

Underwater Cultural Heritage: Threats and Frameworks for Protection

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Introduction

International law assigns responsibility to states, especially coastal states, to take collaborative and individual measures to protect underwater cultural heritage (“UCH”).¹ In this regard, coastal states can also exercise their jurisdiction over vessels carrying state flags in their exclusive economic zone—a marine area extending to 200 nautical miles—and their state jurisdictional contiguous zone—twenty-four nautical miles—to maintain the protection of UCH.² International law provides this jurisdictional authority and also offers particular rules and regulations for state preservation of UCH.³ For instance, Articles 149 and 303 of the 1982 Law of the Sea Convention and the 2001 UNESCO Convention on the Protection of Underwater Cultural Heritage (“CPUCH”) provide some important guidelines to states to maintain protection for UCH.⁴ This Article will elucidate these guidelines.

The first section of this Article includes a detailed description of the meaning of UCH. It also explains the importance of UCH and current potential threats to it. The second Section includes an explanation of the relevant legal provisions, regulations, and recommendations for UCH protection provided by the 2001 UNESCO Convention, the 1982 Law of Sea Convention, the law of salvage, the law of finds, and the

UNESCO Conventions of 1970 and 1972. The third Section evaluates the effectiveness of the contemporary management of UCH. The fourth and final Section focuses on the existing gaps and challenges in offering complete protection to UCH. Inferences are drawn and elucidated at the end of the paper, which include a discussion of a new technique adopted by the English Heritage Council in UK and the Heritage Council of Victoria in Australia to mitigate the widespread threats to Underwater Cultural Heritage. Some of the threats, such as degradation, will inevitably take place, but the pace of the harm carried out by such threats can be reduced by adopting the modern techniques for preventing degradation. Pertinently, the creation of Underwater Cultural Museums and Underwater Archaeological Parks are some of the other ways of protecting the Underwater Cultural property.

Section I: The Concept of Underwater Cultural Heritage

UCH is an important part of international cultural heritage.⁵ To appropriately discuss the laws and policy surrounding UCH, it is essential to first establish its meaning.

1.1. Meaning of Underwater Cultural Heritage

The 2001 UNESCO Convention provides this definition of UCH:

[A]ll traces of human existence having a cultural, historical or archaeological character which have been partially or totally under water, 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 [pre-Columbian contact] character.⁶

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1. See CRAIG FORREST, INTERNATIONAL LAW AND THE PROTECTION OF CULTURAL HERITAGE 357–58 (2012). The term “Underwater Cultural Heritage” includes the cultural heritage sites or properties that have been underwater for at least one hundred years or more. For more details about the Underwater Cultural Heritage (UCH), see Convention on the Protection of the Underwater Cultural Heritage art. 1(1)(a), Nov. 2, 2001, 2562 U.N.T.S. 3 [hereinafter UNESCO Convention].

2. See Tullio Scovazi, *The Law of the Sea Convention and Underwater Cultural Heritage*, in DAVID FREESTONE, THE 1982 LAW OF THE SEA CONVENTION AT 30: SUCCESSES, CHALLENGES AND NEW AGENDAS 80 (2013). See also United Nations Convention on the Law of the Sea art. 33(2), Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter UNCLOS].

3. See ROB PICKARD, ANALYSIS AND REFORM OF CULTURAL HERITAGE POLICIES IN SOUTH-EAST EUROPE 244 (2008).

4. See generally FORREST, *supra* note 1, at 325–26 (detailing articles 149 and 303 of UNCLOS); ROBERTA GARABELLO & TULLIO SCOVAZZI, THE PROTECTION OF THE UNDERWATER CULTURAL HERITAGE: BEFORE AND AFTER THE 2001 UNESCO CONVENTION 95 (2003) (discussing the 2001 UNESCO Convention).

5. See, e.g., FORREST, *supra* note 1, at 351; see also JANET BLAKE, INTERNATIONAL CULTURAL HERITAGE LAW, 97 (2015).

6. See UNESCO Convention, *supra* note 1, art. 1(1)(a). See also SARAH DROMGOOLE, THE PROTECTION OF THE UNDERWATER CULTURAL HERITAGE: NA-

This definition indicates the significance of archaeological artifacts and remnants of humans and vessels found in the seas. Rising sea levels have submerged, amongst other things, numerous ancient human colonies and buildings,⁷ which are now considered part of UCH.⁸ Furthermore, shipwrecks, caused by natural disasters or human error, are also considered UCH.⁹ Underwater artifacts and remnants remain the cultural heritage of ancient human civilizations; therefore, these are considered part of international cultural heritage.¹⁰

1.2. Exact Location of Underwater Cultural Heritage

The exact location of UCH is significant because the laws applicable for UCH protection depend on its location.¹¹ For instance, the location defines whether a particular underwater artifact comes under state jurisdiction or is to be considered international property.¹² If underwater cultural property is located outside the twenty-four nautical mile contiguous zone of a state, then that state has no jurisdiction over that UCH property, and regulations related to flag state jurisdiction might apply.¹³ Hence, UCH property discovered in the jurisdictional marine area of a state is regulated by the domestic laws of that state or in accordance with treaties signed by that state alongside the relevant provisions of international law that provide protection to UCH in territorial seas.¹⁴

However, because domestic law cannot be applied to UCH property found in marine areas beyond national jurisdiction of states, it is regulated by the international law of international waters.¹⁵

1.3. Importance of Underwater Cultural Heritage

The importance of UCH has been recognized by many scholars, archaeologists, and historians.¹⁶ UCH is a reflection of the architectural artistic expressions of ancient civilizations¹⁷ and, as a result, the international community considers UCH to be an ancient historical resource.¹⁸ Furthermore,

the importance of UCH is also recognized in the Preamble of 2001 UNESCO Convention¹⁹:

Acknowledging the importance of underwater cultural heritage as an integral part of the cultural heritage of humanity and a particularly important element in the history of peoples, nations, and their relations which each other concerning their common heritage²⁰

UCH is important for several reasons.²¹ It symbolizes different aspects of a particular historical era, including economic, cultural, artistic, aesthetic, and trade, when an artifact or object was in use or of value.²² The artistic and aesthetic significance of UCH is particularly essential in this regard, as the ancient design, structure, color, and shape of a discovered underwater cultural artifact signifies the aesthetic expertise of the craftsmen of that era. For example, the Roman statues in the Blue Cave (also called “Grotta Azzura”) on Capri are examples of the artistic expressions of the era when they were crafted.²³ There are many other examples, such as the wrecked warship *Vasa*, which was decorated with wooden ornaments and sculptures,²⁴ reflecting the artistic and aesthetic sense of the locals who crafted and adorned them.²⁵

Similarly, UCH may also have particular archaeological cultural value, because the underwater cultural artifact or site can provide information about historical sea routes, levels of development, or technology of the era with which the discovered UCH property is associated.²⁶ It can also provide clues to the lifestyles of the people of that era and can also inform upon a particular event in history that might have caused the submerging of the discovered cultural property.²⁷ For instance, the discovery of a sunken ship in the depths of the sea can reveal the reason for the ship’s sinking and the lifestyles or aesthetic sense of the travelers on that ship.

Underwater cultural property also contains monetary value, which can derive from two factors.²⁸ First is indirect monetary value, which is estimated for nonmarket objects. For instance, the replacement or opportunity cost of a UCH object, or, simply stated, the cost of losing that particular UCH object, can be considered an indirect economic value

TIONAL PERSPECTIVES IN LIGHT OF THE UNESCO CONVENTION 2001 122 (2d ed. 2006) (discussing the inclusion of the phrase “having cultural, historical or archaeological character” in the UCH definition); JENNIFER R. RICHMAN & MARION FORSYTH, *LEGAL PERSPECTIVES ON CULTURAL RESOURCES*, at xi (2004) (describing analogous legislative efforts to protect cultural resources in the United States).

7. See FORREST, *supra* note 1, at 287.

8. See GARABELLO & SCOVAZZI, *supra* note 4, at 103.

9. UNESCO Convention, *supra* note 1, art. 1(8); see FORREST, *supra* note 1, at 287.

10. RICHARD MACKAY & SHARON SULLIVAN, *ARCHAEOLOGICAL SITES: CONSERVATION AND MANAGEMENT*, at xiv (2012).

11. See *id.* at 288.

12. UNCLOS, *supra* note 2, art.2(1), art. 87(1).

13. Ole Varmer, *Closing the Gaps in the Law Protecting Underwater Cultural Heritage on the Outer Continental Shelf*, 33 STAN. ENVTL. L.J., 251, 256–57 (2014).

14. See *id.* at 256–57; ALESSANDRO CHECHI, *THE SETTLEMENT OF INTERNATIONAL CULTURAL HERITAGE DISPUTES* 110 (2014).

15. See CHECHI, *supra* note 14, at 110.

16. See, e.g., BRIGITTA HAUSER-SCHÄUBLIN & LYNDLE V. PROTT, *CULTURAL PROPERTY AND CONTESTED OWNERSHIP: THE TRAFFICKING OF ARTEFACTS AND THE QUEST FOR RESTITUTION* 85 (2016); GUZDEN VARINLIOGLU, *DIGITAL IN UNDERWATER CULTURAL HERITAGE* 18 (2016).

