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A STUDY ON THE CONTROL OF THE MINING ACTIVITIES IN THE DEEP SEABED AREA

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Abstract

Mining activity is one of the activities in the international seabed area. Mining activities consist of prospecting, exploration, and exploitation of the mineral. It shall be carried out by the Enterprise of the International Seabed Authority or state enterprises or natural or juridical persons which possess the nationality of State Parties or effectively controlled by other nations. The deep seabed area extends beyond the national jurisdiction. The Area and its natural resources are the common heritage of mankind. It is open to use by all states exclusively for peaceful purposes. Moreover, the International Seabed Authority is authorized to act on behalf of mankind in respect of the area by the United Nations Convention on the Law of the Sea. This paper is to study how to extend the legal control of the International Seabed Authority and sponsoring states over the mining activities in the deep seabed Area.

Keywords: The Area, Mining activities, International Seabed Authority, Sponsoring States

Introduction

The special legal regime of the Area had been provided in Part XI of the United Nations Convention on the Law of the Sea, 1982 (UNCLOS), and the Agreement relating to the Implementing Part XI of the United Nations Convention on the Law of the Sea, 1994. The United Nations Convention on the Law of the Sea was enacted in 1982 and entered into force in 1994. The Area has been provided in Part XI of the United Nations Convention on the Law of the Sea 1982 and the 1994 implementation agreement. The Area comprises the ocean floor, the seabed, and their subsoil beyond the boundaries of national sovereignty. The UNCLOS recognized the seabed region outside of sovereign borders and its mineral resources as a part of the common heritage of mankind.

The International Seabed Authority is responsible for overseeing the International Seabed Areas and administers and regulates the rules, regulations, and procedures for the exploration of the minerals and marine environment management plans. Through the sponsoring state, the contractors have been permitted to explore and exploit the minerals in the international seabed area. The contractors will then need to file an application to the International Seabed Authority in order to proceed with the deep seabed mining project. Exploration of minerals has been provided in the Regulations for the Exploration of Polymetallic Nodules in 2000, amended in 2013, Regulations for the Exploration of Polymetallic Sulphides in 2010, and Regulations for the Exploration of Crusts in 2012. The regulations contain Part I to Part X, including Annexes. The minerals can be divided into three categories, namely, polymetallic nodules, polymetallic sulphides, and cobalt-rich ferromanganese crusts.

Materials & methods

A qualitative research method is used in this study. International conventions, rules, regulations, lecturer reviews, and legal provisions are utilized in this paper. As the primary Sources, the United Nations Convention on the Law of the Sea 1982, the 1994 Implementation Agreement, and the Exploration Regulations are used as the main materials in this paper. The books of Malcom N. Shaw, International Law, 2017, R.R Churchill and A.V. Lowe, The Law of

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the Sea, 1999, and Yushifumi Tanaka, The International Law of the Sea, 2012 are applied as secondary sources. As the tertiary sources, research journals, newspapers are used in this study.

Historical Background of the Deep Seabed Area

The occurrence of potato-sized nodules was found in the Arctic Ocean off Siberia around the 19th century. They were discovered to exist throughout the majority of the world's oceans during the HMS Challenger scientific mission in 1872–1877. Previously known as manganese nodules, polymetallic nodules are tiny, brown-black balls that typically range in diameter from 1 to 20 cm. In the 1950s, attention was drawn to the economic significance of the nodules During the International Geophysical Year between 1957 and 1958, polymetallic nodules were collected on the Tuamotu plateau approximately 370 kilometers east of Tahiti at a depth of some 900 meters. These nodules proved to contain commercially valuable minerals, such as nickel, copper and cobalt.[2]

Serious attention was focused on deep seabed minerals in the 1960s, when American geologist Jonn L. Mero published a book entitled "The Mineral Resources of the Seas," in which he made the case that the seabed could become a major source of supply for meeting the world's mineral needs.[3] In 1967 Ambassador Pardo of Malta gave an influential speech at the United Nations, noting the danger of militarization of the seabed, the risk of pollution that could permanently damage the marine environment, and the potential that technically advanced states could exclusively control the exploitation of the significant resources of the seabed beyond the limits of national jurisdiction. He emphasized that the General Assembly should promptly adopt a resolution based on the concept that the sea-bed and the ocean floor are a common heritage of mankind and should be used and exploited for peaceful purposes and for the exclusive benefit of mankind as a whole.[4]

In 1970, a 'Declaration of Principles Governing the Sea Bed and Ocean Floor, and the Subsoil Thereof, beyond the Limits of National Jurisdiction,' by 108 votes to nil, with fourteen abstentions, as General Assembly Resolution 2749.[5] It solemnly declared, *inter alia,* that: (1) The seabed and ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction, as well as the resources of the Area, are the common heritage of mankind; (2) the Area shall not be subject to appropriation by any means by States or persons, natural or juridical, and no State shall claim or exercise sovereignty or sovereign rights over any part thereof; (3) No State or person, natural or juridical, shall claim, exercise or acquire rights with respect to the Area or its resources incompatible with the international regime to be established and the principles of this Declaration; and (4) All activities regarding the exploration and exploitation of the resources of the Area and other related activities shall be governed by the international regime to be established.[6]

