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Michael L. Brennan
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Threats to Our Ocean Heritage: Potentially Polluting Wrecks

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Contents

1 Potentially Polluting Wrecks: An Introduction 1
Michael L. Brennan

2 Potentially Polluting Wrecks and the Legal Duty to Protect Our Ocean Heritage 11
Mariano J. Aznar and Ole Varmer

3 Environmental Impact and Modeling of Petroleum Spills 25
Matt Horn, Deborah French-McCay, and Dagmar Schmidt Etkin

4 Corrosion Processes of Steel-Hulled Potentially Polluting Wrecks 41
Robert Glover

5 From Desktop to Dive: Assessing the Pollution Potential of SS *Fernstream*, USNS *Mission San Miguel* and SS *Coast Trader* 61
James P. Delgado

6 Managing Potentially Polluting Wrecks in the United Kingdom 71
Polly Georgiana Hill, Matthew Skelhorn, and Freya Goodsir

7 Polluting Wrecks in the Baltic Sea 85
Benedykt Hac

8 Potentially Polluting Wrecks in the Blue Pacific 103
Matthew Carter, Ashley Meredith, Augustine C. Kohler, Bradford Mori, and Ranger Walter

9 Satellite Detection and the Discovery of *Bloody Marsh* 117
Michael L. Brennan, Geoffrey Thiemann, and William Jeffery

10 Searching for a Lost PPW: SS *William Rockefeller* 129
John Detlie

11 Assessment Methodologies for Potentially Polluting Wrecks: The Need for a Common Approach 143
Mark Lawrence, Stuart Leather, and Simon Burnay

12 Concluding Statement 157
Joao Sousa, Benjamin Ferrari, Michael L. Brennan, and Ole Varmer

Chapter 2
Potentially Polluting Wrecks and the Legal Duty to Protect Our Ocean Heritage

Mariano J. Aznar and Ole Varmer

2.1 Introduction

As said in the introduction to this book, the determination of a shipwreck as environmentally hazardous or potentially polluting does not negate its significance as a historic site (Brennan, Chap. 1, this volume). Practice shows how wrecks may be different things at the same time: a lost property, an artificial reef, a gravesite, an obstacle for navigation, or/and a historic site and a potentially polluting wreck. This makes them a complex object for regulation, both at the domestic and international level (Aznar, 2015).

The purpose of this chapter is to elucidate part of the legal framework for cultural heritage that may also pose a threat to the environment. The last few decades have witnessed a longstanding interest in the protection of the marine environment, which today is generally codified in different international treaties, both on the law of the sea and environmental law. However, the other component of Ocean Heritage—the cultural, archaeological, or historic one—to date has received much less attention. Only in 2001, with the adoption of the UNESCO Convention of the

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Protection of the Underwater Cultural Heritage (2001 Convention),[1] was a more encompassing approach to both cultural and natural heritage adopted. The definition of underwater cultural heritage (UCH) given in this Convention always links both archaeological and natural context,[2] and all activities directed to UCH must include an environmental policy adequate to ensure that the seabed and marine life are not unduly disturbed. There is thus an intimate link between natural and cultural heritage, which may be traced back to 1972 when two seminal documents were adopted: the 1972 Stockholm Declaration, which introduced the precautionary approach in the international environmental agenda, and the 1972 World Heritage Convention (WHC), where the wisdom of integrating the conservation of both natural and cultural heritage became international law. A decade later, the 1982 Law of the Sea Convention (LOSC) included the duties to protect the marine environment and objects of an archaeological and historical nature. Finally, the 2001 Convention crystallised such twofold duty. The 1972 WHC, 1982 LOSC, and 2001 Convention thus provide the general legal foundation and guidance for conserving our Ocean Heritage.

The definition of UCH given in this Convention establishes a time-limit of 100 hundred years, which is conservative and may be lower in the implementing domestic law. Sunk in 1912, the wreck of RMS *Titanic* is today covered by the 2001 Convention, as are the wrecks of vessels sunk during World War I (1914–1918). In less than two decades, thousands of PPWs sunk during World War II (1939–1945) will be also covered by the 2001 Convention as UCH. Under the domestic law of many nations, WWII wrecks are already considered historic. For example, the Australian UCH Act provides blanket protection for wrecks underwater for at least 75 years. The United States' National Register of Historic Places uses 50 years as a rule of thumb for historic properties and eligibility for protective procedures. As many PPWs are sunken state craft of warring nations, this chapter touches on the sensitive issues of ownership, sovereign immunity, and the fact that many sites are also wartime graves.

