

Chapter 3

The Duty to Protect Our Ocean Heritage from Bottom Trawling



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 bottom trawling.

3.1 Introduction

A book such as this provides a platform to contribute to the discussion of the protection of Underwater Cultural Heritage (UCH) from bottom trawling. The focus of this chapter lies in its collaboration with archaeology, joining forces with the law to frame the protection of UCH within the legal international arena. It will provide an overview of the framework for protecting UCH, as part of the marine environment, from bottom trawling.

This chapter starts with a discussion of the main legal instruments that contain provisions which flesh out a duty to protect cultural heritage, namely, the 1972 Stockholm Declaration and the World Heritage Convention, the Law of the Sea Convention, the 1992 Rio Declaration, the 2001 UNESCO Underwater Cultural Heritage Convention, and fits the new agreement on Biodiversity Beyond National Jurisdiction (BBNJ) in where relevant. The chapter briefly introduces the Precautionary Principle¹ and how it applies to an activity such as bottom trawling. The final part of the chapter will bring all this together, offering a legal path toward protecting UCH from an activity as hazardous as bottom trawling.

¹Also known as the Precautionary Approach in some cases.

M. P. Ermida (✉)
Católica Research Centre for the Future of Law, Lisbon, Portugal
e-mail: mermida@ucp.pt

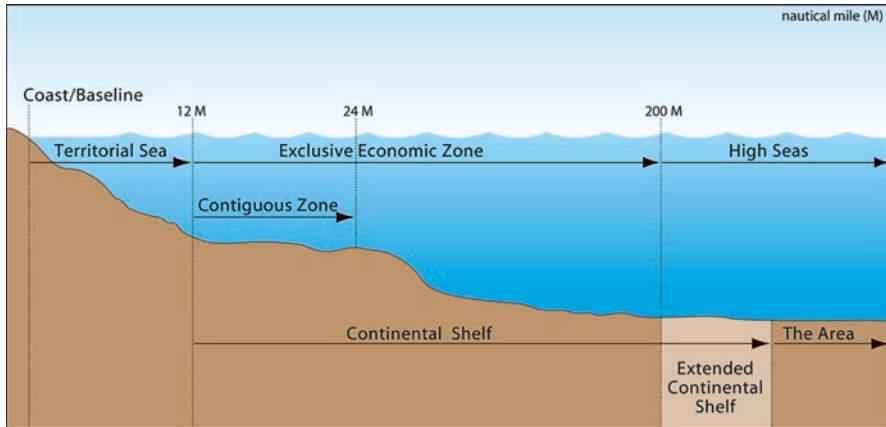


Fig. 3.1 The maritime zones include the 12 nm Territorial Sea, the 24 nm Contiguous Zone, the 200 nm Exclusive Economic Zone, and the High Seas. Image from: United States Department of State. (n.d.). *Maritime zones under the international law of the sea*. <https://www.state.gov/about-ecs/>

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

The Law of the Sea Convention (LOSC) is the main Convention regarding the ocean, and it strives to protect the global marine water column and the seafloor—regardless of its distance to shore or depth. However, the current governance system for this space is based on an underlying idea of ‘divide and conquer’, which distinguishes between 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 soil, subsoil, and resources beyond the continental shelves of States) (LOSC 1982, Article 133 *et seq.*; LOSC 1982, Part XI) (Fig. 3.1).

3.2 Sources of Duty to Protect Cultural Heritage

3.2.1 *The 1972 Stockholm Declaration and the World Heritage Convention*

The 1972 Stockholm Declaration (Stockholm Declaration 1973) is usually cited as instrumental in the ‘development of 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; Schneider, 1979). It codified the customary practice of nations to balance development with protecting the environment so that future generations may inherit it in a healthy state. The framework contains principles that document and delineate the duty to protect the environment and a duty to cooperate for that purpose under customary international law. For instance, principle 4 mentions a 'special responsibility' to safeguard and wisely manage the heritage of wildlife and its habitat, which is now gravely imperilled by a combination of adverse factors.

