India and the common heritage concept in the international seabed area

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The final relinquishment of 20% of the 150,000 km^2 under the 20 + 10 + 20% surrender arrangement has fulfilled India's obligation towards implementing the common heritage of mankind (CHM) concept in the international seabed area. India is a pioneer investor by virtue of its investment and efforts at exploration and research-specific tasks of identifying and demarcating the manganese nodule sites of potential economic importance in the central Indian Ocean. An area of 150,000 km^2 was thus identified for purposes of self-regulation and obligations under the pioneer investor regime. The Indian claim was recognized and registered by the then Preparatory Commission (PrepCom) established under the auspices of the Third United Nations Convention on the Law of the Sea (UNCLOS III), as a prelude to the functioning of the International Seabed Authority at Kingston, Jamaica. The mine sites in the seabed area beyond national jurisdiction are governed and regulated by the International Seabed Authority.

India is the only claimant in the Indian Ocean and was the first pioneer investor registered by PrepCom on 17 August 1987. The Indian site is about 2700 km from its port of operation in Goa between the geographical coordinates 10–16° South and 73–79° East and is among the most explored areas in India's oceanography programme. This Indian Ocean site was the first deep-sea exploration programme in the country's attempt at mineral resources from the international seabed area. This article is an attempt to discuss the CHM concept against the background of deep-sea mineral resources development in the international seabed area, with particular reference to the Indian manganese nodules programme.

THE *HMS Challenger* expedition (1872–76) discovered the variously shaped metal-rich nodules scattered across large areas of the ocean floor. These deposits of high-grade ores contain minerals essential to an industrial society and are generally found beyond the limits of legal continental shelf in the international seabed area.

The essential reasons for global interest in manganese nodules reside in their abundance and the important metals they contain, namely copper, cobalt, nickel and manganese. The average total metal content of copper, nickel and cobalt is 2.25% of which copper is 1%, nickel 1.1% and cobalt 0.15%. Manganese is in the range of 22–23%. Oceanographers claim that the nodules potentially comprise the largest mineral deposit on this planet[1].

Manganese nodules are extremely porous and as a result contain about 25% water. They are made up mainly of oxides of manganese and iron with small but commercially significant quantities of copper, nickel and cobalt. In addition, they have even smaller quantities of valuable and rare metals such as lead, zinc, molybdenum, barium, chromium and titanium[2].

Manganese nodules or polymetallic nodules as they are known cover approximately 46 million km^2 area of the ocean floor with estimated reserves of 1.7–3 trillion tonnes[3]. They are found to occur in all the oceans of the world in varying abundances. The Pacific Ocean alone has an area of 23 million km^2 covered with nodules, followed by the Indian Ocean with 14 million km^2, and the Atlantic with 8 million km^2.

Although the presence of widespread bottom deposits of manganese nodules was known for several decades, it was not until 1965 when John L. Mero studied the economic possibilities of manganese nodules that a coherent hypothesis of nodules as a potential resource began to appear. Since that time, the major commercial enterprises in the US, Japan and Europe, and in later years the government entities in India and elsewhere, have determined that metals from manganese nodules could be extracted at a profit. This belief is still to be confirmed since commercial manganese nodule mining is yet to begin. The technology and legal consent for recovery exist, but operations are delayed for economic reasons.

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Resource evaluation

To qualify as a first-generation nodule deposit, the combined nickel + copper content must amount to approximately 2.25% (ref. 4) and the abundance must be at least 5–10 kg/m^2, with a capacity to sustain a production level of 3 million tonnes of dry nodules per year over a period of 20–25 years. In addition, the ocean floor may not present an extreme relief but must, instead, be relatively flat and free of obstacles such as hills and seamounts, in order for the large ore collectors to function.

The first-generation mine sites contain significant amounts of important metals–nickel, copper and cobalt. These are several times larger than the land reserves of nickel and cobalt; the manganese content approximately equals that of the land reserves; the copper content reaches just about 50% of the land reserves (ref. 4, pp. 13–14).