17. See MACKAY & SULLIVAN, *supra* note 10, at xiv.

18. See VARINLIOGLU, *supra* note 16, at 38; RICHMAN & FORSYTH, *supra* note 6, at xi.

19. See RICHMAN & FORSYTH, *supra* note 6, at 124.

20. UNESCO Convention, *supra* note 1, pmb1.

21. See BLAKE, *supra* note 5, at 97.

22. See *id.*

23. See Rossela Lorenzi, *Roman Statues Found in Blue Grotto Cave*, NBC NEWS (Sept. 28, 2009, 1:38 PM), http://www.nbcnews.com/id/33058777/ns/technology_and_science-science/t/roman-statues-found-blue-grotto-cave/#.WiA2BIWwbiU [https://perma.cc/YAA4-T4UG].

24. Alberto Frigerio, *The Underwater Cultural Heritage: A Comparative Analysis of International Perspectives, Laws and Methods of Management* 27 (2013) (unpublished Ph.D. dissertation, IMT INSTITUTE FOR ADVANCED STUDIES).

25. See *id.* at 211–12.

26. See SILVIA BORELLI & FEDERICO LENZERINI, *CULTURAL HERITAGE, CULTURAL RIGHTS, CULTURAL DIVERSITY: NEW DEVELOPMENTS IN INTERNATIONAL LAW* 253 (2012).

27. See Frigerio, *supra* note 24, at 26–27.

28. See Michel Marée & Sybille Mertens, *The Limits of Economic Value in Measuring the Performance of Social Innovation*, in *SOCIAL INNOVATION: BLURRING BOUNDARIES TO RECONFIGURE MARKETS* 122 (Alex Nicholls & Alex Murdock eds., 2012).

of that object.²⁹ Second is economic value. This could be the auction price that people are prepared to pay for acquiring and retrieving that particular object.³⁰ The overall monetary value can be evaluated using these two different factors.³¹ Economic value can also be considered monetary value, but the converse is not true.³²

The economic or monetary value of a cultural heritage object is set mainly by the interest shown by people such as treasure hunters who consider that object a sellable commodity.³³ Many archaeologists “do not consider the economic value as a feature of the underwater cultural heritage” and believe that such objects should not be monetized in any market.³⁴ For such archaeologists, the economic value of cultural objects is “immeasurable.”³⁵ Thus, they consider that underwater cultural objects have no such attribute like economic or monetary value.³⁶ The main rationale for not monetizing cultural objects is to prevent the exploitation of UCH.³⁷ The 2001 UNESCO CPUCH also endorses the non-commercialization of UCHs.³⁸

Furthermore, UCH also contributes to research on underwater archaeological cultural objects and relevant cultural attributions.³⁹ For instance, researchers can investigate the potential reasons behind the sinking of a vessel that is considered UCH.⁴⁰ Consequently, they can study the historical hydrological, climactic, and oceanographic factors relevant to the vessel.⁴¹

In summary, UCH has aesthetic, artistic, economic, archaeological, and historical significance.⁴² This significance is fair justification for the investment and attention given to the preservation of UCH.⁴³ Through effectively preserving, studying, and managing UCH, we can conduct research to gather information related to the relevant civilizations’ ancient cultural attributes.⁴⁴

1.4. Threats to International Underwater Cultural Heritage

Despite the significance and importance of UCH, a number of threats to its integrity loom.⁴⁵ Human activities cause the majority of threats in marine areas⁴⁶ by erosion or natural

degradation of underwater cultural objects. Threats are also caused by abrupt changes in environmental conditions in the form of natural disasters such as tsunamis.⁴⁷ With the advent of modern technologies and diving equipment, the depths of the seas have become more accessible, and so has UCH.⁴⁸ According to one estimate, vessels can reach a depth of 6,000 meters,⁴⁹ meaning that ninety-eight percent of the entire oceanic floor is now accessible by deep-sea explorers.⁵⁰ This increase in accessibility, accompanied by the monetary value of UCH objects, has also led to the exploitation and looting of UCH.⁵¹ Looting is often to occur when leisure divers gather underwater cultural property as souvenirs as proof of their deep-sea diving exploratory missions.⁵² Some divers intentionally gather UCH to sell on the antique objects market.⁵³

The destruction and dispersal of underwater cultural property is also caused by activities such as deep-sea mining performed during exploration for oil and other minerals, by bottom-trawling fishing nets, and drilling to set up pipelines for the extraction of oil and other minerals.⁵⁴ All of these activities can negatively affect UCH.⁵⁵ Military practices—for instance, the testing of nuclear or other weapons of mass destruction in the seas—can also threaten nearby UCH.⁵⁶ Hence, threats by human activity are mainly in two categories: intentional looting and unintentional damage. The former is usually caused by divers, adventurers, or treasure hunters⁵⁷ who deliberately steal UCH to either show them to others as a proof of their deep-sea missions or sell them in the antiquarian markets.⁵⁸ On the other hand, unintentional damage to UCH results from deep-sea mining, drilling, and pipelining in the depths of the seas.⁵⁹

There is an essential need to take adequate measures to implement practicable and effective policies to protect UCH from diving, deep-sea mining, drilling and bottom-trawling fishing to preserve cultural heritage as a whole. Special measures can be adopted for this purpose, such as identification of underwater cultural property, assessment of the potential risks caused by human activities on that property, and, finally, the implementation of plans for mitigation of such risks and threats to UCH.

29. *Id.*

30. *Id.*

31. See Frigerio, *supra* note 24, at 27.

32. *Id.*

33. See Marée & Mertens, *supra* note 28, at 122. See also BORELLI & LENZERINI, *supra* note 26, at 253.

34. See Frigerio, *supra* note 24, at 28. See also FORREST, *supra* note 1, at 314–15.

35. See Frigerio, *supra* note 24, at 28.

36. *Id.*

37. See FORREST, *supra* note 1, at 314.

38. See UNESCO Convention, *supra* note 1, art. 2(7). See also Frigerio, *supra* note 24, at 28; GARABELLO & SCOVAZZI, *supra* note 4, at 214.

39. See ADALBERTO VALLEGA, SUSTAINABLE OCEAN GOVERNANCE: A GEOGRAPHICAL PERSPECTIVE 110 (2012).

40. See Frigerio, *supra* note 24, at 28.

41. *Id.*

42. See VALLEGA, *supra* note 39, at 110. See also GARABELLO & SCOVAZZI, *supra* note 4, at 49.

43. See Frigerio, *supra* note 24, at 29.

44. *Id.*

45. See, e.g., FORREST, *supra* note 1, at 287.

46. See GARABELLO & SCOVAZZI, *supra* note 4, at 100.

47. See Frigerio, *supra* note 24, at 33.

48. *Id.* at 50. See also ANASTASIA STRATI, THE PROTECTION OF THE UNDERWATER CULTURAL HERITAGE: AN EMERGING OBJECTIVE OF THE CONTEMPORARY LAW OF THE SEA 345 (1995).

49. See Frigerio, *supra* note 24, at 30.

50. *Id.*

51. *Id.* See also FORREST, *supra* note 1, at 314–15.

52. See Sarah Dromgoole, *Law and the Underwater Cultural Heritage: A Question of Balancing Interests*, in *ILlicit Antiquities: The Theft of Culture and the Extinction of Archaeology* 109 (Neil Brodie & Kathryn Walker Tubb eds., 2003).

53. *Id.*

54. See FORREST, *supra* note 1, at 287.

55. *Id.*

56. See Frigerio, *supra* note 24, at 32.

57. See CHECHI, *supra* note 14, at 110.

58. Cf. Dromgoole, *supra* note 52, at 109.

59. See FORREST, *supra* note 1, at 287.

Section 2: The International Legal Framework on Protection of Underwater Cultural Heritage

International law includes certain regulations and principles for the protection of UCH.⁶⁰ For instance, the 2001 UNESCO CPUCH, the 1982 Law of the Sea Convention, and the 1970 UNESCO Convention provide legal support for the protection of UCH.⁶¹

2.1. The 1982 United Nations Convention on the Law of the Sea

The United Nations Convention on the Law of the Sea (“UNCLOS”) recognizes the importance of archaeological cultural objects by obligating states to protect such objects.⁶² Article 149 specifically applies this obligation by stating that “[a]ll objects of an archaeological and historical nature found in the Area shall be preserved and disposed of for the benefit of mankind as a whole.”⁶³ Thus, all states have an obligation to protect UCH in the marine areas beyond states’ national jurisdiction,⁶⁴ owing to the archaeological and historical importance of UCH.⁶⁵ The same obligation is implied in the language of Article 303 of UNCLOS.⁶⁶ Article 303 additionally confers a responsibility on states to not only exert their individual efforts to protect the archaeological and historical objects found in their territorial seas,⁶⁷ but also to cooperate with other states for the protection of such objects.⁶⁸