Ambassador Arvid Pardo of Malta's addresses led to the convening, in 1973, of the Third United Nations Conference on the Law of the Sea, which after nine years of negotiation adopted

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[2] Tanaka, Yoshifumi, 2012, The International Law of the Sea, Cambridge University Press, p.170.
[3] www.un.org/en/chronicle/article/international-seabed-authority-and-deep-seabed-mining.
[4] Satya N. Nandan, Michael W. Lodge, Shabtai Rosenne, (2002), the Development of the Regime for Deep Seabed Mining, p.17.
[5] Ibid, p.27-28.
[6] General Assembly, Resolution 2749 (XXV), 1970.

the Convention. The Convention sets out a comprehensive legal framework that regulates all ocean space, its uses, and resources. It contains provisions relative to the maritime zones and provides for the protection and preservation of the marine environment. One of the most important parts of the Convention concerns the exploration for and exploitation of the resources of the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction. By the Convention, the Area and its resources are proclaimed to be 'the common heritage of mankind'.

Relationship between Part XI of the UNCLOS 1982 and 1994 Implementation Agreement

The First United Nations Conference on the Law of the Sea 1958 (UNCLOS I) adopted four conventions. These were the Geneva Conventions on the Territorial Sea and Contiguous Zone, on the High Seas, and on the Continental Shelf and on the Fishing and Conservation of the Living Resources of the High Seas. The 1958 conference could not solve which had defeated the 1930 conference: the breadth of the territorial sea. Thus, the Second United Nations Conference on the Law of the Sea (UNCLOS II) was convened in 1960 to discuss that problem, and also the associated question of fishery limits. However, it failed to adopt a compromise formula providing for a six-mile territorial sea plus a six-mile fishery zone. Agreement on the breadth of the territorial sea had to await the preparation of the Convention drawn up by the Third United Nations Conference on the Law of the Sea (UNCLOS III). UNCLOS III had its origins in the Sea Bed Committee established in 1967 by the United Nations General Assembly to examine the question of the deep seabed lying beyond the limits of national jurisdiction. The 1958 conference had not made any special provision for the legal regime of the seabed, because at the time its great mineral wealth was not appreciated, and technology necessary for its exploitation did not exist. UNCLOS III was agreed in 1970, in General Assembly Resolution 2570, to convene a United Nations Conference with the task of producing a comprehensive Convention on the Law of the Sea. The Third United Nations Conference on the Law of the Sea (UNCLOS III) was held its first session in 1973, and worked for several months each year until it finally adopted a convention in 1982.[7]

At the Third United Nations Conference on the Law of the Sea (UNCLOS III), negotiation of a deep seabed mining regime proved difficult. The final product, codified primarily in Part XI of the LOS Convention, set out general principles to govern seabed mining, principles that traced their origins to the early General Assembly resolutions. The Convention also contained complex articles specifying the structure and powers of a new international institution, the International Seabed Authority (ISA or Authority). In addition, the Convention provided for economic assistance for developing states, a production ceiling to safeguard land-based producers, and mechanisms allowing an international seabed institution to obtain mining technology. This section highlights Part XI’s provisions, along with critical reactions to those provisions. Many of Part XI’s detailed provisions were modified or set aside in the 1994 Implementation Agreement.[8]

The regime established by Part XI was innovative in the sense that it stated the parallel system, production policies, financial terms of contracts, the transfer of technology, and review

[7] Churchill, R.R and Lowe, A.V, (1999), The Law of the Sea, Third Edition, Juris Publishing Manchester University Press, p.15-16.

[8] Louis B. Sohn, John E. Noyes, Erik Franckx, Kristen G. Juras, (2010), Cases and Materials on the Law of the Sea, Second Edition, p. 560.

conference. Nonetheless, some industrialized States, including the United States, strongly objected to the framework governing the Area. Later on, major industrialized States adopted unilateral domestic legislation in relation to mining systems in deep seabed areas. In 1984, eight industrialized States established the Provisional Understanding Regarding Deep Seabed Matters in order to keep away from overlapping in deep seabed operations. This was called the 'Reciprocating State' regime or the 'mini-treaty' regime. Nevertheless, there were growing concerns that which situation ran the serious risk of damaging the unity and universality of the deep seabed regime established in Part XI and the LOSC as a whole. States were also prompted to reevaluate Part XI of the UNCLOS by the global economic shift toward market-oriented strategies and the postponement of the commercial exploitation of deep seabed resources.[9]

Against that background, in July 1990, the UN Secretary-General Javier Pérez de Cuéllar initiated informal consultation in order to meet the specific objections of the developed States. These informal consultations took place from 1990 to 1994 and fifteen meetings were convened. As a result, on 28 July 1994, the UN General Assembly adopted the Implementation Agreement, by a vote of 121 in favor, none against, and seven abstentions. The provisions of the Implementation Agreement and Part XI of the LOSC are to be interpreted and applied as a single instrument. In the event of any inconsistency between the 1994 Agreement and Part XI, the provisions of the former shall prevail. After the adoption of the 1994 Agreement, "any instrument of ratification or formal confirmation of or accession to the Convention shall also represent consent to be bound by the 1994 Agreement." No State or entity may establish its consent to be bound by the 1994 Implementation Agreement unless it has previously established or establishes at the same time its consent to be bound by the Convention. Despite the title of the 'Implementation' Agreement, it modifies the original regime of Part XI of the LOSC.[10]