The economic advantages to seabed mining states have corresponding disadvantages for land-based exporters of the metals, nickel, copper, cobalt and manganese. The land producers of these four metals are both developing and developed countries. Because the production and export of these metals in developing countries constitutes the greatest share of their income, it is mainly these countries which are at a disadvantage.

The economic significance of nodules depends on the demand and the availability on land of nickel, copper, cobalt and manganese. The key factor which determines the economic grade of nodules is their chemical composition, and this is represented by the important metals present therein, i.e. nickel, copper and cobalt. The ratio of nickel and copper to the total weight of nodules is the key determinant of economic grade. Nickel and copper will be the mainstay of the seabed mining industry (ref. 2, p. 16). Nodule deposits are commonly thought of as potential nickel ores because nickel will furnish the bulk of the revenue from nodule mining.

The concept of 'prime area' is also used by resource scientists in the assessment of nodule reserves. Prime areas can be defined as those in at least part of which there are deposits of relatively abundant nodules with significantly higher grades than elsewhere. The Indian mine site(s) in the central Indian Ocean is one such prime area among others in the world ocean (Figure 1). It is in these prime areas that the potential mine sites will eventually find acceptance.

The common heritage concept

The question of legal rights to exploration and mining followed the discovery and exploration phase of manganese nodules. The debate in the 1960s focused upon whether the deep seabed was to be considered as *res nullius* or *res communis*. *Res nullius* meant that the seabed was a no man's land, which could be appropriated through occupation. *Res communis*, on the other hand, meant that the seabed was part of the high seas and, as such, could be used freely by any state. Both approaches, however, opened the seabed for unilateral exploitation by those states which had the financial and technological capability to do so.

There was, therefore, growing fear among the developing countries that the technologically advanced nations would soon expose the seabed and ocean floor to competitive national appropriation and use. This led former Ambassador, Arvid Pardo, of the permanent mission of Malta to the United Nations, to propose that the seabed and its resources beyond the limits of national jurisdiction should be declared the 'common heritage of mankind' (CHM, Figure 2) and must therefore be reserved exclusively for peaceful purposes. From 1967 onwards the deep seabed polymetallic nodules became the CHM both in symbolic and in material terms[5]. Pardo's concept of the CHM has dominated the subsequent debate and is now enshrined in article 136 of the 1982 UN Convention on the Law of the Sea (UNCLOS).

Although it was the first time that such a proposal was put forward at the UN General Assembly, the concept was not an innovation by itself. The common heritage concept dates back to the 19th century[6], and was referred to at the Hague 1930 Codification Conference, and also at UNCLOS I in 1958 (ref. 7). The other proposals to consider the deep seabed as a common heritage resource were those of the Law of the Sea Institute (University of Rhodes Island) and the call of the United States President Johnson, both in 1966 (ref. 6).

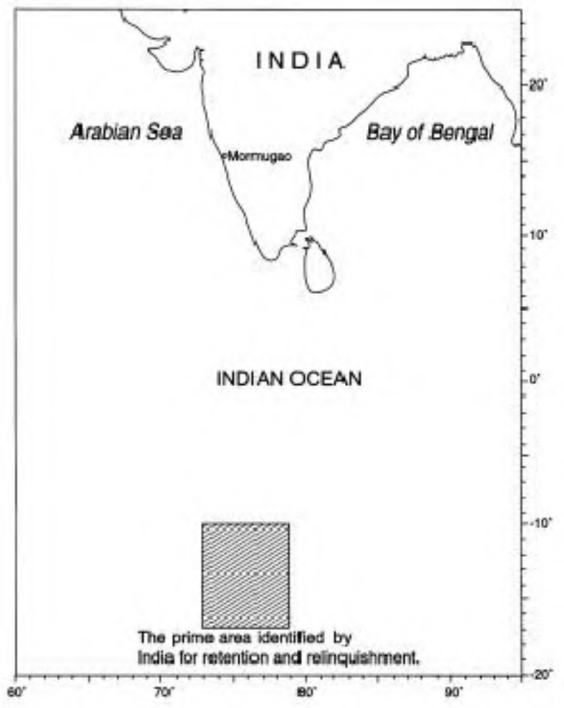

Figure 1. Manganese nodule mine site allotted to India in the international seabed area.

