

## **Bolstering the Area's Benefits to Humankind:**

### **A Legal Analysis of UNCLOS' Common Heritage of Mankind Principle and 'for the benefit of mankind' Provisions in the Context of the Call for a Deep Seabed Mining Moratorium**

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**Matter commented on:** The call for a moratorium on deep seabed mining, common heritage of mankind principle, meaning of 'benefits' in the Area regime under Part XI of the 1982 United Nations Convention on the Law of the Sea

#### **1. Introduction**

The latest International Seabed Authority (ISA) Council meeting took place from 31 October 2022 to 11 November 2022. The Council is working towards finalising the Mining Code, which is a complete set of ISA rules, regulations, and procedures to regulate prospecting, exploration, and exploitation of the Area's resources ([ISA's Mining Code](#)). The ISA is required to develop the Mining Code under Part XI of the 1982 United Nations Convention on the Law of the Sea ([UNCLOS](#)) and the [1994 Part XI Implementation Agreement](#). According to Nauru's triggering of the two-year rule, the Mining Code should be finalised by June 2023 ([ISA, 2021; Blanchard, 2021](#)), although meeting this deadline seems unlikely. The biggest splash made at this recent Council meeting was France's statement ([France Declaration to the ISA](#), 10 November 2022) supporting France's President Macron at the United Nations Framework Convention on Climate Change COP27 calling for an outright moratorium (ban) on all deep seabed mining (DSM) in the international seabed (beyond (outer) continental shelves), which is referred to in UNCLOS as 'the Area.' France's statement evoked strong responses from some state delegates, including questioning the legality of a DSM Moratorium.

The Area and its resources are the common heritage of (hu)mankind (CHM) (UNCLOS, article 136). Inherent in the debate over whether DSM should soon commence or be banned (temporarily or permanently) is the question of what benefits humankind currently derive and could derive from the Area. This post assesses UNCLOS' provisions which (i) establish the Area and its resources as CHM; and (ii) provide for utilising the Area and its resources for the benefit of humankind, in historical and contemporary contexts. In particular, it demonstrates that there have been significant developments in scientific knowledge of the functions of the deep seabed since the negotiations on the UNCLOS (1973-1982). Based on this discussion, this post proposes adopting a holistic and evolutive approach when interpreting 'benefits' from the Area and discusses what this means in the context of discussions around a DSM Moratorium.

#### **2. The context in which the DSM regime was negotiated**

The UNCLOS negotiations and the Area/DSM regime's drafting took place during the post-World War II process of decolonisation. At the time, the misconception existed that deep seabed minerals were a limitless resource ([Thompson et al](#), 2018, p 2). Former colonisers had lost ownership of resources in their former colonies and sought new ways to continue generating wealth. Newly independent states sought opportunities to generate wealth and close the inequality gap with the former colonisers. The deep seabed was thus seen as an opportunity to generate widespread economic wealth and development - a new international economic order ([Feichtner](#), 2019, p 605). Accordingly, when drafting the regime for the Area in Part XI of UNCLOS, the focus was undoubtedly on the potential economic and developmental benefits that could be derived from the Area.

However, since UNCLOS was negotiated there has been a significant increase in scientific research of the deep seabed and scientists are more knowledgeable about deep-sea ecosystems, fauna, and flora and the crucial ecosystem functions and services that the deep-sea/deep seabed provides. It is now commonly accepted that DSM will interfere with diverse ecosystems reliant on deep seabed sites proposed for DSM and cause irreversible consequences in these ecosystems ([Amon et al](#), 2022; [Miller et al](#), 2021; [Vanreusel](#), 2016; [Thompson et al](#), 2018). It is crucial for negotiators and commentators discussing the DSM regime today to remember the historical context in which the provisions of UNCLOS, particularly relating to the Area, were negotiated and how our understanding of deep seabed ecosystems has advanced since those negotiations.