Also in 1972, the World Heritage Convention took place and played a significant role in integrating the conservation of natural and cultural heritage. With 193 State parties, it focused initially on terrestrial sites and traditional cultural structures. However, it soon evolved to recognise heritage in the marine environment beyond the territorial sea into the EEZ/CS. This move seaward continues as there are calls for recognition of heritage in the high seas, including wreck sites such as *Titanic*.

Considering these two legal instruments, it is clear how the awareness of the Global Community grew regarding the protection of UCH as a part of the Marine Environment. This elevated UCH makes it a target of protection against human activities capable of causing adverse impacts in the marine environment, such as bottom trawling.

3.2.2 *The 1982 UN Law of the Sea Convention*

The Law of the Sea Convention, also referred to as the Constitution of the Oceans (Koh, 1982), is the comprehensive legal framework instrument that balances specific legal values such as the flag State rights of navigation, fishing, and other uses with the coastal State jurisdiction, and authority in the maritime zones under its jurisdiction and even, in certain occasions, beyond them. The Convention, however, does not contain any specific mention of bottom trawling. This practice is subject to the general fisheries provisions of the Convention, which do not deal with this activity's particular destructive power.

The LOSC should, however, always be read in line with the implementing agreements that were adopted posteriorly, namely the 1994 Agreement on Part 11, the 1995 Fish Stocks Agreement,² and the more recent 2023 Agreement on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ). Although the relevance on the 1994 Agreement regarding the issue of bottom trawling is marginal, the same cannot be said about the latter two. While neither specifically refer to bottom trawling, they do contain some relevant provisions for the issue at hand, which will be analysed further in this text. However, both agreements are quite different in how they are structured. The

²The 1994 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 on part XI and the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

1995 Agreement has a purely sectoral approach while the BBNJ attempts to move away from it, addressing ABNJ as a whole, with the goal of ‘protecting, caring for and ensuring responsible use of the marine environment, maintaining the integrity of ocean ecosystems and conserving the inherent value of biological diversity of areas beyond national jurisdiction’.³

Being a widely accepted international agreement ratified by 168 nations plus the European Union,⁴ most of the LOSC is recognised as having codified customary international law (Churchill, 2015, p. 30). As a result, over the past four decades, it has been followed in practice by parties and non-parties, with many rights and obligations that result from this treaty being pointed at as being customary international law (Churchill, 2015, p. 30). This includes a duty to protect UCH.⁵

The LOSC does contain provisions on the ‘protection’ and ‘preservation’ of our cultural heritage, referred to in the Convention as ‘archaeological and historical objects’ (Scovazzi, 2017a, b),⁶ in Articles 149 and 303. Article 303 is in the general provisions of Part XVI of the LOSC, while Article 149 regards the Area. (LOSC 1982, Article 1 (1) (1)).⁷ These short articles make up a broad and somewhat vague duty to protect UCH without any definitions or further details to understand ways to implement it. Another relevant provision in this regard is Article 192 which focuses on the obligation of the protection of the marine environment. These provisions will be taken as a starting point for this analysis.

3.2.2.1 Duty to Protect Cultural Heritage Under Article 149 and 303

Article 149

According to Article 149 ‘all objects of an archaeological and historical nature found in the Area shall be 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

³BBNJ Agreement, Preamble.

⁴1982 United Nations Convention on the Law of the Sea – Treaty Status. Retrieved September 3 2023 from https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXI-6&chapter=21&Temp=mtdsg3&clang=_en#:~:text=Signatories%20%3A%20157.,Parties%20%3A%20169.&text=CTC%2DArabic%3B%20CTC%2DChinese,1833%2C%20p

⁵Take for instance the case of the US, which although being criticised for not ratifying the 2001 UNESCO Convention on the protection of UCH, has on numerous occasions adopted domestic laws that seek to protect UCH. For example, Antiquities Act of 1906, the Archaeological Resources Protection Act of 1979, or the National Marine Sanctuaries Act of 1972, to name a few. The US was a facilitator in the adoption of the Agreement Concerning the Shipwrecked Vessel RMS Titanic 2003 which mentions in its Preamble that UCH should be protected in the interest of present and future generations.

