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**Equitable benefit sharing in the exploitation of common heritage of mankind areas according to the provisions of UNCLOS 1982: current situation, challenges and prospects**

**Partilha equitativa de benefícios na exploração das áreas de patrimônio comum da humanidade segundo as disposições da CNUDM de 1982: situação atual, desafios e perspectivas**

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THE COMMON HERITAGE OF MANKIND IN  
INTERNATIONAL LAW: PAST, PRESENT AND FUTURE

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# Equitable benefit sharing in the exploitation of common heritage of mankind areas according to the provisions of UNCLOS 1982: current situation, challenges and prospects\*

## Partilha equitativa de benefícios na exploração das áreas de patrimônio comum da humanidade segundo as disposições da CNUDM de 1982: situação atual, desafios e perspectivas

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### Abstract

The Common Heritage of Mankind, referred to as “the Area” under the 1982 United Nations Convention on the Law of the Sea, constitutes a global asset collectively owned by humanity. It cannot be claimed, possessed, or owned by any state, organisation, or individual. The exploration and exploitation of the Area's resources must be conducted solely for the benefit of all humankind, and the International Seabed Authority administers the financial and economic benefits of these activities to ensure their equitable distribution. Some studies have shown that the practices of resource exploitation in the Area and the operations of the International Seabed Authority have exposed significant challenges in implementing the principle of equitable benefit sharing among countries. Smaller States, particularly those with limited scientific, technological, and financial resources, often face systemic disadvantages in accessing the benefits derived from the Area. Consequently, international legal reforms are imperative to ensure the fair and sustainable distribution of benefits derived from this global commons. Based on this practical context, to clarify the legal issues and international practices related to ensuring the principle of equity in the exploration, exploitation, and distribution of benefits among nations in the Area, as well as to guarantee that the exploitation and use of resources in the Area are fair and sustainable, this article will first examine the provisions of the United Nations Convention on the Law of the Sea and other pertinent international laws regarding the legal status of the common heritage of mankind and the principle of equitable benefit sharing by combining various scientific research methods. It will then analyze the International Seabed Authority's role in implementing a fair benefit-sharing system. Additionally, the article will address the primary challenges faced in achieving equitable benefit sharing within the common heritage framework. Finally, it will propose recommendations to foster equitable and sustainable benefit-sharing among countries.

**Keywords:** UNCLOS 1982; common heritage of mankind; equitable benefit sharing; ISA; deep seabed resources.

tadas recomendações para promover uma partilha de benefícios equitativa e sustentável entre os países.

**Palavras-chave:** CNUDM 1982; patrimônio comum da humanidade; partilha equitativa de benefícios; AIFM; recursos dos fundos marinhos profundos.

## Resumo

O Patrimônio Comum da Humanidade, referido como “a Área” na Convenção das Nações Unidas sobre o Direito do Mar de 1982 (CNUDM), constitui um bem global de titularidade coletiva da humanidade. Não pode ser reivindicado, possuído ou apropriado por qualquer Estado, organização ou indivíduo. A exploração e o aproveitamento dos recursos da Área devem ser realizados exclusivamente em benefício de toda a humanidade, sendo a Autoridade Internacional dos Fundos Marinhos responsável por administrar os benefícios financeiros e econômicos dessas atividades para garantir a sua distribuição equitativa. Estudos demonstram que as práticas de exploração de recursos na Área e as operações da Autoridade Internacional dos Fundos Marinhos revelam desafios significativos na implementação do princípio de partilha equitativa de benefícios entre os países. Estados menores, especialmente aqueles com recursos científicos, tecnológicos e financeiros limitados, frequentemente enfrentam desvantagens sistêmicas no acesso aos benefícios derivados da Área. Consequentemente, reformas jurídicas internacionais mostram-se imprescindíveis para assegurar a distribuição justa e sustentável desses benefícios. Com base nesse contexto prático, e visando clarificar as questões jurídicas e as práticas internacionais relacionadas à garantia do princípio da equidade na exploração, no aproveitamento e na distribuição de benefícios entre as nações na Área, bem como assegurar que o uso e a exploração de seus recursos sejam justos e sustentáveis, o presente artigo examinará inicialmente as disposições da CNUDM e de outros instrumentos internacionais pertinentes quanto ao estatuto jurídico do patrimônio comum da humanidade e ao princípio da partilha equitativa de benefícios, combinando diversos métodos de investigação científica. Em seguida, analisará o papel da Autoridade Internacional dos Fundos Marinhos na implementação de um sistema justo de partilha de benefícios. Adicionalmente, abordará os principais desafios enfrentados na concretização da partilha equitativa de benefícios no âmbito do patrimônio comum. Por fim, serão apresen-

## 1 Introduction

### 1.1 The term “Common Heritage of Mankind”

The Area means the seabed and subsoil of the submarine areas beyond the limits of national jurisdiction<sup>1</sup>. Reflecting on the history of the formation of the 1982 Convention on the Law of the Sea (hereinafter abbreviated as UNCLOS), Tullio Scovazzi asserts in his research that

while other significant aspects of the United Nations Convention on the Law of the Sea, such as the exclusive economic zone and the regulations for protecting the marine environment, have evolved naturally within international maritime law, the concept of the common heritage of mankind is revolutionary. This concept introduces a third type of regime that differs from the traditional sovereignty applied in territorial waters and the freedom that governs the high seas<sup>2</sup>.

The term “Common Heritage of Mankind” (hereinafter abbreviated as CHM) is a key concept and principle in environmental law and the law of the sea. It asserts that certain areas and resources are the collective property of all humanity. This principle emphasizes that these resources should be utilized for the benefit of everyone, taking into account the needs of future generations and the interests of developing countries<sup>3</sup>. In case of a dispute, the international dispute resolution

<sup>1</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*: UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 1.

<sup>2</sup> SCOVAZZI, T. The concept of common heritage of mankind and the genetic resources of the seabed beyond the limits of national jurisdiction. *Agenda Internacional*, year 14, n. 25, p. 11-14, 2007.

<sup>3</sup> MICKELSON, Karin. Common heritage of mankind as a limit to exploitation of the global commons. *European Journal of International Law*, v. 30, n. 2, p. 635-663, May 2019. TLADI, Dire. The common heritage of mankind in the proposed implementing agreement. In: NORDQUIST, Myron H.; MOORE, John Norton; LONG, Ronán (ed.). *Legal Order in the World's Oceans*: UN Convention on the Law of the Sea. Leiden: Brill, 2018. chapter 2.

mechanism will be activated, and the legal sources referenced will be the provisions of international law of the sea and environmental law<sup>4</sup>.

It should be noted that, in this study, the authors will not address the specific regime of archaeological and historical nature found in the Area. Issues related to this matter may refer to relevant articles published in the special issue of this journal<sup>5</sup>. The term “the Common Heritage of Mankind” examines the Area’s general legal status and serves as the foundation for the principle of equitable benefit sharing. In the study *Benefitting from the Common Heritage of Humankind: From Expectation to Reality* in 2020, Jaeckel also stated that the concept of CHM is the heart of the Area’s regime. Its expression in the UNCLOS aims to build a unique regime centered on solidarity and trusteeship to manage some of Earth’s most remote natural resources<sup>6</sup>. The concept was first presented in the 1960s amid debates regarding its scope, content, status, and relationship to other legal terms<sup>7</sup>. In 1967, this term was further mentioned by Maltese Ambassador Arvid Pardo during his address to the United Nations General Assembly<sup>8</sup>. In his speech, he contended that the Geneva Convention permits states to extend their continental shelf to the extent that their capacity for exploitation allows, which would lead to competition among countries in the race to occupy the seabed<sup>9</sup>. Moreover, this competition is unfair to countries with less advanced science and technology. Therefore, he urged “[...] the establishment of an effective inter-

national regime for the seabed and ocean floor outside clearly defined national jurisdictions”<sup>10</sup>. Some research indicates that the CHM term has a much longer history, and Pardo drew on it to develop the CHM into a legal concept for the ocean<sup>11</sup>. However, Mr. Arvid Pardo’s speech generated significant momentum, capturing the attention of numerous countries and laying the groundwork for successful agreements in the UNCLOS regarding the legal status of the CHM area. The establishment of the Area marked the first time in the history of international maritime law that a resource management regime was created on a global scale, supported by an international organization<sup>12</sup>.

## 1.2 The principle of equitable benefit sharing in the area

To ensure all States, especially developing States, stood to benefit, the Area and its mineral resources were declared the CHM through the UNCLOS, and benefits were to be shared with all<sup>13</sup>. According to Article 136 of the UNCLOS, the Area is open to use exclusively for peaceful purposes by all States, whether coastal or land-locked<sup>14</sup>.

No state shall assert or exercise sovereignty or sovereign rights over any part of the Area or its resources. Additionally, no state, individual, or legal entity shall appropriate any portion of the Area or its resources. Such claims, exercises of sovereignty, or appropriations will not be recognized<sup>15</sup>.

<sup>4</sup> Regarding the rules of environmental litigation, see also TRUILHÉ-MARENGO, Eve. La progressive harmonisation des règles du procès environnemental : manifestation de l’émergence d’un droit global ?. *Revista de Direito Internacional = Brazilian Journal of Law and Public Policy*, v. 14, 2017.

<sup>5</sup> MOUSTAIRA, Elina. The underwater cultural heritage regime: some problems and possible solutions. *Revista de Direito Internacional*, v. 17, n. 3, p. 412-422, 2020.

