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Threats to Our Ocean Heritage: Deep Sea Mining

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Chapter 2
Deep Sea Mining vs. Underwater Cultural Heritage

Maria Pena Ermida

Abstract This chapter seeks to provide an overview of the legal framework surrounding the protection of UCH as a part of the Marine Environment within the context of Law of the Sea, focusing particularly on the rules regarding deep sea mining. The text seeks to analyse how such an activity may be considered compatible, or not with the protection of the marine environment and in particular how underwater cultural heritage may be addressed within such a context.

Keywords Marine environment · Area · Mining · Law of the sea · Underwater cultural heritage

2.1 Introduction

As Humanity comes closer to exploring the bottom of the ocean, questions concerning our knowledge of this area emerge. Usually, such questions regard the environmental aspect of the deep sea and impacts on marine organisms and ecosystems. However, a less common question is, how will such an activity impact Humanity's shared history, which still lies hidden at the bottom of the sea? How can one protect underwater cultural heritage (UCH) using the legal framework from an activity such as deep sea mining (DSM)?

The framework concerning the protection of UCH results from the interaction between different legal frameworks, namely the law of the sea, environmental law, and cultural heritage. Various legal instruments will be referred to, and although

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they may seem unrelated at first, the reader will be guided through their unifying points concerning the protection of UCH as a part of the marine environment, considering the duty to protect UCH and the relevance of the application of the precautionary principle.

2.2 From Total Freedom to Common Heritage of Mankind[1]

Before the adoption of the 1982 Law of the Sea Convention (LOSC),[2] there was no explicit agreement on how to share, or exploit, minerals found on the seabed. Although there were some possible methods, the practical result of any of those theories would be a 'first come, first served' scenario, whereby developed States with the technology to carry out such endeavours would be better placed to exploit resources in the terms and timeframe they saw fit (Tanaka, 2019, p. 218). At the same time, this activity had the potential to negatively impact States that relied on the export of land-based mining for their economy, many of which were developing States.[3] A solution was needed to avoid difficulties which would deepen the existing rift between developed and developing States further.

To give States a purpose to come together amid Cold War uncertainty and perceived unfairness, Maltese Ambassador Arvid Pardo made a historic speech in 1967 at the UN General Assembly, stating that a new framework of cooperation amongst States was vital to prevent the unruled appropriation by States of the deep sea for military purposes, the exploitation of marine resources in an unequal manner, and the dumping of radioactive waste in these areas (Pardo, 1967). In light of these risks, Pardo proposed a moratorium on all uses of the deep sea until the adoption of a legal framework that put these areas and resources under the Principle of Common Heritage of Mankind (CHM).[4] This would eventually happen with the 1969 Moratorium, General Assembly Resolution 2574 D (XXIV), known as the Moratorium Resolution. According to it, no activities targeted at exploiting resources were to occur in the deep sea in areas beyond national jurisdiction until an international framework was adopted for this area and the resources therein.

[1] In the twenty-first century, this concept is most often referred to as the Common Heritage of Humankind, but the acronym CHM is still in use.

[2] The LOSC, also referred to as the Constitution of the Oceans, is the result of more than a decade of negotiations, political declarations, workgroups, and heated discussions that culminated in the adoption of one of the most comprehensive and sophisticated legal instruments in the history of international law.

[3] Take for example the Democratic Republic of the Congo, rich in minerals such as copper, cobalt, diamonds, and gold, or Bolivia rich in tin, silver, and zinc.

[4] Although Arvid Pardo did not conceptualize this Principle, he was the father of its introduction in the Law of the Sea. This Principle had been included in other conventions such as the *Antarctic Treaty (1961),* the Preamble of the NATO treaty (1949), and the Treaty on the Non-Proliferation of Nuclear Weapons (1968).