⁶A seemingly deceiving provision which should however be read in a broad sense to include artefacts undoubtedly within the field of archeology but also those of relatively recent origin but that hold a historical weight, such as a sunken ship from WWII. For this reason, throughout this text, for a question of clarity the term used to describe such artefacts will be Underwater Cultural Heritage as defined in the 2001 Convention on Underwater Cultural Heritage (UCH).

⁷The seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction.

of origin, or the State of cultural origin, or the State of historical and archaeological origin'. This gives UCH similar legal protection to the Area and its resources, which are subject to the principle of the Common Heritage of Humankind (Scovazzi, 2017a; Aznar, 2017). Moreover, the drafters have a clear preference to protect UCH for the public good over the private interest. Although there is no specific mention of the protection of UCH against economic activities, such as bottom trawling, these main ideas are cited as a source of inspiration for the duty to protect UCH contained in the 2001 Convention on the protection of Underwater Cultural Heritage (Scovazzi, 2017a, mn. 15).

Article 303

Article 303(1) establishes two general duties: the duty to protect UCH and the duty to cooperate in doing so (Scovazzi, 2017b, mn.10). For instance, Article 303 (2) limits the geographic scope of coastal State jurisdiction to protect UCH from foreign-flagged vessels and nationals up to the 24-mile limit of the Contiguous Zone. Beyond that, the Coastal state only holds sovereign rights over the 'natural resources'—a concept that does not encompass UCH (Aznar, 2014; Oxman, 1988, p. 363; Scovazzi, 2017b, mn. 20).⁸ However, if a foreign national or vessel conducts activities that trigger this jurisdiction over natural resources in the EEZ/CS, namely due to treasure hunters, salvors, or looters, a coastal state may enforce its natural resource regulations against them.

The LOSC also recognises that coastal States have jurisdiction, authority, and control over the placement and management of artificial reefs. Thus, if UCH on the CS beyond the 24 nm Contiguous Zone serves as an artificial reef (as many shipwrecks do), a coastal State may be able to protect, manage, and prevent looting and unwanted salvage under that regime. This aligns with the LOSC drafters' intention to avoid any significant erosion of the principle of freedom of the high seas, particularly regarding the 'creeping jurisdiction' of coastal States in areas beyond the territorial sea (Oxman, 1988, p. 363).

There is, however, no concern for the protection of UCH indirectly harmed by human activities, such as bottom trawling, but activities directed at the pursuit of UCH itself. Nevertheless, it is a starting point to argue that the LOSC *does* establish a duty to protect UCH against human activities, such as bottom trawling, which are directed at exploiting resources around and that can impact UCH.

Moreover, the text in Article 303(4) implicitly recognises that there is little guidance or detail concerning the scope and reach of this duty (Aznar, 2022; Varmer, 2020, p. 77; Scovazzi, 2017b), mn. 10). This provision is therefore an open clause calling for a further expansion in international law of the duties enounced in this

⁸The looting in salvage is not within the scope of the rights or freedom of navigation.

provision (Rosenne & Sohn, 1989, p. 162).⁹ This need for further details on how to implement this duty to protect cultural heritage has been largely addressed by the UNESCO 2001 Convention discussed below. However, before doing so, it is worth looking at the Duty to Protect the Marine Environment under the LOSC contained in Article 192. This may provide better guidance, particularly when cultural heritage is inextricably integrated with the natural heritage, as it is when shipwrecks act as artificial reefs.

3.2.2.2 Duty to Protect Cultural Heritage Under Article 192

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, many targeted by bottom trawling and in areas which often contain UCH (Czybulka, 2017, mn. 25). Thus, the obligation under Part XII provides guidance on how to address the threat to the marine environment from bottom trawling and may also provide guidance to how to implement the duties under Articles 303 and 149 (Varmer, 2020, p. 92).

3.2.3 *The 1992 Rio Declaration*

The 1992 Conference on Environment and Development in Rio de Janeiro, Brazil, resulted in the Rio Declaration on Environment and Development, which established in Agenda 21, a duty to protect the marine environment and to cooperate for that purpose—expressly stemming from the 1982 LOSC.¹⁰ One of the most essential aspects of Agenda 21, however, is the fact that it identifies approaches to implement this duty and calls explicitly for integrated management and a precautionary approach to the sustainable development and protection of the marine environment. As Varmer notes, ‘While 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).