In addition to the Article 303 and Article 149 of the UNCLOS, the Article 33 of the UNCLOS also includes some guidelines related to the Underwater Cultural Heritage. Article 33 of UNCLOS designates the area within twenty-four nautical miles of the base lines of the territorial sea of a state as the contiguous zone of that state.⁶⁹ Article 33 (1) (b) asserts that a state has the right to inflict punishment or penalty on those who violate the laws and regulations of the state in its contiguous zone.⁷⁰ It further articulates that a state has jurisdictional authority over the immigration, customs, sanitary laws, and fiscal aspects and related issues in its contiguous zone, therefore the state can perform measures to prevent violations related to these issues within its zone.⁷¹ In accordance with this rule, Article 303 of UNCLOS considers the removal of archaeological objects from the contiguous zone of a state without the prior permission of that state to be a serious violation of Articles 33 and

303 of UNCLOS.⁷² Hence, anyone who disperses or removes a particular archaeological object from the contiguous zone of a state will be considered as an offender of rules enshrined in the UNCLOS, because such removal of archaeological objects is not approved in the UNCLOS.⁷³ This implies that UNCLOS provides coastal states with an exclusive right to not only prevent actions that infringe upon UCH in the contiguous zone, but also to punish such violators.⁷⁴

However, it is pertinent to note that the applicability of Article 303 is considered contentious in nature: some scholars assert that this Article is applicable only in the contiguous zones of states and therefore lacks applicability to the high seas.⁷⁵ Others argue that paragraphs 1, 3, and 4 of Article 303 also apply to the high seas, owing to the language used in these paragraphs, which specifically mentions “archaeological and historical objects found at sea,” implying all sea regions.⁷⁶ Nonetheless, paragraph 2 of this Article would still be inapplicable to the high seas.⁷⁷

On the other hand, Article 149 only applies to the high seas and not in the contiguous zone, as it specifically mentions the words “the Area” where the states are required to protect UCH.⁷⁸ Although Articles 303 and 149 of UNCLOS provide protection to UCH, most scholars argue that UNCLOS as a whole has been unable to offer full protection to UCH.⁷⁹ For instance, Article 303 elaborates upon some valuable points, including the states’ duty to cooperate and protect UCH. On the other hand, however, some of its clauses create inconsistency in the protection offered by the same Article.⁸⁰ Paragraph 3 of Article 303 of UNCLOS extends priority to the application of salvage law, under which there is no requirement for prior permission to be obtained from the state by a salvor to conduct a salvage mission in the contiguous zone of that state.⁸¹ Paragraph 2 of the same Article, however, necessitates that a coastal state must control the salvaging of UCH in its contiguous zone, further implying that a salvor has to obtain prior permission from the state before conducting any salvage activity in the contiguous zone of that state.⁸² Hence, paragraph 2 of Article 303 appears ambiguous. Unfortunately, the law of the sea does not provide any information or recommendation to resolve this ambiguity.

60. See GARABELLO & SCOVAZZI, *supra* note 4, at 211–12.

61. See *id.* at 99–100.

62. See LIONEL SMITH & MICHELE GRAZIADEI, *COMPARATIVE PROPERTY LAW: GLOBAL PERSPECTIVES* 385–86 (2017).

63. UNCLOS, *supra* note 2, art. 149.

64. See SMITH & GRAZIADEI, *supra* note 62.

65. See MACKAY & SULLIVAN, *supra* note 10, at xiv.

66. See FORREST, *supra* note 1, at 325.

67. See UNCLOS, *supra* note 2, art. 303(2). See also SMITH & GRAZIADEI, *supra* note 62, at 385–86.

68. See UNCLOS, *supra* note 2, art. 303(1).

69. *Id.* art. 33(2). See also SMITH & GRAZIADEI, *supra* note 62, at 385–86.

70. UNCLOS, *supra* note 2, art. 33(1)(b).

71. *Id.* art. 33(1)(a).

72. See *id.* art. 303(2).

73. See Patrizia Vigni, *Enforcement of Underwater Cultural Heritage by Courts*, in *ENFORCING INTERNATIONAL CULTURAL HERITAGE LAW* 134 (Francesco Francioni & James Gordley, eds., 2013).

74. See UNCLOS, *supra* note 2, arts. 33, 303. See also FRANK MAES & THARY DERUDDER, *ASSESSMENT OF INTERNATIONAL AND EUROPEAN LAW RELATED TO OR AFFECTING UNDERWATER CULTURAL HERITAGE* 11 (2014).

75. MAES & DERUDDER, *supra* note 74.

76. *Id.* at 11–13, 17.

77. Cf. FORREST, *supra* note 1, at 324–25.

78. See MAES & DERUDDER, *supra* note 74, at 12.

79. See, e.g., Valentina Sara Vadi, *Investing in Culture: Underwater Cultural Heritage and International Investment Law*, 42 *VAND. J. TRANSNAT’L L.* 853, 862–63 (2009).

80. See MAES & DERUDDER, *supra* note 74, at 15.

81. See FORREST, *supra* note 1, at 328; MAES & DERUDDER, *supra* note 74, at 16.

82. Article 303 of UNCLOS 1982 expressly articulates that any activity, entailing removal of an object, carried out without the permission of the coastal state within its contiguous zone would be regarded as an infringement to the laws and regulations mentioned in that Article. UNCLOS, *supra* note 2, art. 303(2). See Vadi, *supra* note 79, at 862; see also Vigni, *supra* note 73, at 134.

2.2. The 2001 UNESCO CPUCH

The UNESCO Convention on the Protection of Underwater Cultural Heritage 2001 provides rules and recommendations to protect UCH.⁸³ CPUCH has two important components: the main set of rules and the Annex.⁸⁴ It specifically extends protection of UCH to commercial trading.⁸⁵ The Annex suggests that UCH objects should not be perceived as commodities.⁸⁶

The Convention recommends that state parties ensure the adoption of practicable measures to prevent any activity in their jurisdictional zones from causing any adverse effects to UCH.⁸⁷ For instance, activities such as oil and mineral exploration, deep-sea mining, pipelining, and fishing can potentially threaten UCH.⁸⁸ Therefore, in accordance with Article 5, states should take effective measures “to prevent or mitigate” the potential harmful effects of these activities on UCH in their jurisdictional zones.⁸⁹

Article 4 of CPUCH also restricts those salvage activities that are not authorized by coastal state authorities.⁹⁰ For instance, it is mandatory for any flagship in any marine zone that finds UCH property to report that discovery to the relevant authorities of the relevant coastal state.⁹¹ Furthermore, it also recommends that state parties adopt measures to prevent any illicit export or import, looting, and removal of UCH within their jurisdictions.⁹² States can also impose sanctions and penalize violators.⁹³ Thus, it endorses the sovereign authority of states over their jurisdictional maritime zones.

The 2001 UNESCO Convention also requires all state parties to protect UCH in their exclusive economic zones and on the continental shelf.⁹⁴ There is uncertainty and ambiguity, however, in the principles of this convention regarding state sovereignty over maritime zones beyond the jurisdiction of states.⁹⁵ To mitigate this problem, the Convention endorses cooperation among state parties to protect UCH, including on the high seas and in the twenty-four nautical mile area.⁹⁶ It encourages state parties to cooperate with each other to share information,⁹⁷ transfer technology,⁹⁸ and take expert advice from competent authorities⁹⁹ regarding states’ ongoing and planned measures to protect UCH.¹⁰⁰ The con-

vention also recommends that state parties establish capacity-building and educational programs for public awareness regarding the need to protect UCH.¹⁰¹ Furthermore, it also endorses state parties to enter into bilateral agreements to strengthen protection for UCH.

UNESCO has an essential role in the implementation of CPUCH, including taking the role of Secretariat of the convention.¹⁰² More particularly, it has the essential task of promoting and administering the convention.¹⁰³ The director-general of UNESCO calls for state parties to meet once every two years in accordance with Article 23 of CPUCH, primarily to evaluate the progress and the practical implementation of the convention.¹⁰⁴ One major result of these meetings is the adoption of the Advisory Body’s operational guidelines for the implementation of CPUCH, the manual for activities at UCH, and the *UNESCO Code of Ethics for Diving on Underwater Cultural Heritage Sites* (“the Code”), which are applicable to all state parties.¹⁰⁵

The Advisory Body is responsible for addressing issues of all kinds related to the CPUCH, especially issues of a scientific and technical nature and those concerning the sustainability of UCH.¹⁰⁶ It also elaborates on issues like licensing divers for research and the scientific exploration of UCH.¹⁰⁷ The manual explains the rules and principles defined in the Annex of the CPUCH.¹⁰⁸ The UNESCO Code elucidates the guidelines for divers to ensure that their activities do not harm UCH.¹⁰⁹

An important contribution of CPUCH is its definition of UCH, listing particular objects within the category.¹¹⁰ The definition requires that certain preconditions be met for an object or site to be ratified as UCH.¹¹¹ Foremost among these are that the object must have an archaeological, cultural, or historical attribute, and that it has been under water either partially or completely for at least 100 years.¹¹² The definition covers objects such as aircraft that have been in the sea for over 100 years,¹¹³ meaning that aircraft that fell into the sea during World War I are now eligible to be considered UCH.¹¹⁴ Cables and pipelines are not included as UCH.¹¹⁵

83. See UNESCO Convention, *supra* note 1, pmb. See also AMANDA M. EVANS, JOSEPH C. FLATMAN, & NICHOLAS C. FLEMMING, PREHISTORIC ARCHAEOLOGY ON THE CONTINENTAL SHELF: A GLOBAL REVIEW 155 (2014).