Pardo (1975) advocated that to give relevance to values such as freedom or sovereignty instead of a principle like Common Heritage of Humankind, would result in 'a competitive scramble for sovereign rights over the land underlying the world's seas and oceans, surpassing in magnitude and its implications last century's colonial scramble for territory in Asia and Africa' (Pardo, 1975, p. 31). This would raise the same suspicions and tensions among the powerful few, something Pardo was attempting to avoid, and further the resentment of former colonies towards their colonisers. The answer was, therefore, obvious—to develop an approach based on the prohibition of national appropriation, peaceful uses, and a shared and responsible utilisation of the Area, with consideration for developing countries. The goal was to benefit Humankind instead of the same established few (Vönecky & Höfelmeier, 2017, mn 9).

Ultimately, this principle made it into the LOSC. This Convention divided the ocean into Areas Within National Jurisdiction and Areas Beyond National Jurisdiction. Areas Within the National Jurisdiction of States include the Territorial Sea (LOSC 1982, Article 2), the Contiguous Zone (LOSC 1982, Article 33), the Exclusive Economic Zone (EEZ), and the Continental Shelf (LOSC 1982, Article 76). Areas beyond National Jurisdiction include the High Seas (the water column and resources therein beyond the EEZ of States) and the Area (the seabed beyond the continental shelves of States) (LOSC 1982, Article 1 (1) (1), Article 133 *et seq*.; LOSC 1982, Part XI). As a widely accepted international agreement ratified by 169 nations plus the European Union, most of LOSC is recognised as codified customary international law. As a result, over the past four decades, it has been followed in practice by parties and non-parties, with many rights and obligations resulting from this treaty being pointed at as customary international law (Churchill, 2022, 32 *et seq*.) (Fig. 2.1).

With the adoption of the LOSC, the Area and its resources became governed by the Principle of the CHM which had three elements. (LOSC, 1982, Article 136; on this Principle see Wolfrum, 1983; Kiss, 1985; Pureza, 1998; Scovazzi, 2004) Firstly, the creation of an international management structure for the Area and its resources that would guarantee that all benefits of activities in the area were shared equally among Humanity (LOSC, 1982, Articles 136, 137, 138 & 140). Secondly, the use of the Area exclusively for peaceful purposes (LOSC, 1982, Article 141). Finally, the principle of non-appropriation by States and consequential benefit sharing of the resources therein (LOSC, 1982, Article 137). This chapter explores how this concept is relevant to UCH.

The inclusion of 'The Area and its resources' in the principle of the CHM has raised much discussion concerning the nature of the benefits to be gained from the exploitation of resources (Vönecky & Höfelmeier, 2017, mn 22).[5] For this text, it is essential to analyse the evolution of the Principle of the CHM, namely in terms of

[5] By ensuring technology and knowledge transfer, Articles 143 and 144 of the LOSC ensures the sharing of benefits other than economic among all States, including developing States. This framework has however suffered some changes through the Implementation Agreement for Part XI of the Convention.

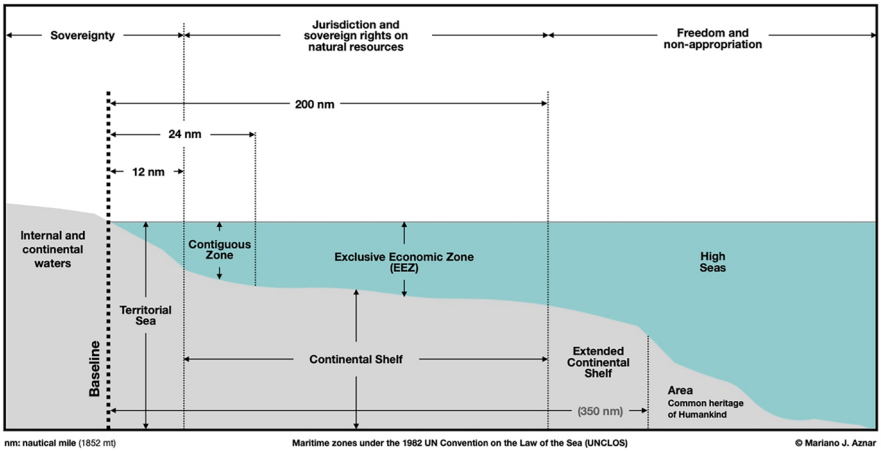

Fig. 2.1 The maritime zones include the 12 nm Territorial Sea, the 24 nm Contiguous Zone, the 200 nm Exclusive Economic Zone, and the High Seas. (Source: © Mariano Aznar, reprinted with permission)