⁹Predicting 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.

¹⁰Chapter 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.’

Thus, although it is undeniable that the LOSC provided the first tier of the framework for the legal protection of UCH found in all maritime zones, other tools, put into place since the signing of the LOSC, have been vital to build a structure to protect UCH, not only from salvage and looters but also from activities with the potential of having a negative impact on the marine environment, including bottom trawling.

3.2.4 *The UNESCO 2001 Convention*

The UNESCO 2001 Convention arose as the Agreement to implement the call for more details under LOSC Art 303(4).¹¹ 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, there are some provisions regarding human activities, with the indirect potential of damaging or destroying UCH, such as bottom trawling.

Firstly, 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), in turn, emphasises the idea of an obligation of preservation of UCH in the Area, as stated 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 (Blake, 2015, p. 99). Furthermore, Article 8 of the 2001 Convention provides that ‘States Parties may regulate and authorize activities directed at underwater cultural heritage within their contiguous zone’, making it clear that there is indeed an obligation to actively protect UCH through coastal state jurisdiction, and also reinforcing the idea that the duty to protect UCH does include economic activities that may adversely impact UCH, such as bottom trawling.

The Annex to the 2001 Convention, concerning activities directed at UCH, also addresses the threats to natural resources and the environment around it, hinting at the idea that UCH is, in fact, a part of the marine environment. For instance, its drafters stated in Rule 10(1) 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

¹¹ There are currently 72 parties to the 2001 Convention.

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’.

Thus, the 2001 Convention provides guidance for implementing the duty to protect under the LOSC, feeding the notion that UCH is often inextricably connected to the natural marine environment, namely when UCH also serves as an artificial reef, thus reinforcing the protection of Article 192 of the LOSC.

3.3 The Precautionary Principle

It is generally agreed upon that applying the precautionary principle presupposes that we are before three cumulative requirements. Firstly, the object of potential application of this 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. 10).¹² However, this was not always so. In fact, in its early stages, the focus of international environmental law was a reactive one, centring on remedying damage that had already occurred or on preventing damage that was sure to occur (Trail Smelter Case (US v Canada), 1938, p. 1965). Precaution, meaning the idea of seeing beyond the cause-effect paradigm and instead thinking of an unidentified risk or potential future harm, was not a factor that entered the discussion for various decades. This consciousness only arose with the scientific recognition of the delicate balance of ecosystems, the uncertainties surrounding them, and the effects certain activities can have on them and Humankind (Jaeckel, 2017, p. 28).

This 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,¹³ 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 fishing. On ITLOS alone, five occasions can be identified with such an underlying

¹² Scientific uncertainty may arise due to a lack of data, the dubious origin of that data or even from contradicting data.

¹³ The precautionary approach may also be found in the 1992 United Nations Framework Convention on Climate Change, the 1995 WTO Agreement on the Application of Sanitary and Phytosanitary Measures, the 1998 Agreement on the International Dolphin Conservation Program, the 2000 Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, the 2001 International Convention on the Control of Harmful Anti-Fouling Systems, and the 2001 Agreement on the Conservation of Albatrosses, to name a few.

idea: 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 Illegal, Unreported, and Unregulated (IUU) Fishing.

Although the claimants mention the precautionary approach in all three court cases in their arguments, the ITLOS did not phrase it as such. Instead, the court kept to less compromising language such as ‘for instance’ and the use of expressions such as ‘prudence’ and ‘caution’ (Southern Bluefin Tuna, (*New Zealand v. Japan; Australia v. Japan*) 1999, para. [77]; MOX Plant (Ireland v. United Kingdom), 2001, para [84]; Land Reclamation, (Malaysia v Singapore) 2003, para [99]). The ITLOS Advisory Opinions, however, reveal an evolution in this sense, referring clearly to a ‘precautionary approach’ and even evoking Principle 15 of the Rio Declaration (AO ITLOS, 2011, para. [127]). In fact, in its 2015 Advisory Opinion, in addressing the issue concerning flag State obligations in the case of IUU Fishing, the Tribunal already mentioned that parties should apply conservation and management measures based on the best available scientific evidence but that if said evidence is insufficient, the ‘precautionary approach’ should be applied (AO ITLOS 2015, para. [208]).