### **3. Textual analysis of UNCLOS provisions relating to ‘for the benefit of mankind’ and the CHM principle**

#### **3.1. UNCLOS’ preamble**

The starting point for interpreting the terms of a treaty is established in the [Vienna Convention on the Law of Treaties](#), 1969 (VCLT), which provides that “a treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose” (VCLT, article 31(1)). A treaty’s preamble does not create legally binding obligations, but it is key for understanding a treaty’s object and purpose, which must be considered alongside the ordinary meaning of its provisions (as per the VCLT). Before considering the relevant individual provisions in Part XI of UNCLOS, it is useful to consider two specific paragraphs in UNCLOS’ preamble..

UNCLOS’ unnumbered preambular paragraph 4 provides the overall goals of UNCLOS as:

*a legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment...*

This paragraph makes it clear that it is not only (equitable) utilisation of marine resources that is a goal of UNCLOS, but equally so are the conservation of living resources and the study, protection, and preservation of the marine environment goals of UNCLOS. That this paragraph contains the goals of UNCLOS is indicated by the wording in unnumbered preambular paragraph 5 which refers to the “achievement of these goals.” Unnumbered preambular paragraph 5 provides as follows:

*Bearing in mind that the achievement of these goals will contribute to the realization of a just and equitable international economic order which takes into account the interests and needs of mankind as a whole and, in particular, the special interests and needs of developing countries, whether coastal or land-locked.*

This paragraph establishes the notion of realising a just and equitable international economic order as one of the intended outcomes of UNCLOS, through the legal order for the seas and oceans that UNCLOS aims to create (as stated in unnumbered preambular paragraph 4). The second part of this paragraph introduces an important qualifier, which is that “the interests and needs of mankind as a whole” and of developing states, in particular, must be taken into account, presumably for the international economic order to be just and equitable. Recalling the decolonisation context of UNCLOS negotiations is essential to understand the purpose of this paragraph. During UNCLOS’ negotiations, particularly in relation to Part XI, state parties sought to ensure that the scramble for land that ensued during colonisation was not repeated where the deep seabed was concerned, but that a more just and equitable regime would be established (such notion was famously captured by Malta at the UNCLOS negotiations in its ambassador [Arvid Pardo's 1967 speech](#)). However, it is necessary to note that the 1994 Part XI Implementation Agreement, which was driven by developed states and the desire to facilitate universal participation in UNCLOS, sought to amend the DSM regime to base it on commercial terms (and less on wealth redistribution) ([Jaeckel et al, 2020, p 60](#) ). This shift is referred to in its preamble as “noting political and economic changes, including in particular a growing reliance on market principles” (1994 Part XI Implementation Agreement’s unnumbered preambular paragraph 5).

These preambular paragraphs are important to keep in mind when assessing how the Area can and should be utilised for the benefit of humankind. It is clear that while the drafters envisaged the utilisation of ocean resources, such use was intended to take place in a just and equitable manner for all humankind, while also conserving the marine environment. Even with the amendment to the Area regime by the 1994 Part XI Implementation Agreement and its diminishing of the originally-envisaged wealth redistribution (and new international economic order) that was believed could arise from the Area regime, the declaration of the Area and its resources as the CHM remained. The commitment to giving particular consideration to developing states and utilising the Area and its resources to benefit all humankind thus persists under the Area regime.

The declaration of the Area and its resources as the CHM and the exploration and exploitation of the seabed and its resources ‘for the benefit of mankind as a whole’ is explicitly referred to in UNCLOS’ unnumbered preambular paragraph 6. This paragraph does no more to establish or explain these concepts other than referring to the desire to develop them in line with the resolution that established them ([UN resolution 2749 \(XXV\) of 17 December 1970](#)). These concepts are further fleshed out in Part XI of UNCLOS. The preamble to the 1994 Part XI Implementation Agreement reaffirms the Area and its resources as the CHM.