its benefit-sharing aspects (LOSC, 1982, Article 137 & 140). Initially, this element included an idea of cooperation regarding these resources that mainly targeted the economic benefit one could extract from them. This means that the Principle of the CHM could also be applied, particularly its benefit-sharing element, to other activities, such as activities with a research or knowledge-seeking character (Vönecky & Höfelmeier, 2017, mn 22; See also Scovazzi, 2007; Heafy, 2014). Secondly, the CHM principle has also been understood to have both a spatial dimension (meaning that it applies to all states (AO ITLOS 2011, para. [159]) and a temporal dimension (allowing it to consider both present and future generations) (Vönecky & Höfelmeier, 2017, mn 23; See also LOSC, 1982, Articles 137, 138, & 140), thus raising the question of Intergenerational Justice. In this sense, it could be argued that cultural benefits, the knowledge of our human history, and its passing to future generations is something that figures within the scope of the principle of the CHM and thus a duty to protect UCH may naturally arise. This position, as shall be demonstrated, can be found in the text of the LOSC, namely through Articles 303 and 149. However, before analysing these provisions it is important to provide a general overview of the framework for deep sea mining according to the LOSC.

2.3 Deep Sea Mining Beyond the Law

The Area includes 'the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction' (LOSC, 1982, Article 1(1) (1)) and is addressed by LOSC, Part XI. The administration of the Area and its resources is carried out by the International Seabed Authority (ISA), one of the institutions created by LOSC

(along with ITLOS and the Commission on the Limits of the Continental Shelf). This institution's mandate includes regulating the 'activities in the Area', which include 'drilling, dredging, excavation, disposal of waste, construction and operation or maintenance of installations, pipelines and other devices related to such activities' (LOSC, 1982, Article 145 (a) and Annex III, Article 17 (2) (f))). No member State may authorise activities in the Area without the knowledge and permission of the Authority.[6] If an entity wishes to pursue any activity in the Area, it must submit plans of work to the Authority for approval as stated in Article 3 (1) of Annex III of LOSC. According to Article 153 (2), these entities must be sponsored by that State.

The role of the Sponsoring State is to contribute to the common interest of all States in the proper implementation of the principle of the Common Heritage of Humankind by assisting the Authority and by acting on its own to ensure that entities under its jurisdiction conform to the rules on deep sea mining (AO ITLOS 2011, para. [226]).

According to Article 139 (1) of the LOSC 'States Parties shall be responsible for ensuring that activities in the Area (…) shall be carried out in conformity with this Part. (…).'. Annex III, Article 4 (4) reinforces this, stating that 'The sponsoring State or States shall, pursuant to Article 139, have the responsibility to ensure, within their legal systems, that a contractor so sponsored shall carry out activities in the Area in conformity with the terms of its contract and its obligations under this Convention. A sponsoring State shall not, however, be liable for damage caused by any failure of a contractor sponsored by it to comply with its obligations if that State Party has adopted laws and regulations and taken administrative measures that are, within the framework of its legal system, reasonably appropriate for securing compliance by persons under its jurisdiction'.

In the last 40 years, the international community has walked towards regulating activities with a hazardous character based on a logic of 'community interest' or 'common concern' (AO ITLOS 2011, para. [76]). In addition, it has also been established that the obligation of the Sponsoring State, based on both provisions, was one of due diligence, meaning that the State is required to adopt a specific conduct or refrain from doing so. In this case, States were called upon to apply 'reasonably appropriate' measures, legal and administrative, to ensure compliance with the relevant rules and thus prevent harm and violations (Ago, 1977, p. 8; See also Zhang, 2013). This has created much space for ambiguity in the adopted measures.

With time, scholarship and case law have attempted to densify the term 'reasonably appropriate'. On the one hand there would need to be a domestic legal framework that included measures considered 'reasonably appropriate' (See *Pulp Mills*,

[6] The question of non-member States will not be addressed in detail in this chapter. However, it is important to note that although much of the law of the Sea is considered to be customary law, this does not fully encompass the framework for the Area and its resources. Even so, there is some room to argue that some non-members States have taken actions that counteract this tendency, such as US's signing of the 1994 Agreement of part XI of the LOSC. For more on this issue see Vönecky, S. and Höfelmeier, C. (2017), mn 8–9.