<sup>6</sup> JAECKEL, Aline. Benefitting from the common heritage of humankind: from expectation to reality. *The International Journal of Marine and Coastal Law*, v. 35, n. 4, p. 660-680, 2020.

<sup>7</sup> JAECKEL, Aline. Benefitting from the common heritage of humankind: from expectation to reality. *The International Journal of Marine and Coastal Law*, v. 35, n. 4, p. 660-680, 2020.

<sup>8</sup> UNITED NATIONS. *General Assembly: twenty-second session: official records*. New York, 1 Nov. 1967. Available at: [http://www.un.org/depts/los/convention\\_agreements/texts/pardo\\_ga1967.pdf](http://www.un.org/depts/los/convention_agreements/texts/pardo_ga1967.pdf). JAECKEL, Aline. Benefitting from the common heritage of humankind: from expectation to reality. *The International Journal of Marine and Coastal Law*, v. 35, n. 4, p. 660-680, 2020.

<sup>9</sup> JAECKEL, Aline. Benefitting from the common heritage of humankind: from expectation to reality. *The International Journal of Marine and Coastal Law*, v. 35, n. 4, p. 660-680, 2020.

<sup>10</sup> JAECKEL, Aline. Benefitting from the common heritage of humankind: from expectation to reality. *The International Journal of Marine and Coastal Law*, v. 35, n. 4, p. 660-680, 2020.

<sup>11</sup> MICKELSON, Karin. Common heritage of mankind as a limit to exploitation of the global commons. *European Journal of International Law*, v. 30, n. 2, p. 635-663, May 2019.

<sup>12</sup> SCOVAZZI, T. The concept of common heritage of mankind and the genetic resources of the seabed beyond the limits of national jurisdiction. *Agenda Internacional*, year 14, n. 25, p. 11-14, 2007.

<sup>13</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*: UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 136. JAECKEL, Aline. Benefitting from the common heritage of humankind: from expectation to reality. *The International Journal of Marine and Coastal Law*, v. 35, n. 4, p. 660-680, 2020.

<sup>14</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*: UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 141.

<sup>15</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*: UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 137.



The above-mentioned provisions showed that the UNCLOS has established a crucial international legal framework for countries to reasonably and equally exploit natural resources in the Area. The key distinction between the legal status of the Area and the high seas lies in resource exploitation. In the Area, any exploitation of resources must be conducted under the supervision of the International Seabed Authority (ISA). In contrast, countries have the freedom to take the initiative and implement resource exploitation on the high seas. This distinction demonstrates that the concept of CHM is specifically applied to a certain type of resource within a particular maritime area. It does not replace the traditional regimes of sovereignty or freedom concerning other resources and maritime spaces. However, it offers a radically innovative and much more equitable approach<sup>16</sup>.

In accordance with Articles 136 and 141 of the UNCLOS, the Convention established the principle that all activities conducted in the Area, including mineral exploitation, must be for the benefit of all humanity, regardless of the geographical location of the States. To uphold this principle, the UNCLOS requires the ISA to provide for equitable sharing of financial and other economic benefits on a non-discriminatory basis<sup>17</sup>. In fact, fairness is a complex term that must be interpreted contextually<sup>18</sup>. The principle of common heritage, as articulated in Part XI of the UNCLOS, encompasses several fundamental elements, such as (i) the Convention designates the seabed as the common heritage of mankind. It represents the idea that certain resources are considered the common heritage of all humanity and should be managed and conserved in a way that benefits present and future generations, and ISA serves as its trustee<sup>19</sup>. Consequently, the members of the ISA, which

consists of countries that are parties to the UNCLOS, will benefit from these resources. They are considered as representatives of all humanity. However, mankind is perceived not as an active participant in activities related to the deep seabed but rather as a beneficiary whose interests must be taken into account<sup>20</sup>. Each participating country is equal, so fairness in benefit distribution can be achieved through sharing rules that the ISA considers appropriate to its needs<sup>21</sup>; (ii) non-ownership and non-appropriation rules. According to the rule, claims or exercises of sovereignty or sovereign rights over the deep seabed and its resources, as well as any appropriation of these resources, are prohibited<sup>22</sup>; (iii) the use of the deep seabed and its resources must adhere to the following principles: peaceful utilization, protection of the marine environment, and activities that benefit all of humanity<sup>23</sup>. These elements will be analyzed more deeply in the following part of the article.

Undoubtedly, the Area and its resources are of the utmost importance and indispensable to each country's prosperity development<sup>24</sup>. However, the practice of

netic resources as common heritage of mankind under the BBNJ agreement; the international community toward a pragmatic benefit-sharing approach? *Biodiversity and Conservation*, v. 34, p. 131-153, Nov. 2024. Available at: <https://doi.org/10.1007/s10531-024-02962-2> Access on: 10 Jan. 2025.

<sup>20</sup> WOLFRUM, Rüdiger. *The principle of the common heritage of mankind*. c1983. [https://www.zaoerv.de/43\\_1983/43\\_1983\\_2\\_a\\_312\\_337.pdf](https://www.zaoerv.de/43_1983/43_1983_2_a_312_337.pdf). Access on: 25 Dec. 2024.

<sup>21</sup> WOLFRUM, Rüdiger. *The principle of the common heritage of mankind*. c1983. [https://www.zaoerv.de/43\\_1983/43\\_1983\\_2\\_a\\_312\\_337.pdf](https://www.zaoerv.de/43_1983/43_1983_2_a_312_337.pdf). Access on: 25 Dec. 2024.

<sup>22</sup> WOLFRUM, Rüdiger. *The principle of the common heritage of mankind*. c1983. [https://www.zaoerv.de/43\\_1983/43\\_1983\\_2\\_a\\_312\\_337.pdf](https://www.zaoerv.de/43_1983/43_1983_2_a_312_337.pdf). Access on: 25 Dec. 2024. TAGHIZADEH, Zakieh. Marine genetic resources as common heritage of mankind under the BBNJ agreement; the international community toward a pragmatic benefit-sharing approach? *Biodiversity and Conservation*, v. 34, p. 131-153, Nov. 2024. Available at: <https://doi.org/10.1007/s10531-024-02962-2> Access on: 10 Jan. 2025.

<sup>23</sup> WOLFRUM, Rüdiger. *The principle of the common heritage of mankind*. c1983. [https://www.zaoerv.de/43\\_1983/43\\_1983\\_2\\_a\\_312\\_337.pdf](https://www.zaoerv.de/43_1983/43_1983_2_a_312_337.pdf). Access on: 25 Dec. 2024. TAGHIZADEH, Zakieh. Marine genetic resources as common heritage of mankind under the BBNJ agreement; the international community toward a pragmatic benefit-sharing approach? *Biodiversity and Conservation*, v. 34, p. 131-153, Nov. 2024. Available at: <https://doi.org/10.1007/s10531-024-02962-2> Access on: 10 Jan. 2025.

<sup>24</sup> DO, Huu Tung *et al.* Phân cấp quản lý tài nguyên khoáng sản: Kinh nghiệm thế giới và bài học tham khảo đối với Việt Nam/ Decentralization of mineral resource management: World experience and lessons for Vietnam. *Tạp chí Công sản*, 20 Mar. 2023. Available at: [https://www.tapchiconsan.org.vn/web/guest/thuc-tien-kinh-nghiem1?p\\_p\\_auth=0N8Dz0aB&p\\_p\\_id=49&p\\_p\\_lifecycle=1&p\\_p\\_state=normal&p\\_p\\_](https://www.tapchiconsan.org.vn/web/guest/thuc-tien-kinh-nghiem1?p_p_auth=0N8Dz0aB&p_p_id=49&p_p_lifecycle=1&p_p_state=normal&p_p_)

<sup>16</sup> SCOVAZZI, T. The concept of common heritage of mankind and the genetic resources of the seabed beyond the limits of national jurisdiction. *Agenda Internacional*, year 14, n. 25, p. 11-14, 2007.

<sup>17</sup> INTERNATIONAL SEABED AUTHORITY. Equitable sharing of financial and other economic benefits from deep-sea mining. *Policy Brief*, n. 01, 2022. Available at: [https://www.isa.org/jm/wp-content/uploads/2022/06/policy\\_brief\\_benefit\\_sharing\\_01\\_2022-1.pdf](https://www.isa.org/jm/wp-content/uploads/2022/06/policy_brief_benefit_sharing_01_2022-1.pdf). Access on: 10 Jan. 2025.

<sup>18</sup> INTERNATIONAL SEABED AUTHORITY. *Equitable sharing of financial and other benefits from deep-seabed mining*: ISA technical study no 31. Kingston: ISA, 2021. Available at: [https://www.isa.org/jm/wp-content/uploads/2022/06/ISA\\_Technical\\_Study\\_31.pdf](https://www.isa.org/jm/wp-content/uploads/2022/06/ISA_Technical_Study_31.pdf). Access on: 10 Jan. 2025.