84. See DAVID JOSEPH ATTARD ET AL., THE IMLI MANUAL ON INTERNATIONAL MARITIME LAW: THE LAW OF THE SEA 451 (2014).

85. See Vadi, *supra* note 79, at 864.

86. *Id.* at 865.

87. See UNESCO Convention, *supra* note 1, art. 5.

88. See FORREST, *supra* note 1, at 287.

89. See UNESCO Convention, *supra* note 1, art. 5.

90. See *id.* art. 4.

91. See *id.* art. 9(1)(a).

92. See *id.* art. 14.

93. See *id.* art. 17.

94. See *id.* art. 9(1).

95. See Vadi, *supra* note 79, at 865.

96. See UNESCO Convention, *supra* note 1, art. 2(2).

97. See *id.* art. 19.

98. See *id.* art. 21.

99. See *id.* art. 22.

100. See *id.* art. 19, 21–22.

101. See *id.* art. 20.

102. See *id.* art. 24.

103. See BARBARA J. LAUSCHE, GUIDELINES FOR PROTECTED AREAS LEGISLATION 235 (2011).

104. See UNESCO Convention, *supra* note 1, art. 23; MAES & DERUDDER, *supra* note 74, at 18.

105. See MAES & DERUDDER, *supra* note 74, at 18–19.

106. See *id.* at 18.

107. See *id.* at 19.

108. See *id.*; UNESCO, MANUAL FOR ACTIVITIES DIRECTED AT UNDERWATER CULTURAL HERITAGE 7 (2013), <http://www.unesco.org/culture/en/underwater/pdf/UCH-Manual.pdf> [https://perma.cc/B8WK-3JNX].

109. See *Code of Ethics for Divers*, UNESCO, <http://www.unesco.org/new/en/culture/themes/underwater-cultural-heritage/divers/code-of-ethics/> [https://perma.cc/85FV-KGKD] (last visited Oct. 17, 2018).

110. See UNESCO Convention, *supra* note 1, art. 1(1).

111. See MAES & DERUDDER, *supra* note 74, at 20.

112. *Id.*

113. See *id.* at 19.

114. This is because almost 100 years have passed since World War I, which started in 1914 and ended in 1918. Aircraft sunk in the sea prior to 1918 can be included in the category of underwater cultural heritage. See UNESCO Convention, *supra* note 1, art. 1(1)(a)(ii); MAES & DERUDDER, *supra* note 74, at 20.

115. UNESCO Convention, *supra* note 1, art. 1(1)(b).

The CPUCH uses a 100-year period in its definition of UCH because the parties to the CPUCH agreed that objects older than 100 years usually had particular historical or archaeological character.¹¹⁶ Moreover, the same time period is considered a threshold for other relevant categorizations in other legal conventions, such as the 1970 UNESCO Convention, the 1985 European Convention on the Offences Relating to Cultural Property, the 1978 Council of Europe Recommendation on the Underwater Cultural Heritage, and in the 1985 European Council Draft Convention on the Underwater Cultural Heritage.¹¹⁷

The CPUCH also gives priority to the relevant provisions of the Law of the Sea Convention.¹¹⁸ The Preamble to the CPUCH specifically states that the CPUCH must be understood and interpreted in conformity with international law, especially with UNCLOS.¹¹⁹ In fact, some international legal experts also argue that CPUCH is a set of rules derived and adopted from Article 149 of UNCLOS.¹²⁰

A useful and pragmatic contribution by the CPUCH was its recommendation that state parties establish competent authorities to maintain proper protection for UCH.¹²¹ The competent authorities should not only be able to keep an inventory of UCH but also maintain and fully protect it.¹²² In this regard, the state parties are also required to inform UNESCO's director-general of the names and addresses of personnel designated by the competent authorities to relevant roles for offering protection to UCH.¹²³ The Annex to the CPUCH provides relevant technical guidelines to the competent authorities for preserving UCH.¹²⁴ For example, it suggests evaluation and authorization protocols when archaeologists plan activity to be used by the competent authorities.¹²⁵ The Annex also includes the conditions that the competent authorities must consider before approving any project or activity of archaeologists regarding UCH.¹²⁶

It is essential to note that the main purpose of the 2001 UNESCO Convention is to preserve UCH for the long term in all marine zones, including territorial contiguous zones, archipelagic seas, the continental shelf, and exclusive economic zones.¹²⁷ Therefore, it gives rules and principles for state parties and their competent authorities for long term and complete protection of UCH.¹²⁸ These rules are meant for all independent divers, researchers, and archaeologists

exploring, studying, and researching UCH for the benefit of mankind.¹²⁹

2.3. *The Law of Salvage and Law of Finds as Principles of Admiralty Law on UCH*

The law of salvage and the law of finds are two important principles of admiralty law.¹³⁰ The law of salvage governs salvage activities in marine zones and therefore includes UCH.¹³¹ The term "salvage" means recovering underwater property or life from perils in the water.¹³² In this regard, the salvage law rewards those who get involved in the salvage of any endangered underwater property or life from the sea.¹³³ This law supports the efforts of divers, mariners, and salvors who discover and rescue any underwater property.

Admiralty courts apply the salvage law to issues and cases related to the recovery of historical objects found in the sea.¹³⁴ According to this law, if a private vessel or a diver recovers a historical object from the sea, then the diver or the owner of the vessel must be provided with a reward in return for the discovery.¹³⁵ The reward can either be in the form of monetary sums obtained after the official auction or sale of the discovered antique object or could be some portion of the artifacts discovered by that salvor.¹³⁶ However, in order to claim the reward it is also essential that three conditions have been met by the salvor. First, the property the salvor recovered must have been in peril prior to the salvage; second, the salvage activity must have been voluntary; third, the salvor must have successfully recovered it while causing no damage to its locality or elsewhere.¹³⁷ Admiralty courts have historically adopted this system.¹³⁸ It was the 1989 International Convention on Salvage ("Salvage Convention") that officially ratified the salvage law as part of international treaty law, giving it international recognition.¹³⁹ The Salvage Convention was held under the supervision of the International Maritime Organization in 1989.¹⁴⁰ The convention synchronized the civil law and common law principles related to salvage.¹⁴¹

In relation to UCH, the Salvage Convention approved an exception for states in respect to any underwater object or site that has some historical, cultural, and archaeological significance and that has been located under water for a considerable time.¹⁴² When these conditions are met and the exception is in place, states may exercise their jurisdic-

116. See MAES & DERUDDER, *supra* note 74, at 21.

117. *Id.*

118. See GARABELLO & SCOVAZZI, *supra* note 4, at 99.

119. *Id.*

120. See, e.g., ATTARD ET AL., *supra* note 84, at 451.

121. See UNESCO Convention, *supra* note 1, art. 22(1).

122. *Id.*

123. *Id.* art. 22(2).

124. See, e.g., DROMGOOLE, *supra* note 6, at 143; UNESCO Convention, *supra* note 1, annex.

125. See UNESCO Convention, *supra* note 1, annex.

126. See *id.*

127. See UNESCO Convention, *supra* note 1, art. 8, 9, 10 (discussing the contiguous, continental shelf, and exclusive economic zones); Vigni, *supra* note 73, at 134.

128. Mariano J. Aznar, *The Legal Protection of Underwater Cultural Heritage: Concerns and Proposals*, in CARLOS ESPÓSITO, JAMES KRASKA, HARRY N. SCHEIBER, & MOON-SANG KWON, OCEAN LAW AND POLICY: TWENTY YEARS OF DEVELOPMENT UNDER THE UNCLOS REGIME 124 (2016).

129. See UNESCO Convention, *supra* note 1, annex.

130. See Vadi, *supra* note 79, at 864.

131. See *id.* at 866-67.

132. See *id.* at 867.

133. *Id.* See also MAES & DERUDDER, *supra* note 74, at 52.

134. See Vadi, *supra* note 79, at 867.

135. *Id.*

136. *Id.* at 876-78.

137. *Id.*

138. See *id.* at 867.

139. See *id.* at 868.

140. See *id.*; International Maritime Organization, International Convention on Salvage pmb. n.1, Apr. 28, 1989, 1953 U.N.T.S. 193 [hereinafter International Convention on Salvage].