2010, para. [187]; AO ITLOS 2011[123], [215] and [227]). Moreover, the direct obligations specific to the quality of the Sponsoring State, meaning are those with which the Sponsor States must comply 'independently of their obligation to ensure a certain behavior by the sponsored contractor', should also be taken into account, (AO ITLOS 2011[121]) namely the obligation to assist the Authority, (AO ITLOS 2011[124]; LOSC, 1982, Article 153(4) *in fine*) the obligation to apply best environmental practices(AO ITLOS 2011[135-136]; ISA Regulation, 2009, article 33 (2)), the obligation to protect the marine environment, (AO ITLOS 2011[138]; LOSC, 1982, Article 209) and the application of the precautionary approach (AO ITLOS 2011 [125-135]; ISA Regulation, 2013, Regulation 31(2)). Finally, the adopted domestic measures should be no 'less effective than the international rules, regulations and procedures' to be adopted by the ISA (LOSC, 1982, Articles 145 & 209(2)). However, The ISA has been heavily criticised for not including adequate environmental and sustainability standards in such instruments (ISA, 2020). Presently, the Council of ISA is still negotiating the so-called exploitation regulations. At this point, there is still no verdict regarding what these regulations are bound to look like (See Blanchard et al., 2023). A moratorium until all of the concerns for the marine environment and related cultural heritage would be a more prudent precautionary approach.

Nevertheless, it is worth mentioning that, unlike in the past, those who seek the protection of UCH have been called to speak concerning its relationship with an activity such as deep sea mining. For instance, recently, there has been ongoing pressure by NGOs to include that identifies the UCH that members of the ISA have a duty to protect under LOSC Articles 149, 303(1), and Part XII in the baseline surveys of the marine environment for environmental impact assessments, as a way of ensuring science-based decision making when granting licenses to conduct mining.[7] Moreover, UCH and natural heritage are physically and legally linked. Thus, integrating the legal obligations to protect UCH and the marine environment into Environmental Impact Assessments and consideration as areas to set aside from exploitation or as MPAs consistent with the BBNJ are crucial for their adequate protection.

2.4 The Treatment of UCH in the LOSC

Before addressing the treatment of UCH in the LOSC, it is important to note that there were already a number of instruments relevant for the establishment of a general duty to protect UCH prior to the LOSC. Take for example, the 1972 Stockholm Declaration which is considered to have been instrumental in the 'development of

[7] This is in line with recent State Practice. In fact, the EU Directive on Environmental Impacts amendments in 2014 referred to the need to assess the effects of projects on, biodiversity, water and even 'cultural heritage, including architectural and archaeological aspects....' (Annex IV – Information for the Environmental Impact Assessment Report).

provisions that resulted in the 1982 Law of the Sea Convention and the framework for the conduct of activities at sea, which must consider the duties to protect our natural and cultural heritage' (Varmer, 2020, p. 88). In addition, in 1972 the World Heritage Convention also took place, playing a significant role in the establishment of a duty to protect UCH and influencing later calls for recognition of cultural heritage in the high seas, including wreck sites such as *Titanic* (Varmer, 2020, p. 95; Ermida, 2024, p. 29). These shall be addressed in more detail further in this text.

It is, however, undeniable that during the LOSC negotiations, UCH was not an issue that received much attention (Risvas, 2013, p. 564; Scovazzi, 2017b, mn. 16). While some States strongly supported the regulation of such matters within an instrument such as the LOSC, others were firmly against it (Risvas, 2013, p. 565). Despite this stalemate, the drafters of the LOSC managed to include the 'protection' and 'preservation' of our cultural heritage in the final text, namely in Articles 149 and 303. Although they referred to UCH as 'archaeological and historical objects',[8] one could argue that although both provisions express a 'duty to protect' these objects, the provisions are fairly general and vague for implanting the duty to protect UCH (Scovazzi, 2017a, mn. 9; Ermida, 2024, p. 30). Moreover, it is also essential to note that while Article 303 is in the general provisions of Part XVI of the LOSC, Article 149 is included in Part XI of the LOSC, thus regarding the Area specifically. As we shall see, this holds specific implications for UCH, particularly in cases where DSM conflicts with the duty to protect the marine environment present in the LOSC, namely in Articles 145 and 192 (Czybulka, 2017, mn. 25; Varmer, 2020, p. 92; Ermida, 2024, p. 32).