<sup>19</sup> WOLFRUM, Rüdiger. *The principle of the common heritage of mankind*. c1983. [https://www.zaoerv.de/43\\_1983/43\\_1983\\_2\\_a\\_312\\_337.pdf](https://www.zaoerv.de/43_1983/43_1983_2_a_312_337.pdf). Access on: 25 Dec. 2024. TAGHIZADEH, Zakieh. Marine ge-

benefit sharing among countries reveals an imbalance between developed and developing nations, particularly regarding access to and exploitation of resources. This disparity is largely due to the technological advantages of deep-sea mining and the abundant financial resources available to developed countries. Although the UNCLOS provides for revenue sharing from resource exploitation to developing countries, the benefits shared are minimal and do little to bridge the economic gap for these countries. Under ISA's annual report in 2024, the ISA has issued 31 contracts to 22 contractors for the exploration of three types of mineral resources in the Area are PMN (Polymetallic Nodules), PMS (Polymetallic Sulphides) and CFC (Cobalt-Rich Ferromanganese). The leading countries in terms of contracts for deep-sea mining exploration only are developed countries like China, Russia, Germany, South Korea, the UK, and Poland. There is a very small number of contracts that come from developing countries<sup>25</sup>. In addition, There has been considerable debate over the financial benefits of deep-sea mining in recent years, with several studies indicating that countries are likely to gain economically insignificant advantages. This report estimates that the ISA Member States could receive between \$42,000 and \$7.35 million each year from corporate income tax and royalties related to deep-sea mining. Some countries believe these amounts are unfair<sup>26</sup> and too small compared to the size of most national econo-

mies<sup>27</sup>. A growing concern is the actual capacity of the ISA. Its operating mechanism is ineffective and lacks transparency in monitoring the distribution of benefits to countries. This undermines the principle of fairness established by the UNCLOS and leads to perceptions that this principle is merely a "formality." As a result, the interests of countries, particularly developing countries, are negatively affected.

### 1.3 The research hypothesis and methodology

This study is conducted to discuss the legal issues and international practices related to applying the principle of equity in the exploration, exploitation of resources, and benefit-sharing among States in the Area to ensure the effective implementation of UNCLOS and other relevant legal instruments. Additionally, it aims to guarantee that the exploitation and use of resources in the Area are fair and sustainable. The article is structured into the following key sections: (i) examine the provisions of the UNCLOS and other pertinent international legal instruments concerning the legal status of the common heritage of mankind and the principle of equitable benefit-sharing, (ii) assess the role of the International Seabed Authority in developing and implementing a mechanism to ensure fair and equitable benefit-sharing, (iii) identify and analyze the primary challenges to realizing equitable benefit-sharing under the common heritage regime, and finally, (iv) propose recommendations aimed at fostering equitable and sustainable benefit-sharing among states.

To achieve the research objectives, the authors employed a comprehensive methodology that integrates both quantitative and qualitative approaches to address pertinent legal and practical issues. Through the application of well-recognized scientific research methods, including analysis, comparison, explanation, and case study examination, the authors systematically analyzed and processed a wide range of documents and data, yielding clear and substantiated findings. Notably, the development of the article is grounded in the meticulous selection and processing of information from offi-

mode=view&\_49\_struts\_action=%2Fmy\_sites%2Fview&\_49\_groupId=20182&\_49\_privateLayout=false. Access on: 15 Jan. 2025.

<sup>25</sup> INTERNATIONAL SEABED AUTHORITY. *Finance and resources: secretary-general annual report 2024*. Kingston: ISA, 2024. Available at: [https://www.isa.org.jm/wp-content/uploads/2024/06/ISA\\_Secretary\\_General\\_Annual\\_Report\\_2024\\_Chapter8.pdf](https://www.isa.org.jm/wp-content/uploads/2024/06/ISA_Secretary_General_Annual_Report_2024_Chapter8.pdf). Access on: 26 Jan. 2025. INTERNATIONAL SEABED AUTHORITY. *Secretary-General: annual Report 2024*. Kingston: ISA, 2024. Available at: <https://www.isa.org.jm/secretary-general-annual-report-2024/>. Access on: 10 Jan. 2025. INTERNATIONAL SEABED AUTHORITY. *Exploration contracts. ISA*, [17 Mar. 2022]. Available at: <https://www.isa.org.jm/exploration-contracts/>. Access on: 10 Jan. 2025. HAUGAN, P. M. *et al.* What role for ocean-based renewable energy and deep-seabed minerals in a sustainable future? In: LUBCHENCO, Jane; HAUGAN, Peter M. (ed.). *The blue compendium: from knowledge to action for a sustainable ocean economy*. [S. l.]: Springer International Publishing, 2023. p. 51-89. Available at: [https://doi.org/10.1007/978-3-031-16277-0\\_3](https://doi.org/10.1007/978-3-031-16277-0_3). Access on: 10 Jan. 2025

<sup>26</sup> ALGERIA. *Statement on Behalf of The African Group by Mr. Mehdi REMAOUN First Secretary At the, 25th Session of the Council of the International Seabed Authority, Agenda Item 11: Financial Model*. Kingston, 25 February 2019. Available at: [https://www.isa.org.jm/wp-content/uploads/2022/06/1-algeriaoboag\\_finmodel.pdf](https://www.isa.org.jm/wp-content/uploads/2022/06/1-algeriaoboag_finmodel.pdf). Access on: 10 Jan. 2025.

<sup>27</sup> ALGERIA. *Statement on Behalf of The African Group by Mr. Mehdi REMAOUN First Secretary At the, 25th Session of the Council of the International Seabed Authority, Agenda Item 11: Financial Model*. Kingston, 25 February 2019. Available at: [https://www.isa.org.jm/wp-content/uploads/2022/06/1-algeriaoboag\\_finmodel.pdf](https://www.isa.org.jm/wp-content/uploads/2022/06/1-algeriaoboag_finmodel.pdf). Access on: 10 Jan. 2025.



cial sources like the articles, reports/comments issued by international organizations, such as the ISA and the International Tribunal on the Law of the Sea, which serve as critical references in supporting and strengthening the article's arguments.

## 2 Equitable benefit sharing in the common heritage of mankind under the UNCLOS

### 2.1 Key components of the system

Provisions relating to the equitable sharing of benefits from activities in the Area are directly found in articles 140(2), 155(1)(f), 160(2)(f)(i) and (g), and 162(2)(o) (i) of the UNCLOS and in section 9(7)(f) of the annexe to the 1994 Agreement relating to the Implementation of Part XI of the UNCLOS 1982 (1994 Agreement). Relevant provisions can also be referred to in articles 171 and 173(2)<sup>28</sup>. Based on such foundations, the Equitable Benefit Sharing system comprises three elements, namely:

*The first element is the non-appropriation of the Area and its resources.* Accordingly, the Convention denies the principle of sovereignty in the CHM. No State shall claim or exercise sovereignty or sovereign rights over any part of the Area or its resources<sup>29</sup>. It is important to note that the UNCLOS 1982 not only disallows the appropriation of the Area as a maritime zone, but also extends this prohibition to its resources. This simultaneously negates the principle of *res communis*, which allows all states to explore and exploit resources and may endeavor to maximize benefits<sup>30</sup>. In this way, the Equitable Benefit Sharing system has excluded two common principles from international law of the sea.

*The second element concerns the beneficiaries of activities in the Area.* Deriving from the exclusion of two principles often associated with States, the aim of the Equitable Benefit Sharing system to serve all of mankind<sup>31</sup>. The idea of the benefit of mankind as a whole is clearly opposed to the state-centric approach, commonly found in many other provisions of the Convention. Moreover, the term 'mankind' is used to convey both spatial and temporal meanings. On the one hand, it encompasses all individuals on the planet, regardless of their location or national identity<sup>32</sup>. On the other hand, the sharing of benefits is not only intended to serve current goals but also for future generations. Therefore, all benefits obtained in the Area that do not comply with the above criteria cannot be alienated<sup>33</sup>.

*The third element of the system relates to the sustainable development of all kinds of countries and peoples.* To fulfil the mission for the benefit of all mankind, promoting sustainable development among these subjects is crucial. Accordingly, the Benefit Sharing System is designed to provide parties with financial support and other economic benefits derived from activities in the Area<sup>34</sup>. Furthermore, the allocation of benefits to countries will not depend on their geographical location, whether coastal or landlocked. At the same time, Benefit Sharing will also be based on the development level of the countries and the independence status of the people<sup>35</sup>. All these requirements aim to ensure that benefits are shared among members in an equitable manner, rather than an equal one.

To ensure the effectiveness of the system, the 1994 Agreement has established the Finance Committee. The Committee consists of 15 members with appropriate qualifications related to financial matters. This organ of the ISA is expected to contribute to the research and

<sup>28</sup> INTERNATIONAL SEABED AUTHORITY. *Equitable sharing of financial and other benefits from deep-seabed mining*: ISA technical study no 31. Kingston: ISA, 2021. Available at: [https://www.isa.org/im/wp-content/uploads/2022/06/ISA\\_Technical\\_Study\\_31.pdf](https://www.isa.org/im/wp-content/uploads/2022/06/ISA_Technical_Study_31.pdf). Access on: 10 Jan. 2025.

<sup>29</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 137.

<sup>30</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 137.

<sup>31</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 140(1).

<sup>32</sup> PROELß, Alexander (ed.). *United Nations Convention On The Law Of The Sea: a commentary*. German: CH Beck Hart Nomos, 2017.

<sup>33</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 137(2).

<sup>34</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 140.

<sup>35</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 137.

development of a fair Benefit Sharing Mechanism. Accordingly, one of the tasks of the Finance Committee in the ISA's Strategic Plan for the period 2019-2023 is to conduct a study on the equitable sharing of financial and other economic benefits from deep seabed mining. The completion of this objective in 2019 has helped the ISA move toward the next goal in the Strategic Plan for the period 2024-2028, which is to find an appropriate mechanism to provide for the equitable sharing of financial and other economic benefits derived from activities in the Area on a non-discriminatory basis.

