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A new interpretation of the common heritage of mankind in the context of the international law of the sea

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ABSTRACT

After Arvid Pardo recommended that the seabed and subsoil beyond national jurisdiction should be regarded as Common Heritage of Mankind (hereinafter CHM), put forward the proposal of an international seabed system, the principle of CHM was perceived as the foundation of a specific marine legal regime. Later, the principle of CHM was stipulated, both in the General Assembly Resolution 2749 (XXV) and UNCLOS. However, there is no clear definition of its legal connotations. This paper analyzes the legal connotation of CHM by reviewing relevant international legal documents. In the context of the international law of the sea, the legal connotations of CHM are as follows: the subject of CHM is the aggregation of all States. Marine resources, which are seen as CHM, have the characteristics of extraterritoriality, sharing and legality. There are four main elements of CHM based on content elements considered: Firstly, no State shall claim or exercise sovereignty or sovereign rights over marine resources, which are seen as CHM, nor shall any State or natural or juridical person appropriate any part thereof. Secondly, it must be used for the benefit of all mankind, taking into account the interests and needs of developing States in particular. Thirdly, it must be used exclusively for peaceful purposes. Fourthly, take into account the protection of the marine environment and the sustainable use of marine resources. With the modification and refinement of the Area system, the connotations of CHM have been evolving. The principle of CHM can provide theoretical basis for some marine management approaches which is of significance for current and future international law-making and can lay the foundation for new regimes of international law of the sea in the future.

1. Introduction

With the expansion of marine activities in areas beyond national jurisdiction (hereinafter ABNJ),[1] the conservation and sustainable use of marine biodiversity of ABNJ (hereinafter BBNJ) has increasingly attracted the attention of the international community. Negotiations for the international legally binding instrument (hereinafter ILBL) under the *1982 United Nations Convention on the Law of the Sea*[2] (hereinafter UNCLOS) on the conservation and sustainable use of BBNJ are proceeding. Whether the ILBL applies the principle of freedom of the high seas or the principle of Common Heritage of Mankind (hereinafter CHM), was also central to the discussion for some delegates (Tiller et al., 2019). Developed States believe that, the principle of freedom of the high seas should be applied, while developing States advocate the application of the principle of CHM. In addition, some States, such as South Africa, advocate the application of the principle of freedom of the high seas in the high seas part and the principle of CHM in the Area part (Earth Negotiations Bulletin, 2018).[3] The application of different principles will determine the establishing direction of the ILBL. However, it can be seen that, the principle of CHM has the potential to become the foundation for the construction of the ILBL.

At present, although the principle of CHM has institutional

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[1] ABNJ includes the high seas and the Area. The area refers to the sea-bed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction.See the 1982 *United Nations Convention on the Law of the Sea*, article 1.1(1).

[2] *United Nations Convention on the Law of the Sea*, 10 December 1982, came into force16 November 1994.

[3] Summary of the First Session of the Intergovernmental Conference on an International Legally BindingInstrument under the UN Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biodiversity of Areas Beyond National Jurisdiction: 4–17 September 2018, Earth Negotiations Bulletin, Vol. 25 No. 179, p.3.http://enb.iisd.org/download/pdf/enb25179e.pdf, Accessed date: 5 July 2019.

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foundations in the international law of the sea,[4] the connotation of the principle has evolved significantly in the Area system. The international community does not have a unified understanding of this principle, nor does it have a clear definition of its legal connotations. This situation is likely to lead to arbitrariness in the interpretation of existing systems by some States in accordance with their own interests. If the ILBL finally chooses the principle of CHM as its foundation, the uncertainty in the definition of CHM is also likely to lead to doubts about the quality of the legislation. In addition, the principle of CHM also has an institutional foundation in the international space law.[5] Although the international space law is also a branch of international public law, in view of its obvious differences from the normative object of the international law of the sea, the interpretation of CHM needs to be carried out in the different fields respectively.