Article 303 seeks to establish two general duties: the duty to protect UCH and the duty to cooperate in doing so (Scovazzi, 2017b, mn. 10). These duties apply to our heritage in all maritime zones, including the Area. However, a closer analysis of this provision shows that that they are notably vague (Scovazzi, 2017b, mn 10; See also Aznar, 2022). For instance, article 303 (2) limits the geographic scope of coastal State jurisdiction to control and regulate activities directed at UCH. There are no doubts regarding the competence of the Coastal State regarding the territorial sea where, according to Article 2 of the LOSC, the State benefits from total sovereignty, with only a few limitations such as the right of innocent passage, present in Article 17 of the LOSC. However, such doubts arise when activities in the contiguous zone come to play, particularly between the 12 and the 24 nautical-miles limit. The reading of Article 303(2) suggests that the removal of archaeological or historical objects located within this limit could entail a violation of legislation of the Coastal State, despite it saying nothing about cultural heritage. Thus, it could be argued that the text and logic of the LOC suggests that UCH should not be protected *per se* but that it should be protected incidentally when the coastal State is entitled to exercise

[8] A seemingly deceiving provision which should however be read in a broad sense to include artifacts undoubtedly within the field of archaeology but also those of relatively recent origin but that hold a historical weight, such as a sunken ship from WW2. For this reason, throughout this text, for a question of clarity the term used to describe such artifacts will be considered UCH as defined in the 2001 Convention on Underwater Cultural Heritage.

jurisdiction due to issues like smuggling, public health or immigration (Scovazzi, 2017b, mn. 13). Moreover, the wording of the provision itself does not even predict *in situ* protection rendering coastal States powerless in scenarios where UCH is at risk of being destroyed in the very place where it stands due to economic activities such as deep sea mining (Scovazzi, 2017b, mn. 14). Luckily, recently the ICJ has provided important insights regarding the treatment of UCH within the Contiguous Zone, stating that Article 303 (2) reflects customary international law and that States may extend the application of their own cultural heritage legislation over the contiguous zone 'in so far as it includes the power of control with respect to archaeological and historical objects found within the contiguous zone'. See Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (Nicaragua v. Colombia), Judgment, I.C.J. Reports 2022, p. 266, [180–185]).

It is also worth noting that the LOSC defines nothing regarding archaeological and historical objects found on the Continental shelf or the EEZ. In the CS, for instance, in accordance with Article 77 (1), the coastal State only holds rights to explore and exploit 'natural resources'—a concept that does not easily encompass UCH (Scovazzi, 2017b, mn. 19; See also Oxman, 1988; Aznar, 2014). This leaves a legal vacuum behind begging for the Principle of freedom of the high seas to intervene (Scovazzi, 2017b, mn. 20).[9] There are, however, ways around this. For instance, in accordance with Articles 33, 56 and 94 of the LOSC a coastal State has jurisdiction over its nationals and vessels and a State may exercise jurisdiction over vessels flying its flag in its EEZ/CS and on the high seas.[10] However, if what is at stake is a foreign national or vessel conducting a highly hazardous activity or even a case of UCH which is a clear part of the marine environment, it could be argued that this could trigger jurisdiction over natural resources in the EEZ/CS from UCH's treasure hunters, salvors, or looters, a coastal State may enforce its natural resource regulations against those looters and salvors. Another example lies in the coastal States jurisdiction, authority, and control over the placement and management of artificial reefs. It could be argued that as UCH can also serve as an artificial reef, a coastal State could have ample authority to protect, manage, and prevent looting and unwanted salvage under that regime. Nevertheless, although the text in Article 303(4) implicitly recognises that there is little guidance or detail concerning the scope and reach of this duty, it contemplates a subsequent agreement (Scovazzi, 2017b mn. 42; See also Aznar, 2022).