The issue of sustainable development not only includes benefit-sharing policies but also encompasses certain obligations for countries operating in the Area. Accordingly, the activities of countries in the Area must ensure compliance with obligations related to using the Area exclusively for peaceful purposes, obligations to cooperate in scientific research, obligations to protect the marine environment, and obligations for the protection of human life<sup>36</sup>. Notably, the Convention also establishes the transfer of technology between countries as a distinct obligation under Article 144. In contrast, under the 1994 Agreement, the transfer of technology must meet certain requirements for fair trade. If the Enterprise or developing States are unable to obtain the technology, related States are only obliged to cooperate with the Authority in facilitating its acquisition on terms that are consistent with the effective protection of intellectual property rights<sup>37</sup>. Thus, these conditions seem to address objections from some developed state parties,<sup>38</sup> rather than facilitating a smoother transfer of technology.

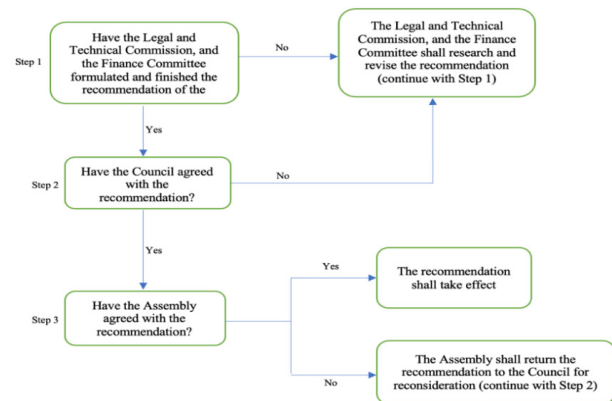
## 2.2 The role of the international seabed authority in the equitable benefit sharing system

As a representative of mankind as a whole in the Area, the ISA is granted legislative and enforcement ju-

risdiction concerning all activities in this zone<sup>39</sup>. This has enabled the ISA to be the direct authority managing the Equitable Benefit Sharing System.

Regarding legislative power in the system, the ISA has the authority to establish rules, regulations, and procedures on the equitable sharing of financial and other economic benefits derived from activities in the Area<sup>40</sup>. The procedure for enacting these documents will include the following steps.

**Figure 1** - The process of approving Equitable Benefit Sharing rules by the ISA



Source: United Nations<sup>41</sup>

One important point to note is that each body of the ISA will undertake a specific task in developing these rules. Specifically, the Legal and Technical Commission will have the duty of considering all relevant factors, including assessments of the environmental implications of activities in the Area. Meanwhile, the Council and the Assembly will be responsible for considering the interests and needs of developing States and peoples who have not attained full independence or other self-governing status.

In the process of developing laws on benefit-sharing from activities in the Area, the economic benefits derived from extraction activities and the necessity of

<sup>36</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 141, 143, 145, 146.

<sup>37</sup> UNITED NATIONS. General Assembly. *Agreement Relating to the Implementation of Part XI of UNCLOS 1982*. c2001. Available at: [https://www.un.org/depts/los/convention\\_agreements/texts/agreement\\_part\\_xi/agreement\\_part\\_xi.htm#section5](https://www.un.org/depts/los/convention_agreements/texts/agreement_part_xi/agreement_part_xi.htm#section5). Access on: 15 Jan. 2025.

<sup>38</sup> BROWN, E. D. The 1994 Agreement on the implementation of part xi of the UN Convention on the Law of the Sea: breakthrough to universality? *Marine Policy*, v. 19, n. 1, p. 5-20, 1995.

<sup>39</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 17(1).

<sup>40</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 160(2).

<sup>41</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 160(2), 162(2), 165(2).

environmental protection are regarded as the most important factors. This not only ensures the goals of sustainable development but also helps maintain biodiversity and protect sensitive ecosystems in the Area. As such, the UNCLOS also grants the ISA the authority to adopt appropriate rules, regulations, and procedures for protecting and conserving the environment from the harmful effects of activities such as drilling, dredging, and excavation in the Area<sup>42</sup>. Besides, the subsequent 1994 Agreement also emphasizes that the adoption of rules, regulations and procedures incorporating applicable standards for the protection and preservation of the marine environment is one of the matters on which the Authority needs to concentrate during the time between the entry into force of the Convention and the approval of the first plan of work for exploitation<sup>43</sup>. Thus, the obligation to protect the environment will be one of the core objectives of the laws of the ISA. Only when environmental standards are ensured can there be a basis for granting permits for exploitation in the Area.

**Figure 2** - ISA currently contributes to 12 of the 17 SDGs through the implementation of its mandate



In the draft strategic plan of the ISA for the period 2024-2028, the ISA has outlined several strategic directions to protect the marine environment from the

harmful effects of activities in the Area. This includes developing an adaptive regulatory framework based on best environmental practices, conducting regional environmental assessments and management plans for mineral provinces, and ensuring public access to environmental information while enhancing stakeholder participation<sup>44</sup>. Additionally, the ISA also aims to establish robust monitoring programs to assess potential risks to the ecological balance and develop regulations to prevent and control pollution and other hazards, ensuring compliance with the protection requirements outlined in Part XII of the Convention. Through these strategic initiatives, the ISA has demonstrated its commitment to safeguarding the marine environment while facilitating responsible exploration and exploitation in the Area.

Concerning enforcement jurisdiction, the Convention grants the ISA the exclusive privilege of supervising and licensing resource extraction activities in the Area<sup>45</sup>. Furthermore, Article 153 confers on the ISA the right to take at any time any measures provided for under Part XI to ensure compliance with its provisions and the exercise of the function of control and regulation assigned to it thereunder or under any contract<sup>46</sup>. This means that the ISA has the authority to revoke the licenses of parties operating and extracting resources in the Area if they fail to comply with the requirements set forth by the UNCLOS and the ISA. This oversight aims to ensure that all activities are conducted sustainably and adhere to principles of environmental protection as well as the rights of other member states. Only by meeting such requirements can the resources obtained from extraction activities be alienated from the market<sup>47</sup>.

<sup>44</sup> INTERNATIONAL SEABED AUTHORITY. *Strategic Plan of the International Seabed Authority for the Period 2024-2028*. 26 May 2023. Available at: <https://www.isa.org/im/wp-content/uploads/2023/05/Draft-SP-2024-2028v1-26.05.23.pdf>. Access on: 10 Jan. 2025.

<sup>45</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 151.

<sup>46</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 153.

<sup>47</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 137(2).

<sup>42</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 145.

<sup>43</sup> UNITED NATIONS. General Assembly. *Agreement Relating to the Implementation of Part XI of UNCLOS 1982*. c2001. Available at: [https://www.un.org/depts/los/convention\\_agreements/texts/agreement\\_part\\_xi/agreement\\_part\\_xi.htm#section5](https://www.un.org/depts/los/convention_agreements/texts/agreement_part_xi/agreement_part_xi.htm#section5). Access on: 15 Jan. 2025.



## 2.3 Financial mechanisms and benefits distribution of the ISA

### 2.3.1 Financial mechanisms

Article 171 of the UNCLOS lists various financial sources of the ISA from multiple activities in the Area. These revenue sources have since been amended and interpreted by the 1994 Agreement. Therefore, the funding sources of the ISA currently include: assessed contributions made by States that are members of the Authority; agreed contributions, as determined by the Authority, made by international organizations members of the Authority in accordance with annexe IX to the Convention; funds received by the Authority pursuant to Annex III, Art. 13 (2) of the UNCLOS and Section 8 of the Annex to the 1994 Agreement; funds transferred from the Enterprise in accordance with Annex IV, Art. 10 of the UNCLOS; voluntary contributions made by members or other entities; and such other funds to which the Authority may become entitled or may receive, including income from investment<sup>48</sup>. However, the financial resources of the ISA will not be immediately allocated for sharing with mankind according to Article 140 of the Convention. Instead, they will need to be deducted for several costs. The UNCLOS stipulates that these deductions include the ISA's administrative costs, funds to capitalize the Enterprise, and the economic adjustment assistance fund<sup>49</sup>.

The ISA's administrative costs cover the costs associated with running the Secretariat, including staff costs. In the financial period 2023-2024, the administrative expenses of the ISA amount to USD 14,413,000 out of a total budget of USD 22,712,940<sup>50</sup>. After deducting the ISA's administrative costs, the next deduction is the funds to capitalize the Enterprise, which are necessary to maintain the operations of the Enterprise in the Area. This organ of the ISA is not expected to operate until

2023, with a budget for the period 2023-2024 amounting to USD 456,940<sup>51</sup>. The economic adjustment assistance fund is designed to assist developing countries facing significant adverse effects on their export earnings or economies due to reduced prices or export volumes of affected minerals caused by activities in the Area<sup>52</sup>. The financial report for the ISA for the period 2023-2024 does not itemize this fund separately; instead, it includes a single line item for the programmatic activities of the ISA, which may encompass this fund, with a cost of USD 3,123,000<sup>53</sup>. It is important to note that the UNCLOS does not limit the deductions from the ISA's budget to just these three items. The ISA may expand this list in the future<sup>54</sup>.