As Kristina Gjerde beautifully 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). Thus, a path emerges where the precautionary principle is included into both legal instruments as well as case law. Potentially, it could even become a common standard that applies to fishing activities, including bottom trawling (Sands et al., 2012, p. 225).

3.4 Steps Forward

The last few years have seen an increase in global concern over the impact fisheries, and in particular bottom trawling, on the marine environment, particularly in what concerns vulnerable marine ecosystems (VME). However, there has been little political will to take real international action against such threats. For instance, when United Nations General Assembly (UNGA) attempted to move towards a ban of bottom trawling in 2006, the measures were blocked (Goodwyn, 2015, p. 808). However, in 2007 and 2009, the UNGA adopted Resolution 61/105 and 64/72. In both resolutions, there is a clear emphasis on a need for sustainable fisheries. In addition, these resolutions also included a recognition of the work that was already carried out by Regional Fisheries Management Organisations (RFMOs),¹⁴ in what concerns bottom trawling. The latest 2011 UNGA resolution 66/68 led to a further

¹⁴International organisations meant to regulate regional fishing activities in the high seas. For example, North-East Atlantic Fisheries Commission or the International Commission for the Conservation of Atlantic Tunas.

increase in management bodies' efforts concerning the establishment of closed areas to protect VMEs. These resolutions have sustained a call to action for these entities to further adopt and start to 'implement measures, in accordance with the precautionary approach, ecosystem approaches, and international law, for their respective regulatory areas as a matter of priority' (UN, 2006, Para. [83]). These measures have been mainly of two types: Area Based Management Tools (ABMT) and rules concerning fishing gear.

Regarding fishing gear, in 2009, FAO released the International Guidelines for the Management of Deep-Sea Fisheries in the High Seas (FAO, 2008). Bottom fishing gear has been shown to impact wrecks severely and has likely caused oil release events due to damage from mobile gear (e.g., Brennan, 2016; Brennan et al., 2023). Although this document only targeted specific VME and biodiversity protection,¹⁵ it has contributed to changes in the industry, namely through the modification of gear to reduce the effects of this activity in the deep seabed, namely by reducing its weight and size or building it in a way that keeps most of it above the seabed (O'Leary et al., 2020, p. 5).

Nevertheless, it is generally agreed upon that the most effective option to mitigate human impact within the marine environment are ABMT (O'Leary et al., 2020, p. 9). ABMT aim to manage human activities, establish areas for biodiversity and ecosystem conservation, and sustainable use of resources. RFMOs have been essential in this regard, adopting measures to control bottom trawling, namely through MPAs (Rayfuse, 2015, p. 1296).

One of the ways in which the BBNJ agreement proposes to do this is through the establishment of ABMT.¹⁶ This is to be done through a framework based on cooperation and coordination as the BBNJ attempts to strike a balance between the interests of the Agreement and those of all individual Parties and established international bodies.¹⁷ There is undeniable potential for adopting solutions and enhanced cooperation in protecting the Marine Environment, particularly UCH, in a legal framework such as the BBNJ. However, at the present moment, there are various uncertainties as to when this agreement and its institutions will enter into force, if at all (Chavez-Molina et al., 2023).

Nevertheless, we can confidently say there is a light at the end of the tunnel. The Vienna Convention on the Law of the Treaties contains certain obligations regarding

¹⁵For instance, according to Chapter 5.2 'A marine ecosystem should be classified as vulnerable based on the characteristics that it possesses'. The guidelines do provide a list of such characteristics which includes uniqueness or rarity, functional significance of the habitat, fragility, life-history traits of component species that make recovery difficult and structural complexity. Examples contained in Annex I of the guidelines include 'Coldwater corals and hydroids', 'some types of sponge dominated communities', 'communities composed of dense emergent fauna where large sessile protozoans (xenophyophores) and invertebrates (e.g., hydroids and bryozoans) form an important structural component of habitat' and endemic 'seep and vent communities comprised of invertebrate and microbial species'.

¹⁶BBNJ Agreement, Article 1(1), BBNJ Agreement, Article 17 (a), (b) and (c).