141. See Vadi, *supra* note 79, at 868.

142. *Id.* (citing International Convention on Salvage, *supra* note 140, art. 34, pmb. n.1).

tional control over the salvage of such property as the Salvage Convention does not apply.¹⁴³ Even so, the existence of the exception does not alter the principles and applicability of the “general admiralty law of which salvage law is a part.”¹⁴⁴ This, again, implies that the salvor should be rewarded for the discovery of property as per general admiralty law and salvage law, and not the state.¹⁴⁵

The law of finds provides an additional foundation. It rewards finders of underwater archaeological property if the original owner of that property has abandoned it.¹⁴⁶ The admiralty courts have also historically used this law to deal with cases of recovering abandoned property at sea as well as on land.¹⁴⁷ The implications of the law of finds provide a better rationale for salvaging, which eventually leads to the preservation of abandoned property from the unavoidable harmful effects of environmental factors and degradation in the sea.¹⁴⁸ Moreover, the actual importance and worth of an abandoned archaeological property cannot be estimated unless it is recovered properly and added into the category of cultural property after verification.¹⁴⁹ Hence, the salvaging of abandoned property can prove to be beneficial in preserving it after it is recovered.

There are two potential outcomes of rewarding the salvors of UCH. First, salvors tend to put more effort into discovering UCH objects, sites, and vessels, owing to the incentive of receiving a reward for salvaging a UCH property.¹⁵⁰ Adventurers and independent explorers may put their efforts and money into salvaging UCH, as salvage activities may require huge financial costs, but the incentive of obtaining a reward for salvage may urge them to put money into salvage operations.¹⁵¹ Hence, salvaging of UCH property by independent salvors and adventurers would be a beneficial outcome for the jurisdictional state authority because state authorities would not have to spend the high underlying financial costs to salvage UCH. Even so, a second possible outcome is the unintentional damage to UCH as a result of poor handling even by experienced divers.¹⁵² Accidental damage to UCH may reduce its value as well as the states’ interest in its collection, rehabilitation, and preservation.¹⁵³ Moreover, after their sale, UCH objects might no longer be so readily available for research.¹⁵⁴ Hence, the salvage law and the law of finds produce two kinds of externalities for UCH.

To mitigate the negative consequences of finding or salvaging UCH by private entities, further protection to the recov-

ered property can be ensured if competent authorities provide the finder or salvor with practicable guidelines not only for recovering the property safely but also for preserving it after the finder or the relevant owner has won ownership of the property, as suggested by the convention.¹⁵⁵ The law of finds gives ownership of discovered property to the finder if no original owner of that property files a claim for retaining it.¹⁵⁶ So, the responsibility for preserving such property gets transferred to the finder where no other entity claims ownership. In the event of a clash of claims for owning a discovered property, the admiralty court or relevant authorities may adjudicate on it.¹⁵⁷

2.4. The 1970 UNESCO Convention

The UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property (“1970 UNESCO Convention”) was ratified in 1970.¹⁵⁸ It endorses protection of entire international cultural heritage from illicit import and export.¹⁵⁹ Because UCH is also a part of *international* cultural heritage,¹⁶⁰ this convention indirectly offers protection to UCH.¹⁶¹ Furthermore, Article 4 of this convention obliges state parties to protect all cultural property within their territory, which also includes the cultural property located in their jurisdictional seas.¹⁶²

Similar to the UPUCH, the 1970 UNESCO Convention also recommends that state parties establish one or more national services, which should be assigned responsibilities such as maintaining a record of cultural properties, establishing institutions for protecting cultural property, and ensuring the preservation of areas of archaeological significance.¹⁶³ Furthermore, it also makes it obligatory for states to issue certificates for any cultural property that is officially required to be exported to another state.¹⁶⁴

The 1970 UNESCO Convention specifically regulates cultural property that is either stolen or illicitly exported from a state’s territory.¹⁶⁵ The convention endorses additional protection for UCH by prohibiting its illicit seizure and trade. If stolen cultural property of a state is found in another, the state in possession must take necessary measures to recover and return it.¹⁶⁶

143. *Id.*

144. *Id.* (quoting EKE BOESTEN, *ARCHAEOLOGICAL AND/OR HISTORIC VALUABLE SHIPWRECKS IN INTERNATIONAL WATERS: PUBLIC INTERNATIONAL LAW AND WHAT IT OFFERS* 62 (2002)).

145. *See id.*

146. *See id.* at 870; FORREST, *supra* note 1, at 311–12.

147. *See* FORREST, *supra* note 1, at 312.

148. For instance, Vadi and Frigerio explain that the decay of certain underwater cultural objects is unavoidable. *See* Vadi, *supra* note 79, at 866; Frigerio, *supra* note 24, at 217.

149. *See* FORREST, *supra* note 1, at 312.

150. *See* Vadi, *supra* note 79, at 869.

151. *Id.*

152. *Id.*

153. *See id.* at 869–70.

154. *Id.*

155. *See* MAES & DERUDDER, *supra* note 74, at 51.

156. *See id.*; *see also* RICHMAN & FORSYTH, *supra* note 6, at 121.

157. For some historic cases entailing the clash of claims over the ownership of a discovered cultural property, *see* Varmer, *supra* note 13, at 275; *see also* Frigerio, *supra* note 24, at 92.

158. *See* Convention on the Means of Prohibiting and Preventing Illicit Import, Export, and Transfer of Ownership of Cultural Property, Nov. 14, 1970, 8233 U.N.T.S. 231 [hereinafter 1970 UNESCO Convention].

159. *Id.* art. 2.

160. *Cf.* FORREST, *supra* note 1, at 351. *See also* BLAKE, *supra* note 5, at 97.

161. *See generally* UNESCO, *UNESCO CULTURE FOR DEVELOPMENT INDICATORS: METHODOLOGY MANUAL* 132 (2014).

162. *See* 1970 UNESCO Convention, *supra* note 158, art. 4(b).

163. *See id.* art. 5.

164. *See id.* art. 6.

165. *See* Evelien Campfens, *Alternative Dispute Resolution in Restitution Claims and the Binding Expert Opinion Procedure of the Dutch Restitutions Committee*, in *ART, CULTURAL HERITAGE AND THE MARKET: ETHICAL AND LEGAL ISSUES* 67 (Valentina Vadi & Hildegard E. G. S. Schneider, eds., 2014).

166. *See* 1970 UNESCO Convention, *supra* note 158, art. 7(b)(ii).

These provisions urge states to prevent museums and other institutions from acquiring an illegally imported UCH property.¹⁶⁷ They also urge the states to restrict the movement of illegally removed cultural property.¹⁶⁸

Section 3: Evaluating the Effectiveness of Contemporary Methods for the Protection of UCH

This Section will discuss successful methods including underwater archaeological parks, underwater museums, restricted access sites, and reburial sites.

3.1. Underwater Archaeological Parks

The establishment of underwater archaeological parks¹⁶⁹ is an effective method of protecting UCH from potential threats.¹⁷⁰ These are sites constructed underwater to keep underwater cultural property safe.¹⁷¹ They are established and utilized for the management of diverse underwater cultural properties—sunken sites, shipwrecks, ports, etc.—located not only in the seas, but also in lakes and rivers¹⁷²

There are two main categories of underwater archaeological parks: those open to the public, and those that require visitors to obtain a license or permit, and for a guide to accompany them.¹⁷³ Because the public can visit these parks either on their own or with a permit, the parks are making a significant contribution toward creating public awareness of the need to protect UCH.¹⁷⁴

Furthermore, archaeological parks are proving to be effective and successful methods of managing UCH and are paving the way toward achieving the goals in the CPUCH.¹⁷⁵ For instance, archaeological parks consider the protection of UCH in situ as a priority, apply protection to UCH for future generations, and disseminate awareness of the significance of preserving UCH.¹⁷⁶ All of these aspects are essential goals set down by the CPUCH.¹⁷⁷

In addition to realizing the CPUCH's goals, the underwater archaeological parks are also proving to be beneficial in many other respects.¹⁷⁸ For instance, they provide opportunities to archaeological researchers to study the UCH properties managed by these parks.¹⁷⁹ The research can provide valuable information regarding the origin of UCH

as well as the cultural, artistic, and historical significance of the people who cast them off.¹⁸⁰ Moreover, such parks are always open to recreational divers, providing divers with an opportunity to explore the parks without causing any damage to them.¹⁸¹ In addition, the public can access such parks by diving or watching videos.¹⁸² Some underwater archaeological parks also contain dry areas where underwater cultural objects can be seen through glass-bottomed floors constructed there.¹⁸³

Some examples of major underwater archaeological parks are the Florida Underwater Archaeological Preserves in the United States (also known as the “Museum in the Sea”), the Underwater Archaeological Park in Italy, the Victorian Underwater Shipwreck Discovery Trail in Australia, and the Underwater Museum in Croatia.¹⁸⁴

3.2. Underwater Museums

The establishment of underwater museums can be an appealing technique for protecting and managing semimovable or immovable UCH property located in the coastal areas.¹⁸⁵ These museums are, in fact, constructions that map the sunken UCH site on land.¹⁸⁶ They provide a direct display of the UCH site to the public.¹⁸⁷ Of these museums, as of 2018 The Baiheliang Underwater Museum in China is currently the only underwater museum open to the public.¹⁸⁸ This will hopefully change as UNESCO and the Egyptian authorities are constructing an underwater museum for the sunken ancient royal quarters of Alexandria.¹⁸⁹

Not much research has been conducted on the relationship between underwater museums and the objectives of UCH preservation.¹⁹⁰ Furthermore, their construction is expensive. States have so far given little attention to using this method to manage UCH despite its effectiveness.¹⁹¹ The construction of an underwater museum has both pros and cons.¹⁹² For instance, once the plans to construction such a museum are realized, the relevant UCH site or property becomes completely safe from all kinds of threats generated by human activities, including

167. See *id.* art. 10.

168. ANNE FAHY, COLLECTIONS MANAGEMENT 87 (2005).

169. Underwater archaeological parks are also referred to as “underwater archaeological trails”, “underwater archaeological sanctuaries”, and “underwater archaeological preserves.” See Frigerio, *supra* note 24, at 247.