### 2.3.2 Benefits distribution

After deducting all the aforementioned costs, the remaining funds will be used for benefit-sharing purposes based on the principle of fairness according to Article 140. Additionally, the Convention allows member states to provide input during the Review Conferences to assess whether the system has resulted in the equitable sharing of benefits derived from activities in the Area<sup>55</sup>. This enables members to voice their concerns in cases of inequity within the benefit-sharing system.

<sup>48</sup> PROELß, Alexander (ed.). *United Nations Convention On The Law Of The Sea: a commentary*. German: CH Beck Hart Nomos, 2017.

<sup>49</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 173.

<sup>50</sup> INTERNATIONAL SEABED AUTHORITY. *Finance and resources*: secretary-general annual report 2024. Kingston: ISA, 2024. Available at: [https://www.isa.org.jm/wp-content/uploads/2024/06/ISA\\_Secretary\\_General\\_Annual\\_Report\\_2024\\_Chapter8.pdf](https://www.isa.org.jm/wp-content/uploads/2024/06/ISA_Secretary_General_Annual_Report_2024_Chapter8.pdf). Access on: 26 Jan. 2025.

<sup>51</sup> INTERNATIONAL SEABED AUTHORITY. *Finance and resources*: secretary-general annual report 2024. Kingston: ISA, 2024. Available at: [https://www.isa.org.jm/wp-content/uploads/2024/06/ISA\\_Secretary\\_General\\_Annual\\_Report\\_2024\\_Chapter8.pdf](https://www.isa.org.jm/wp-content/uploads/2024/06/ISA_Secretary_General_Annual_Report_2024_Chapter8.pdf). Access on: 26 Jan. 2025. WILDE, Daniel; LILLY, Hannah; CRAIK, Neil; CHAKRABORTY, Anindita. Equitable sharing of deep-sea mining benefits: more questions than answers. *Marine Policy*, v. 151, May 2023. Available at: <https://www.sciencedirect.com/science/article/pii/S0308597X23000994>.

<sup>52</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 151.

<sup>53</sup> INTERNATIONAL SEABED AUTHORITY. *Finance and resources*: secretary-general annual report 2024. Kingston: ISA, 2024. Available at: [https://www.isa.org.jm/wp-content/uploads/2024/06/ISA\\_Secretary\\_General\\_Annual\\_Report\\_2024\\_Chapter8.pdf](https://www.isa.org.jm/wp-content/uploads/2024/06/ISA_Secretary_General_Annual_Report_2024_Chapter8.pdf).

<sup>54</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 173.

<sup>55</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 155.

Under Article 140, the Benefit-sharing will be divided into financial support and other economic benefits<sup>56</sup>. While ‘financial benefits’ can be defined as a direct cash disbursement to governments<sup>57</sup>, the phrase ‘other economic benefits’ is somewhat unclear. At first glance, this could include the transfer of technology as outlined in Article 150(d)<sup>58</sup>. Recently, the 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 (BBNJ Agreement) has purportedly clarified additional benefits that can be shared within the system, namely marine genetic resources and their associated digital sequence information. Previous instruments, such as the Convention on Biological Diversity (CBD), merely required member states to strive to create conditions to facilitate access to genetic resources for other countries<sup>59</sup>. The use of a weak formulation made the sharing of genetic resources seem like an obligation of conduct rather than an obligation of result. In contrast, the BBNJ Agreement specifically emphasizes the principle of Equitable Benefit Sharing arising from marine genetic resources, including financial and non-financial benefits<sup>60</sup>. Additionally, the Agreement also sets forth several conditions, including the requirement for the due date of sharing data in an accessible repository, in order to ensure effective implementation by the parties<sup>61</sup>. Ob-

viously, the BBNJ Agreement has marked a significant development of the Equitable Benefit Sharing system.

### 3 Key challenges in equitable benefit sharing in the exploitation of common heritage of mankind areas

The deep seabed mining (DSM) regime is governed by the UNCLOS and the newly established agreement on marine biodiversity beyond national jurisdiction (BBNJ). It aims to regulate the extraction of minerals from the seabed located beyond national jurisdiction, known as the “Area.” This Area is recognized as the common heritage of mankind, according to the UNCLOS. As a result, the principle of benefit sharing is fundamental to the DSM regime. However, despite decades of discussions and development, the DSM framework has yet to provide effective mechanisms for benefit sharing. This failure is due to various legal, institutional, environmental, and economic challenges.

#### 3.1 Transparency issue

The principle of the CHM relies heavily on transparency to ensure equitable governance and benefit-sharing. This principle underpins the operations of the ISA, which oversees seabed mining and related activities. Since its establishment, there have been persistent concerns regarding the transparency of the Legal and Technical Commission (LTC), a key decision-making body within the ISA. As interest in seabed mining grows, so does the demand for more open and inclusive governance processes. This sentiment was evident during the ISA’s 2014 annual session, where strong interest was expressed in enhancing transparency and fostering dialogue on the LTC’s activities. The ISA has acknowledged these concerns, prompting efforts such as drafting a stakeholder consultation and participation strategy to address transparency deficits<sup>62</sup>.

A particularly critical area for transparency is the development and implementation of regulations on finan-

<sup>56</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 140.

<sup>57</sup> ASCENCIO-HERRERA, Alfonso; NORDQUIST, Myron H. *The United Nations Convention On The Law Of The Sea, part xi regime and the international seabed authority: a twenty-five year journey* Leiden: Brill Nijhoff, 2022.

<sup>58</sup> UNITED NATIONS. General Assembly. *United Nations Convention on the Law of the Sea*. UNCLOS. [1982]. [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). Art. 150(d).

<sup>59</sup> UNITED NATIONS. Secretariat of the Convention on Biological Diversity. *Convention on biological diversity: text and annexes*. Montreal: Secretariat of the Convention on Biological Diversity, 2011. Available at: <https://www.cbd.int/doc/legal/cbd-en.pdf>. Art. 15(2).

<sup>60</sup> UNITED NATIONS. *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*. 2023. Available at: <https://www.un.org/bbnjagreement/sites/default/files/2024-08/Text%20of%20the%20Agreement%20in%20English.pdf>. Access on: 15 Jan. 2025. Art. 14.

<sup>61</sup> UNITED NATIONS. 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. 2023. Available at: <https://www.un.org/bbnjagreement/sites/default/files/2024-08/Text%20of%20the%20Agreement%20in%20English.pdf>. Access on: 15 Jan. 2025. Art. 14.

<sup>62</sup> WOOD, M. C. International seabed authority: the first four years. *Max Planck Yearbook of United Nations Law*, v. 3, n. 1, p. 173-241, Jan. 1999.

cial benefits, a responsibility shared by the ISA's Finance Committee. This committee is pivotal in ensuring the fair distribution of benefits derived from the DSM activities, especially in developing States. Without robust transparency in the Finance Committee's auditing and reporting processes, it becomes challenging to guarantee compliance from States and contractors. A lack of openness could erode trust among stakeholders, particularly for developing nations relying on DSM-related financial benefits to support their development goals. Thus, transparency in financial governance is essential to uphold the CHM principle and the ISA's credibility<sup>63</sup>.

Incorporating transparency into the ISA governance structures is a procedural necessity and a moral imperative. Transparency ensures that decision-making processes are inclusive, allowing the international community—especially marginalized stakeholders—to hold governance bodies accountable. Furthermore, it promotes fairness in benefit-sharing, particularly for developing States, which are central to the CHM principle. As global attention on seabed mining increases, the ISA must proactively address these transparency challenges. Failure to do so risks undermining the fundamental principles of equitable resource sharing and collaborative stewardship of the seabed, which the CHM concept seeks to uphold<sup>64</sup>.

### 3.2 Unclear sharing benefits mechanisms

While the UNCLOS establishes the ISA to oversee resource activities in the Area, the mechanisms for distributing benefits remain underdeveloped. Questions around revenue-sharing formulas and operationalization of the common heritage principle have hindered progress.

Developing a fiscal regime for DSM has long been challenging and contentious. During the negotiations of the UNCLOS, the complexities of resource payments and financial benefit-sharing highlighted differing prio-

rities among nations. Today, as seabed mining moves closer to reality, the ISA must establish clear rules, regulations, and procedures to govern financial transactions. Central to these efforts is ensuring alignment with the CHM principle, which emphasizes equitable sharing of resources and benefits among all nations. That will require the ISA to address financial risks for humankind while ensuring that it receives its fair share of the benefits derived from seabed mining activities<sup>65</sup>.

A significant point of contention is defining a fair and equitable fiscal regime under the CHM framework. Beyond monetary considerations, this regime may need to account for the loss of natural capital and associated ecosystem services that benefit humankind. Extracting resources from the seabed could damage marine ecosystems, affecting biodiversity and long-term ecological health. The financial implications of such losses, including potential compensation for present and future generations, have not been thoroughly addressed. This omission raises questions about the long-term sustainability and ethical dimensions of the financial structures being developed<sup>66</sup>.

Integrating considerations for ecosystem losses into the DSM fiscal regime would represent a progressive and holistic approach to governance. It would acknowledge marine ecosystems' intrinsic value and importance to global well-being. Developing such a framework, however, requires extensive dialogue among stakeholders, robust scientific assessments, and mechanisms to ensure that financial benefits are equitably distributed while mitigating environmental impacts. By proactively addressing these challenges, the ISA can set a precedent for sustainable resource management that aligns with the principles of CHM and ensures a fair balance between economic gains and environmental stewardship<sup>67</sup>.