¹⁷BBNJ Agreement, Article 17 (d), (e) and Article 19 (2) and (3).

the actions of States that may defeat the object and purpose of a Treaty,¹⁸ which in this case include ensuring the conservation of marine biodiversity in areas beyond national jurisdiction.¹⁹ Moreover, the legal duties to protect our Ocean Heritage under international law and the goals of the UN Decade of Ocean Science for Sustainable Development (UN, 2017) show that the best way to address the threats from bottom trawling is a precautionary approach. This approach has gained traction within legal instruments and decisions in the last decade and has even been included in the final text of the BBNJ. The application of precautionary measures such as a temporary moratorium regarding bottom trawling until several conditions are met, namely 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. This is the logical solution against a fishing technique that can result in irreparable harm and destruction to UCH and marine life. Suppose this precautionary principle is respected and the standards are developed and followed. In that case, the results will be a healthier ocean, a necessary characteristic of Earth's life support system, as well as the safeguarding of humanity's own culture and history through the preservation of UCH.

References

- Aznar, M. J. (2014). The contiguous zone as archaeological zone. *The International Journal of Marine and Coastal Law*, 29, 1–51.
- Aznar, M. J. (2017). Exporting environmental standards to the protection of underwater cultural heritage in the area. In J. Crawford, A. G. Koroma, S. Mahmoudi, & A. Pellet (Eds.), *The international legal order: Current needs and possible responses – Essays in honour Djamchid Montaz* (1st ed., pp. 255–273). Brill/Nijhoff.
- Aznar, M. J. (2022). Comentário ao artigo 303° objetos arqueológicos e históricos achados no mar. In W. Brito (Ed.), *Comentários à Convenção das Nações Unidas sobre Direito do Mar* (1st ed., pp. 567–593). Ed. Almedina.
- Blake, J. (2015). *International cultural heritage law*. Oxford University Press.
- Brennan, M. (2016). Quantifying impacts of trawling to shipwrecks. In M. E. Keith (Ed.), *Site formation processes of submerged shipwrecks* (pp. 157–179). University Press of Florida.
- Brennan, M. L., Delgado, J. P., Jozsef, A., Marx, D. E., & Bierwagen, M. (2023). *Site formation processes and pollution risk mitigation of World War II oil tanker shipwrecks: Coimbra and Munger T. Ball* [Preprint]. In Review. <https://doi.org/10.21203/rs.3.rs-3029829/v1>
- Chavez-Molina, V., et al. (2023). Protecting the Salas y Gomez and Nazca Ridges: A review of policy pathways for creating conservation measures in the international waters of the Southeast Pacific. *Marine Policy*, 152, 105594.
- Churchill, R. R. (2015). The United Nations Convention on the Law of the Sea. In D. R. Rothwell, A. G. O. Elferink, K. N. Scott, & T. Stephens (Eds.), *The Oxford handbook on law of the sea* (1st ed., pp. 24–45). Oxford University Press.

¹⁸Vienna Convention on the Law of the Treaties, Article 18, Article 30.

¹⁹BBNJ Agreement, Article 2.