In view of above-mentioned concerns, there is a need to clarify the connotation and significance of the principle of CHM, as regards the international law of the sea. This article discusses the matter from the following three aspects: Firstly, the paper clarifies the history of incorporating the concept of CHM into the international law of the sea and determines the background, purpose and original connotation of introducing the concept in the field of the law of the sea. Secondly, the paper interprets the legal connotations of CHM from the existing international law of the sea and extracts its core elements by reviewing relevant international legal documents. Thirdly, it summarises the development of CHM in the existing international law of the sea and anticipates its significance in the construction of new modern law of the sea systems. The paper concludes by suggesting that, the connotations of CHM have been evolving and the principle will become the foundation of future regimes of the international law of the sea.

2. Historical reviews for the term of CHM in the context of the international law of the sea

In the field of the international law of the sea, the idea of CHM has a long history. As early as the 19th Century, Andres Bello, a Latin American jurist, argued that, marine resources could be considered as the inherited property of mankind; at the end of the 19th Century, a French jurist, A.G. de Lapradelle, put forward the idea that, the ocean was the heritage of mankind and advocated that the ocean and its resources should be managed by the international community; in the 1920s, Jose Leon Suarez, an Argentine jurist, also advocated that the ocean be regarded as the heritage of mankind; during the First United Nations Conference on the Law of the Sea, Prince Wan Waithayakon of Thailand, the President of the Conference, proposed that, the ocean was the common heritage of mankind and the law of the sea should ensure that, the inherited property was preserved for the well-being of all (Nandan and Mao, 2009). The above scholars all held a worthwhile vision, regarding considering the ocean as a whole as CHM, rather than limiting the scope of application of CHM to ABNJ.

The direct impetus for the institutionalisation of the concept of CHM in the field of the international law of the sea, came from the efforts of developing States in the establishment of the Area regime. In the 1960s, the development of international seabed polymetallic nodules attracted much attention from the international community (Arnold, 1975). Developing States advocated the establishment of the Area system, this differing from the high seas system and the formation of a fair and reasonable new order of resource development, which could enable the international seabed and its resources to serve the interests of all mankind. It could prevent some maritime powers from exploiting the international seabed resources predatorily with their financial and technological advantages, and to ensure that the exploitation of the international seabed and its resources would be beneficial to mankind as a whole (Larschan and Brennan, 1983). In 1967, Arvid Pardo, Malta's ambassador to the United Nations, recommended to the General Assembly that, the seabed and subsoil beyond national jurisdiction should be regarded as CHM(Lodge, 2012), upholding that it should not be owned by any State but used for universal peaceful purposes (Nurbintoro and Nugroho, 2016). Pardo also suggested that, such resources should be developed through effective international systems.[6] The proposal aroused general concern, yet great interest among the international community (Gorove, 1972), leading to the adoption of General Assembly Resolution 2749 (XXV), at the 25th session of the United Nations General Assembly in 1970, which declared the International Seabed Area and its resources as CHM and further defined its legal status.[7] Although General Assembly Resolution 2749 (XXV) is not legally binding, it is of great significance in incorporating the principle of CHM into the international law of the sea and developing and improving the Area system, on the basis of this principle.

At the Third United Nations Conference on the Law of the Sea (1973–1982), the principle of CHM was included in the negotiations for the package deal. It was finally incorporated into the Preamble and Part XI of UNCLOS. Based on General Assembly Resolution 2749 (XXV), UNCLOS defines the legal attributes of the Area and its resources as CHM[8] but these provisions are difficult to advance in practice, due to opposition from some developed States (Lodge, 2012). In order to make UNCLOS universally accepted by the international community, the *1994 Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1, 982*[9] (hereinafter 1994 Implementation Agreement), revised the Area system on the Convention. It promotes the implementation of the Area system, based on the principle of CHM, by weakening the status of the Enterprise Department of the International Seabed Authority (hereinafter Enterprise Department), reducing the obligations of developed States, meeting the technical and financial claims of developed States. Subsequently, the

[4] United Nations Convention on the Law of the Sea, Part Xl.

[5] Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Article 11.

[6] While proposing that the ABNJ seabed and subsoil be declared as CHM, Pardo also put forward the following propositions: (1) the seabed and subsoil should not be acquired by any State; (2) the use of the seabed and subsoil and the exploitation of its resources should be aimed at protecting all human interests; (3) the benefits derived from the use and exploitation of the seabed and subsoil should be mainly used to assist poor, developing countries; (4) Seabed and subsoil should be used exclusively for peaceful purposes; (5) International institutions should be established, to regulate, supervise and manage activities on the seabed and subsoil, on behalf of States. The Nature of the Principle of Common Heritage of Mankind and Its Implementation in the Area system: A Natural Law Perspective (in Chinese). Journal of China University of Geosciences (Social Science Edition)15 (3), 40.

