Perez-Alvaro, E. (2013) 'Unconsidered Threats to Underwater Cultural Heritage: Laying Submarine Cables'

Rosetta **14**: 54-70.

http://www.rosetta.bham.ac.uk/issue14/perezalvaro.pdf

Unconsidered Threats to Underwater Cultural Heritage: Laying Submarine Cables

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Abstract. Emerging uses of the oceans are interfering with the preservation of underwater cultural heritage. Increasingly, international communications require an international submarine cable network. At the same time, the discipline of underwater heritage has finally created a serious legal framework to protect underwater cultural heritage from illegal activities. The crucial issue, however, is whether legal activities – such as laying submarine cables – threaten the protection of underwater cultural heritage, or whether the protection of this heritage conflicts with the best route for laying the submarine cables. Surprisingly little attention has been given to this aspect of heritage management.

Keywords: Underwater cultural heritage, submarine cables, benefit of humankind

Introduction

According to the UNESCO Convention on the Protection of Underwater Heritage (2001)[2] ("UNESCO Convention" hereinafter), there are the archaeological remains of more than three million vessels lying in the oceans around the world, including whole fleets such as the Spanish Armada of Philip II. There are also historic monuments underwater, such as the Lighthouse of Alexandria, whole cities such as Port Royal in Jamaica, old Carthage in North Africa and the temples of Mahabalipuram and Dwarka in India.[3] Cities and buildings that once stood on land are now covered by the sea. However, of all the types of underwater archaeological sites, wrecks are the most important in terms of their number, volume and variety.

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[2] UNESCO 2001 Convention. The convention entered into force on 2 January 2009 in accordance with its Article 27. As of March 2013, the UNESCO Convention has 42 state parties: Albania, Argentina, Barbados, Benin, Bosnia and Herzegovina, Bulgaria, Cambodia, Croatia, Cuba, Democratic Republic of the Congo, Ecuador, France, Gabon, Grenada, Haiti, Honduras, Iran (Islamic Republic of), Italy, Jamaica, Jordan, Lebanon, Libya, Lithuania, Mexico, Montenegro, Morocco, Namibia, Nigeria, Palestine, Panama, Paraguay, Portugal, Romania, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Slovakia, Slovenia, Spain, Trinidad and Tobago, Tunisia and Ukraine.

[3] UNESCO 2001 Convention.

Shipwrecks are important not only for the vessel, but also for their cargo (such as works of art, architectural components, sarcophagi, marble blocks, minerals and amphorae) and the human remains on them.

As an illustration, the *Mary Rose,* flagship of King Henry VIII's fleet, sank in 1545. Her hull, raised from the shallow sea-bed near the English south coast, was towed into Portsmouth harbour on the evening of 11th October 1982.[4] The shell was a veritable time-capsule. In this regard, Pompeii is a famous archaeological example of the rare situation on dry land where we have intact vestiges preserved from a single moment in time. By contrast, it is the usual circumstance of a shipwreck that it is a closed time-capsule. This is a key reason why shipwrecks are so valuable, and their preservation and study such an important part of heritage. If a shipwreck can be dated, then everything on board can also be dated. Consequently, this heritage requires an archaeological study in order to protect it from destruction without an adequate record of provenance. An antiquity without a precise provenance is of limited historical significance, knowledge of archaeological context gives an opportunity to study how and where each object was buried, and how it is related to other objects.

International law today offers a seriously deficient legal framework for the protection of underwater cultural heritage. Since there is still no international law on its protection, there have been some efforts to co-ordinate international measures to manage and protect it. In this regard, two important sets of international negotiations are subject to underwater cultural heritage: the first concerns the international law of the sea – the *UN Convention of the Law of the Sea*[5] ("UNCLOS" hereafter) - and the second relates to a provision for the specific protection of underwater cultural heritage: *UNESCO Convention on the Protection of the Underwater Cultural Heritage.* These two regulations protect the underwater cultural heritage against illegal activities and advise on its management. However, these regulations do not solve the issue of prioritisation when a conflict between legal usages arises. For example, they do not clarify protocol to follow when a 200 year old shipwreck is found whilst planning submarine cable routes, how the law should be interpreted in

[4] Willis 2008.

these cases, if it should be communicated to the authorities, if new routes should be traced or who controls these aspects.