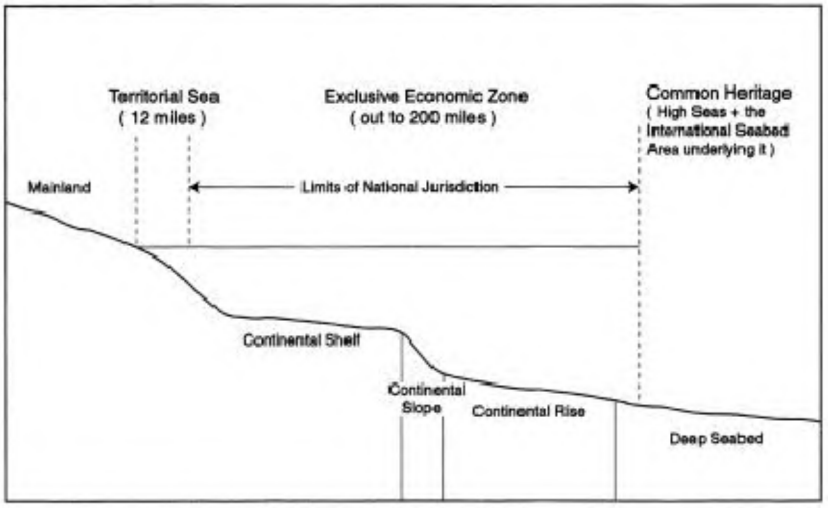

Figure 2. International seabed area in perspective.

All these previous references to the interest of international community in the sea and its resources notwithstanding, the credit of introduction of the CHM as a new concept in international law goes to Pardo (ref. 6, p. 121). Barkenbus (ref. 1, p. 32) regards the role of Pardo as that of a 'legal catalyst'.

The CHM doctrine

Five principal elements appear to characterize the 'CHM' notion when applied to common space areas[8]. First, these regions would not be subject to appropriation of any kind, either public or private, national or corporate. Under the CHM doctrine, common space areas would be regarded legally as regions owned by no one, though hypothetically managed by everyone. Sovereignty would be absent, as would all its legal attributes and ramifications.

Second, it follows that under a CHM regime all people would be expected to share in the management of a common space area[9]. In other words, states or national governments would be precluded from this legal function, save as the representative agents of all mankind[8]. This purports to expunge national interests from the administration process. Thus, the CHM concept is meant not only to define the legal status of the deep seabed and its resources, but also to govern the whole system and machinery for the management of those resources.

Third, if natural resources were exploited from a common space area, any economic benefits derived from those efforts would be shared internationally[10]. A fourth important element in a CHM regime maintains that use of the area must be limited exclusively to peaceful purposes. In effect, this would demilitarize the area to ensure use for peaceful purposes.

A final characteristic defining an international area under a CHM status concerns the conduct of scientific research in the region. Such research would be freely and openly permissible, so long as the environment of the common space area was in no way physically threatened or ecologically impaired.

All these principles of (a) inappropriability and indivisibility of the seabed beyond national jurisdiction, (b) international regulation of the exploration and exploitation activities of this common property, (c) equitable distribution of benefits among all countries irrespective of the geographical location of states, (d) freedom of access, use and navigation, (e) use of the seabed only for peaceful purposes, and (f) international cooperation, were supposed to be subsumed in the generic term 'common heritage of mankind' and emphasized by most of the countries in different words and with varying emphasis[11].

The United Nations resolutions

Since the introduction of Malta's proposal, a number of UN General Assembly resolutions were passed that emanated from the seabed committee. However, two of these resolutions, namely the 'Moratorium Resolution' and 'Declaration of Principles Governing the Seabed' are considered to be most important and of particular value in strengthening the common heritage concept for the recovery of manganese nodules.