[7] General Assembly Resolution 2749 (XXV) defines the legal status of the international seabed area and its resources as follows: (1) the seabed, the ocean floor and its subsoil beyond national jurisdiction (hereinafter the Area), and the resources of the Area are the Common Heritage of Mankind; (2) the Area and its resources shall not be claimed or exercised sovereignty or sovereign rights over by any State, and no State or individual, natural or juridical person, by any means, shall take possession of the Area t and its resources; (3) No State or individual, natural or juridical person shall claim, exercise or acquire the rights of the Area and its resources in violation of the rules established in General Assembly Resolution 2749 (XXV) and the international mechanisms to be established. (4) Exploration and exploitation of the Area and its resources, including other related activities, shall be subject to the supervision of the forthcoming international statute. International Law of the Sea (in Chinese). Tsing Hua University Press, p. 251.

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

[9] Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 4 December 1995, came into forceon11 December 2001.

International Seabed Authority successively formulated the *2000 Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area*[10] (hereinafter 2000 Regulations), the *2010 Regulations on Prospecting and Exploration for Polymetallic Sulfides in the Area*[11] (hereinafter 2010 Regulations) and the *2012 Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area*[12] (hereinafter 2012 Regulations), which established a set of relatively complete and systematic rules and procedures for the exploration and exploitation of resources of the Area. As a result of enriching the connotation of CHM, the Area system is strengthened and more robust, as well as more practicable.

Part XI of UNCLOS is based on the principle of CHM,[13] which is one of the examples of the evolution of thought regarding the international law of the sea. Since the era of Grotius, the framework regarding the law of the sea has, for many years, been based on the doctrine of freedom of the sea (Churchill and Lowe, 1999). Later, the factors of national sovereignty and sovereign rights began to spread across the vast oceans. In the ABNJ, the principle of the freedom of the high seas, which has long been regarded as the standard, has gradually been replaced by the principle of CHM(Shaw, 2003). At present, although the principle of CHM has not yet informed or been adopted by international customary law, it has been widely accepted and recognised by the international community because it has the institutional basis of UNCLOS.[14] It provides a good example for the international community, to encourage abandoning the idea of, 'first come, first served', and advocates peaceful and cooperative development (Liao, 2018).

3. Analysis of the legal connotations of CHM in the context of the international law of the sea

With regard to a definition of the principle of CHM, it was not defined at two conventions, namely, the 1979 *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*[15] and UNCLOS. The legal connotations of CHM have not yet been universally recognised by international law academia.

The regulative object of law is to beneficially influence social relations. Social relations would become legal relations, after being regulated by law. From another perspective, static legal regulations should be activated in legal relations. Thus, it would seem to be better methodology to consider the theory of legal relations as an analytical tool, to analyse the legal connotations of the objects of international law, with the legal attribute of CHM. UNCLOS and the 1994 Implementation Agreement have stipulated the legal relations regarding the Area and its resources. In this article, the legal connotations of CHM have been examined from three aspects of legal relations, namely, subject, object and content (Zhang, 2014). In reviewing the relevant international legal instruments regarding the oceans, the legal connotations of CHM can be analysed and summarised in the context of the international law of the sea as follows.