How to preserve historic PPWs from a cultural perspective while monitoring, mitigating or even removing them as threats to the marine environment is the legal

[1] During negotiations some countries led by the United States expressed concern that the instrument creates new rights within the EEZ/continental shelf beyond those recognised in the LOSC and thus maybe upsetting the balance of interests under the 1982 LOSC. There was also some concern about whether the consent of the foreign flagged State before the authorisation of activities directed as sunken warships within the territorial sea as was clear in the other maritime zones. However, the international community, including the US, recognise the coastal State authority and jurisdiction to address threats to the marine environment within the EEZ including sunken warships that may also be in the territorial sea.

[2] UCH is defined as 'all traces of human existence having a cultural, historical or archaeological character which have been partially or totally under water, periodically or continuously, for at least 100 years such as: (i) sites, structures, buildings, artefacts 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' (emphasis added).

challenge. There are much older shipwrecks that may pose an environmental risk. For example, the 1724 wreck of *Tolosa*, a Spanish galleon sunk off the Dominican Republic, then carrying tons of mercury. However, the main concerns are generated by PPWs sunk during the last century, most in World War I and II.

For this, considering the duty to protect our Ocean Heritage and the precautionary principle nested in international and domestic law from the 1972 Stockholm Declaration, the next pages will analyse how they influenced the WHC, LOSC and some International Maritime Organisation (IMO) conventions. We will see how the discussion of the 1992 Rio Declaration built upon the 1972 Declaration, including the integrated management of natural and cultural heritage, and taking a precautionary approach to activities in balancing economic development with the conservation of our Ocean Heritage for future generations. As mentioned, the 2001 Convention echoes all these principles; and today the UN Decade of Ocean Science for Sustainable Development builds upon this rich history and is relevant to the challenges in addressing the threat to our Ocean Heritage from PPWs. Addressing the threats to our Ocean Heritage from PPWs comes within these outcomes sought by the Decade: a clean ocean where sources of pollution are identified and reduced or removed; a healthy and resilient ocean where marine ecosystems are understood, protected, restored, and managed; and a productive ocean supporting sustainable food supply and a sustainable ocean economy. Many of the PPWs are within the waters of lesser developed nations where the livelihoods of their peoples are dependent upon a healthy ocean and coastal waters for fishing and ecocultural tourism.

2.2 The Initial Evolution of a Duty to Protect Our Ocean Heritage

2.2.1 1972 Stockholm Declaration

The United Nations Conference on the Human Environment met in Stockholm and resulted in the Stockholm Declaration. It codified in programmatic terms the customary practice of nations in balancing economic development and protecting the environment so that it may be inherited by future generations in a healthy state (heritage). It contains principles that document and delineate the duty to protect and to cooperate for that purpose under customary international law, including that we bear 'a solemn responsibility to protect and improve the environment for present and future generations' (Principle 1). A 'special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat, which are now gravely imperiled by a combination of adverse factors. Nature conservation, including wildlife, must therefore receive importance in planning for economic development' (Principle 4). 'States should adopt an integrated and coordinated approach to their development planning to ensure that development is compatible with the need to protect and improve environment for the benefit of their population' (Principle 13). 'In

exercising the sovereign right to exploit their own resources, there is the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction' (Principle 21).

The 'integrated and coordinated approach' to development planning in Principle 4 helps to delineate the precautionary approach, being the starting point for the introduction of concepts into international law that previously were only used in national legislation. This is reinforced by the integration of natural and cultural resources to be conserved in UNESCO's 1972 World Heritage Convention.