The so-called Moratorium Resolution prohibited deep seabed exploitation activity (but not exploration) until the establishment of an international regulatory authority. This resolution was particularly controversial as it ran directly counter to the *res nullius* principles espoused by many industrial nations (ref. 1, p. 134).

The strong opposition of the principal technologically advanced countries to the Moratorium Resolution was not only because of the restriction for an indefinite time on the exploitation of deep seabed resources, but also for the more accessible oil and gas reserves in the continental margins which, according to the definition of the conti-

nental shelf in the 1958 Convention, could still be considered to a great extent outside the limits of national jurisdiction and therefore a part of the CHM (ref. 6, p. 131). For the Group of 77 (the developing countries), the Moratorium Resolution was a firm step towards safeguarding of the CHM from any encroachment.

The second and perhaps the most important among the UN resolutions emanating from the seabed committee was the 1970 'Declaration of Principles Governing the Seabed'. Its purpose was to set forth the principles upon which a new and definitive legal regime could be based. Both the developed and developing countries voted for this resolution, and it represented a compromise from both the Group of 77 and the technologically advanced countries. The main reason for its general acceptability was its delphic construction[12].

The 'Declaration of Principles' resolution was of crucial importance for it served as the basis for negotiations between 1973 and 1982, which led to the provision now contained in Part XI of the 1982 Convention (ref. 5, p. 195). Essentially, it incorporated and refined the 1967 Pardo proposal. It states that the deep seabed and its natural resources are 'the common heritage of mankind' and that exploitation of those resources shall be carried out for the benefit of mankind as a whole, taking into particular consideration the interests and needs of the developing countries.

It provides that all activities regarding the exploration and exploitation of those resources shall be governed by 'an international regime to be established under a generally accepted international treaty of a universal character based upon the principles of the Declaration'. However, the 1970 Declaration does not expressly forbid or authorize the exploration for and the exploitation of the mineral resources of the deep seabed pending the establishment of a 'generally accepted treaty of an international character'.

At the time of its adoption, the US and several other ocean-mining states declared that it was not binding. These states reserved their rights to begin exploration and exploitation of the deep seabed on a non-exclusive basis with the rights of other states, until they became parties to an eventual international agreement.

The common heritage concept, from the time of its presentation at the 22nd Session of the General Assembly in 1967 until 1970 when the 'Declaration of Principles' was adopted, had two discernible features (ref. 6, p. 130). First, it was not accepted by all the countries involved. Secondly, those who had accepted it had different interpretations of this concept.

The developing and developed countries were divided over the issue of legal status of deep seabed and the system of the exploitation of deep sea resources, as envisaged in Malta's proposal and the subsequent UN resolutions. The developing countries (G-77) contended that there existed a legal vacuum in the deep seabed, and the concept of the CHM, which transcended *res nullius*, *res communis* and other concepts was to fill up that vacuum (ref. 6, pp. 122–123). The industrialized states, on the other hand, thought that the legal regime of the high seas or the principles of international law embodied in the charter of the UN were applicable to the deep seabed. They felt that the CHM concept is devoid of any legal content and is contrary to existing norms and principles of international law.

The principle of the CHM which underlies the 1982 Convention as a whole and the Part XI proposals in particular is not, as it is implemented in those proposals, reflective of the current customary international law of the sea[13]. However, it can be argued[13] that two central underlying ideas behind that concept are now widely accepted in the international community. They are (i) that the 'discovery and occupation' principle of the acquisition of the title to resources beyond the boundaries of national jurisdiction is now obsolete, and (ii) that the exploitation of what may be determined to be common heritage resources must in some form inure to the benefit of all members of the international community according to need. The most that can be postulated about the present status of the CHM concept is that it may indicate an emergent principle of international law[8].