3.1. Subject elements

The subject of legal relations refers to those who enjoy rights and fulfil obligations in legal relations. With regards to the CHM, what is meant by 'mankind'? Does this expression encompass future generations? (Owolabi, 2013). These issues remain subject to dispute. Theoretically, the concept of mankind mentioned above is designed to treat all without discrimination. From the viewpoint of the eligible subject of international law, mankind, as a whole, is not the subject of international law, which is a collective concept that transcends space and time (Li, 2018). It is more appropriate to regard the subject of legal relations relating CHM as the aggregation of all States. As the most common and important subject of international law, States are the medium of mankind as a whole. Marine resources, with the legal attribute of CHM, are the shared resources of mankind, and the development and management of these resources needs to be indirectly conducted by States. In addition, no State can take unilateral action to obtain benefits from the resources with the legal attribute of CHM, according to the understanding of the subject as being the aggregation of all States (Li, 2017). A further question to address is how States, in practice, can explore and regulate marine, natural resources with the legal attributes of CHM. The existing law of the sea system is to encourage the joint participation of all States, through the establishment of an international organisation, namely, the International Seabed Authority. Article 137 (2) of UNCLOS stipulates that, all rights to the resources of the Area are vested in mankind as a whole, on whose behalf the International Seabed Authority shall act. Article 156 provides that, all States Parties are *ipso facto* members of the International Seabed Authority. Article 157 provides that, the International Seabed Authority is the organisation through which State Parties shall, in accordance with Part XI, organise and control activities in the Area, particularly with a view to administering the resources of the Area. In order to guarantee implementation of the management power of the International Seabed Authority and to ensure that the resources of the Area benefit all mankind, the operational mechanism of the International Seabed Authority is specified in detail, in Part XI, Sections III, IV and Annexes II and III of UNCLOS.

3.2. Object elements

The object of legal relations refers to the intermediary which connect the subject of legal relations creating the rights and obligations and the object to which the rights and obligations of the subject of the legal relations point, affect and act upon (Zhang, 2011). Differing from property, in the sense of private law, resources with the legal attribute of CHM are the sources of human property and the object of international law but not the object of ownership. Thus, States should not claim ownership over them, nor pre-empt for a claim of *res nullius*. In addition, reconsidering the institutionalised history of CHM in the field of the international law of the sea and according to the provisions of UNCLOS, the concept of CHM is limited in the ABNJ. Through researching relevant international legal documents and theories, this article holds that, marine natural resources, with the legal attribute of CHM, have at least the following characteristics.

3.2.1. Extraterritoriality

With the establishment of various maritime regimes stipulated by four 1958 Geneva Conventions on the Law of the Sea[16] and UNCLOS, there is no institutional basis for the previous view that the ocean as a whole, is the CHM. In the maritime areas under national jurisdiction, it is impossible to have the space of CHM, for reasons of national sovereignty and sovereign rights. The General Assembly Resolution 2749 (XXV) and UNCLOS, both apply the principle of CHM in the Area which belongs to ABNJ. At present, the ABNJ, such as polar, deep sea and the Area, have become frontiers for States in expanding strategic resources

[10] Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, 13July 2000.

[11] Regulations on Prospecting and Exploration for Polymetallic Sulfides in the Area, 7May 2010.

[12] Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area, 27 July 2012.

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

[14] Up to now, there are 168 States Members of the UNCLOS. https://www.un.org/Depts/los/reference_files/status 2018.pdf, Accessed date: 3 April 2019.

[15] Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, 5December 1979, came into force on 11 July 1984.

[16] The 1958 four Geneva Conventions include as follows: The 1958 Convention on the Territorial Sea and the Contiguous Zone; the 1958 Convention on the High Seas; the 1958 Convention on Fishing and Conservation of Living Resources; the 1958 Convention on the Continental Shelf.

and seeking competitive advantages. According to the existing international law formed by the international community, most maritime areas at frontiers are the common property of mankind. Among the aforementioned, the Area and its resources have been clearly defined as the CHM by UNCLOS. From the perspective of intra-generational equity and inter-generational equity, it is historically necessary to regard some resources of ABNJ as being CHM.

3.2.2. Sharing

As to the development of marine natural resources with the legal attribute of CHM, it is necessary to ensure that the exploitation and utilisation opportunities of all States and meet the requirement of benefit-sharing. It is also a requirement that the developing States advocate the application of the CHM in the field of the international law of conflict at sea, in the interests of the sea. According to Article 141 of UNCLOS, the Area shall be open to all States. According to Article 150, CHM should be developed for the benefit of mankind as a whole and opportunities for States Parties to participate in the development of resources of the Area should be enhanced, with monopolisation of activities in the Area being prevented. In addition, since the development of these resources depends on the scientific, technological and financial conditions of some developed States, the dilemma between balancing development (efficiency) and sharing (equity) is also the focus of consideration in the establishing of relevant international legal regimes, which is reflected in Article 150 (2) (f) of UNCLOS.