The Annex to the Agreement address a number of issues raised by developed states. In particular, it is stated that all organs and bodies established under the Convention and Agreement are to be cost-effective and based upon an evolutionary approach taking into account the functional needs of such organs or bodies; a variety of institutional arrangements are detailed with regard to the work of the International Seabed Authority; the work of the Enterprise is to be carried out initially by the Secretariat of the Authority and the Enterprise shall conduct its initial deep seabed mining operations through joint venture that accord with sound commercial principles; decision-making in the Assembly and Council of the International Seabed Authority is to comply with a series of specific rules; the Assembly upon the recommendation of the Council may undertake at any time of matters referred to in article 155(1) of the Convention, notwithstanding the provisions of that article as a whole; and transfer of technology to the Enterprise and developing states is to be sought on fair and reasonable commercial terms on the open market or through joint-venture arrangements.[11]

Mineral Resources and Mining Activities

The Seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction, is defined as "The Area".[12] The seabed of the Area and its resources are the "common heritage of

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[9] Tanaka, Yoshifumi, 2012, The International Law of the Sea, Cambridge University Press, p. 178.
[10] Ibid.
[11] Shaw, Malcom N., 2017 International Law, Eight Edition, Cambridge University Press, p.472-473.
[12] Article 1 (1) of the United Nations Convention on the Law of the Sea, 1982.

mankind."[13] All rights in the resources of the Area are empowered by "mankind as a whole". It is the International Seabed Authority (ISA) which is authorized to act on behalf of mankind in respect of the Area.

The mineral resources are divided into three categories by the International Seabed Authority in the international seabed area with the respectively regulation, namely polymetallic nodules, polymetallic sulphides and cobalt-rich ferro manganese crust.

Polymetallic nodules are defined "one of the natural resources of the Area consisting of any deposit or accretion of nodules, on or just below the surface of the deep seabed, which contain manganese, nickel, cobalt and copper."[14] Polymetallic sulphides mean "hydrothermally formed deposits of sulphides and accompanying mineral resources in the Area which contain concentrations of metals including, *inter alia,* copper, lead, zinc, gold and silver."[15] Cobalt crust is defined "hydroxide deposits of cobalt-rich iron/manganese crust formed from direct precipitation of minerals from seawater on to hard substrates containing minor but significant concentrations of cobalt, titanium, nickel, platinum, molybdenum, tellurium, cerium, other metallic and rare earth elements."[16]

Mining activities in the Area are all activities of exploration for, and exploitation of, the resources of the Area.[17] Regulations 1(3)(a) of the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, 2000, Regulations 1(3)(a) of the Regulations on Prospecting and Exploration for on Polymetallic Sulphides in the Area, 2010, Regulations 1(3)(b) of the Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area 2012 state that prospecting has defined the search for deposits of polymetallic nodules, polymetallic sulphides, cobalt crusts in the Area including estimation of the composition, sizes and distributions of deposits and their economic, values, without exclusive rights. Exploration system means "searching for deposits of polymetallic nodules, polymetallic sulphides and cobalt crusts in the Area with exclusive rights, the analysis of such deposits, the testing of collecting systems and equipment, processing facilities and transportation systems and the carrying out of studies of the environmental, technical, economic, commercial and other appropriate factors that must be taken into account in exploitation." Exploitation means "the recovery for commercial purposes of polymetallic nodules, polymetallic sulphides, cobalt crusts in the Area and the extraction of minerals therefrom, including the construction and operation of mining, processing and transportation systems, for the production and marketing of metals."[18]

Mining activities in the Area shall be carried out by the Enterprise, and in association with the Authority by States Parties, or state enterprises or natural or juridical persons which possess the nationality of States Parties or are effectively controlled by them or their nationals, when sponsored by such States, or any group of the foregoing.[19] Mining activities shall be carried

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[13] Article 136 of the United Nations Convention on the Law of the Sea, 1982.

[14] Regulations 1(3)(d) of the Regulations on Prospecting and Exploration for Polymetallic Nodule in the Area, 2000.

[15] Regulations 1(3)(d) of the Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area, 2010.

[16] Regulations 1(3)(d) of the Regulations on Prospecting and Exploration for Cobalt-rich Ferro Manganese Crusts in the Area, 2012.

[17] Article 1(3) of the United Nations Convention on the Law of the Sea, 1982.

[18] Regulations 1(3)(a) (b) of the Regulations on Prospecting and Exploration for Polymetallic Nodule in the Area, 2000, Polymetallic Sulphides in the Area, 2010, for Cobalt-rich Ferro Manganese Crusts in the Area, 2012.

[19] Article 153(2) of the United Nations Convention on the Law of the Sea, 1982.

out in accordance with a formal written plan of work drawn up and approved by the Council after review by the Legal and Technical Commission. In the case of activities in the Area carried out as authorized by the Authority by the entities, the plan of work shall be in the form of a contract.[20] "Contracts may provide for joint arrangements between the contractors and the Authority through the Enterprise, in the form of joint ventures or production sharing, as well as any other form of joint arrangement, which shall have the same protection against revision, suspension or termination as contracts with the Authority."[21]

Thus, deep seabed mining systems can be carried out by state enterprises or natural persons or juridical persons and by joint venture with the International Seabed Authority through the Enterprise, but they possess the nationality of States Parties.