### **3.2. UNCLOS Part XI: CHM and ‘for the benefit of mankind’**

Article 136 provides that “*the Area and its resources are the common heritage of mankind.*” While this provision establishes the application of the CHM principle in Part XI of UNCLOS, it does little to explain what the CHM principle entails. Despite the ambiguity in this provision, it is commonly accepted that the CHM principle has five core elements ([Proelss, 2017, p 954](#); [Jaeckel, 2020, p 663](#)). The first four elements are further established in the articles following article 136.

These core elements of the CHM principle (with the Part XI articles that further establishes each in brackets) are (Proelss, 2017, p 954 – 955):

- i. non-appropriation (article 137(1));
- ii. common management (numerous provisions concerning the establishment of the ISA, including article 157, read with articles 156(2) and 137(2));
- iii. equal sharing of benefits (article 140(2) read with 160(2)(f)(i); article 142; article 143; article 144 (and see discussion below));
- iv. use for peaceful purposes only (article 141); and
- v. preservation for future generations.

This analysis is concerned with elements iii and v of the CHM principle. It is essential to understand what benefits from the Area can be equally shared and with whom they should be shared. The fifth element of the CHM principle is established because the common heritage resource belongs to (hu)mankind. ‘Humankind’ has a wider meaning than ‘all states.’ Although this does not create a new subject of international law, it mandates that in dealing with the Area as a common heritage resource, the ISA and states must account not only for the present generation (which is represented by states) but for future generations as well (Proelss, 2017, p 956 – 957).

There is no definition of benefits in UNCLOS (or the 1994 Part XI Implementation Agreement). However, article 140 is entitled ‘benefit of mankind’ and provides as follows:

*“1. Activities in the Area shall, as specifically provided for in this Part, be carried out for the benefit of mankind as a whole, irrespective of the geographical location of States, whether coastal or land-locked, and taking into particular consideration the interests and needs of developing States...”*

*2. The Authority shall provide for the equitable sharing of financial and other economic benefits derived from activities in the Area through any appropriate mechanism...”*

This provision links the concept of ‘for the benefit of mankind’ specifically with activities in the Area. UNCLOS article 1 defines ‘activities in the Area’ as “all activities of exploration for, and exploitation of, the resources of the Area,” and UNCLOS article 133 defines ‘resources,’ (for the purposes of Part XI) as “all solid, liquid and gaseous mineral resources *in situ* in the Area at or beneath the seabed, including polymetallic nodules.” Accordingly, when activities and resources are mentioned in Part XI, this refers only to mineral resources in the Area. Paragraph 2 of article 140 further reinforces this link by mandating the ISA to establish a mechanism to ensure financial and economic benefits are equitably shared (emphasis added). Benefits under article 140 thus seem to be referring specifically to benefits derived from mineral resource extraction, which are predominantly economic benefits, as well as mineral supply.

It is no surprise that the drafters placed emphasis on economic benefits from the Area’s resources, given the decolonisation context in which UNCLOS III was negotiated. However, these are not the only benefits to humankind that can be derived from the Area. UNCLOS expressly recognises some of the other benefits from the Area. It is submitted that all benefits that can be derived from the Area need to be given proper consideration and due weight.

#### **4. How can the Area benefit humankind?**

[Jaeckel](#), 2020 categorises the benefits derived from the Area into six categories, each of which represents a different lens seeking to achieve different benefits, to give effect to the CHM principle (p 662):

- (1) wealth generation and redistribution;
- (2) advancing developing states;
- (3) mineral supply security;
- (4) ecosystem services;
- (5) scientific knowledge; and
- (6) other uses of the Area.

The first two categories are expressly recognised in article 140 of UNCLOS and category 2 is also recognised in article 144 in relation to technology transfer. Category 3 is an obvious outcome of the Area regime. Category 5 is also expressly recognised in UNCLOS as article 143(2) mandates the ISA to promote marine scientific research. Category 6 refers to all other uses of the Area, which fall outside the ambit of Part XI and thus are not managed or regulated by the ISA (and so are beyond the scope of this analysis). Accordingly, it is only category 4 which is not expressly provided for in Part XI. This is most likely due to more recent advancements in technology that have enabled scientists to more readily access and study the deep seabed in ways that were not possible when UNCLOS was being negotiated. The closest article in UNCLOS that encapsulates this category of benefits is article 145. However, article 145 concerns protecting the marine environment from the harmful effects of DSM rather than directly benefitting humankind from the functions and services of deep seabed ecosystems.