Thousands of kilometres of submarine cables lie on or under the seabed carrying telephone calls and internet data (only 1% of telecommunications are established via satellite). In 2013, 283 cables are active with 29 new routes planned. Future project developments supposedly involve an initial environmental impact assessment including the potential effects of the laying operations on the environment, other seabed users and underwater cultural heritage sites.[6]

Part II below provides background information on the values of underwater cultural heritage and the threats to its preservation. It also discusses the use and importance of submarine cables and their relation to underwater cultural heritage. Part III sets out the legal controversy surrounding the different perspectives of the different users and/or uses of the sea. Consideration is given to: (a) the legal protection of underwater cultural heritage with special attention to UNCLOS; (b) the legal protection of submarine cables under the umbrella of UNCLOS; (c) the unresolved issues between these two uses and (d) the advantages and implications of declaring the protection of underwater cultural heritage as for the "benefit of humankind".

Underwater cultural heritage/submarine cables: technical argument

As claim for their valuable attributes has broadened, historic shipwreck resources have become the subject of confrontations among different "users" or interest groups (for example, archaeologists, historians, commercial salvagers, sport divers or companies exploiting the subsoil). Some of this underwater cultural heritage, especially shipwrecks, is not only an archaeological resource but also an economic asset. Many of these sunken galleons were laden with a fortune in gold, silver and other precious materials plundered from colonies between the 16th and 19th centuries (see the case of *Nuestra Senora de las Mercedes*).[7]

[5] UNCLOS 1982. 10 December 1982, in force since 16 November 1994.

[6] Carter at al. 2009.

[7] Alderman 2010. *Nuestra Señora de las Mercedes* is a Spanish warship sunk by the British navy southwest of Portugal in 1804 with more than 200 people on board. Their salvage yielded over 500,000 silver coins weighing more than 17 tons, hundreds of gold coins, worked gold, and other artefacts. The shipwreck was discovered by a private company, *Odyssey Marine Exploration*. Spain

In fact, it has been calculated that lying under the waves of the Mediterranean alone there could be sunken treasure worth $100bn, but the real value will probably never be known. Elsewhere, scattered around the globe, in the Atlantic, Caribbean and Pacific, there are far more sunken millions. However, it is still not possible to know how many wrecks are lying at the bottom of the oceans.[8]

> […] if one vessel sank in every year of every decade of every century of every millennium since the first seafarers in Greece 11,000 years ago, we would have 11,000 wrecks in the Aegean alone. But hundreds of ships have sunk in Aegean storms in a single day. The number of wrecks beneath the Seven Seas is truly unimaginable.[9]

It is now possible to recover material from 98% of the world's seabed.[10] Consequently, shipwrecks once too deep to reach have become accessible and vulnerable to human interference. *The Titanic* is a good example: it has now been precisely located in the vast depths of the North Atlantic and can be visited with modern deep-ocean exploration craft.[11] However, it is estimated that a wreck needs to be worth more than US$ ten million to be commercially attractive for salvage and that there are only around 100-200 such wrecks on the seabed.[12] Thus, objects from shipwrecks are not only archaeological, artistic or historical items but also pieces with a possible high economic value: historic shipwrecks can hold valuable fortunes. These objects are worth a great sum of money and can be a source of legal disputes and international confrontations between maritime countries. They can also be objects of dispute with non-maritime countries which owned vessels in the past, and the cause of legal actions with private companies (such as treasure hunters).

Consequently, there are several threats to underwater heritage, such as construction, illegal salvage or "treasure-hunters". Furthermore, as we have seen, human interference not only includes illegal uses but also legal applications, like laying submarine cables and pipelines. These legal activities affect shipwrecks in deeper waters unlike treasure hunting activity, where the trend is the plunder of

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went to the US Federal Court claiming ownership of the treasure as part of a "country's national heritage".

[8] O'Keefe 2002.

[9] Bass 2005: 27.

[10] Dromgoole 2003.

[11] Aznar-Gomez and Varmer 2013.

[12] Dromgoole 2003.

shipwrecks in shallower waters. In deep water (usually international waters/High Seas) shipwrecks tend to be better preserved than those in shallow waters. The latter often sink as the result of collision and are badly damaged. In addition, there is less organic activity in cold, deep water so remains are better preserved. As a consequence, the laying of submarine cables is more likely to affect better preserved shipwrecks which have not been discovered and/or plundered.