Structure of the International Seabed Authority

The International Seabed Authority (ISA) was established on 16 November 1994 when the United Nations Convention on the Law of the Sea (LOSC) came into force. The ISA has been fully operational since June 1996**,** with its headquarters located in Kingston, Jamaica. The ISA is responsible for regulating activities related to mineral resources in the international seabed area, which is beyond national jurisdiction. The ISA comprises 169 member states plus the European Union. The International Seabed Authority was established by the Prat XI of the United Nations Convention on the Law of the Sea, 1982. All States Parties are *ipso facto* members of the Authority. As of 30 April 2024, there are 152 parties to the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea, 1982. The Authority is the organization through which States Parties shall, in accordance with a view to administering the resources of the Area.

The autonomous organ known as the International Seabed Authority is tasked by the government's signatories to the 1982 Convention with coordinating and supervising operations inside the Area, especially in relation to resource management. In June 1996, it was completely operating. The Assembly, Council, and Secretariat are the Authority's three main organs. The Finance Committee and the Legal and Technical Commission should also be included.[22]

All States parties to the Convention are *ipso facto* members of the Authority and so, too, of the Assembly, wherein each State has one vote.[23] The Assembly, as 'the supreme organ of the Authority to which the other principal organs shall be accountable', has the power to lay down general polices for the Authority which must, however, be consistent with the specific provisions set out in the Convention. In addition, the Assembly formally elects members of the Council, and of the Governing Board and Director General of the Enterprise, and other subsidiary organs of the Authority, and adopts on matters such as approval of the budget of the Authority and of the rules governing the distribution of financial and other economic benefits from exploitation of the resources of the Area.[24]

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[20] Ibid, Article 153(3).
[21] Article 11 (1), Annex III of the United Nations Convention on the Law of the Sea, 1982.
[22] Shaw, Malcom. N, 2017, International Law, Eight Editions, Cambridge University Press, p. 473.
[23] Article 156(2), 159 of the United Nations Convention on the Law of the Sea, 1982.
[24] Article 160 (2) of the United Nations Convention on the Law of the Sea, 1982.

The Council is the central, executive organ of the ISA. The Council consists of representatives of 36 member states that are elected by the Assembly. It can exercise law-making, policy-making, and supervisory competencies, including the power to establish specific policies on any matter within the competencies of the ISA. In particular, the Council decides over the approval of plans of work, elaborates and adopts the Mining Code, and 'exercises control over the activities in the Area.' The LOSC also confers competencies on the Council to ensure environmental protection, including the power to issue emergency orders, on the basis of recommendations received from the Legal and Technical Commission. In sum, the Council enjoys more competencies than the Assembly and can be regarded as the main decision-making organ.[25] The Council consists of two organs; namely an Economic Planning Commission and a Legal and Technical Commission.

Each Commission shall be composed of 15 members, elected by the Council from among the candidates nominated by the States Parties. However, if necessary, the Council may decide to increase the size of either Commission having due regard to economy and efficiency.[26]Economic Planning Commission's task was to advise the Council on economic matters and in particular to review trends of and factors affecting supply, demand and prices concerning raw materials which might be obtained from the Area. However, the functions of the Economic Planning Commission are to be performed by the Legal and Technical Commission until either the Council decides otherwise or the first plan for the exploitation of a deep seabed site is approved by the Authority.[27]

The Legal and Technical Commission shall make recommendations with regard to the exercise of the Authority's functions upon the request of the Council; review formal written plans of work for activities in the Area, and submit appropriate recommendations to the Council, environmental protection, the establishment of an inspectorate for day-by-day supervision of seabed mining, the institution of cases before the Sea Bed Disputes Chamber, and measures to enforce decisions of the Chamber. In addition, the Commission drafts the rules and regulations of the Authority.[28]

The Secretariat of the Authority shall "comprise a Secretary-General and such staff as the Authority may require. The Secretary-General shall be elected for four years by the Assembly from among the candidates proposed by the Council and may be reelected. It shall be the chief administrative officer of the Authority, and shall act in that capacity in all meetings of the Assembly, of the Council and of any subsidiary organ, and shall perform such other administrative functions as are entrusted to the Secretary-General by these organs. It shall make an annual report to the Assembly on the work of the Authority."[29] In addition to arranging the annual sessions, workshops, and technical meetings, the Secretariat also manages the contracts

[25] Jaeckel, Aline L., 2017, The International Seabed Authority and the Precautionary Principle: Balancing Deep Seabed Mineral Mining and Marine Environmental Protection, Boston: Brill Nijhoff, Publication on Ocean Development, Volume 83, pp. 93-94.

[26] Article 163 (1) (2) of the United Nations Convention on the Law of the Sea, 1982.

[27] Churchill, R.R and Lowe, A.V, 1999, The Law of the Sea, Third Edition, Juris Publishing Manchester University Press, p.226.

[28] Article 163,165 of the United Nations Convention on the Law of the Sea, 1982.