3.2.3. Legality

As the property in the field of international law, resources with legal attribute of CHM are of the object of international law, which should be related to international relations and regulated by international law. International legal instruments are required to specify the type and legal status of such resources or to form customary international law, which should be modified or derogated from (Lehmann, 2007). Currently, only the Area and its resources, the moon and its natural resources are clearly defined as CHM, by conventions.[17] Moreover, Article 311 (6) of UNCLOS provides that, State Parties shall not amend or participate in any agreement derogating from the principle of CHM, as set forth in Article 136 of UNCLOS.

3.3. Content elements

The core content elements of legal relations include rights and obligations. Rights are the legal force for enjoying specific interests, while obligations are the legal requirements which have to be met (Wang, 2009). Reviewing the existing relevant regimes of the law of the sea, the legal connotation of CHM can be combined terms of content elements, as follows:

3.3.1. No sovereignty or sovereign rights, nor appropriation

Article 137 (1) of UNCLOS provides: 'No State shall claim or exercise sovereignty or sovereign rights over any part of the Area or its resources, nor shall any State or natural of juridical person appropriate any part thereof. No such claim or exercise of sovereignty or sovereign rights nor such appropriation shall be recognised'. Article 137 (3) provides: 'No State or natural of juridical person shall claim, acquire or exercise rights with respect to the minerals recovered from the Area except in accordance with this Part (Part XI of UNCLOS). Otherwise, no such claim, acquisition or exercise of such rights shall be recognised'. This element is the embodiment of the subject elements in content and is also determined by the extraterritoriality of the object elements.

3.3.2. Used for the benefit of mankind as a whole

The main purpose of the principle of CHM is to share resources, avoid exploitative opportunities, ensure substantive fairness and give priority to the interests and needs of developing States. According to Article 140 (1) of UNCLOS, activities in the Area shall be carried out for the benefit of mankind as a whole, taking into particular consideration the interests and needs of developing States. According to Article 140 (2), the International Seabed Authority shall provide for the equitable sharing of the financial and other economic benefits derived from activities in the Area, on a non-discriminatory basis. Furthermore, Article 144 of UNCLOS, as regards Transfer of Technology and Article 149 on Archaeological and Historical Objects, both refer to this element.

3.3.3. Used exclusively for peaceful purposes

Article 141 of UNCLOS provides: 'The Area shall be open to use exclusively for peaceful purposes by all States, whether coastal or landlocked, without discrimination and without prejudice to the other provisions of this Part (Part XI of UNCLOS)'. Article 143 (1) of UNCLOS provides: 'Marine scientific research in the Area shall be carried out exclusively for peaceful purposes and for the benefit of mankind as a whole, in accordance with Part XIII.' In addition, Article 146, Article 147 and Article 155 (2) of UNCLOS also refer to this element. The meaning of peaceful purposes should be understood under Article 301, that is, States Parties shall refrain from any threat or use of force against the territorial integrity or political independence of any State or in any other manner inconsistent with the principles of international law embodied in the Charter of the United Nations, rather than total prohibition of all military activities (Lodge, 2012).

3.3.4. Conservation and sustainable use

It is critical to take into account the protection of the marine environment and the sustainable use of marine resources while exploring and exploiting the CHM. Although the Part XI of UNCLOS does not specify this element, in the spirit of the Convention,[18] the term CHM concerns not only contemporary people but also the interests of future generations (Owolabi, 2013). The right of future generations to use marine natural resources with legal attribute of CHM should also be respected. It should be noted that, this does not mean that future generations are subjects of international law but advocates the maintenance of inter-generational equity.

4. Prospects for the development of CHM in the context of modern international law of the sea

Since Part XI of UNCLOS confirmed the principle of CHM, it has not been implemented in the field of the law of the sea. In response to this practical dilemma, on the basis of coordination and compromise between developed and developing States, the recent lawmaking of the law of the sea has made the legal connotations of CHM further evolve. The principle has the potential to become the foundation of future regimes of the international law of the sea.

4.1. The practical dilemma and connotations of the development of CHM

4.1.1. The practical dilemma of CHM

Although the principle of CHM has been confirmed by UNCLOS, thus far, it has not been implemented as expected.