As previously mentioned, there is a common misconception that most international communications are via satellites, when in fact over 95% of this traffic is actually routed via submarine fibre-optic cables.[13] These submarine cables cost around $100-$500m to build and every year around 100–150 cases of cable damage are reported and only 9% of this damage is due to natural causes.[14]

The laying of submarine cables is a difficult task. First, there is a Desktop Study to investigate the initial route and gather information on landing sites, geopolitical and cultural issues, security, geology, meteorology, oceanography, location and history of existing nearby cables and other obstructions – presumably including underwater cultural heritage finds - fisheries or hazards. The route undergoes a preliminary engineering survey conducted by marine geologists with cable engineering experience who assemble all available hydrographical and geological information.[15] After that, a survey of the bottom of the seas is made. This assessment produces information on, for example, the fauna and flora of the bottom of the ocean and the temperature of the water.

The result is cables that can have total lengths of over 21,000 km (13,000 miles). It seems likely that over such long distances shipwrecks will have been found. However, no such shipwrecks have been reported to date by any of the companies laying cables.

The equipment used to find archaeological remains and that used to find submarine cables differ greatly from each other. It seems unlikely that when deliberately looking

[13] Carter at al. 2009.
[14] Carter at al. 2009.
[15] Carter at al. 2009.

for a shipwreck a submarine cable is found or when looking for a cable with specific tools, a shipwreck is found.

> To use an underwater metal detector to try to find a submerged cable is like trying to shoot a rhinoceros with a pellet gun. There is no reason to use that small an instrument. You would have an overwhelming signal if you were wearing earphones. It would practically deafen you. If you are a competent mariner, you have charts, which show cables. Most cables are laid in areas where you are not supposed to be, and it would be something if, say, there was an older cable, that your magnetometer, which the vessel had, would clearly delineate that linear magnetic signature. So I can see no reason whatsoever for the use of a metal detector in that circumstance.[16]

Conflict when finding shipwrecks while laying submarine cable has not yet occurred, but oceans are being affected by the new uses that are being developed. All of these uses should co-exist, and governments and other organizations will have to create new international regulations in the process.

Legal approach

Underwater Cultural Heritage: legal protection

Most of the shipping lanes (and as a consequence most sunken vessels) are located in international waters, where no state can claim sovereign jurisdiction. Since territorial sea area extends only twelve nautical miles from a state's land out to sea, there is a vast area of sea beyond that boundary with a wealth of shipwrecks with difficult issues of ownership. The picture emerging outside the territorial sea is one of a lack of agreement between states claiming rights over underwater heritage.

International law today offers a seriously deficient legal framework for the protection of maritime patrimony. In fact, the protection of underwater cultural heritage was specifically neglected on an international level until ten years ago: the UNESCO Convention was not adopted until 2nd November 2001. Thirty states are now party to it. This is the only legal instrument to specifically protect underwater cultural heritage. The most important aspects of this convention are the priority of preservation *in situ,* the rejection of commercial recovery of underwater cultural heritage since it is incompatible with its preservation (this rule eliminates recognition of the economic value of this heritage) and the principle of co-operation between interest groups such

as scientific institutions, archaeologists and divers, as well as between countries. However, there are also some weaknesses in the UNESCO Convention: the vague definition of underwater cultural heritage, issues of ownership and abandonment, the question of warships and other state-owned vessels and the determination of the geographical scope of the UNESCO Convention. There is no reference to the prioritisation of the protection of underwater cultural heritage over other legal uses of the seas – including the laying of submarine cables.

The second legal instrument to protect underwater cultural heritage is the 1982 United Nations Convention on the Law of the Sea (UNCLOS, 1982) this refers to underwater cultural heritage in only two articles: 149 and 303. However, both articles are vague and ambiguous. The first main conclusion of these two articles is that states are obliged to protect archaeological and historical objects found in the sea. Unlike the 2001 UNESCO Convention, *in situ* preservation and the prohibition of commercial exploitation of underwater cultural heritage are not only not contemplated in the provisions of UNCLOS but Article 303.3 reflects that neither are they contemplated in spirit.

> Article 303 - Archaeological and historical objects found at sea
> 3. Nothing in this article affects the rights of identifiable owners, the law of salvage or other rules of admiralty, or laws and practices with respect to cultural exchanges.

A second issue is the categorisation of the resource. The 2001 UNESCO Convention agrees that underwater cultural heritage is strictly a heritage resource, and although the UNCLOS also regards it as a heritage resource, it does not exclude its treatment as an economic resource.