The BBNJ significantly enhances benefit-sharing principles to effectively tackle marine genetic resources (MGRs) and the broader aspects of biodiversity in areas

<sup>63</sup> JAECKEL, Aline; ARDRON, Jeff. A.; GJERDE, Kristina M. Sharing benefits of the common heritage of mankind – is the deep seabed mining regime ready? *Marine Policy*, v. 70, p. 198-204, Aug. 2016.

<sup>64</sup> ARMAS-PFIRTER, Frida M. The “Common Heritage of Mankind” principle and the equitable sharing of benefits. In: ASCENCIO-HERRERA, Alfonso; NORDQUIST, Myron H. *The United Nations Convention On The Law Of The Sea, part xi regime and the international seabed authority: a twenty-five year journey* Leiden: Brill Nijhoff, 2022. chapter 3.

<sup>65</sup> TAGHIZADEH, Zakieh. Marine genetic resources as common heritage of mankind under the BBNJ agreement; the international community toward a pragmatic benefit-sharing approach? *Biodiversity and Conservation*, v. 34, p. 131-153, Nov. 2024. Available at: <https://doi.org/10.1007/s10531-024-02962-2> Access on: 10 Jan. 2025.

<sup>66</sup> MASSIMI, Michela. The fraught legacy of the common heritage of humankind principle for equitable ocean policy. *Environmental Science & Policy*, v. 153, Mar. 2024.

<sup>67</sup> RANGANATHAN, Surabih. Ocean floor grab: international law and the making of an extractive imaginary. *European Journal of International Law*, v. 30, n. 2, p. 573-600, May 2019.



beyond national jurisdiction. Article 14 introduces various forms of non-monetary benefit sharing, yet critical details are intentionally reserved for future decisions by the Conference of the Parties (COP). These decisions will be crucial for establishing the mechanisms for distributing monetary benefits from commercializing marine genetic resources and ensuring adherence to the Agreement. To fulfil the aims of this Agreement, Part II sets forth vital guidelines for regulating MGR-related activities, ensuring that monetary and non-monetary benefits are distributed equitably. This proactive approach empowers future Parties to guarantee that all entities within their jurisdiction comply with the innovative regulations and requirements embedded in the Agreement, paving the way for a more sustainable and fair utilization of our ocean's resources<sup>68</sup>.

A cornerstone of the BBNJ Agreement is the creation of an Access and Benefit-Sharing Committee and a Clearing-House Mechanism to manage the equitable sharing of the MGRs and related data. These mechanisms are designed to enhance transparency and facilitate the exchange of information among countries and organizations, advancing scientific research and innovation. The Clearing-House Mechanism provides a notification system that tracks MGRs-related activities across various value chain stages, ensuring compliance with the agreement's provisions. This system supports international collaboration and ensures that the utility of MGRs is distributed fairly<sup>69</sup>.

The agreement requires that monetary benefits from MGRs activities be deposited into a "special fund." This fund will support capacity-building initiatives and other assistance programs, especially for developing countries, to help achieve the goals of the BBNJ Agreement. Developed countries are responsible for contributing to this fund, including milestone-based contributions, commercialization fees, and other financial mechanisms determined by the COP. By establishing these financial structures, the BBNJ Agreement aims to ensure that benefits from MGRs-related activities are shared fairly and

reinvested into the conservation and sustainable use of marine biodiversity<sup>70</sup>.

Significant uncertainties remain regarding implementing fair and equitable benefit-sharing mechanisms under the BBNJ Agreement. Questions persist about defining and operationalizing fairness and equity in benefit-sharing, particularly in addressing disparities in stakeholders' access to monetary and non-monetary benefits. Ensuring compliance with transparency requirements is another concern, as the mechanisms for monitoring and enforcing these obligations are not fully detailed. These challenges are further compounded by existing imbalances in the capacity of different nations to access and utilize MGRs, making it essential to establish transparent and inclusive frameworks that address these inequalities<sup>71</sup>.

Moreover, the ambiguous definition of marine scientific research within the framework of the UNCLOS and the BBNJ Agreement raises additional complexities. This lack of clarity could hinder the equitable sharing of research results and the effective transfer of technology, which are critical components of benefit-sharing. Balancing states' rights, freedoms, and responsibilities in marine scientific research in areas beyond national jurisdiction (ABNJ) requires careful negotiation and clear guidelines. Addressing these challenges will be pivotal in future COP, which must delve deeper into these issues to create a more robust and equitable benefit-sharing regime that aligns with the objectives of the BBNJ Agreement<sup>72</sup>.

### 3.3 Capacity building and technology transfer

Justice issues surrounding marine bioprospecting in ABNJ primarily stem from disparities in access to and utilization of MGRs. A small number of countries and a limited number of companies within them dominate

<sup>68</sup> TAGHIZADEH, Zakieh. Marine genetic resources as common heritage of mankind under the BBNJ agreement; the international community toward a pragmatic benefit-sharing approach? *Biodiversity and Conservation*, v. 34, p. 131-153, Nov. 2024. Available at: <https://doi.org/10.1007/s10531-024-02962-2> Access on: 10 Jan. 2025.

<sup>69</sup> MORGERA, Elisa. The need for an international legal concept of fair and equitable benefit sharing. *European Journal of International Law*, v. 27, n. 2, p. 353-383, May 2016.

<sup>70</sup> VADROT, A.; LANGLET, A.; TESSNOW-VON WYSOCKI, I. Who owns marine biodiversity? contesting the world order through the 'common heritage of humankind' principle. *Environmental Politics*, v. 31, n. 2, p. 226-250, 2022.

<sup>71</sup> DE LUCIA, Vito. After the dust settles: selected considerations about the new treaty on marine biodiversity in areas beyond national jurisdiction with respect to ABMTs and MPAs. *Ocean Development & International Law*, v. 55, n. 1-2, p. 115-136, 2024.

<sup>72</sup> HARDEN-DAVIES, Harriet. Marine science and technology transfer: can the intergovernmental oceanographic commission advance governance of biodiversity beyond national jurisdiction? *Marine Policy*, v. 74, p. 260-267, Dec. 2016.

the patent filings and technological advancements related to MGRs. In contrast, many developing countries remain excluded from these activities and are significantly underrepresented in marine taxonomic research. This imbalance highlights a critical gap in capabilities, a fundamental barrier to achieving distributive justice, as it restricts equitable participation in and benefits from MGR-related initiatives<sup>73</sup>.

Interestingly, there is limited evidence of patents or commercial products being specifically or exclusively derived from MGRs sourced from ABNJ as opposed to other marine areas. That underscores the challenge of distinguishing the unique contributions of ABNJ resources to scientific and commercial applications. Nevertheless, the broader inequality in research and technological capabilities raises concerns about the fairness of benefit-sharing frameworks. Addressing these disparities will require targeted capacity-building initiatives, more inclusive research collaborations, and mechanisms that enable developing countries to participate meaningfully in bioprospecting and benefit-sharing activities, ultimately advancing the goals of equity and justice in marine governance<sup>74</sup>.

Developing states face significant challenges in participating in and benefiting from seabed mining activities, deepening existing inequalities in marine resource governance. While both the UNCLOS and the BBNJ Agreement acknowledge the importance of capacity-building and technology transfer, the mechanisms to provide concrete and sustained support remain underdeveloped. That leaves many developing nations unable to fully engage in critical areas such as research, resource exploitation, and benefit-sharing negotiations. The technological divide between advanced states and developing nations persists, as the latter often lack access to expensive marine technologies like remote sensing, underwater robotics, and advanced data analysis tools<sup>75</sup>.

The potential for meaningful technology transfer is further hindered by the reluctance of technologically advanced countries to share cutting-edge tools and knowledge due to concerns over national security, economic competition, and commercial interests. Moreover, training programs and technology transfer initiatives often lack long-term strategies, leading to short-lived and fragmented benefits for developing states. Without sustained efforts to address these barriers, developing nations remain marginalized in the global management of seabed resources. Bridging these gaps will require robust, well-funded, and inclusive capacity-building initiatives to foster long-term participation and equitable benefit-sharing for all states<sup>76</sup>.

### 3.4 Partially towards a sustainable equity approach

Sustainable equity underscores the obligation to ensure that the present exploitation and use of shared resources do not hinder the rights and opportunities of future generations. This paradigm is rooted in the balance between inter-generational and intra-generational equity. Inter-generational equity focuses on the responsibility of the current generation to preserve and manage marine natural resources sustainably, ensuring that future generations can also derive benefits and meet their needs. It emphasizes a long-term perspective, prioritizing conservation and sustainable use over short-term gains<sup>77</sup>.

In contrast, intra-generational equity addresses fairness and justice within the present generation, emphasizing the equitable distribution of resources and opportunities among communities and states. It advocates for reducing disparities in access to resources, technology, and benefits, particularly between developed and developing nations. These two dimensions of sustainable equity aim to create a holistic approach that balances immediate and long-term needs, fostering a framework where marine natural resources are managed responsibly and equitably across time and space. This dual focus

<sup>73</sup> VIERROS, Marjo K.; HARDEN-DAVIES Harriet. Capacity building and technology transfer for improving governance of marine areas both beyond and within national jurisdiction. *Marine Policy*, v. 122, Dec. 2020.

<sup>74</sup> POPOVA, Ekaterina *et al.* Ecological connectivity between the areas beyond national jurisdiction and coastal waters: safeguarding interests of coastal communities in developing countries. *Marine Policy*, v. 104, p. 90-102, June 2019.