[29] Article 166 of the United Nations Convention on the Law of the Sea, 1982.

for exploration and exploitation. Moreover, the Secretariat conducts expert studies and offers background information and research for the ISA organs to take into consideration.[30]

Establishment of the Enterprise is provided in Article 158(2) and its statute is set out in Annex IV of the United Nations Convention on the Law of the Sea 1982. "There shall be an Enterprise Governing Board, a Director-General and the staff compliment as may be necessary for the performance of its functions. The Governing Board shall be composed of 15 members elected by the Assembly."[31]

The functions of the Enterprise are: "monitoring and review of trends and developments relating to deep seabed mining activities, including regular analysis of world metal market conditions and metal prices, trends and prospects; assessment of the results of the conduct of marine scientific research with respect to activities in the Area; assessment of available data relating to prospecting and exploration; assessment of technological developments relevant to activities in the Area; evaluation of information and data relating to areas reserved for the Authority; assessment of approaches to joint-venture operations; collection of information on the availability of trained manpower."[32]

Mandate of the International Seabed Authority relating to the Mining System

International Seabed Authority (ISA) is the intergovernmental organization that organizes, carries out and controls activities in the Area on behalf of mankind as a whole. The ISA shall exercise such control over activities in the Area as is necessary for the purpose of securing compliance with the relevant provisions and the plans of work approved in accordance with article 153(3) of UNCLOS. Further, ISA shall have the right to take at any time measures provided for under part XI to ensure compliance with its provisions and the exercise of the functions of control and regulation assigned to it thereunder or under any contract.[33]

ISA adopts and uniformly applies rules, regulations and procedures relating to, *inter alia,* (1) the prospecting for, exploration and exploitation of resources in the Area, (2) the effective protection, (3) financial and internal administration of ISA, (4) a payment mechanism and financial terms of contracts for the exploitation of mineral resources between ISA and the Contractors, (5) the equitable sharing and other economic benefits derived from activities in the Area and contributions made pursuant to Article 82 of the UNCLOS,1982.

The work of the International Seabed Authority affects all actors involved in the seabed mining regime. The ISA is assigned three crucial tasks: The first is to establish the Area regime by enacting the Mining Code; the second is to use the previously indicated contractual mechanism to regulate access to minerals within the Area; and the third is to make sure that the regulatory framework is followed. Moreover, Rules and regulations for its financial management

[30] Jaeckel, Aline L., 2017, The International Seabed Authority and the Precautionary Principle: Balancing Deep Seabed Mineral Mining and Marine Environmental Protection, Boston: Brill Nijhoff, Publication on Ocean Development, Volume 83, p. 95

[31] Article 5 of the Annex IV of the United Nations Convention on the Law of the Sea, 1982.

[32] Section 2 (1) of Annex of the Agreement relating to the Implementing Part XI of the United Nations Convention on the Law of the Sea, 1994.

[33] International Seabed Authority, (2023), the Rights and Obligations of the International Seabed Authority and the Sponsoring States with respect to Activities in the Area, Discussion Paper, p. 6-7.

and internal administration and for equitable sharing of the financial benefits of seabed mining shall be established by the International Seabed Authority.[34]

The ISA can legislate with respect to activities in the Area. Concerning the legislative jurisdiction, Article 17 (1) of Annex III provides that, the Authority shall adopt and uniformly apply rules, regulations and procedures in accordance with article 160(2)(f)(ii), and article 162(2)(o)(ii), for the exercise of its functions as set forth in Part XI on, *inter alia,* (a) administrative procedures relating to prospecting, exploration and exploitation in the Area; (b) operations; (c) financial matter; (d) implementation of decisions taken pursuant to Article 151 (10) and Article 164 (2)(d). The Authority is also empowered to adopt appropriate rules and regulations concerning protection of human life, protection of the marine environment, installations used for carrying out activities in the Area, the equitable sharing of financial and other economic benefits derived from activities in the Area and the payments and contributions, including regulations relating to prospecting, exploration and exploitation of the mineral in the Area.[35]

Importantly, “the contract for exploration and the standard clauses for exploration contract are annexed to the Regulations. However, some important differences between the contractors’ obligations remain. Notably, the five-year program of activities, which is not publicly available, is individually developed by each contractor and annexed to the contract.”[36] “Regulations can be amended which requires the Legal and Technical Commission to keep the rules, regulations, and procedures under review and recommend amendments to the Council as it may be deemed necessary or desirable.”[37]

“The programme of work of the Legal and Technology Commission comprises regular items that are annually or periodically considered by the commission, regulatory and environmental management matters of the Authority and specific requests made by the Council.”[38] “The regular agenda items mainly include the evaluation of the activities of the contractors, such as the review of annual reports; requests for extensions and relinquishments; the periodic review of contracts; the drafting and revision of regulations and recommendations for guidance to contractors; the environmental management of impacts that may result from activities in the Area; and the review of new applications for approval of plans of work for exploration as and when received by the Secretariat. Other items to be considered by the Commission include items requested by the Council.”[39]

Article 145 of the Convention requires the Authority to take necessary measures with respect to activities in the Area to ensure effective protection for the marine environment from harmful effects which may arise from such activities. The first regional environmental management plan was adopted in 2012 for the Clarion-Clipperton Zone. Since then, the Council

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[34] Jaeckel, Aline L., (2017), The International Seabed Authority and the Precautionary Principle: Balancing Deep Seabed Mineral Mining and Marine Environmental Protection, Boston: Brill Nijhoff, Publication on Ocean Development, Volume 83, p.144.