The last matter is that the term *natural resources,* within the meaning of UNCLOS, is not meant to include underwater cultural heritage.[17] Consequently, UNCLOS refrains from explicitly extending the sovereign rights that states have over the natural and economic resources in their exclusive economic zone and in the continental shelf as pertaining to underwater archaeological resources.

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16 International Tribunal for the Law of the Sea, Verbatim Record. Experts declaration.
17 UNCLOS 1982

Due to this lack of specific legislation aimed at the protection of heritage, there are still inadequacies which allow private companies and foreign countries to exploit heritage under the seas. In general, the law needs to catch up with new developments. Underwater cultural heritage is a field which has evolved mainly in the last twenty years. The general "demand" for historic shipwrecks has grown, increasing both their economic value[18] and the conflicts between different users. However, the conventions to preserve underwater cultural heritage were implemented respectively more than 30 years ago - UNCLOS - and more than ten years ago - UNESCO. The law needs to be adapted to the new changes in the uses of the oceans either through the implementation of new agreements, or by the creation of new annexes.

Submarine cables: legal protection

There is a difference between pipelines and cables. Much of the international law relating to offshore pipelines – including the UNCLOS - has been drawn by analogy with the long-established regulation for submarine telegraphic and telephone cables. These statutes do not differentiate between either method, although in practice they are extremely different: pipelines, unlike cables, can pollute. In addition, cables can be laid under almost any topographic conditions, while pipelines generally have limited routing possibilities, especially on account of their inflexibility. Finally, improving technology enables longer pipelines to be built in deeper water and across more difficult submarine terrain.[19] In theory, however, cables and pipelines are included together in UNCLOS and are named together in the 2001 UNESCO Convention. However, the present article refers specifically to submarine cables.

There are numerous international conventions under the UNCLOS umbrella to further specify issues for ocean uses such as international shipping or fisheries, but not for submarine cables.

[18] Crowley 1987.
[19] Carter at al. 2009.

1) *1884 Convention for the Protection of Submarine Telegraph Cables.*[20] The Cable Convention continues to be widely used in the cable industry. It was the foundation of modern international law for submarine cables as contained in the Geneva Conventions on the High Seas 1958 (Articles 26–30) and Continental Shelf 1958 (Article 4) and, most recently, in UNCLOS. Since the 1884 Convention is concerned with the protection of cables, it does not regulate the rules for laying them. It does not address any criteria to follow when finding archaeological remains.

2) The 2001 UNESCO Convention on the Protection of Underwater Cultural Heritage mentions submarine cables in only one article, the first one. It reads:

> Article 1 – Definitions. For the purposes of this Convention:
> 1. (a) "Underwater cultural heritage" means 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.
> (b) Pipelines and cables placed on the seabed shall not be considered as underwater cultural heritage.
> (c) Installations other than pipelines and cables, placed on the seabed and still in use, shall not be considered as underwater cultural heritage.

To be clear, underwater cultural heritage is only considered to be traces of human existence with more than 100 years underwater. The first cable was laid in August 1850. Were cables not specifically excluded from the definition, they could have fallen under this definition. The UNESCO Convention suggests that destruction is exclusively connected to "excavating without proper conservation". However, recently UNESCO's position has shifted to cover other important threats – like land reclamation, dredging, construction of harbours, trawling, laying of submarine cables and pipelines, off-shore drilling platforms, wind power plants, water pollution and forces of nature. According to some authors, the parties to this Convention agreed to

[20] Convention for the Protection of Submarine Telegraph Cables (Paris, 14 March 1884). Department of Foreign Affairs And Trade Canberra. Final Protocol to the Convention for the Protection of Submarine Telegraph Cables of 14 March 1884 (Paris, 7 July 1887). Convention between Great Britain, the Argentine Republic, Austria-Hungary, Belgium, Brazil, Colombia, Costa Rica, Denmark, the Dominican Republic, France, Germany, Greece, Guatemala, Italy, Netherlands, Persia, Portugal, Romania, Russia, Salvador, Serbia, Spain, Sweden And Norway, Turkey, United States And Uruguay.

exempt cables from the treaty because of the specific provisions of UNCLOS and the agreement of the parties that cable laying and maintenance posed no threat to underwater cultural heritage.[21]

3) UNCLOS: the regulations of coastal states for laying submarine cables under UNCLOS are complicated since the UNCLOS rights and obligations lie with states, not private companies, and laying submarine cables is usually executed by private organizations. However, it is expected that private companies sail under a state flag and, as a consequence, that state is responsible for their actions.