Article 149, on the other hand, makes an apparent reference to activities concerning the non-living resources of the deep sea in the Area. According to Article 149, 'all objects of an archaeological and historical nature found in the Area shall be

[9] Predicting that the details needed for this new area of international underwater heritage law would be addressed by State practice and presumably in a new UNESCO Convention.

[10] This is why in the Titanic agreement the US and UK use that flag State jurisdiction to protect *Titanic,* which lies on the outer continental shelf of Canada under the high seas. This is in line with the LOSC drafters' intention to avoid any significant erosion of the principle of freedom of the high seas, particularly in regard to the 'creeping jurisdiction' of coastal States in areas beyond the territorial sea (Aznar & Varmer, 2013).

preserved or disposed of for the benefit of mankind as a whole, particular regard being paid to the preferential rights of the State or country of origin, or the State of cultural origin, or the State of historical and archaeological origin'. From this provision, one may extract that all members of the ISA have an obligation to address this duty to protect UCH, namely through the regulations the ISA must adopt for deep sea mining. This also shows that the drafters preferred to protect UCH for the common good over private interest. Considering the language used ('for the benefit of mankind as a whole'), such objects in the Area appear to have some relationship to the protection to the Area and its natural resources, which are subject to the principle of the CHM. One could even argue that UCH is also under the principle of CHM (in this sense, see Scovazzi, 2017a).

Finally, one cannot ignore that Article 192 of the LOSC establishes a 'general obligation to protect and preserve the marine environment' (LOSC, 1982, article 192). Although the concept of 'marine environment' is not defined in Article 1 of the LOSC, it could be argued, taking from the preparatory works of the Convention (Malta Draft Articles, 1973), that the drafters sought to go beyond an anthropocentric understanding of the term 'environment' and intended it to include the entire marine ecosystem, especially the habitats of species in areas which often contain UCH (Czybulka, 2017, mn 25). Thus, the obligation under Part XII guides how to address threats to the marine environment namely, deep sea mining and may even provide guidance to how to implement the duties under Articles 303 and 149 (see Varmer, 2020).

These central ideas inspire the duty to protect UCH, as contained in the 2001 Convention on the Protection of UCH and its predecessors.

2.5 Overview of the Treatment of UCH Prior to the 2001 UCH UNESCO Convention

The question of the protection of UCH was not broadly discussed in international public law prior to adopting the LOSC. In fact, before its adoption, the silence on this matter was so loud that it produced what some have called a 'legal labyrinth' (See Altes, 1976). Nevertheless, a few instruments had mentioned the importance of cultural heritage in general before the 2001 UCH Convention, even if just briefly.

As has been mentioned, the first international legal instrument that recognised the 'outstanding universal value' of both natural and cultural heritage was undoubtedly the 1972 World Heritage Convention. With it, Member States recognised it was essential 'to adopt new provisions in the form of a convention establishing an effective system of collective protection of the cultural and natural heritage of outstanding universal value, organized permanently and per modern scientific methods' (WHC, 1972, Preamble). The Stockholm Declaration (Stockholm Declaration, 1973) was also important in this process, calling for sustainable development and creating a framework meant to guide policymakers into making decisions that both

fomented development and took into account the protection of the surrounding environment (Varmer, 2020, p. 88).

Later, in 1992, the adoption of the European Convention on the Protection of the Archaeological Heritage (Revised) embodied a spirit of protection of the 'archaeological heritage as a source of the European collective memory', considering as elements of this 'archaeological heritage all remains and objects and any other traces of mankind from past epochs (...) which help to retrace the history of mankind and its relationship with the natural environment' (European Convention on the Protection of the Archaeological Heritage, 1992, article 1). This idea was also affirmed in the 1992 Rio Declaration on Environment and Development, which established in Agenda 21 a duty to protect the marine environment, to cooperate for that purpose and an integrated management approach as well as a precautionary approach.[11] Although as Varmer notes, much of the focus is on the conservation of marine living resources, 'the consideration of cultural heritage can be found throughout, including environmental impact assessments and integrated management' (Varmer, 2020, p.88).