2.2.2 The World Heritage Convention Integrating the Conservation of Cultural and Natural Heritage

While the focus in Stockholm was on the environment and sustainable development, at UNESCO in Paris the focus was an agreement to protect cultural and natural heritage. With 193 State parties today, the World Heritage Convention remains one of the most widely accepted treaties. While it started with recognising terrestrial sites and traditional cultural structures, inclusive of coastal sites with marine components (mostly involving sites in Europe, the Americas and Africa), it more recently evolved to recognise heritage in the marine environment even beyond the territorial sea into the exclusive economic zones (EEZ) and continental shelves (CS), particularly in the Asia–Pacific marine environment. For example, the Papahānaumokuākea Marine National Monument in Hawai'i was inscribed on the World Heritage 'mixed list' for its 'outstanding universal value' as both a natural and cultural heritage site. Of note, is that some of the natural heritage, like coral, were also recognised as cultural heritage of the native Hawaiian people and some of their practices were recognised as intangible cultural heritage.[3] This move seaward continues as there are now calls for recognition of heritage in the high seas, including wreck sites such as *Titanic*. The challenges involve ensuring consistency with the LOSC, more specifically, implementing the duty to protect and cooperate through reliance of flag State jurisdiction, and Port State jurisdiction for enforcement of activities directed at cultural heritage under the high seas.

However, the Convention does not formally apply to EEZ/CS of States and to areas beyond national jurisdiction (ABNJ) like the High Seas and the 'Area,'[4] that include rich marine environment, both cultural and natural. This is why the Report 'World Heritage in the High Seas: An Idea Whose Time Has Come' (UNESCO, 2016) proposes a strong movement towards the applicability of the WHC beyond national jurisdiction.

[3] See more information at WHC site: https://whc.unesco.org/en/list/1326

[4] The 'Area' is defined in Art. 1(1)(1) LOSC as 'the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction.'

2.3 The 1982 Law of the Sea Convention: The General Legal Framework for Managing PPWs

Marine environmental questions were discussed during the First and Second UN Conferences on the Law of the Sea. But it was during the Third Conference (UNCLOS III) when the marine environment was at the heart of many discussions when delineating the future UN Convention on the Law of the Sea (LOSC), labelled as the 'Constitution of the Sea', adopted in 1982 and entered into force in 1994.

The LOSC is well recognised as a codification and progressive development of the law of the sea. It balances the flag State rights of navigation, fishing, marine research, mining and other uses with the coastal State jurisdiction and authority in various maritime zones including a 12 nm territorial sea, a 24 nm contiguous zone, a 200 nm exclusive economic zone (EEZ), the continental shelf, the high seas, and the Area.

LOSC provides the general legal framework for the use and protection of the marine environment, including natural and cultural heritage resources. This legal framework includes several articles on the duty to protect the marine environment but only a couple on protecting 'objects of an archaeological and historical nature.'

2.3.1 General Provisions on the Duty to Protect the Marine Environment and PPWs

LOSC has provisions protecting marine environment in the different marine zones. For example, on the conservation of living resources in the EEZ (Art. 61) or in the High Seas (Arts. 116–120), or a general environmental duty in Art. 145 for the Area. But it is in its Part XII (Arts. 192–237) where it is found the core duties on marine environment protection.

Under Articles 192 and 194 there is the general obligation of States to protect and preserve the marine environment. This general principle may be applied both to wrecks that become artificial reefs, deserving protection as part of the marine environment, and to wrecks that are potentially (or actually) endangering this environment because of their deteriorating structure or polluting cargo still aboard. Specifically, Art. 194(3)(b) deals with the measures to be taken by States, including those designed to fully minimise 'pollution from vessels, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, preventing intentional and unintentional discharges, and regulating the design, construction, equipment, operation and manning of vessels.' These general duties, as it will be seen, have been developed and completed by the different IMO conventions preventing and mitigating pollution from vessels.

2.3.2 *Articles Protecting Cultural Heritage Found at Sea (303) and in the Area (149)*

Cultural heritage was not prominent enough during UNCLOS III. There were some discussions towards the end of negotiations that resulted in only two articles: article 303, which is applicable to all maritime zones, and article 149 for heritage in the Area. However, they did not provide clear guidance on how to implement the obligations much less to address the threats to the marine environment posed by wrecks that may also be objects of cultural heritage.

Article 303(1) recalls the general obligation whereby 'States have the duty to protect objects of an archaeological and historical nature found at sea and shall cooperate for this purpose.' It can be argued that this general duty forms part of customary law, as evidenced by the practice of nations including non-parties like the US, Türkiye, Cambodia, or Colombia (Varmer, 2020). Paragraph 2 of Article 303, which has been declared as customary law (*Nicaragua/Colombia* case, International Court of Justice, 2022), is to be read today as granting coastal States 'the power of control with respect to archaeological and historical objects found within the contiguous zone', which goes beyond what article 303(2) explicitly says (Aznar, 2014). This means that any activity directed to a PPW considered UCH located in the contiguous zone needs to be authorised and regulated by the coastal State, thus applying not only its cultural heritage national legislation but its environmental legislation as well.