Scientific exploration and research into the deep-sea and deep seabed has developed exponentially since UNCLOS negotiations. Humans now know significantly more about the deep seabed and its mineral resources, fauna, flora, and greater ecosystems than when UNCLOS was being negotiated. As an example, the first hydrothermal vents were only discovered in 1977. This was the first time scientists realised that despite there being no sunlight (which meant no photosynthesis could take place), organisms were thriving on these vents by relying only on chemosynthesis and that this process could be the basis of an entire ecosystem. This discovery fundamentally changed scientists' understanding of the earth and life on it ([Ranganathan](#), 2022; [Gollner et al](#), 2021; [Friedman](#), 2017). Even though UNCLOS was adopted five years later and the 1994 Part XI Implementation Agreement 12 years after that, this does not mean that the magnitude of this discovery and what it meant for advancing knowledge of deep-sea ecosystems was understood and encapsulated into these treaties. Scientific discoveries and research in the deep-sea can take decades to understand and considerable research into fully understanding hydrothermal vent ecosystems is still ongoing today. Since 1977, there have been nearly 700 vents reported globally. The first vent on the Central Indian Ridge in the Indian Ocean, for example, was only discovered at the beginning of the 21<sup>st</sup> century ([van der Most et al](#), 2023, p 2).

The known ecosystem functions and services of the deep-sea/deep seabed include, but are not limited to, carbon dioxide absorption, oxygen production, and climate regulation ([Jaeckel](#), 2020, p 675). The Area's resources and associated fauna and flora also have other useful functions besides mineral supply. Scientists have found evidence that fauna on cobalt-rich crusts and polymetallic nodules assist with carbon sequestration, although further research into this is required. Cobalt-rich crusts have proved to increase ocean productivity, and the fauna found on

polymetallic nodules contribute to nutrient regeneration, with positive effects for fish stocks. Polymetallic nodule fauna also has the potential to provide marine genetic resources that can be developed into pharmaceuticals and biomaterials ([Amon et al, 2022, p 7](#)).

Although financial (and developmental) benefits were the core envisaged benefits from the Area and its resources in the 1970 and 1980s, this does not mean that these benefits are more important than other benefits to humankind from the Area. As just illustrated, crucial scientific evidence has been discovered, and continues to be discovered, in the decades since UNCLOS and the 1994 Part XI Implementation Agreement were negotiated. Many of these ecosystem functions and services are undoubtedly a benefit for humankind as a whole because they serve all humankind equally.

## **5. A holistic and evolutive approach to the Area's benefits for humankind**

There is no definition or hierarchy of benefits from the Area explicitly included in Part XI of UNCLOS or the 1994 Part XI Implementation Agreement, but, as demonstrated by the above analysis, the focus is certainly economic benefits. However, what is noteworthy about article 136 is that, on a literal reading of its wording, not only the resources in the Area but also the Area itself is declared the CHM. Considering the definitions included in UNCLOS, this could mean that not only “all solid, liquid and gaseous mineral resources *in situ* in the Area at or beneath the seabed, including polymetallic nodules” (as ‘resources’ is defined in UNCLOS, article 133) are the CHM, but also the other components and resources of the “seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction” (as ‘the Area’ is defined in UNCLOS, article 1). While this makes room for an argument that other components or living resources of the deep seabed that are not mineral resources should also be utilised to benefit humankind, the issue is not so clear cut. A contentious debate exists over which resources of the Area are CHM – only mineral resources or other resources of the Area too, such as marine genetic resources and living resources – and, accordingly, which legal regime governs these other resources; namely the Area regime or the high seas regime ([Vadrot et al, 2021](#); [Oude Elferink, 2007](#); [Morris-Sharma, 2017](#)). This is a key topic of discussion at the ongoing [intergovernmental negotiations on a new legally binding instrument for the conservation and sustainable use of marine biodiversity beyond national jurisdiction](#). Without taking a stance on this complex debate, it is submitted that it is crucial to acknowledge that since UNCLOS was finalised, other benefits (besides wealth generation, advancing developing states through technology transfer, and mineral supply) from the Area, its resources, and its associated fauna and flora have been discovered and/or further researched and understood (such as those demonstrated in the section above).