The UNCLOS regime

Before deep seabed mining beyond national jurisdiction could proceed, a new and widely recognized legal regime governing the exploitation of nodules was necessary. The efforts to establish one was initiated after the Maltese proposal in 1967. From 1968 through 1973, this attempt took place within the UN Seabed Committee and under the auspices of UNCLOS.

Pursuant to the adoption of resolution 3067 by the General Assembly on 16 November 1973, the Seabed Committee was dissolved and the first session of the Law of the Sea Conference was convened in December 1973, with subsequent sessions taking place in the following years. The work of the conference was completed at the end of the 11th session on 30 April 1982 by adopting the present Convention (UNCLOS III).

The Convention defines the legal status of the deep seabed on the basis of the 'common heritage principle' and this finds formal expression in Part XI and the changes by way of the Implementation Agreement of 1996 in the Convention. Part XI on the deep seabed is by far the largest part of the Convention. It contains 59 articles, from articles 133 to 191; and lays down general principles governing the area of the deep seabed (articles 136–149); development of the resources of that area (articles 150–155); the ISA (International Seabed Authority), articles 156–183; and settlement of disputes (articles 186–191).

Out of nine annexes to the Convention, two are directly related to the question of deep sea mining. In addition, there are six more annexes appended to the Final Act of the Convention. The first of these annexes contains four resolutions which were adopted at the final session of the

conference. Resolution I concerns the establishment of the Preparatory Commission (PrepCom) for the Seabed Authority and the Law of the Sea Tribunal. Resolution II provided for the protection of the preparatory investment in pioneer activities relating to polymetallic nodules.

Part XI, Annexes III and IV, and Resolutions I and II together with the Implementation Agreement constitute the law for deep seabed mining as negotiated and agreed upon by the overwhelming majority at UNCLOS III and thereafter in the Implementation Agreement.

The UNCLOS regime governs all activities connected with exploration and exploitation of mineral resources in the 'area'. The area is defined as the 'seabed and ocean floor and subsoil thereof beyond national jurisdiction[1] (article 1). The area which comprises about 60% of the whole seabed and its resources is declared the CHM in pursuance of which access to its resources is regulated by ISA.

The Convention entered into force on 16 November 1994 in accordance with article 308, which provides for entry into force 12 months after the date of deposit of the sixtieth instrument of ratification or accession. This has come about by virtue of the fulfillment of this provision beginning in December 1982 and being completed on 16 November 1993 after the sixtieth ratification. India's non-ratification of the Convention until 29 June 1995 was not a deliberate attempt and did not therefore reflect its position vis-à-vis any of the Convention provisions.

The industrialized States with deep seabed mining interests, particularly the US, UK, Germany, Japan, Italy, Russia, France and the Netherlands did not ratify because of their dissatisfaction with Part XI and the related Annexes on the deep seabed mining regime. The US had made known its displeasure and requirements almost a year before the Convention was opened for signature and ratification in December 1982. In the interim, the silence and non-anticipation of the US in the PrepCom meetings and continued uncertainty over non-ratification by the industrialized States, accompanied by the lack of necessity and compulsions for manganese nodule constituent minerals, had largely contributed to the lack of initiative to respond to the changes sought by the industrialized States.

The sustained position of the industrialized States had over the years led to an offer of dialogue and probable major alterations to Part XI from the G-77 in September 1989, later transferring itself into an United Nations initiative and informal consultation of June 1990. The outcome of this crucial dialogue is the 1994 draft Agreement[14] relating to the implementation of Part XI of the Convention and a draft resolution[15] by which the UN General Assembly would adopt the Agreement and urge States to adhere to it and to the Convention[16]. The resolution was adopted by the General Assembly on 28 July 1994 by a vote of 121-0-7 (ref. 17). The prospect of the Convention coming into force in November 1994 had quickened the pace of developments towards the successful completion of the Agreement.