Beyond the outer limit of that contiguous zone (24 nm), LOSC left a perceived gap that related to the EEZs and continental shelves. Except to the duty to protect under Art. 303 (1), there is only a contextual and analogic interpretation of natural environmental rules that could apply to PPWs and perhaps protect cultural heritage in its natural context.

Beyond the outer limit of these two zones, for the Area article 149 provides that '[a]ll objects of an archaeological and historical nature found in the Area shall be preserved or disposed of for the benefit of mankind, 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.' While it is not always clear which nations have preferential rights, regarding the threat posed by PPW considered cultural heritage, it should be relevant to identify those nations with an interest and responsibility on these wrecks, which would include at least the flag States of the sunken ship and nation from which the cargo came (Aznar, 2019).

2.4 Maritime Law Conventions and the Ocean Heritage: The IMO Endeavours

2.4.1 Natural Disasters by Human Activities

Increasingly during the last century, maritime commerce has included hazardous cargoes aboard which may produce environmental disasters by accident, negligence, or fault. When the *Torrey Canyon* tanker spilled tons of oil in 1967, severely contaminating the marine environment and killing tens of thousands of living resources, it was a catalyst for the modern environmental movement, and nations recognised the need for coastal States to take measures to address pollution from outside their territory, including the high seas.

Gathered at the IMO, States and maritime operators realised the need to adopt new rules to avoid or minimise these disasters. Some of them should apply to PPWs, as for example the 1969 International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, asking Parties to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from pollution or threat of pollution of the sea by oil, following upon a maritime casualty (Art. I). Or the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, which asks Parties to prevent the pollution of the sea by the dumping of waste and other matter that is liable to create hazards to human health, to harm living resources and marine life (Art. I), understanding dumping as including any deliberate disposal of vessels, aircraft, platforms or other man-made structures at sea (Art. III(a)). Thus, the creation of an artificial reef by the disposal of a vessel is acceptable, provided that such placement is not contrary to the aims of this Convention, the protection of marine environment (Art. III(b)(ii)). However, in both cases, the application to sunken warships (typically PPWs) is limited when not excluded.

2.4.2 Cultural Disasters by Human Greed

By the end of the 1970s, when scuba diving was technically possible and new underwater technologies were available, cultural heritage in oceans was also targeted by treasure hunters. US courts, sitting in Admiralty jurisdiction, awarded the treasure, applying what was called ‘historic salvage’ in the absence of clear application of historic preservation law (Varmer & Blanco, 2018). The 1989 London Salvage Convention developed at the IMO to incorporate rewards for salvors preventing or minimizing damage to the marine environment in their salvage of wrecks. While there is a provision for parties to declare that the Convention shall not be applied to historic wrecks, the salvage of our UCH continues. However, several

admiralty decisions regarding historic sunken vessels, both State owned (*Juno* and *La Galga, Mercedes*) or private vessels (*Titanic*) have reversed the previous approach to 'historic salvage', now preserving UCH under strict conditions following archaeological standards widely accepted by the international community, which also include the protection of UCH in its natural context thus preserving our Ocean Heritage.[5]

2.4.3 The Wreck Removal Convention

The IMO conventions did not completely cover the duty to prevent or mitigate threats posed by PPWs. It has been estimated that there are three million wrecks worldwide, thousands of which are PPWs.

The 2007 IMO International Convention on the Removal of Wrecks, also known as the Nairobi Wreck Removal Convention, entered into force on April 14, 2015 and has 67 parties as of January 2024. The Convention recognises the right of a coastal State to address threats from foreign flagged wrecks that may have the potential to adversely affect the safety of lives, goods, and property at sea, as well as the marine environment, pose a hazard to the coastal State or to require the shipowner to remove the wreck at his own expense; hazard being defined as 'any condition or threat that: (a) poses a danger or impediment to navigation; or (b) may reasonably be expected to result in major harmful consequences to the marine environment, or damage to the coastline or related interests of one or more states.'