2.6 The 2001 Convention and Its Relationship with the Law of the Sea

The UNESCO 2001 Convention arose as the Agreement to implement the call for more details under LOSC Article 303(4) and consistent with Article 311. Before this Convention, the LOSC addressed UCH as 'objects of an archaeological and historical nature', a vague and controversial expression. It was only with the 2001 Convention that the expression Underwater Cultural Heritage was adopted and spread worldwide, seeking to describe 'all traces of human existence having a cultural, historical or archaeological character which have been partially or underwater, periodically or continuously, for at least 100 years such as: (i) sites, structures, buildings, artifacts, and human remains, together with their archaeological and natural context; (ii) vessels, aircraft, other vehicles or any part thereof, their cargo or other contents, together with their archaeological and natural context; and (iii) objects of prehistoric character' (UNESCO Convention on UCH, 2001, Article 1.1(a)).

At the negotiation meetings, there was consensus regarding four principles: 1) to protect and preserve UCH; 2) the preferred first policy option of *in situ* preservation and adherence to the Annex Rules when a party decides not to preserve *in situ,* and recovery is in the public interest; 3) no 'commercial exploitation' of UCH; and 4) cooperation among States to protect UCH, particularly for training, education, and outreach. The primary purpose and focus were to address the threat from activities directed at UCH, such as looting and unwanted salvage. However, some provisions

[11] Chapter 17.1 highlights how the LOSC 'sets forth rights and obligations of States and provides the international basis upon which to pursue the protection and sustainable development of the marine and coastal environment and its resources'.

pertain to other human activities, such as deep sea mining, that could indirectly damage or destroy UCH. For instance, the preamble of the Convention highlights 'the need to respond appropriately to the possible negative impact on the underwater cultural heritage of legitimate activities that may incidentally affect it'. Article 2 (3), is a reference to the duty to protect in Article 149 of the LOSC, placing a general duty of protection for all UCH even if there is no direct interest for a State in doing so. Furthermore, Article 8 of the 2001 UCH Convention provides that 'States Parties may regulate and authorize activities directed at underwater cultural heritage within their contiguous zone'. This provides some more detail on the implementation of the LOSC duty to protect, suggesting that it does include economic activities that may adversely impact UCH, namely salvage and mining. It may be argued that the practice of nations as reflected in the ICJ 2022 ruling is more likely that of the details set out in UNESCO convention than a strict and narrow interpretation of the LOSC article.[12] The Annex to the 2001 Convention, concerning activities directed at UCH, also addresses the threats to natural resources and the environment around it as, over time they become inextricably connected. Thus, hinting at the idea that UCH is, in fact, a part of the marine environment. For instance, its drafters stated in Rule 10 (l) that the project design required for all activities concerning UCH, mentioned in Rule 9, must contain an environmental policy. According to Rule 29, the project design must also be 'adequate to ensure that the seabed and marine life are not unduly disturbed'. This concern is again expressed in Rule 14, which states that 'The preliminary work referred to in Rule 10 (a) shall include an assessment that evaluates the significance and vulnerability of the underwater cultural heritage and the surrounding natural environment to damage by the proposed project, and the potential to obtain data that would meet the project objectives'.

The 2001 Convention definition of UCH expressly provides that UCH is not limited to objects, and the archaeological context, but the natural context or it is undeniable that UCH and natural heritage are linked, both in physical and legal terms. Thus, the 2001 Convention provides guidance for implementing the duty to protect under the LOSC, feeding the notion that UCH is part of a broad consideration of the impacts to the marine environment, and even a narrow reading requires the consideration of UCH when UCH also serves as an artificial reef, thus reinforcing the protection of Article 192 of the LOSC.