[35] Tanaka, Yoshifumi, 2012, The International Law of the Sea, Cambridge University Press, P.175.

[36] Schedule 2 of the Annex III of the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, 2000, Polymetallic Sulphides in the Area, 2010, for Cobalt-rich Ferro Manganese Crusts in the Area, 2012.

[37] Article 165(2)(g) of the United Nations Convention on the Law of the Sea, 1982.

[38] Para 28 of the Functions, working practices and anticipated programme of work of the Legal and Technical Commission for the period from 2023-27, 2023 (ISBA/28/LTC/2).

[39] Para 29, Ibid.

has encouraged the Secretariat and the Commission to advance the development of contracts for exploration currently exist. Such areas include, in addition to the Clarion-Clipperton Zone, the northern part of the Mid-Atlantic Ridge, the Indian Ocean and the North-West Pacific Ocean.[40]

If a disagreement emerges over the rejection of a work plan, it will be brought before the dispute resolution processes outlined in the Convention. A dispute between the Authority and a prospective miner regarding the rejection of a contract can only be heard by the Seabed Disputes Chamber, a division of the International Tribunal for the Law of the Sea (ITLOS), once all authorization requirements have been met. It is also possible to exercise jurisdiction over disagreements pertaining to a legal matter that comes up during contract negotiations. The Chamber may not review any decisions taken by the Authority for refusing an application.[41]

Utilizing its law-making powers the ISA has been developing the Mining Code. The ISA has established three sets of regulations: Regulations for the Exploration of Polymetallic Nodules in 2000, Regulations for the Exploration of Polymetallic Sulphides in 2010, and Regulations for the Exploration of Crusts in 2012. The Regulations contain Part I to Part X, including Annexes.

The Role of the Sponsoring States

Part XI of UNCLOS 1982 and the 1994 Agreement ensure that the Area shall be open to all States for activities, as a matter of legal right. The basic conditions for prospecting, exploration, and exploitation are prescribed in Annex III of UNCLOS.[42] The exploration and exploitation of seabed minerals must be carried out under a contract with the International Seabed Authority and subject to its rules, regulations and procedures; to receive a contract, a private entity must be sponsored by an UNCLOS State Party. The system of State sponsorship is an indispensable part of the UNCLOS regime. In 2011, the International Tribunal for the Law of the Sea published an Advisory Opinion explaining that sponsorship "is a key element in the system for the exploration and exploitation of the resources of the Area set out in the Convention".[43] Sponsoring States help protect the Area as "the common heritage of mankind", and the sponsorship system helps ensure that contractors undertake their activities according to the UNCLOS framework.[44]

Article 148 of the Convention states that: "The effective participation of developing States in activities in the Area shall be promoted as specifically provided for in this Part, having due regard to their special interests and needs, and in particular to the special need of the land-locked and geographically disadvantaged among them to overcome obstacles arising from their disadvantaged location, including remoteness from the Area and difficulty of access to and from it."[45]

Contractors are state enterprises and privately owned entities must be sponsored by state parties (sponsoring states), they also have regulatory jurisdiction over the contractor. The LOSC

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[40] Para 46 of the Functions, working practices and anticipated programme of work of the Legal and Technical Commission for the period from 2023-27, 2023 (ISBA/28/LTC/2).

[41] Natalie Klein, (2004), Dispute Settlement in the UN Convention on the Law of the Sea, Cambridge University Press, P.327.

[42] Secretary-General, Annual Report, Just and Equitable Management of the Common Heritage of Humankind, 2023, p.35

[43] Seabed Dispute Chamber of the ITLOS, Advisory Opinions, Case No.17, 2011.

[44] Watson Farley & Williams, 2023, Deep Seabed Mining Insights: The Role and Rights of Sponsoring States under the UNCLOS Regime.

[45] Article 148 of the United Nations Convention on the Law of the Sea, 1982.

envisaged there could be certain situations in which the sponsoring state is also liable for damage arising out of activities in the Area, as set out in article 139(1) and (2) and article 4(4) of Annex III.[46]

In order for a natural or juridical person to be eligible to carry out mining activities under article 153, they must either be a national of the sponsoring state or effectively controlled by it. In the event that the state of effective control differs from the state of nationality, the Law of the Sea Convention requires that both states issue certificates of sponsorship. If effective control is interpreted as meaning regulatory control that is, the ability to exercise regulatory jurisdiction over the persons, there is limited scope for joint sponsorship since states will have broad regulatory over their nationals.[47]

States Parties or the Sponsoring States have responsibility to ensure relating to the deep seabed mining activities that "States parties shall have responsibility to ensure that activities in the Area, whether carried out by States Parties, or state enterprises or natural or juridical persons which possess the nationality of States Parties or are effectively controlled by them or their nationals, shall be carried out in conformity with this Part."[48]