Firstly, with the respect to the exploration and exploitation of mineral resources of the Area, UNCLOS establishes a parallel development system, to be overseen by the International Seabed Authority. On the one hand, the resources of the Area are to be developed by the Enterprise Department. On the other hand, the Contracting States or their

[17] See the United Nations Convention on the Law of the Sea, Article 136; Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Article 11(1).

[18] See the United Nations Convention on the Law of the Sea, Articles 145, 162, 165, etc.

enterprises could also develop the resources but they should transfer technology, provide funds and share the benefits with the International Seabed Authority. At the same time, they need to allocate a mining area with the same economic value (a reserved area) to the International Seabed Authority, when acquiring a mining area (a contract area).[19] According to the content of Pardo's proposal and the General Assembly Resolution 2749 (XXV), the development of the Area and its resources should be carried out by the representatives of the international governing bodies representing all mankind, that is, a single development system was advocated by developing States, during the Third United Nations Conference on the Law of the Sea. The parallel development system does not strictly implement the concept of CHM as mentioned above but itis a product of coordination and compromise between developing States and developed States, which is of practical significance. Even so, developed States, especially the United States, still believe that, the parallel development system imposes excessive obligations on the contracting parties and their enterprises, while the power allocation of the International Seabed Authority is inconsistent with its contribution (Zhou, 2012).

Secondly, with regard to the distribution of mineral resources income in the Area, UNCLOS adopts a single decision-making system of the General Assembly.[20] According to Article 173 of UNCLOS, the financial or other economic income of the International Seabed Authority shall first have its administrative expenses reimbursed and then, the remainder can be used in the following three ways: Firstly, the Assembly of the International Seabed Authority decides how to share the revenue equitably, for the benefits of mankind as a whole.[21] Moreover, the money will be used to provide the Enterprise Department with funds.[22] Finally, the funds will be used to compensate developing States.[23] This system is in line with the intentions of the CHM, namely, safeguarding the interests of mankind as a whole. Nonetheless, due to the absolute majority of developing States in the General Assembly, they have a greater voice, which has aroused the discontent and opposition of developed States.

For the above reasons, some developed States refuse to sign or ratify UNCLOS. In addition, developed States have obvious financial and technological advantages in the development of mineral resources of the Area. Lacking investment and technological research results in the stagnation of exploration and exploitation of mineral resources of the Area, which makes it difficult for UNCLOS to effectively implement the principles of CHM, even although UNCLOS is functioning.[24]

4.1.2. The connotation development of CHM

In response to the above mentioned practical dilemma, under the direction of the Secretary-General of the United Nations, developed and developing States held two rounds of consultations concerning the Area system during 1990–1994 and amended the provisions of Part XI of UNCLOS through the 1994 Implementation Agreement. In addition, the International Seabed Authority successively enacted 2000 Regulations, 2010 Regulations and 2012 Regulations, which now makes the Area system more specific and operational.

Firstly, in terms of the exploration and exploitation of mineral resources in the Area, the 1994 Implementation Agreement provides the way of 'joint venture', which increases the opportunities for developed States and their enterprises to establish joint ventures with the Enterprise Department, to explore and exploit in reserved areas. If a reserved area is proposed by a developed State or its enterprises, and the Enterprise Department has no intention of developing it, the former can explore and exploit it separately.[25] 2010 Regulations and 2012 Regulations proposed joint venture stock arrangements as an alternative, allowing developers to establish joint ventures with the Enterprise Department. If this approach is chosen, the exploration regulations no longer require developers to provide a 'reserved area', to the International Seabed Authority. Within the joint venture, the Enterprise Department is in a subordinate position, with no more than 50% of the shares. The advantages conferred by UNCLOS on the Enterprise Department gradually disappear. As a result, the development initiative of mineral resources of the Area is gradually being dominated by a few developed States. In addition, the 1994 Implementation Agreement abolished the mandatory obligation of developers to transfer technology[26] and provided funds to the Enterprise Department,[27] changed the payment regulations[28] and reduced the restrictions imposed by UNCLOS on developers.