2.7 Intangible Cultural Heritage

Although a less discussed side of cultural heritage, intangible cultural heritage has found its way into the debate surrounding deep sea mining activities. Intangible cultural heritage was first acknowledged in the 1992 Rio Declaration on Environment and Development, in Principle 22, where it was recognised that 'Indigenous people

[12] See Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (Nicaragua v. Colombia), Judgment, I.C.J. Reports 2022, p. 266, [180–185].

and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture, and interests and enable their effective participation in achieving sustainable development'. It was only much later, however, that the UNESCO Intangible Cultural Heritage Convention of 2003 defined this concept as 'the practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artifacts and cultural spaces associated in addition to that—that communities, groups and, in some cases, individuals recognize as part of their cultural heritage' (UNESCO Intangible Cultural Heritage Convention 2003, Article 2 (1)). Moreover, this instrument also reinforced the existing relationship between intangible cultural heritage and tangible cultural and natural heritage (UNESCO Intangible Cultural Heritage Convention 2003, Preamble). In the context of UCH, intangible cultural heritage usually refers to the relationships many communities have built with the ocean.

Take, for instance, the seafaring peoples who traversed the Pacific thousands of years ago, the methods of which some call sacred, or the sacred bond some cultures hold with the sea deeming it even an ancestor itself or a resting place for their ancestors. It is plausible that an activity as hazardous as DSM could hurt such communities. For a long time, this conversation has not found a place in the ongoing work of the ISA. Nevertheless, since 2023, these communities have started to have their voice heard amid negotiations for the exploitation regulations, seeking to include a definition of intangible underwater cultural heritage and methods for its protection in the ISA regulations. An outstanding achievement in this regard was the establishment of the Intersessional Working Group on Underwater Cultural Heritage (see Chap. 4, this vol.).[13] Although the work of this group is still in its early stages it shows much promise, putting hope into the hearts of those who yearned for it.

2.8 Applying the Precautionary Approach to Deep Sea Mining and the Protection of UCH

It is generally agreed upon that applying the precautionary approach presupposes that we are before three cumulative requirements. Firstly, the object of potential application of this approach must be an activity or substance. Secondly, said object must pose a risk of serious or irreversible harm. Thirdly, there must be scientific uncertainty about the degree, likeliness, or type of damage that can be caused by such an activity or substance (Recuerda, 2008, p. 9).[14]

[13] https://enb.iisd.org/international-seabed-authority-isa-council-28-2-12jul2023. See also https://www.isa.org.jm/wp-content/uploads/2024/06/Submission-UCH-Specific-Indigenous-representatives-organizations.pdf.

[14] Scientific uncertainty may arise due to a lack of data, the dubious origin of that data or even from contradicting data.

This approach has been included in several international legal instruments, such as the 1992 Rio Declaration, which is yet another instrument famous for its Principle 15 on the precautionary principle and Agenda 21 of specifically, Chapter 17.22, which calls for a precautionary approach to the protection of the marine environment, the 1995 Fish Stocks Agreement,[15] and, more recently, the Agreement on the Protection of Biodiversity Beyond National Jurisdiction, still to enter into force.

International jurisprudence, mainly that produced by the International Tribunal for the Law of the Sea (ITLOS), has also been an avid defender of the application of a precautionary approach to the protection of the marine environment, including deep sea mining. At ITLOS alone there have been three court cases, namely, the Southern Bluefin Tuna, the MOX Plant, and the Land Reclamation cases, and two Advisory Opinions, specifically that on state Responsibility concerning activities in the Area and that concerning IUU Fishing.

Thus, a path emerges where the precautionary approach is included in legal instruments and case law. It could become a common standard for hazardous activities, such as deep sea mining. As Kristina Gjerde puts it, 'to ensure consistent application of principles agreed to by the world community (…), the principles, policies, and best practices that were adopted (…) will need to be explicitly recognized and incorporated into management action at all levels' (Gjerde, 2006, p. 305).

The call for a moratorium regarding deep sea mining is perhaps the major manifestation of the application of the precautionary approach to this activity. This moratorium would not be an outright ban, but an opportunity to create the conditions for better and more informed policy decisions, namely concerning UCH. Conducting surveys to ensure that no UCH finds itself in planned exploitation areas, proper Environmental Impact Assessments, and significant natural and cultural heritage aside as Marine Protected Areas are but a few measures that could be implemented for this purpose. The alternative could be irreparable environmental harm and the further destruction of elements of Humanity's common culture and history.

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