170. See K. O'BRIEN ET AL., NORDIC BLUE PARKS 20 (2011).

171. *Id.*

172. See Frigerio, *supra* note 24, at 248.

173. *Id.* at 247 n.644.

174. See O'BRIEN ET AL., *supra* note 170, at 19–20.

175. Frigerio, *supra* note 24, at 263.

176. *Id.* at 264.

177. See UNESCO Convention, *supra* note 1, pmb. See also MAES & DERUDDER, *supra* note 74, at 77.

178. See Frigerio, *supra* note 24, at 264.

179. A restricted direct public access ensures protection for such sites. Moreover, such sites can also be used for educational and promotional purposes. See *id.*

180. See VALLEGA, *supra* note 39, at 110.

181. See RICHARD A. GOULD, ARCHAEOLOGY AND THE SOCIAL HISTORY OF SHIPS 27 (2011).

182. See O'BRIEN ET AL., *supra* note 170, at 20.

183. *Id.*

184. See Frigerio, *supra* note 24, at 248.

185. *Id.* at 233.

186. *Id.*

187. *Id.*

188. For details about Baiheliang Museum, see BARBARA EGGER ET AL., MANUAL FOR ACTIVITIES DIRECTED AT UNDERWATER CULTURAL HERITAGE: GUIDELINES TO THE ANNEX OF THE UNESCO 2001 CONVENTION 51 (2013). See also JESSE WATSON & KIM HUNTER GORDON, CHONGQING & THE THREE GORGES 143 (2012).

189. See Frigerio, *supra* note 24, at 233. For more details about this Underwater Museum, see Michelle Z. Donahue, *An Underwater Museum in Egypt Could Bring Thousands of Sunken Relics Into View*, SMITHSONIAN, (Dec. 29, 2015), <https://www.smithsonianmag.com/innovation/underwater-museum-egypt-could-bring-thousands-sunken-relics-into-view-180957645/> [https://perma.cc/Z94M-NV9B].

190. Frigerio has provided quite a good analysis of different aspects related to the establishment of underwater museums. However, the analysis by other scholars is lacking in this regard. See Frigerio, *supra* note 24, at 233.

191. *Id.* at 244.

192. *Id.* at 245.

diving, mining, exploring minerals, etc.¹⁹³ At the same time, it is quite challenging to protect the relevant UCH site or property during the construction of such a museum.¹⁹⁴ Moreover, it offers protection only to those UCH sites that are near, or preferably adjacent, to coastal areas.¹⁹⁵ Consequently, there is no protection or management offered for UCH property located away from the coast.

The construction of underwater museums appears to be a balancing exercise. A museum offers benefits in that it can offer full protection to a UCH site once it is constructed; however, site construction is expensive.¹⁹⁶ Shipwreck surveys, construction materials, and excavation drive costs high.¹⁹⁷ A museum with walls, windows, or floors made of glass would entice the public to visit such places.¹⁹⁸ Conversely, a serious challenge is also linked to such construction: it must have the capacity to face and resist strong tidal waves and consequent motional currents and jerks produced by the waves in coastal areas.¹⁹⁹ Public safety is another challenge. The risks posed by earthquakes, tsunamis, or strong tidal waves must be addressed.²⁰⁰

Owing to the high costs and risks associated with construction of underwater museums, they should only be constructed to protect UCH that is of “outstanding international value.”²⁰¹ Otherwise, such a method of UCH management and preservation is too costly.²⁰²

3.3. Sites With Restricted Access

In some methods of managing UCH, public access to UCH is restricted for the purpose of preserving it.²⁰³ Such restriction is adopted for UCH sites or objects that require intensive care and protection, or where exposure could result in harm to the cultural property or visitors.²⁰⁴ The severity and level of the restrictions imposed on such sites depends upon the sensitivity of the particular underwater cultural property,²⁰⁵ and may not be the same at all restricted UCH sites.²⁰⁶ Relevant state authorities monitor these sites to observe whether there has been any unusual activity or changes in the underwater

environment that may cause harm.²⁰⁷ Such UCH sites are located in Australia, the United Kingdom, Sweden, and the United States to protect certain UCH objects.²⁰⁸

The public is not allowed to visit restricted sites.²⁰⁹ Once such sites reach a stable condition and it is no longer risky for them to be open for public access, attention should be given to managing such sites as archaeological parks,²¹⁰ where entry is granted to the public to access and visit such sites either gratuitously or with a permit.

3.4. Reburial or Covering Sites

Reburial or covering of sites aims to control the degradation process that harms UCH objects or sites.²¹¹ This method is used when a UCH site has already been hit by a severe storm or natural disaster (or any other activity that has degraded it), and where it becomes highly unlikely that degradation could be prevented, or when there is no possibility of complete recovery of a UCH site or object.²¹² This method may involve the use of sandbags and geotextiles to create covering or reburial sites.²¹³ The United Kingdom, the Netherlands, Greece, and Spain have used this method to preserve precious and fragile UCH that has degraded to some extent.²¹⁴ It is quite cost-effective²¹⁵ and flexible,²¹⁶ which has made it a popular preservation method.²¹⁷ Implementing this can protect UCH sites or objects located in cold or hot waters or in the sandy or rocky depths of the sea by adopting different reburial techniques.²¹⁸ Still, one prominent drawback is that it limits public access.²¹⁹

Consistent and proper monitoring is the key to the success and effectiveness of reburial and covering of sites.²²⁰ This is accomplished by evaluating the changes in the sites' attributes to check whether further degradation is taking place and, if so, what precautionary measures should be adopted.²²¹ The response also considers whether interventions risk further spoiling of UCH property or other collateral consequences.²²² Additionally, the effectiveness and success of the adopted measures are also evaluated to determine whether the degradation has been paused or slowed down.²²³ This technique thus involves a long-term, consistent assessment of the measures taken to control the degradation of UCH.

193. *Id.*

194. *Id.*

195. *Id.* at 246.

196. *Id.* at 244–45.

197. See Michael Flecker, *Wrecked Twice: Shipwrecks as a Cultural Resource in Southeast Asia*, in *RETHINKING CULTURAL RESOURCE MANAGEMENT IN SOUTHEAST ASIA: PRESERVATION, DEVELOPMENT, AND NEGLECT* 15, 32 (John N. Miksic, Geok Yian Goh & Sue O'Connor eds., 2011).

198. See EUSEBIO DIZON ET AL., *MANUAL FOR ACTIVITIES DIRECTED AT UNDERWATER CULTURAL HERITAGE: GUIDELINES TO THE ANNEX OF THE UNESCO 2001 CONVENTION* 51 (Thijs Maarleveld et al. eds., 2013) (demonstrating the imagery of the Baiheliang Museum and its structuring including the glass walls or windows through which the people can view the underwater archaeological objects located there).

199. Frigerio, *supra* note 24, at 246.

200. *Id.*

201. See *id.* at 246–47.

202. See *id.* at 245.

203. For some of the justifications for restricting cultural sites, see U.N. EDUC., SCI. & CULTURAL ORG., *MANUAL FOR ACTIVITIES DIRECTED AT UNDERWATER CULTURAL HERITAGE: GUIDELINES TO THE ANNEX OF THE UNESCO 2001 CONVENTION* 52 (2016) [hereinafter *UNESCO MANUAL*].

204. *Id.*

205. See Frigerio, *supra* note 24, at 269.

206. *Id.*

207. See *id.* at 281.

208. *Id.* at 269.

209. See EGGER ET AL., *supra* note 188, at 52.

210. See Frigerio, *supra* note 24, at 281.

211. *Id.* at 282.

212. *Id.*

213. *Id.* at 283.

214. *Id.*

215. PETER VETH ET AL., *THE AUSTRALIAN HISTORIC SHIPWRECK PROTECTION PROJECT* 7 (2017).

216. Frigerio, *supra* note 24, at 292.

217. *Id.* at 290.

218. *Id.* at 292.

219. *Id.* at 293.

220. *Id.* at 292.