Secondly, with regard to the distribution of income from mineral resources of the Area, the 1994 Implementation Agreement changed the decision-making mechanism of the International Seabed Authority from a single decision-making system of the General Assembly, to a mutual checks and balances between the General Assembly and the Council, thus, the Council makes recommendations on the distribution of income, which must be approved by the General Assembly.[29] Although the General Assembly retains the power of approval, the power of content design and procedure initiation of income distribution is transferred to the Council. As a result of developed States occupying a considerable proportion of seats on the Council, the voice of developed States is strengthened, at the expense of developing States (Zhang, 2018).

Although the 1994 Implementation Agreement and these three exploration regulations enacted by the International Seabed Authority amended the Area system established by Part XI of UNCLOS, making the legal connotations of CHM different from these of Pardo, to a great extent, the aforementioned core elements of the CHM have not changed (Qureshi, 2019). In the field of modern law of the sea, the connotations of the principle of CHM are still developing. Early interpretations of the principle of CHM mainly focus on publicity (Holmila, 2005). After the institutionalisation of the exploration and exploitation of resources of the Area, it becomes an urgent problem to reconcile the contradictions between the efficiency of resource development and the equitable distribution of interests.

4.2. The significance of the principle of CHM for the future regimes

The institutionalising of CHM not only presents a new legal concept in the field of the international law of the sea (Gorove, 1972) but also has an increasing impact on international legal relations and international economic order. UNCLOS and the 1994 Implementation Agreement, establish the specific system of CHM(Noyes, 2011–2012). In the ongoing activities of the international community, the legal connotations of CHM have been developing continuously. Despite this, however, it has not yet become the customary international law yet, in view of its position and

[19] United Nations Convention on the Law of the Sea, Annex III, Article 8.
[20] United Nations Convention on the Law of the Sea, Article 173.
[21] United Nations Convention on the Law of the Sea, Articles 140, 160(2) (g).
[22] United Nations Convention on the Law of the Sea, Article 170 (4).
[23] United Nations Convention on the Law of the Sea, Articles 10, 160 (2) (l).
[24] To date, the United States, as the strongest maritime power, has not ratified the UNCLOS, largely because it does not agree with the existing the Area system.
[25] Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, Annex, Section 2, paragraph 5.
[26] Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, Annex, Section 5.
[27] Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, Annex, Section 2, paragraph 5.
[28] Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, Annex, Section 8.
[29] Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, Annex, Section 3.

role in the ABNJ, it will, in turn, become the foundations of the establishing of new regimes of the international law of the sea (Liang, 1990).

A prominent example is the ILBL on BBNJ. The discovery of deep-sea hydrothermal vents in 1977, overturned the previous understanding that deep-sea bed was lifeless (Glowka, 1996). At present, the focus of the international community has shifted from seabed mineral resources to the marine biodiversity of ABNJ. The negotiation of ILBL is the latest institutional progress in the modern law of the sea. One of its core topics is ABNJ marine genetic resources, including benefit-sharing issues.

What regime applies to ABNJ marine genetic resources is a controversial and theoretical issue in the ILBL negotiation. At present, there are four propositions for this issue: developed States believe that the principle of high seas freedom should be applied; developing States advocate the application of the principle of CHM; some States such as South Africa advocate the application of the principle of high seas freedom on the high seas and the principle of CHM on the Area; other States and international organisations represented by the European Union advocate the ILBI negotiations do not depend on determining the legal status of ABNJ marine genetic resources.[30]

Though the draft text of an agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (hereinafter ILBL negotiation draft)[31] does not mention CHM as an overarching principle, the elements of CHM are all presented in the draft. Firstly, in terms of the subject elements, the Part VI of the ILBL negotiation draft establishes the institutional arrangements for choosing the Conference of the Parties model. Article 9 (1) provides that: "Activities with respect to marine genetic resources of areas beyond national jurisdiction may be carried out by all States and their natural or juridical persons under the conditions laid down in this Agreement and with due regard for the rights, obligations and interests under the Convention." Secondly, in terms of object elements, Articles 1 (4), 3 (1), 8 (1) of the ILBL negotiation draft define the geographical scope of marine genetic resources as ABNJ, and Articles 8 (2) (a), 8 (3) (a) define marine genetic resources from material scope and temporal scope, which conforms to the characteristics of extraterritoriality and legality analysed above. Article 9 (1) also reflects the characteristic of sharing. Thirdly, in terms of content elements, Article 9 (3) provides: "No State shall claim or exercise sovereignty or sovereign rights over marine genetic resources of areas beyond national jurisdiction, nor shall any State or natural or juridical person appropriate any part thereof. No such claim or exercise of sovereignty or sovereign rights nor such appropriation shall be recognised." Article 9 (4) provides: "The utilisation of marine genetic resources of areas beyond national jurisdiction shall be for the benefit of mankind as a whole, taking into consideration the interests and needs of developing States, in particular the least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States, coastal African States and developing middle-income countries." Articles 9 (5) provides: "Activities with respect to marine genetic resources of areas beyond national jurisdiction shall be carried out exclusively for peaceful purposes." Articles 2 provides: "The objective of this Agreement is to ensure the long-term conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction through effective implementation of the relevant provisions of the Convention and further international cooperation and coordination."