The implementation agreement

The Resolution and the Agreement seek to achieve universal participation and widespread ratification to the Convention by way of modifications and improvements to Part XI in recognition of the demands of the industrialized States and a growing worldwide reliance on market-oriented principles accompanied by the economic and political changes of the intervening period between 1983 and 1994. The Agreement consists of a preamble, ten articles and an annex divided into nine sections. Dwelling on the relationship between the Agreement and Part XI, article 2 of the Agreement provides that it is to be interpreted and applied together with Part XI as a single instrument and in the event of any inconsistency between them, the Agreement will prevail.

As for application of the Agreement for ratifying States after the adoption of the Resolution on 28 July 1994, article 4 of the Agreement provides that 'after the adoption of this Agreement, any instrument of ratification or formal confirmation of or accession to the Convention shall also represent consent to be bound by this Agreement' and that 'no State or entity may establish its consent to be bound by this Agreement unless it has previously established or establishes at the same time its consent to be bound by Convention'. Accordingly, India's ratification of the Convention on 29 June 1995 represents its consent to be bound by the Agreement as well.

For State Parties to the Convention prior to adoption of the Agreement on 28 July 1994, the Agreement provides liberal terms for provisional application by these and other later ratificants and affords States several years to become party to both the Agreement and the Convention[18]. With a large number of States, including the industrialized countries accepting the provisional application, one may expect that Part XI will be implemented from the outset in accordance with the new Agreement and with representative participation in decision-making organs[19]. The Agreement has since come into force on 28 July 1996 (in accordance with article 6(1) of the Agreement) with provisional application of the Agreement coming to an end on the same day (in accordance with article 7(3) of the Agreement)[20].

The Agreement establishes general principles in those areas which relate to the objections of the industrialized States on economic and commercial grounds. These principles will be the basis for rules and regulations establishing a management regime for commercial production, when interest in commercial mining emerges[21]. The Agreement retains the institutional outlines of Part XI, but scales back the structure and links the initiation and operation of institutions to the actual development of concrete interest in seabed mining. Both the Convention (articles 312–316) and the Agreement (Annex, Section 4) have provisions for their amendment. This is of great general importance, because the invention and develop-

ment of quasi-legislative techniques are essential to the future well-being of international law in general (ref. 21, pp. xii–xiii; Foreword by Jennings, Robert, Y.).

The re-evaluation of Part XI

The major changes to Part XI were inevitable. It depended on the ability to make encouraging moves and compromises to be able to satisfy the long-held demands of the industrialized States. Though an initial response to the major policy shift demonstrated by the G-77 could be mistaken for a dilution of the CHM principle as was originally envisaged in the Convention, a careful study indicates the realities and wisdom that the Agreement has since embraced. Considering the sustained reaction of the industrialized States and the importance of their participation in the Convention and, if the past events, experiences and developments in the intervening period between 1982 and 1994 are any guide, then the changes asked and made to Part XI were a foregone conclusion. The experiences of the industrialized States; and success with market-oriented principles, and dissatisfaction with large international organizations for reasons of maintenance expenses; and their own expectations from Part XI were in sharp contrast to the G-77 concept of the CHM.

The Agreement is a substantial improvement and relief for pioneer and potential investors due to the major concessions made and the near-universal acceptance it has brought about. This could also be sufficient reason to attract investment in areas outside the application sites held by the pioneer investors and the ISA.

Conclusion

The CHM concept has given a rationale and an identity to the international seabed area beyond national jurisdiction and saved it from being drowned in the attempts at appropriation. The development and emergence of the concept is the nearest that could have happened towards the fair settlement of resources in the region. India has gained to the extent that the availability of international seabed area under the CHM concept has made it possible to acquire an undisputable title to the resources on the basis of norms and regulations laid down by the ISA. The surrender of 75,000 km^2 i.e. 50% of the allotted area is in fulfillment of the obligations for access to the resources that lay in Indian claim of the international seabed area. The deep seabed regime and the amendments made therein have removed the uncertainty and the 'discovery and occupation' principle in pursuit of undesirable titles to resources in the seabed area beyond national jurisdiction, thus paving the way for opportunities and a possible share from the profits for developing countries.

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