221. *Id.*

222. *Id.*

223. *Id.*

The different methods used for the protection of UCH property have different pros and cons. For example, the construction of underwater museums and archaeological parks are costly.²²⁴ By comparison, reburial sites are cost-effective and flexible.²²⁵ Nonetheless, different countries are utilizing all of these methods. Some methods like underwater archaeological parks and underwater museums also facilitate public access to UCH, which eventually promotes awareness and education among the public of the importance of protecting UCH.²²⁶ Raising public awareness is essential to protect UCH from different human activities, such as salvaging.²²⁷

Section 4: Gaps and Challenges in Protecting Underwater Cultural Heritage

Despite the methods listed above for protecting UCH and the legal provisions in the UPUCH, the 1970 UNESCO Convention, and the 1982 Law of the Sea Convention, there are several gaps in both the legal framework and the practical efforts adopted for UCH protection.

4.1. The Gaps and Conflicts in the Provisions of the 1982 Law of the Sea Convention

Articles 149 and 303 of the Law of the Sea Convention are considered to address UCH.²²⁸ These two Articles, however, do not define the precise measures that can be adopted. The language of Article 303 has resulted in uncertainty as to its application.²²⁹ For instance, while UNCLOS requires all states to protect UCH,²³⁰ states can only take strict measures to protect UCH in contiguous zones, where they enjoy jurisdiction.²³¹ Article 303 does not mention anything about the scope of the duty that it imposes on states to protect UCH, and we can only infer that such a duty is limited to states' contiguous zones.²³² A question then arises as to treatment of UCH located beyond the contiguous zones. Article 303 does not help—it does not clarify how states can protect UCH on the high seas or in the twenty four nautical mile area.²³³ Article 149 attempts to cover this gap by recommending

that state parties protect UCH in the area,²³⁴ but it does not enunciate any practical framework through which states can protect UCH beyond their national jurisdiction, which creates uncertainty about its application.²³⁵ This appears to be a significant gap in the UNCLOS regulations regarding protecting UCH.

Furthermore, paragraph 3 of Article 303 of UNCLOS directs that the salvage law, admiralty law, and other relevant laws remain unaffected by the implementation of this Article.²³⁶ This implies that the salvor does not need state permission to conduct salvage activities—a fundamental principle of the salvage law.²³⁷ This implication directly contradicts paragraph 2 of Article 303 of UNCLOS, which provides that the salvor or any explorer must obtain prior permission from the relevant authorities of the coastal state for salvage or exploration activities in its seas.²³⁸ This contradiction thus extends the ambiguity associated with the implementation of the rules provided by UNCLOS for protecting UCH.²³⁹

4.2. The Gaps in the 2001 UNESCO Convention on the Protection of UCH

The number of state parties that have ratified the UPUCH is very small, which means that only a few states follow its rules and obligations.²⁴⁰ This is alarming because the states that have not yet ratified this convention are not bound to follow its rules for the protection of Underwater Cultural Heritage in the Exclusive Economic Zone (“EEZ”) or in the twenty-four nautical mile area. Consequently, such states cannot be held accountable for any harm their actions cause to UCH because they are not following the rules of the CPUCH, which is the only set of instruments solely aimed at the protection of UCH.²⁴¹ The recent technological advancements that allow divers and independent explorers to reach the deepest parts of the seas have also increased the chances of the looting of UCH.²⁴² This risk is particularly strong if states have not ratified the legal framework of the UPUCH and are instead conducting activities such activities as deep-sea mining or mineral exploration that threaten UCH.²⁴³

One potential reason why the CPUCH has only been ratified by a small number of states is that it contains controversial provisions that are not readily accepted.²⁴⁴ For instance, it adopts an idealistic approach to protecting UCH, as it limits salvage actions to a minimum and even

224. See *id.* at 245.

225. See VETH ET AL., *supra* note 215. See also Frigerio, *supra* note 24, at 292.

226. See O'BRIEN ET AL., *supra* note 170, at 20.

227. The need to create public awareness regarding the importance of underwater cultural heritage is also evaluated in Article 20 of the 2001 UNESCO Convention, *supra* note 1. For details, see Article 20, UNESCO Convention 2001. See also MAES & DERUDDER, *supra* note 74, at 23, 46.

228. Tullio Scovazi, *The Merits of the UNESCO Convention on the Protection of the Underwater Cultural Heritage*, in CULTURAL HERITAGE, CULTURAL RIGHTS, CULTURAL DIVERSITY: NEW DEVELOPMENTS IN INTERNATIONAL LAW 270 (Silvia Borelli & Federico Lenzerini eds., 2012).

229. See SARAH DROMGOOLE, UNDERWATER CULTURAL HERITAGE AND INTERNATIONAL LAW 34 (2013).

230. See Vigni, *supra* note 73, at 134.

231. ANASTASIA STRATI, MARIA GAVOUNELI, & NIKOLAOS ST SKOURTOS, UNRESOLVED ISSUES AND NEW CHALLENGES TO THE LAW OF THE SEA: TIME BEFORE AND TIME AFTER 36 (2006).

232. This is because Article 303, paragraph 2, recommends that states perform strict measures in their coastal areas. See UNCLOS, *supra* note 2, art. 303(2).

233. Article 303 lacks applicability in the high seas. See MAES & DERUDDER, *supra* note 74, at 12. In particular, paragraph 2 of Article 303 cannot be applied to the high seas or in areas beyond jurisdiction. See FORREST, *supra* note 1, at 325.

234. See MAES & DERUDDER, *supra* note 74, at 12.

235. See FORREST, *supra* note 1, at 328.

236. See *id.*; see also MAES & DERUDDER, *supra* note 74, at 16.

237. See FORREST, *supra* note 1, at 328.

238. *Id.*

239. See *id.*

240. See Vigni, *supra* note 73, at 142.

241. *Id.* at 135

242. See Frigerio, *supra* note 24, at 31; see also Dromgoole, *supra* note 52, at 109.

243. Continuation of these activities near the area where UCH is located can cause harms to UCH. See FORREST, *supra* note 1, at 287.

244. See Frigerio, *supra* note 24, at 116 & 131.

discourages them.²⁴⁵ States find this approach impractical.²⁴⁶ This also creates contradiction in the scope of the CPUCH, which specifically mentions that the purpose of the convention is to protect UCH for the collective benefit of mankind.²⁴⁷ UCH located in the seas, however, cannot be protected from decay unless it is salvaged and rescued carefully and in a timely manner.²⁴⁸

4.3. Conflict Between the Law of Salvage and the UPUCH

There is a conflict between the law of salvage and the UPUCH. Salvage law favors the idea that salvors do not require any prior permission for salvage activities, and maintains that salvors should be rewarded for the property they salvage.²⁴⁹ By contrast, the UPUCH applies a limit to salvage activities and does not grant ownership of the salvaged objects to salvors.²⁵⁰ For this reason, many of the states that have endorsed the 1989 Law of Salvage Convention have not ratified the UPUCH.²⁵¹ Only seventeen states have ratified both conventions, which is an indication of the conflict between the two.²⁵² Other states that have not ratified the UPUCH are hesitant to do so because of the UPUCH's treatment of salvage law or because of the UPUCH's ambiguities.²⁵³ Most states also have reservations regarding Article 30(1)(d) of the 1989 International Convention on Salvage, which gives permission to states to exclude the application of the salvage law for prehistoric and cultural property found at sea, meaning that such states are not willing to exclude or neglect the application of salvage law.²⁵⁴ Furthermore, most states with a federal system of government (e.g., Australia and Canada) are reluctant to accept the UPUCH despite praising its provisions.²⁵⁵ Federal states face challenges in implementing legislation in accordance with the provisions of the UPUCH; nonetheless, these states have accepted the law of salvage.²⁵⁶

More than fifty percent of states that have ratified the 1989 International Convention on Salvage have either expressed their reservations to Article 30(1)(d) of this convention or have not accepted the UPUCH.²⁵⁷ This suggests that the 1989 Convention on Salvage Law and the UPUCH oppose each other in terms of their applicability and governance of salvage activities related to UCH.²⁵⁸ The former aims to protect the interests of the salvors and considers

UCH a commercial entity,²⁵⁹ while the latter prohibits the commercialization of UCH.²⁶⁰ This could explain why most states have ratified one, but not both, of these two conventions. This further indicates that there is no adhesion and uniformity in international customary law principles in relation to salvage activities at sea.²⁶¹

4.4. No Protection to UCH Offered by the Law of Salvage, the Law of Finds, or Admiralty Law

The framework necessary to protect UCH is absent in the law of salvage, admiralty law, and the law of finds. A major drawback of relying on salvage law to protect UCH is that salvage law provides no rule regarding the preservation of discovered property.²⁶² Salvage law only provides regulations for the recovery and retrieval of UCH.²⁶³ This lack of protection is also evident in international maritime law, where salvage law has its roots.²⁶⁴ Admiralty law was meant only to deal with commercial trade of UCH, which was historically carried out by private merchants.²⁶⁵ Similarly, the law of finds gives ownership of UCH property to the finder and does not establish any framework or principles for protecting discovered UCH property.²⁶⁶

4.5. The Gaps Related to the 1972 UNESCO Convention (World Heritage Convention) in Protecting UCH

The UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage, also called World Heritage Convention,²⁶⁷ was held in 1972.²⁶⁸ This convention offers protection to international cultural heritage property located on land and at sea,²⁶⁹ including underwater cultural property.²⁷⁰ However, the Convention recognizes three types of heritage objects as cultural heritage—buildings, sites, and monuments—all of which are immovable.²⁷¹ Thus, it excludes shipwrecks, which are movable²⁷² and are, in fact, the most prominent type of UCH property.²⁷³

245. See, e.g., *id.* at 115–17.

246. See *id.* at 166–67.

247. See UNESCO Convention, *supra* note 1, pmb1.

248. Cf. Frigerio, *supra* note 24, at 216–17.

249. See FORREST, *supra* note 1, at 325. See also MAES & DERUDDER, *supra* note 74, at 16, 52; Vadi, *supra* note 79, at 867.