In this context, there are different parts and articles of UNCLOS that refer to submarine cables and pipelines depending on the maritime zones. In territorial seas, Article 21 (1)(c) establishes that states must adopt laws in respect of the protection of cables and pipelines and the right of the coastal state to establish conditions for cables or pipelines entering its territory (Article 79 (4)). The sovereignty of a coastal state in its territorial sea is not unlimited. Article 2 (3) of UNCLOS provides that the sovereignty of a coastal state over its territorial sea is exercised subject to UNCLOS and other rules of international law. The main limitations to the sovereignty of the coastal state in the territorial sea relate to the passage of ships since they have the right of innocent passage. Such passage must be continuous and expeditious and must not engage in any activity. Laying, maintenance or repair of submarine cables in territorial seas would not be considered as part of the right of innocent passage. As a consequence a coastal state has the total right and sovereignty to regulate the laying, maintenance and repair of submarine cables within its territorial sea.[22] In relation to archipelagic waters, Article 51 (2) states that they must respect submarine cables through its waters and permit maintenance and replacement if due notice is received. In the EEZ - Article 58 (1) - there is freedom of laying submarine cables and pipelines although companies laying cables must comply with the laws adopted by the coastal state. Article 87 (1) establishes a freedom of the High Seas to lay submarine cables and pipelines subject to Part VI (continental shelf, Article 79). On the settlement of disputes, Article 297 (1) (a) proposes that procedures provided in Section 2 - compulsory procedures entailing binding decisions - will apply if it is

[21] Carter at al. 2009.

alleged a coastal state acted in contravention in regard to the laying of submarine cables and pipelines. More specifically, Article 79 on the Continental Shelf (Part VI) relates that:

> 1. All States are entitled to lay submarine cables and pipelines on the continental shelf, in accordance with the provisions of this article.
> 2. Subject to its right to take reasonable measures for the exploration of the continental shelf, the exploitation of its natural resources and the prevention, reduction and control of pollution from pipelines, the coastal State may not impede the laying or maintenance of such cables or pipelines.
> 3. The delineation of the course for the laying of such pipelines on the continental shelf is subject to the consent of the coastal State.
> 4. Nothing in this Part affects the right of the coastal State to establish conditions for cables or pipelines entering its territory or territorial sea, or its jurisdiction over cables and pipelines constructed or used in connection with the exploration of its continental shelf or exploitation of its resources or the operations of artificial islands, installations and structures under its jurisdiction.
> 5. When laying submarine cables or pipelines, States shall have due regard to cables or pipelines already in position. In particular, possibilities of repairing existing cables or pipelines shall not be prejudiced.

Under UNCLOS, coastal states have jurisdiction to adopt "reasonable measures" for the exploration and exploitation of the natural resources of the seabed or subsoil, and prevention, reduction and control of pollution in the continental shelf. The owner of a cable or pipeline to be laid needs to pay due regard to other submarine cables or pipelines already in position, and needs to receive the coastal state's permission for the route of the cable (Article 79 (3)). In case of a conflict, the coastal state has priority.

Articles 112, 113, 114 and 115 Part VII (High Seas) state that all states are entitled to lay submarine cables and pipelines on the bed of the High Seas. The break in, or injury of, a cable by a ship, if done wilfully, is a punishable offence, except if done while saving their lives or their ships. If a person subject to the jurisdiction of a state causes a break in or injury to a cable or pipeline, they shall bear the cost of the repairs. Also, owners of ships that have sacrificed an anchor or net in order to avoid injuring a submarine cable shall be indemnified by the owner of the cable or pipeline. However, there is no mention of any special precaution or safety measure for the environment and/or archaeological remains when planning, tracing, surveying or laying submarine cables.

[22] Beckman 2010.

Conflicts: unresolved issues

Underwater cultural heritage is increasingly threatened by pipeline - and cable - laying, port development, breakwater construction and clearing of navigation channels. However, the obligation for protection under Article 303, paragraph 1 UNCLOS applies to all states.

> 1. States have the duty to protect objects of an archaeological and historical nature found at sea and shall cooperate for this purpose.

However, in relation to the freedom of other states, it is possible that, in applying their rights in the High Seas or other maritime zones (specifically freedom of the laying of submarine cables and pipelines), companies laying submarine cables may find an archaeological or historical object. In this regard, Article 303 – in spite of its vagueness - can be read as stating that they are obliged to protect such objects. Paragraph 4 of Article 303 is important in that it provides that other regulations still apply, for instance UNESCO Convention for the Protection of Underwater Cultural Heritage.