The sponsoring State or States shall have the responsibility to ensure, within their legal systems, that a contractor so sponsored shall carry out activities in the Area in conformity with the terms of its contract and its obligations under this Convention. "A sponsoring State shall not, however, be liable for damage caused by any failure of a contractor sponsored by it to comply with its obligations if that State Party has adopted laws and regulations and taken administrative measures which are, within the framework of its legal system, reasonably appropriate for securing compliance by persons under its jurisdiction."[49]

The United Nations Convention on the Law of the Sea provided that "states shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment from activities in the Area undertaken by vessels, installations, structures and other devices flying their flag or of their registry or operating under their authority. The requirements of such laws and regulations shall be no less effective than the international rules, regulations and procedures".[50]

Moreover, this paper discusses Myanmar's implementation relating to the UNCLOS and deep seabed regime. After the proclamation of Territorial Sea and Straight Baseline in 1968, Myanmar declared its Territorial Sea and Maritime Zones Law in 1977, prior to the conclusion of the 1982 United Nations Convention on the Law of the Sea. On the first day, Myanmar was a signing member, and on May 21, 1996, it was approved. In June 1996, the UNCLOS came into effect for Myanmar.[51] In 2017, the Government enacted Myanmar Territorial Sea and Maritime Zones Law under the Pyidaungsu Hluttaw No.14/2017.[52] The objectives of this Law are: "to have security, rule of law and tranquility for the interests of the State in the territorial sea, contiguous

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[46] Tara Davenport, (2019) Responsibility and Liability for Damage Arising out of Activities in the Area: Attribution of Liability, Liability Issues for Deep Seabed Mining Series, Paper No. 4, P-8.

[47] Andres Sebatian Roja and freedom-Kai Philips, (2019), Effective Control and Deep Seabed Mining: Toward a Definition, p. 2.

[48] Article 139 of the United Nations Convention on the Law of the Sea, 1982.

[49] Article 4 (4) of Annex III of the United Nations Conventions on the Law of the Sea, 1982.

[50] Article 209 of the United Nations Convention on the Law of the Sea, 1982.

[51] Executive Summary, The Republic of the Union of Myanmar, Continental Shelf Submission, Amended July 2015, p.1

[52] Pyidaungsu Hluttaw No.14/2017.

zone, exclusive economic zone and continental shelf; to protect and conserve, and maritime zones of the State and to do marine scientific researches; and to protect and conserve from the pollutions on the sea, airspace and impact on marine environment through the territorial sea and maritime zones of the State."[53] Moreover, the Government of Myanmar has drawn up street regulations to promote careful planning of mineral exploitation. These Laws cover for all mining or mining related activities in land ward sites, namely (i) The Myanmar Gemstone Law, 1995; (ii) The Myanmar Pearl Law, 1995; (iii) The Myanmar Mines Law, 1994, amended in 2015. However, these Laws cover mining systems within the national jurisdiction.

In Myanmar, relating to the workshop on deep seabed resources and the blue economy for the Association of Southeast Asian Nations (ASEAN) and the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) countries was held in Nay Pyi Taw on 9-11 September 2019. Myanmar is the first nation in ASEAN and BIMSTEC countries to host that workshop in cooperation with the International Seabed Authority, and it was supported by the Korea Maritime Institute. The workshop's main goals are to raise awareness among ASEAN and BIMSTEC members of the International Seabed Authority's mandate and responsibilities, as well as the obligations of sponsoring States and contractors when engaging in activities in the area; to comprehend the potential opportunities for development that ASEAN and BIMSTEC members may experience from increased participation in activities conducted in the area; and to create the conditions necessary for ASEAN and BIMSTEC members to have opportunities for capacity building.[54] As Myanmar, this workshop can be first step to participate in deep seabed mining activities.

States shall operate in deep seabed mining under the joint venture investment. In Joint venture, it can be potential questions arise such as the question whether the joint venture would take the form of a contractual or an incorporated joint venture; the applicable law applied to the contract and to the operating company formed by the joint venture partners; the ratio of capital participation of the joint venture partners; the conditions for terminating or revising the contract; and the settlement of disputes mechanisms.[55]

According to the United Nations Convention on the Law of the Sea 1982 and 1994 Implementation Agreement, the International Seabed Authority encourages to the developing States for mining activities in the Area. The developing States can access technology assistance for exploration of the mineral. Mining activities shall be carried out as a joint venture arrangement. In a joint venture system, contractors are required to obtain a certificate of sponsorship from each sponsoring state.

National Laws of the Sponsoring States

Deep seabed mining may be carried out by the Enterprise and by state parties, State enterprises, or natural persons or juridical persons. Natural and juridical persons must eligible to carry out those activities, which comply with two requirements. First, they must be either nationals of a state party or effectively controlled by it or its nationals. Second, they must be sponsored by such States.

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[53] Section 3 of the Myanmar Territorial Sea and Maritime Zones Law, 2017.
[54] Myanmar Digital News, September 10, 2019.
[55] Giinther Jaenicke, Professor Emeritus, Dr.jur, (1995), Joint Ventures for Deep Seabed Mining Operations, p.331.