<sup>75</sup> HARDEN-DAVIES, Harriet *et al.* How can a new UN ocean treaty change the course of capacity building? *Aquatic Conservation: Marine and Freshwater Ecosystems*, v. 32, n. 5, p. 907-912, Feb. 2022.

<sup>76</sup> GRANIERI, Massimiliano; BASSO, Andrea. Building capacity building in technology transfer: an introduction. In: GRANIERI, Massimiliano; BASSO, Andrea (ed.). *Capacity building in technology transfer: the european experience*. [S. l.]: Springer International Publishing, 2019.

<sup>77</sup> MORGERA, Elisa. The need for an international legal concept of fair and equitable benefit sharing. *European Journal of International Law*, v. 27, n. 2, p. 353-383, May 2016.

is critical in shaping policies that ensure justice across and within generations while promoting the sustainable use of marine resources<sup>78</sup>.

The benefit-sharing mechanism outlined in the BBNJ Agreement can be critiqued for not fully balancing the requirements of equitable benefit-sharing with the anthropological and forward-looking principles derived from the CHM concept. While the Agreement incorporates elements of sustainable equity, it does so partially, leaving critical gaps in addressing how the shift towards a more pragmatic benefit-sharing framework impacts the broader sustainability paradigm. This partial integration raises concerns about how the BBNJ Agreement adequately supports inter-generational equity, which focuses on preserving resources for future generations, and intra-generational equity, which emphasizes fairness among present-day stakeholders.

By not fully embracing the principles of sustainable equity and the CHM, the Agreement risks undermining its ability to achieve its overarching objectives of conservation and equitable use of marine resources. A fragmented approach to benefit-sharing could hinder the realization of fair outcomes across communities and nations while failing to ensure the long-term preservation of biodiversity. For the BBNJ Agreement to fully capitalize on the potential of the CHM concept and advance the sustainability paradigm, it will need to adopt a more integrated and balanced approach that effectively bridges the gap between present-day practicalities and future-focused responsibilities<sup>79</sup>.

### 3.5 Enforcement and monitoring gaps

Ensuring compliance with benefit-sharing obligations under both the UNCLOS and the BBNJ Agreement framework is critical to achieving equity and sustainability in the use of marine resources. However, both frameworks face challenges due to inadequate monitoring and enforcement mechanisms. While the

UNCLOS outlines general benefits-sharing obligations, mainly through the ISA, it lacks specific, binding provisions for ensuring that states and private actors fulfill their commitments. This limitation has resulted in inconsistent application and accountability, particularly regarding monetary and non-monetary benefits. Without stringent compliance mechanisms, the aspirations of equitable sharing remain challenging<sup>80</sup>.

The BBNJ Agreement, though more recent and expansive, similarly falls short in enforcing benefit-sharing obligations. While it emphasizes transparency, particularly through the deposition of MGRs and associated Digital Sequence Information (DSI) in public repositories, it does not clearly define penalties or remedial measures for non-compliance. This creates loopholes that could allow states or entities to exploit resources without sharing the resulting benefits equitably. For example, states are expected to notify and deposit data with the Clearing-House Mechanism, but no robust mechanism exists to monitor compliance or sanction those who fail to comply<sup>81</sup>.

One significant challenge lies in the absence of a global enforcement authority capable of overseeing compliance across jurisdictions. The decentralized nature of high-seas governance makes monitoring activities and ensuring benefit-sharing compliance particularly challenging. Both frameworks rely heavily on voluntary commitments and goodwill, which often fall short in the face of competing national interests or commercial priorities. Furthermore, the lack of standardized protocols for reporting, verification, and enforcement adds complexity to ensuring that benefit-sharing obligations are upheld consistently<sup>82</sup>.

<sup>78</sup> BLAIS, François. The fair and equitable sharing of benefits from the exploitation of genetic resources: a difficult transition from principles to reality. In: PRESTRE, Philippe G. (ed.). *Governing Global Biodiversity*. London: Routledge, 2002.

<sup>79</sup> TAGHIZADEH, Zakieh. Marine genetic resources as common heritage of mankind under the BBNJ agreement; the international community toward a pragmatic benefit-sharing approach? *Biodiversity and Conservation*, v. 34, p. 131-153, Nov. 2024. Available at: <https://doi.org/10.1007/s10531-024-02962-2> Access on: 10 Jan. 2025.

<sup>80</sup> VADROT, A.; LANGLET, A.; TESSNOW-VON WYSOCKI, I. Who owns marine biodiversity? contesting the world order through the 'common heritage of humankind' principle. *Environmental Politics*, v. 31, n. 2, p. 226-250, 2022.

<sup>81</sup> MORGERA, Elisa. The role of fair and equitable benefit-sharing in environmental peacebuilding. In: JONG, Daniëlla Dam-de; SJÖSTEDT, Britta. (ed.). *Research handbook on international law and environmental peacebuilding*. Cheltenham: Edward Elgar Publishing, 2023. chapter 4.

<sup>82</sup> POPOVA, Ekaterina *et al.* Ecological connectivity between the areas beyond national jurisdiction and coastal waters: safeguarding interests of coastal communities in developing countries. *Marine Policy*, v. 104, p. 90-102, June 2019.



## 4 Proposed solutions for equitable benefit sharing

The principles of equitable benefit-sharing underpin global efforts to manage and utilize marine resources beyond national jurisdiction. The UNCLOS and the recent the BBNJ Agreement represent significant steps toward fostering fairness and sustainability in using these resources. However, both frameworks face persistent challenges in operationalizing benefit-sharing, including gaps in transparency, capacity-building, technology transfer, and enforcement. These challenges are compounded by disparities between developed and developing nations in accessing and utilizing marine resources, particularly in the context of seabed mining and MGRs. To address these issues, it is essential to develop robust mechanisms that ensure monetary and non-monetary benefits are distributed equitably while promoting the long-term sustainability of marine ecosystems. By adopting the necessary measures, the international community can bridge existing gaps and create a more inclusive framework that aligns with equity, justice, and the CHM principles.

### 4.1 Transparent and inclusive governance

Mandatory transparency protocols for key decision-making bodies, such as the ISA's Legal and Technical Commission and Finance Committee, are essential to ensuring equitable benefit-sharing in the governance of marine resources. These bodies play a pivotal role in regulating seabed mining and MGRs activities, and their decisions have far-reaching implications for global equity and sustainability. By mandating transparency, these bodies can open their processes to greater scrutiny and participation, ensuring that stakeholders, particularly from developing nations, have access to the information needed to hold them accountable. Such measures align with the (CHM principle, emphasizing fairness, inclusivity, and shared stewardship of global resources<sup>83</sup>).

A public online platform for publishing financial reports, environmental assessments, and real-time benefit-sharing agreements would further enhance trans-

parency and accessibility. Such a platform could serve as a central repository for key information, allowing governments, organizations, and civil society to track compliance with agreed protocols and the distribution of benefits. By making this data readily available, stakeholders can assess whether financial and environmental obligations are being met, fostering a sense of shared responsibility and collaboration. Additionally, this openness can reduce potential conflicts and mistrust among nations by providing clear, verifiable information about managing marine resources.

Independent audits of seabed mining and MGRs activities would provide an additional layer of oversight, ensuring that transparency requirements are declared and effectively implemented. Independent auditors, operating free from the influence of vested interests, could evaluate compliance with financial and environmental commitments and identify areas where improvements are needed. These audits would provide an unbiased perspective, reinforcing the credibility of decision-making bodies and enhancing their accountability. For developing countries, in particular, such audits could serve as a critical safeguard, ensuring that their interests are protected and that they receive their fair share of benefits.

Together, these measures build trust among stakeholders, particularly those from developing countries, who often lack the resources to monitor and verify compliance independently. Transparency and accountability are cornerstones of the CHM principle, which seeks to ensure that the benefits of global resources are shared equitably among all humanity. By fostering a transparent and inclusive governance framework, these initiatives can help bridge the trust deficit, promote equitable resource management, and reinforce global commitments to sustainability and justice<sup>84</sup>.

### 4.2 Strengthened benefit-sharing mechanisms

Establishing clear and enforceable guidelines for revenue-sharing formulas is essential for promoting equity in the governance of marine resources. These formulas should emphasize the fair distribution of fi-

<sup>83</sup> JAECKEL, Aline; ARDRON, Jeff. A.; GJERDE, Kristina M. Sharing benefits of the common heritage of mankind – is the deep seabed mining regime ready? *Marine Policy*, v. 70, p. 198-204, Aug. 2016.

<sup>84</sup> TAGHIZADEH, Zakieh. Marine genetic resources as common heritage of mankind under the BBNJ agreement; the international community toward a pragmatic benefit-sharing approach? *Biodiversity and Conservation*, v. 34, p. 131-153, Nov. 2024. Available at: <https://doi.org/10.1007/s10531-024-02962-2> Access on: 10 Jan. 2025.

financial benefits, particularly prioritizing the needs of developing nations that cannot often fully participate in resource extraction activities. Transparent and equitable revenue-sharing frameworks can help bridge existing disparities, ensuring that all nations can access the benefits derived from MGRs and seabed mining regardless of their technological or economic status. This approach aligns with the CHM principle, emphasizing shared responsibility and fairness.