To realise these crucial benefits from the Area, the Area's ecosystems, fauna, and flora need to be protected to the extent that the Area is able to continue to provide these crucial services, even when other activities in the Area are taking place. This is consistent with one of UNCLOS' goals, namely to protect and preserve the marine environment (alongside equitable use of mineral resources), as set out in its unnumbered preambular paragraph 4, as well as the direct obligation created by Part XI's article 145. Setting adequate standards for protecting the marine environment from the harmful effects of DSM is a critical part of the ISA's current negotiations where its Mining Code is being developed. The deep seabed's ecosystem functions and services are a benefit that may be essential for humankind's existence and, at the very least, are essential for humankind's continued and sustainable use of oceans resources. So, if the marine environment that provides these functions and services cannot be adequately protected while DSM takes place, resulting in it no

longer being able to provide such essential services, it needs to be seriously considered whether the benefits from DSM outweigh its impact on this essential benefit for humankind.

Both UNCLOS' unnumbered preambular paragraph 5 and the CHM principle, particularly component v, demonstrate one of UNCLOS' and Part XI's objectives, respectively, that ocean resources must be utilised in a just and equitable manner and take into account the interests and needs of all humankind. In the Area this objective is taken a step further as the use of the Area's resources are intended to benefit humankind (UNCLOS' unnumbered preambular paragraph 6) (emphasis added). Despite the preamble not creating binding obligations and component v not correlating to any specific article (although the CHM principle is firmly founded in article 136), it can be argued that both give important insight (especially when read together) into the object and purpose of UNCLOS in general and Part XI in particular. Accordingly, the specific provisions relating to how to utilise the Area's resources must be interpreted in light of this object and purpose, as per the VCLT. If activities in the Area are not benefitting all humankind – both present and future generations, and both developed and developing states – or are affecting the ability of the Area to benefit humankind in another way, due to detrimental effects for a part of humankind, then these activities cannot be said to be carried out for the benefit of (or taking into account the interest and needs of) humankind as a whole. Put more simply, if only developed states or the present generation, for example, derive benefits from mineral resource extraction from the Area, to the detriment of all humankind, particularly developing states and future generations, benefitting from the ecosystem functions and services of the Area, the objective of a fair and just economic order that benefits humankind as a whole is undermined. Such activities could therefore be undermining the object and purpose established in UNCLOS' preamble (unnumbered paragraph 5) and Part XI's CHM principle.

Furthermore, focusing on the Area's ecosystem functions and services, and the effect that DSM may have on this category of benefits, is essential to ensure the preservation and use of the deep seabed for future generations. This is consistent with [SDG14](#), which is to “conserve and sustainably use the oceans, seas and marine resources for sustainable development.” Notably, the UN Environment Programme Finance Initiative (UNEPFI) in its [June 2022 Report](#) (p 10) indicated that, at present, due to the environmental harm that DSM poses to deep-sea ecosystems, no robust precautionary approach can be adopted for DSM and it concluded that financing of DSM activities is incompatible with the spirit and intent of the sustainable blue economy.