- Czybulka. (2017). Art. 192. In A. Proelss (Ed.), Maggio A. R. (Assistant Editors), Blitza E. (Assistant Editors), Daum O. (Assistant Editors), *United Nations Convention on the Law of the Sea: A commentary*. Nomos Verlagsgesellschaft.
- Food and Agriculture Organisation (FAO). (2008, August 29). *International guidelines for the management of deep-sea fisheries in the high seas*. SPRFMO-VI-SWG-INF01. Retrieved August 2, 2023, from <https://www.sprfmo.int/assets/Meetings/Meetings-before-2013/Scientific-Working-Group/SWG-06-2008/7e88751513/SPRFMO6-SWG-INF01-FAO-Deepwater-Guidelines-Final-Sep20.pdf>
- Gjerde, K. (2006). High seas fisheries management under the convention on the law of the sea. In D. Freestone, R. Barnes, & D. M. Ong (Eds.), *The law of the sea: Progress and prospects* (1st ed., pp. 281–307). Cambridge University Press.
- Goodwyn, E. (2015). Threatened species and vulnerable marine ecosystems. In D. R. Rothwell, A. G. O. Elferink, K. N. Scott, & T. Stephens (Eds.), *The Oxford handbook on law of the sea* (1st ed., pp. 799–824). Oxford University Press.
- Jaeckel, A. L. (2017). *The international seabed authority and the precautionary principle*. Brill/Nijhoff.
- Koh, T. B. (1982, December 6 and 11). A constitution for the oceans. Montego Bay conference. Retrieved August 2023, from https://www.un.org/depts/los/convention_agreements/texts/koh_english.pdf
- O’Leary, B. C., et al. (2020). Options for managing human threats to high seas biodiversity. *Ocean and Coastal Management*, 187, 105110.
- Oxman, B. (1988). Marine archaeology and the international law of the sea. *Columbia Journal of Law*, 12(353), 353–372.
- Rayfuse, R. (2015). Regional fisheries management organizations. In D. R. Rothwell, A. G. O. Elferink, K. N. Scott, & T. Stephens (Eds.), *The Oxford handbook on law of the sea* (1st ed., pp. 349–462). Oxford University Press.
- Recuerda, M. A. (2008). Dangerous interpretations of the precautionary principle and the foundational values of European Union food law: Risk versus risk. *Journal of Food and Law Policy*, 4(1), 1–42.
- Rosenne, S., & Sohn, L. (Eds.). (1989). *United Nations law of the sea convention 1982: A commentary: Volume V*. Martinus Nijhof.
- Sands, P., Peel, J., Fabra, A., & MacKenzie, R. (2012). *Principles of international environmental law* (3rd ed.). Cambridge University Press.
- Schneider, J. (1979). *World public order of the environment: Towards an international ecological law and organization*. University of Toronto Press, Scholarly Publishing.
- Scovazzi, T. (2017a). Article 149. In A. Proelss (Ed.), A. R. Maggio (Assistant Editors), E. Blitza (Assistant Editors), O. Daum (Assistant Editors) (2017). *United Nations Convention on the Law of the Sea: A commentary*. Nomos Verlagsgesellschaft.
- Scovazzi, T. (2017b). Article 303. In A. Proelss (Ed.), A. R. Maggio (Assistant Editors), E. Blitza (Assistant Editors), O. Daum (Assistant Editors) (2017). *United Nations Convention on the Law of the Sea: A commentary*. Nomos Verlagsgesellschaft.
- United Nations General Assembly. (2006, November 8). Sustainable fisheries, including through the 1995 agreement for the implementation of the provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments. A/RES/61/105 Retrieved September 2, 2023, from <https://digitallibrary.un.org/record/588357?ln=en>
- United Nations General Assembly. (2017, November 22). *Seventy-second session Agenda item 77 (a): Oceans and the law of the sea: oceans and the law of the sea*. Resolution A/72/L.18. Retrieved August 2, 2023, from <https://documents-dds-ny.un.org/doc/UNDOC/LTD/N17/396/23/PDF/N1739623.pdf?OpenElement>
- Varmer, O. (2020). The duty to protect underwater cultural heritage and to cooperate for that purpose under law and policy. In H. Karan, X. Ademuni-Odeke, & K. Türk (Eds.), *The legal regime of underwater cultural heritage and marine scientific research* (1st ed., pp. 77–117). Yetkin Yayinlari.

Cases

- Land Reclamation in and around the Straits of Johor (Malaysia v. Singapore), Provisional Measures, Order of 8 October 2003, ITLOS Reports 2003, p. 10.
- MOX Plant (Ireland v. United Kingdom), Provisional Measures, Order of 3 December 2001, ITLOS Reports 2001, p. 95.
- Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission, Advisory Opinion, 2 April 2015, ITLOS Reports 2015, p. 4.
- Responsibilities and obligations of States with respect to activities in the Area, Advisory Opinion, 1 February 2011, ITLOS Reports 2011, p. 10.
- Southern Bluefin Tuna (New Zealand v. Japan; Australia v. Japan), Provisional Measures, Order of 27 August 1999, ITLOS Reports 1999, p. 280.
- Trail Smelter Case (US v Canada), Arbitration Award, 16 April 1938 and 11 March 1941, 3 RIAA 1905.

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