250. Salvage law aims to protect UCH for public interests rather than giving ownership of UCH to the salvor. See Frigerio, *supra* note 24, at 181.

251. For a detailed account of the states that have ratified the Salvage Law Convention but not the 2001 UNESCO Convention, see Frigerio, *supra* note 24, at 178–80.

252. See Frigerio, *supra* note 24, at 179.

253. See *id.* at 178–81.

254. See *id.* at 180.

255. *Id.*

256. *Id.*

257. See *id.*

258. See *id.* at 181.

259. *Id.*

260. See Vadi, *supra* note 79, at 864.

261. See Frigerio, *supra* note 24, at 181.

262. STRATI, *supra* note 48, at 45. See also DROMGOOLE, *supra* note 6, at 124.

263. See STRATI, *supra* note 48, at 45.

264. *Id.*

265. See Vadi, *supra* note 79, at 869.

266. Strati indicates that the application of Law of Finds can invite piracy and lawlessness at sea, which would imply the non-preservation of UCH. STRATI, *supra* note 48, at 45.

267. PROTECTION OF INTELLECTUAL, BIOLOGICAL AND CULTURAL PROPERTY IN PAPUA NEW GUINEA 92 (Kathy Whimp & Mark Busse eds., 2013).

268. See SOPHIA LABADI, UNESCO, CULTURAL HERITAGE, AND OUTSTANDING UNIVERSAL VALUE: VALUE-BASED ANALYSES OF THE WORLD HERITAGE AND INTANGIBLE CULTURAL HERITAGE CONVENTIONS 27 (2013)

269. Vigni, *supra* note 73, at 135.

270. FORREST, *supra* note 1, at 351. See also BLAKE, *supra* note 5, at 97.

271. MAES & DERUDDER, *supra* note 74, at 58.

272. See also DROMGOOLE, *supra* note 6, at 157.

273. See FORREST, *supra* note 1, at 287.

The exclusion of shipwrecks indicates a contradiction in the scope of the World Heritage Convention. On the one hand, it claims to offer protection to the entire international cultural heritage²⁷⁴; on the other hand, it excludes an important element—shipwrecks—from the list of those cultural properties eligible for its protection.²⁷⁵ It should have offered protection to all UCH objects and sites without discriminating between movable and immovable cultural properties.²⁷⁶ This gap has to be filled by UNESCO in elaborating the scope of the World Heritage Convention.

These gaps in UNCLOS, the UPUCH, the World Heritage Convention, and the Salvage Law Convention should be dealt with effectively by UNESCO and the international community. Resolving gaps and ambiguities in the UPUCH can encourage more states to ratify it.²⁷⁷

Conclusion

Underwater cultural heritage faces constant threats from both human activity and natural processes. Although several international agreements focus on UCH or implicate its protection, several of these agreements contain conflicting provisions that prevent a comprehensive international system of UCH protection from taking form. To effectively preserve UCH for the edification and appreciation of future generations, the international community, including bodies like UNESCO, need to reconcile these agreements and adopt changes that can achieve international consensus. This reconciliation would greatly enhance the formal protections that UCH clearly deserves and would dramatically improve states' ability to implement effective, successful UCH preservation schemes.

UCH is facing numerous threats from several human activities, such as deep-sea mining, diving, and pipelining.²⁷⁸ It is essential to address these threats before they can damage UCH.²⁷⁹ It is also essential to consider the costs in determining whether different methods of UCH protection is feasible.²⁸⁰ Certain methods of preserving UCH sites (for instance, the construction of underwater museums) are quite costly.²⁸¹ That is why there is only a single underwater museum functional in the world at present.²⁸² No other state has adopted this method of preserving UCH because of high construction costs.²⁸³

274. See Vigni, *supra* note 73, at 135.

275. RICHMAN & FORSYTH, *supra* note 6, at 156. See also DROMGOOLE, *supra* note 6, at 157.

276. See FORREST, *supra* note 1, at 287.

277. See Vigni, *supra* note 73, at 142.

278. See GARABELLO & SCOVAZZI, *supra* note 4, at 100. See also Dromgoole, *supra* note 52, at 109; CHECHI, *supra* note 14, at 110; FORREST, *supra* note 1, at 287.

279. Frigerio, *supra* note 24, at 34.

280. For performing any activity on the underwater cultural heritage, certain conditions and factors must be considered for making the activity as feasible and favorable for UCH. In this regard, Frigerio provides some suggestions for any activity or project initiated at a UCH site or object. *Id.* at 152.

281. *Id.* at 245.

282. *Id.* at 247.

283. *Id.*

UCH is an important part of international cultural heritage.²⁸⁴ International law has realized this importance and has provided valuable contributions in the form of legal provisions, rules, and principles for protecting UCH.²⁸⁵ In this regard, an important suggestion provided by the UPUCH is the establishment of competent authorities.²⁸⁶ Article 22 of this convention recommends that all state parties establish competent authorities to monitor UCH where appropriate as well as performing necessary measures to counter the threats to UCH.²⁸⁷ If every coastal state invests in its competent authorities and the relevant officials are actually competent in preserving UCH, then UCH would receive sustainable protection in every state's contiguous zone.²⁸⁸

However, international law still lacks clarity in its protection of UCH at sea.²⁸⁹ This ambiguity extends to the contiguous zones of states when the law of salvage is applied in the contiguous zones.²⁹⁰ The law of salvage has as a core principle that the salvor of a UCH property should be given some reward for the UCH property salvaged.²⁹¹ Moreover, the salvor need not necessarily have the permission of the coastal state for the salvage activities.²⁹² Article 303(3) of UNCLOS also states that the law of salvage must remain unaffected by any activity preserving UCH.²⁹³ However, Article 303(2) makes it mandatory that states control every activity in their contiguous zones, including salvage activities.²⁹⁴ Under this provision, every activity in the contiguous zone requires the prior permission and approval of the jurisdictional coastal state.²⁹⁵ This implication is directly contrary to Article 303(3) of UNCLOS.²⁹⁶ Such ambiguity should be tackled by international legal experts to provide a harmonious framework for the protection of UCH.

Furthermore, other international conventions, such as the World Heritage Convention, should also include provisions related to preserving UCH. The World Heritage Convention sets out provisions for protecting the entire international cultural heritage,²⁹⁷ but it excludes movable objects,

284. BLAKE, *supra* note 5, at 97. See also BRIGITTA HAUSER-SCHÄUBLIN & LYNDEL V. PROTT, CULTURAL PROPERTY AND CONTESTED OWNERSHIP: THE TRAFFICKING OF ARTEFACTS AND THE QUEST FOR RESTITUTION 85 (2016); VARINLIOGLU, *supra* note 16, at 18.

285. See GARABELLO & SCOVAZZI, *supra* note 4, at 210–12. See also FORREST, *supra* note 1, at 351.

286. See UNESCO Convention, *supra* note 1, art. 22(1).

287. *Id.*

288. The 2001 UNESCO Convention has also provided the rules for the competent authorities through which they can protect the underwater cultural heritage. For instance, see UNESCO Convention, *supra* note 1, annex r. 9, 10.

289. Ambiguity lies in Article 303 of UNCLOS as well as in the 2001 UNESCO Convention. See FORREST, *supra* note 1, at 328. See also Vadi, *supra* note 79, at 865.

290. See FORREST, *supra* note 1, at 328.

291. See STRATI, *supra* note 48, at 45.

292. See FORREST, *supra* note 1, at 328.

293. *Id.*

294. *Id.* See also, Vigni, *supra* note 73, at 134.

295. See FORREST, *supra* note 1, at 328.

296. *Id.*

297. See Vigni, *supra* note 73, at 135. See also Convention Concerning the Protection of the World Cultural and Natural Heritage, pmbl., Nov. 16, 1972, 1037 U.N.T.S. 151 ("We, the members of the World Heritage Committee, recognize the universality of the 1972 Convention concerning the Protection of the World Cultural and Natural Heritage and the consequent need to ensure that it applies to heritage in all its diversity").

including shipwrecks.²⁹⁸ This aspect should be dealt with by UNESCO as the World Heritage Convention presented it. As UNESCO has provided protection to shipwrecks and movable archaeological property in the UPUCH,²⁹⁹ it should

also give attention to adding relevant clauses for protecting shipwrecks and movable archaeological objects to the World Heritage Convention. This would lead to additional protection for UCH.

298. See DROMGOOLE, *supra* note 6, at 157.

299. See FORREST, *supra* note 1, at 287.