While the provisions and measures apply only when both the coastal State and the vessel's flag State are parties to the Convention, they may provide guidance for addressing the threats by non-parties and cases involving sunken warships. As is the case with many other maritime conventions, it does not apply to 'any warship or other ship owned or operated by a state and used, for the time being, only on Government non-commercial service' unless the flag State decides otherwise (Art. 4). The problem with the Wreck Removal Convention relies on its application only to wreckages produced after its entry into force (2015), which would leave out PPWs that originated during the two World Wars.

[5] In the US, this was possible thanks to a coordinated effort among different agencies, led by NOAA, which offered admiralty courts an acceptable set of conditions preserving the archaeological and natural context of historic wrecks.

2.5 A New Approach to Ocean Heritage

2.5.1 The Precautionary Approach as a Guide to Manage PPWs as UCH

Ten years after the LOSC and twenty years after the Stockholm conference, the United Nations convened another conference on environment and development in Rio de Janeiro, Brazil. This 1992 Rio Conference resulted in the Rio Declaration on Environment and Development (Rio Declaration), including Agenda 21 which provides that there is a duty to protect the marine environment and to cooperate for that purpose, expressly flowing from the LOSC. Chapter 17.1 of the Rio Declaration 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.' It then identifies approaches to implement this duty and specifically calls for integrated management and a precautionary approach, transformed into an international legal principle, in the sustainable development and protection of the marine environment. Principle 15 of the Rio Declaration reads as follows: 'In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall be not used as a reason for postponing cost-effective measures to prevent environmental degradation.'

Since then, this principle has been incorporated into several international treaties, some of them addressing (albeit sometimes obliquely) PPWs; has been also included, for example, in the International Seabed Authority's Mining Code; and has been declared as part of general international environmental law, as may be seen in the case-law of the International Tribunal for the Law of the Sea (ITLOS). The International Seabed Authority (ISA) and UNCLOS States parties are negotiating a new regulation on exploitation of the mineral resources in the Area. There is an ongoing discussion on how to protect underwater cultural heritage in its natural context during deep-sea mining activities, which should be always presided by the precautionary approach.

As a recent landmark of this approach, the Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ Treaty), adopted on 12 June 2023 but not yet in force, expressly includes the precautionary principle (Art. 5(d)), the need for environmental impact assessments (Part IV) and the governance and management of large portions of the oceans, even beyond national jurisdiction, using marine protected areas (Part III) under international monitoring (Art. 13).

2.5.2 2001 Convention on the Protection of Underwater Cultural Heritage

UNESCO convened a Meeting of Experts to negotiate an agreement to provide the sorely needed details to implement the duty to protect 'objects of an archaeological or historical nature' under the 1982 LOSC and to address the major threat to this heritage from treasure hunting. Consensus was reached quickly on a clear definition of UCH to address the undefined terms in the LOSC. Consensus was also reached on the general ban against the application of the law of finds and salvage with a narrow exception for nations that may want to implement the obligations under their domestic maritime law including the law of salvage (Varmer & Blanco, 2018). In that case, the implementation must be consistent with the entire Convention, including the Annex Rules which are the standards and requirements for when recovery or salvage is determined to be in the public interest.

The Convention has four main principles on which there was consensus: (1) the obligation to protect and preserve UCH; (2) the preferred first policy option of *in situ* preservation; (3) no 'commercial exploitation' of UCH; and (4) cooperation among States to protect UCH, particularly for training, education, and outreach. There was however a lack of consensus on the relation between LOSC and the Convention (with a fear of creeping jurisdiction of coastal States in the EEZ/CS), and on the legal status of sunken States vessels (particularly those located in the territorial sea). But all States agreed in the general precautionary approach embodied in the *in situ* rule, as the first option to preserve UCH before using more intrusive or destructive methodologies.

Hence, precaution in activities directed at UCH is particularly relevant if such heritage is a PPW. In this case, these activities must be performed under severe conditions keeping in mind that: (i) UCH is by definition inextricably linked to its natural context (Art.1(1)); (ii) any project must have an environmental policy to ensure that the seabed and marine life are not unduly disturbed (Rules 10 and 29, Annex); and (iii) as all preliminary work of the projected activity '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' (Rule 14, Annex).