With the aforementioned in mind, it is submitted that a holistic and evolutive approach should be adopted when considering how to implement Part XI in a manner that ensures humankind benefits from the Area and its resources. When adopting this approach, the benefits for humankind that can be derived from the Area are much broader than those established in UNCLOS' article 140. Such an approach gives effect to the CHM Principle and the underlying goals of UNCLOS. This approach also recognises that the times (and associated issues that humankind is facing) and our scientific knowledge and understanding of the Area and its ecosystems have changed drastically since the negotiation and adoption of UNCLOS and the 1994 Part XI Implementation Agreement.

It is thus vital for the international community to acknowledge that there are various benefits - economic, social, developmental, scientific, environmental - that can be derived from the Area and its resources and each should be given due consideration when DSM discussions take place, especially the call for a DSM moratorium.

## **6. A DSM Moratorium may be the best way to benefit humankind from the Area**

A DSM moratorium would mean that, during its implementation, no financial or mineral supply benefits would be derived from the Area as mineral resource extraction would not take place. To benefit humankind as a whole, a cost-benefit analysis of the uses of the Area needs to be conducted and DSM should only commence if it amounts to a net benefit to humankind ([Jaeckel, 2020](#)). The damage to the marine environment and the subsequent potential for failure of essential ecosystem functions and services must be considered when conducting such an analysis. Furthermore, whether there will be substantial benefit to developing states must also be a key consideration. There are still significant scientific gaps in baseline data about deep-sea ecosystems and the effect of DSM thereon ([Amon et al, 2022, p 11](#)). It is also well known that the 1994 Part XI Implementation Agreement severely diminished the technology transfer and wealth redistribution that were originally intended to accrue to developing states from the Area regime. Yet even after the amendments made to Part XI by the 1994 Part XI Implementation agreement, special consideration of the needs and interests of developing states is still an obligation under the DSM regime (UNCLOS article 140(1) and article 148, supported by UNCLOS' unnumbered preambular paragraph 5). In addition, the ISA has yet to establish an adequate benefit-sharing model that results in just and equitable financial benefits to developing states as a collective ([Miller et al, 2021, p 5](#)). These factors mean that currently it is not possible to conduct an accurate cost-benefit analysis on DSM.

If commencing with DSM too early adversely alters the ocean's ecosystem functions and services, this will likely have a detrimental effect on all humankind (present and, particularly, future generations). This is especially so in the context of climate change, although further scientific research is needed into the role of the deep-sea/deep seabed in mitigating climate change ([Amon et al, 2022, p 7](#)). As developing states generally have less resources for effective adaptation or mitigation strategies to tackle climate change than developed states, the failure of these ecosystem functions and services may affect developing states even more severely. If DSM commences to the detriment of developing states (and thus humankind as a whole) this would be contrary to the special consideration that was intended to be given to developing states under Part XI.

Based on the above, it may be that the benefits that humankind is currently reaping from the ecosystem functions and services of the deep seabed outweigh the mineral supply and economic benefits that will be derived from DSM. This is particularly so when the proposed benefits from the current DSM regime do not adequately give special consideration to the interests and needs of developing states, particularly where the potential environmental harm faced by developing states from DSM is considered. In case not all states and future generations are benefitting from DSM, then the Area's resources are not being used for the benefit of humankind as a whole, as was intended from the governance of the Area and its resources (under the CHM principle and the object and purpose of UNCLOS). Moreover, a DSM Moratorium would give more time to conduct the necessary research needed to establish adequate protection mechanisms for the marine environment while DSM takes place and ensure an accurate cost-benefit analysis could be conducted to determine which benefits from the Area humankind should be pursuing. There is evidence (such as that relied on by the UNEPFI report) that in its current form any DSM, even if carried out with precaution, may cause irreversible harm to vital deep-sea ecosystems. On this basis it is arguable that, currently, a DSM Moratorium – even if only temporary or conditional – may be the best way to reap the most benefit for humankind from the Area.

While there is much room for debate on this topic, it is submitted that it is crucial to recognise at this juncture in the DSM debate that the Area's benefits are broader than, and should not be limited to, financial profits from mineral extraction.

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