Incorporating compensatory measures for ecosystem losses and biodiversity degradation into the fiscal regime is critical to aligning financial benefits with sustainability goals. Resource extraction and bioprospecting activities often result in ecological disruptions, impacting marine biodiversity and the long-term health of ecosystems. By integrating compensation for these losses into revenue-sharing mechanisms, stakeholders can mitigate environmental damage while ensuring that financial benefits reflect the actual cost of resource exploitation. These measures can include funding for restoration projects, biodiversity conservation programs, and research initiatives to understand and mitigate the impacts of marine resource utilization.

Developing specific monetary and non-monetary benefit-sharing modalities during future Conferences of the Parties under the BBNJ Agreement framework will further enhance the fairness and effectiveness of benefit-sharing mechanisms. Monetary benefits may include royalties, milestone payments, and periodic contributions, while non-monetary benefits could encompass capacity-building initiatives, technology access, and scientific data sharing. By clearly defining these modalities, the COP can provide a roadmap for equitable benefit-sharing that is comprehensive and adaptable to the needs of diverse stakeholders. Such a framework would ensure compliance with the BBNJ Agreement and foster global collaboration and inclusivity.

Implementing these measures clarifies financial obligations, reduces inequalities, and ensures that benefits align with ecological and equity principles. By addressing the economic and environmental dimensions of marine resource governance, these actions contribute to a holistic framework supporting sustainable development and intergenerational equity. Moreover, clear and enforceable guidelines strengthen trust among stakeholders, fostering a cooperative environment that prioritizes the collective good over individual interests.

This approach ensures that the governance of marine resources is fair and transparent but also sustainable and forward-looking<sup>85</sup>.

#### 4.3 Enhanced capacity-building and technology transfer

Establishing a dedicated global fund, financed primarily by developed countries, is critical to support capacity-building programs for small island developing states (SIDS) and least developed countries (LDCs). These nations often face significant financial and technical barriers that limit their ability to participate effectively in marine resource management and benefit-sharing initiatives. A well-funded mechanism can provide training, infrastructure development, and research resources, ensuring that these countries are not left behind in the global effort to manage marine biodiversity sustainably. Such a fund would embody the principle of equity, addressing disparities and empowering vulnerable states to contribute to and benefit from marine governance frameworks.

Facilitating partnerships between developed and developing countries can further advance this goal by enabling the transfer of marine technologies and expertise. These collaborations should focus on providing affordable and adaptable tools, such as remote sensing equipment, underwater robotics, and data analysis software, tailored to the unique needs of developing nations. Knowledge transfer programs, including joint research projects and technical training, can help bridge the technological divide, fostering a more inclusive and equitable approach to managing marine resources. By leveraging the resources and expertise of developed countries, these partnerships can empower developing nations to participate actively in scientific innovation and benefit-sharing.

To ensure the sustainability and effectiveness of capacity-building initiatives, long-term strategies must be implemented, including monitoring and periodic evaluations. Regular assessments can identify areas for improvement, track progress, and ensure that programs remain aligned with their objectives. This approach

<sup>85</sup> BROGGIATO, Arianna *et al.* Fair and equitable sharing of benefits from the utilization of marine genetic resources in areas beyond national jurisdiction: bridging the gaps between science and policy. *Marine Policy*, v. 49, p. 176-185, Nov. 2014.

enhances the quality and impact of training programs and builds confidence among stakeholders by demonstrating accountability and measurable outcomes. Reducing technological disparities and enabling broader participation can foster scientific innovation and equitable resource management in underrepresented regions, contributing to a more balanced and inclusive global marine governance framework<sup>86</sup>.

#### 4.4 Addressing equity in marine bioprospecting and adopting a holistic approach to sustainable equity

Inclusive participation of developing nations and Indigenous Peoples in marine taxonomic research and bioprospecting initiatives is vital for ensuring equity in marine resource governance. By actively involving these groups, the global community can address the disparities in representation and access to MGRs. Their participation enriches research efforts with diverse perspectives and traditional knowledge and empowers underrepresented countries and communities to contribute to and benefit from the sustainable use of marine biodiversity. Ensuring that these stakeholders are integral to decision-making and research activities aligns with the broader goals of equity and justice in the governance of shared global resources.

Access to the DSI and research findings through public repositories is another critical step in achieving fairness in marine governance. Requiring such access ensures that all states can utilize data and research outcomes for scientific and commercial purposes, irrespective of their economic or technological capabilities. To further support equity, mechanisms must be developed to share profits from the commercialization of MGRs-based products in a way that prioritizes underrepresented countries. By ensuring a fair distribution of both scientific and financial benefits, these measures can bridge existing inequalities, promote collaborative innovation, and uphold principles of justice and inclusivity in the global management of marine resources.

Integrating inter-generational and intra-generational equity principles into benefit-sharing frameworks is essential for achieving immediate and long-term sus-

tainability goals. Inter-generational equity ensures that current resource utilization does not compromise the ability of future generations to meet their needs, emphasizing the preservation and sustainable management of marine biodiversity. Intra-generational equity, on the other hand, focuses on the fair distribution of resources and benefits among present-day stakeholders, particularly between developed and developing nations. Embedding these principles into benefit-sharing agreements fosters a holistic approach that balances the needs of diverse stakeholders across time and geography.

Achieving this balance requires deliberately aligning short-term economic gains with long-term ecological preservation. This can be done by incorporating robust environmental safeguards into mining and bioprospecting agreements, ensuring that resource extraction activities are conducted responsibly and sustainably. Furthermore, the COP should be encouraged to formalize policies reflecting sustainable equity's dual focus, providing clear guidelines for equitable resource management and environmental protection. By addressing the needs of current and future generations, these measures ensure the sustainable and just utilization of marine resources while preserving the health of ocean ecosystems for years to come<sup>87</sup>.

#### 4.5 Improving monitoring and enforcement mechanisms

The establishment of an independent global enforcement body under the BBNJ Agreement framework is essential for ensuring compliance with benefit-sharing and transparency obligations. Such a body would provide an impartial mechanism to monitor and enforce adherence to agreed-upon rules, addressing gaps in the current decentralized governance structure. By overseeing compliance, this enforcement body would ensure that benefit-sharing activities are conducted fairly and in alignment with the principles of equity and sustainability. It would also serve as a neutral arbiter, resolving disputes and fostering stakeholder trust, particularly between developed and developing nations.

<sup>86</sup> SANTO, E. M. De. *et al.* Protecting biodiversity in areas beyond national jurisdiction: an earth system governance perspective. *Earth System Governance*, v. 2, Apr. 2019.

<sup>87</sup> LEARY, David. Agreeing to disagree on what we have or have not agreed on: the current state of play of the BBNJ negotiations on the status of marine genetic resources in areas beyond national jurisdiction. *Marine Policy*, v. 99, p. 21-29, Jan. 2019.



Standardized protocols for reporting and verifying benefit-sharing activities should be implemented to further enhance compliance. These protocols would ensure uniformity across jurisdictions, creating a consistent framework for assessing whether obligations are being met. Additionally, penalties for non-compliance, such as restricted access to future marine genetic resources or mandatory financial contributions to capacity-building funds, would deter violations and incentivize adherence. Promoting accountability and closing enforcement gaps would strengthen the BBNJ Agreement framework, ensuring that benefit-sharing agreements are upheld and that the exploitation of marine resources is conducted equitably and sustainably<sup>88</sup>.

The above solutions collectively address the gaps and challenges, providing a comprehensive roadmap for achieving equitable benefit-sharing, sustainable resource management, and stronger governance under the UNCLOS and the BBNJ Agreement.

## 5 Conclusion

The principle of equitable benefit-sharing is central to the Area's governance as a part of the CHM under the UNCLOS and the newly established the BBNJ Agreement. While significant progress has been made in conceptualizing this principle, its implementation faces persistent challenges, including a lack of transparency, limited capacity-building mechanisms, insufficient technology transfer, and weak enforcement frameworks. These challenges disproportionately affect developing nations and marginalized communities, undermining the foundational goals of equity, justice, and sustainability.

Addressing these issues requires a multifaceted approach incorporating robust governance structures, clear benefit-sharing frameworks, and a commitment to capacity-building and inclusivity. Measures such as mandatory transparency protocols, independent enforcement bodies, and mechanisms for equitable resource distribution are critical to fostering trust among

stakeholders and ensuring that the benefits of marine resource exploitation are shared fairly. Additionally, long-term capacity-building and technology transfer strategies must be implemented to enable developing nations to participate meaningfully in marine governance.

Integrating inter-generational and intra-generational equity principles into benefit-sharing agreements is essential to balancing current and future resource needs while preserving marine biodiversity. By emphasizing sustainability, inclusivity, and accountability, the international community can align its practices with the CHM's overarching goals. The BBNJ Agreement framework, emphasizing transparency and equitable benefit-sharing, presents an opportunity to address these gaps and set a precedent for fair and sustainable marine resource governance.

In conclusion, realizing equitable benefit-sharing requires a global effort to reform existing frameworks, prioritize inclusivity, and uphold the principles of equity and sustainability. By bridging gaps and addressing disparities, the international community can create a fairer and more resilient system that benefits all of humanity, ensuring the long-term preservation and responsible use of the ocean's resources for current and future generations.

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<sup>88</sup> TAGHIZADEH, Zakieh. Marine genetic resources as common heritage of mankind under the BBNJ agreement; the international community toward a pragmatic benefit-sharing approach? *Biodiversity and Conservation*, v. 34, p. 131-153, Nov. 2024. Available at: <https://doi.org/10.1007/s10531-024-02962-2> Access on: 10 Jan. 2025.

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