2.5.3 The Question of PPWs Which Are Both UCH and Warships or Other States Vessels

As mentioned, when drafting the 2001 Convention, consensus was not reached regarding the treatment by coastal States of foreign sunken State vessels within their Territorial Sea. Parties only agreed that 'consistent with State practice and international law, including [the LOSC], nothing in this Convention shall be interpreted as modifying the rules of international law and State practice pertaining to sovereign

immunities, nor any State's rights with respect to its State vessels and aircraft.' Immunity and property status of State public vessels are clear in international law. Articles 32, 95 and 96 of LOSC reflect customary law, as it does article 16(2) of the 2005 UN Convention on Jurisdictional Immunities of States and Their Property. However, there is no international general convention on the immunities of *sunken* States vessels, particularly sunken warships if also PPW. Yet, the practice of nations regarding jurisdiction and control over PPWs is also informed by the 2015 Resolution of the Institut de Droit International on 'The Legal Regime of Wrecks of Warships and Other State-owned Ships in International Law.' (2015 Resolution).

Unless a sunken State vessel has been expressly abandoned, it continues to be owned by that flag State and is therefore subject to flag State jurisdiction (Articles 3–42,015 Resolution). Contemporary to the promulgation of the US Sunken Military Craft Act of 2004, France, Germany, Japan, Russia, Spain, and the UK made similar statements to that proclaimed by the US on immunity of sunken State vessels, including warships. However, this legal position should be balanced with the jurisdiction of coastal States in their different maritime zones.

The coastal State's sovereignty to regulate activities within its territorial waters is regardless of any foreign flag State ownership and immunity (Article 7, 2015 Resolution). In accordance with Article 303(2) of the LOSC, it may also regulate the removal of historic sunken State vessels from its contiguous zone (Article 8, 2015 Resolution) which would include requiring permits for the removal of oil, fuel, munitions, and other hazardous materials. Beyond the outer limit of the contiguous zone (EEZ/CS), general environmental rules as foreseen in the LOSC do apply, and the UNESCO 2001 Convention respects them in its Article 10(2) when expressing that "[a] State Party in whose exclusive economic zone or on whose continental shelf underwater cultural heritage is located has the right to prohibit or authorize any activity directed at such heritage to prevent interference with its sovereign rights or jurisdiction as provided for by international law including the United Nations Convention on the Law of the Sea." These sovereign rights or jurisdiction include coastal State's environmental rights. However, if such activity is directed to a historic PPW, the same article establishes in its paragraph 7 that "no activity directed at State vessels and aircraft shall be conducted without the agreement of the flag State […]" Therefore, cooperation is important, in accordance with any other applicable treaties. Article 9 of the 2015 Resolution also recognizes that a coastal State has sovereign rights and jurisdiction to protect and manage the environment and resources of its continental shelf and EEZ, which includes addressing the threats from PPWs. This should be done in due regard to the rights of the foreign flag State of a PPW. Cooperation is important. However, if the flag State does not take any action after having been requested to cooperate, the coastal State may proceed and even remove the wreck.

As we have seen, sunken warships may be a polluting wreck and a historic resource or cultural heritage. They may also be a maritime war grave, deserving particular respect (Forrest, 2019). In these cases, the flag State has a particular interest and duty or responsibility regarding its sunken public vessels, which is shared

with the coastal State if such PPW is sunk in or near its maritime zones. In any case, the activities, and duties should be always presided by the precautionary approach balancing the two intimate components of our Ocean Heritage: natural and cultural.

2.6 Conclusion

In light of the importance of conserving our Ocean Heritage for future generations, the legal duties to protect it under international law, and the goals of the UN Decade of Ocean Science for Sustainable Development, the best way to address the threats from PPWs is therefore a precautionary approach that involves a moratorium or pause against activities that may trigger these ticking time bombs until the proper science and assessments are done to make sure that these activities are truly sustainable. The moratorium would be temporary and limited to those activities directed at PPWs such as salvage. There should also be a temporary moratorium against certain indirect activities that could result in irreparable harm and destruction to UCH and marine life such as bottom trawling, or deep seabed mining until after surveys have been conducted to ensure that no PPWs are in planned exploitation areas, proper environmental impact assessments have been conducted, and significant natural and cultural heritage are set aside as marine protected areas.

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