It should be noted that, the connotation of CHM is still evolving in the ILBLnegotiation. For example, unlike the restrictions on mineral resources development in the Area regime, the access of ABNJ marine genetic resources should be moderately loosened in order to stimulate the enthusiasm of developed States for development and utilisation of the ABNJ marine genetic resources, and to benefit the international community through benefit sharing.

5. Conclusion

In the field of the international law of the sea, the idea of CHM has a long history. However, the principle of CHM began to be perceived as the foundation of a specific regime of the international law of the sea after Arvid Pardo put forward the proposal of an international seabed system in 1967. Then UNCLOS and the1994 Implementation Agreement established the Area system based on the principle of CHM. In the context of the international law of the sea, by reviewing relevant international legal documents, the legal connotations of CHM are as follows: The subject of CHM is the aggregation of all States. Some marine resources, which are regarded as CHM, have the characteristics of extraterritoriality, sharing and legality. There are four main elements of CHM based on content elements involved: Firstly, no State shall claim or exercise sovereignty or sovereign rights over marine resources, which are seen as CHM, nor shall any State or natural or juridical person appropriate any part thereof. Secondly, it should be used for the benefit of all mankind, including taking into account the interests and needs of developing States. Thirdly, it should be used exclusively for peaceful purposes. Fourthly, it is essential to achieve the principle of the intergenerational equity required for the protection of the marine environment and the conservation of marine resources. In view of the predicament of the principle of CHM in the practices of UNCLOS, the 1994 Implementation Agreement and the three exploration regulations successively formulated by the International Seabed Authority, have revised and refined the Area regime. With the modification and refinement of the Area regime, the connotations of CHM have been evolving. Moreover, the principle of CHM can provide theoretical basis for some marine management approaches such as marine spatial planning, transboundary conservation initiatives and marine parks, which is of significance for current and future international law-making. The principle of CHM will become the foundation of future regimes of international law of the sea.

From the perspective of emergence and development of CHM in the field of the international law of the sea, the current situation includes as a result of the efforts and struggles of developing States in advocating the construction of a fair and reasonable new international economic order and reflects the relationships between developed and developing States, in the interests of the sea. In the construction of modern law of the sea, it is of vital to balance the contradictions between fairness and efficiency. The principle of CHM aims at safeguarding public interests and the equitable sharing of marine interests, however, if there is an overemphasis on fairness and this neglects the development of incentive mechanisms, it may sacrifice efficiency and even lead to a few developed States not supporting the principle, leaving aside constraints on many exploiting ABNJ marine resources for themselves. In view of this, whether regimes of international law of the sea formed under the principle of CHM are actually conducive to the fair development and rational distribution of resources, poses a practical problem, which can only be resolved by achieving consensus.

[30] Summary of the First Session of the Intergovernmental Conference on an International Legally Binding Instrument under the UN Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biodiversity of Areas Beyond National Jurisdiction: 4–17 September 2018, Earth Negotiations Bulletin, Vol. 25 No. 179, p.3. http://enb.iisd.org/download/pdf/enb25179e.pdf, Accessed date: 5 July 2019.

[31] UN, Draft text of an agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (A/CONF.232/2019/6),Intergovernmental Conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, Third session, New York, 19–30 August 2019. https://undocs.org/en/a/conf.232/2019/6, Accessed date: 22 July 2019.

Declaration of competing interest

This is a short statement to confirm that there is no conflict of interest for this piece of work. All authors agree with the terms and the name order that places in the paper.

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