Sponsoring States are required to take “all measures necessary” to ensure compliance by the sponsored contractor with UNCLOS and the terms of their contract. Such measures include adopting laws, regulations and administrative measures within their legal systems. At its 23rd session in 2017, the Assembly invited sponsoring States, if they had not already done so, to review their respective national legislation, drawing on the advisory opinion of the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea. As of June 2023, ISA’s online National Legislation Database contains information on or the texts of relevant national legislation received from the following 38 States: Bangladesh, Belgium, Benin, Brazil, China, Cook Islands, Cuba, Czechia, Dominican Republic, Ecuador, Egypt, Fiji, France, Georgia, Germany, Guyana, India, Japan, Kenya, Kiribati, Mexico, Micronesia (Federated States of), Montenegro, Nauru, Netherlands, New Zealand, Nigeria, Niue, Oman, Republic of Korea, Russian Federation, Singapore, Sudan, Tonga, Tuvalu, United Kingdom of Great Britain and Northern Ireland, United States of America and Zambia. The database contains further information and the texts of national laws, regulations and administrative measures submitted by the aforementioned member and observer States of ISA.[56]

With the entry into force of UNCLOS in 1994 and the establishment of ISA in 1994, exploration activities for mineral resources in the deep seabed area began to be regulated under exploration contracts.[57] International Seabed Authority has currently issued 30 contracts for exploration (19 for polymetallic nodule fields, 7 for polymetallic sulphides and 4 for cobalt-rich ferromanganese crusts.)[58] Currently access as the sponsoring states are Belgium, China, Cook Islands, France, Germany, India, Jamaica, Korea, Kiribati, Nauru, Poland, Russia, Singapore, Tonga, United Kingdom, and IOM (Bulgaria, Cuba, Czech Republic, Poland, Russian Federation and Slovakia).[59]

Under the Article 153 (4) and Article 4 (4) of the Annex III of the United Nations Convention on the Laws of the Sea, 1982, some Sponsoring States adopted national legislation relating to the deep seabed mining activities in the Area, it’s as follows:

“Belgium adopted ‘Act on prospecting and exploration for, and exploitation of, resources of the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction, 2013.’ China adopted ‘Law of the People’s Republic of China on Exploration for and Exploitation of Resources in the Deep Seabed Area, 2016.’ Germany enacted ‘Seabed Mining Act, 1999, amended in 2010. Japan adopted ‘Law on Interim Measures for Deep Seabed Mining, 1982.’ Kiribati adopted ‘Seabed Minerals Acts, 2017.’ Naura adopted ‘International Seabed Minerals Act, 2015.’ New Zealand enacted ‘United Nations Convention on the Law of the Sea Act, 1996.’ The Singapore adopted ‘Deep Seabed Mining Act 2015.’ Tonga adopted ‘Tonga Seabed Minerals Act 2014.’ The United Kingdom adopted ‘Deep Sea Mining Act 1982,’ amended in 2014.”

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[56] Secretary-General, Annual Report, Just and Equitable Management of the Common Heritage of Humankind, 2023, p.39.

[57] www.isa.org.jm.

[58] Para 51 of the Report of the Secretary-General of the International Seabed Authority under article 166, paragraph 4, of the United Nations Convention on the Law of the Sea (ISBA/29/A/2).

[59] www.isa.org.jm.

In the case of deep seabed mining, contractors must be nationals of the States Parties or effectively controlled by other nations. Thus, States should be provided deep seabed mining law weather operation or not activities in the Area to control the sponsored contractors.

Finding

The prospecting and exploration regulations adopted by the International Seabed Authority are the main control over the prospecting and exploration of the mineral resources. In the case of deep seabed mining activities, the contractors need a sponsoring state. According to the advisory opinion of the Seabed Dispute Chamber, the sponsoring state has to exercise due diligence to ensure that the mining contractor complies with International Seabed Authority rules, regulations and procedures. The applicable law needs to apply for the operating company formed by the joint venture partners, the ratio of capital participation of the joint venture partners, the conditions for terminating or revising the contract, and the settlement of dispute mechanisms. If Myanmar operates mining activities in the Area, need to provide the national law. However, Myanmar current law does not cover the Area. Thus, future Myanmar deep seabed mining law should be drawn based on the analysis of other sponsoring states' Law.

Conclusion

Both the principle of freedom and of sovereignty were unable to provide an equitable legal framework for governing the area. Therefore, the common heritage of mankind has come up as a fundamental principle governing the area. The original regime embodied in the Law of the Sea was significantly modified by the 1994 Implementation Agreement. Major changes include the approval procedure for an exploration plan, the enterprise, decision-making, the review conference, transfer of technology, production policy, the financial terms of contracts, the establishment of a finance committee, and economic assistance. Nonetheless, the principal elements of the principle of the common heritage of mankind remain intact. Exploration activities for mineral resources in the deep seabed area have been regulated under exploration contracts.

Thus, the International Seabed Authority needs to control the deep seabed mining activities effectively for sustainable development use in the deep seabed area. The laws and regulations adopted by the sponsoring states shall also be directed to preventing, reducing, and controlling pollution of the marine environment from activities in the area undertaken by vessels, installations, structures, and other devices flying their flag or of their registry or operating under their authority. When the sponsoring states enact the national legislation, need to consider the application scope of law, to control deep-seabed mining activities, and to protect lawful rights and interests of the citizens. Such laws and regulations shall be no less effective than the international rules, regulations, and procedures.

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