> 4. This article is without prejudice to other international agreements and rules of international law regarding the protection of objects of an archaeological and historical nature.

In this regard, and in relation to the continental shelf and the High Seas, it is questionable whether shipwrecks may have an effect on the freedom to lay submarine cables according to Article 87 (1) (c): freedom of the High Seas where it is stated that the High Seas are open to all states under the conditions of the Convention, where the freedom to lay submarine cables and pipelines is expressly mentioned, subject to Part VI. The same is applicable to the protection of underwater cultural heritage, where the freedom of the High Seas applies, although states have the obligation to protect underwater cultural heritage for the benefit of humankind according to the Article 149 of the same convention:

> All objects of an archaeological and historical nature found in the Area shall be preserved or disposed of for the benefit of mankind as a whole, particular regard being paid to the preferential rights of the State or country of origin, or the State of cultural origin, or the State of historical and archaeological origin

For comparison, the next charts (Fig 1, Fig 2) show the different regulations governing the protection of underwater cultural heritage and the protection of submarine cables under UNCLOS:

	TERRITORIAL SEA Art 2 CONTIGUOUS ZONE Art 303.2, Art 33	EEZ AND CONTINENTAL SHELF Art 303 all maritime zones UNESCO Art 9, Art 10	HIGH SEAS AND THE AREA Art 149, Art 303
COASTAL STATE	Sovereign rights	Obligation to inform UNESCO and priority on being the coordinating State	Freedom of the High Seas. All the States obliged to preserve underwater heritage having in mind the Flag State and the interested State
FLAG STATE	May receive information about the finds	Need its agreement	
INTERESTED STATE	May receive information about the finds	Right to be informed and participation	

Figure 1. Current legislation for the protection of the underwater cultural heritage.

	TERRITORIAL SEA / CONTIGUOUS ZONE – Art 21 (1) (c) , Art 79 (4)	EEZ AND CONTINENTAL SHELF Art 79, Art 58 (1)	HIGH SEAS AND THE AREA Art 87 (1), Art 112, 113, 114, 115
COASTAL STATE	Sovereign rights: adopt laws for the protection. Establish conditions	Laws must be adopted. Only object if laying obstruct rights of exploration and exploitation natural resources	Freedom of the High Seas subject Part VI (continental shelf)
CABLES OWNER STATE	Laying submarine cables and pipelines allowed under regulation of the Coastal State	Freedom of laying submarine cables and pipelines. Comply with Coastal State laws	

Figure 2. Current legislation for the protection of submarine cables.

However, and since the Convention does not nominate jurisdiction for the damage of underwater cultural heritage by legal activities such as the laying of submarine cables, the freedom of the High Seas prevails with harmful consequences for underwater cultural heritage.

Benefit of mankind

> Article 149
> Archaeological and historical objects All objects of an archaeological and historical nature found in the Area shall be preserved or disposed of for the benefit of mankind as a whole, particular regard being paid to the preferential rights of the State or country of origin, or the State of cultural origin, or the State of historical and archaeological origin.

No definition of the term *benefit of mankind* is given. However, the term has been illustrated as "taking into account intra - and intergenerational interests."[23] A broader definition holds that the common heritage of mankind is an international principle, which establishes equal property interests for all people.[24] The Common Heritage doctrine includes five characteristics.[25]

(1) No country can appropriate for itself the territory in question,

(2) All states share responsibility for managing the territory,

(3) All states share in the benefits from exploitation of the territory,

(4) All countries must use the territory for exclusively peaceful purposes,

(5) All countries have a shared responsibility for preserving the unique or irreplaceable resources of the territory for future generations.

The common heritage of mankind has traditionally been applied to the exploration of the Antarctic and of outer space, including the moon. In more recent years, however, the United Nations has tended to apply the Common Heritage concept to environmentally vulnerable sites.[26]

Considering the treatment of underwater cultural heritage as part of the Common Heritage of Mankind seems to go far beyond policy makers intentions. However, it is not only the concept but also the consequences that are interesting to evaluate. The management of Antarctica under the Common Heritage Principle establishes parks dedicated to environmental protection and ecosystem preservation[27] where no exploitation is permitted. There is also a trend for states to create "Marine Protected

[23] Boesten 2002: 51.
[24] Tenenbaum 1990.
[25] Sturges 1998.
[26] Tenenbaum 1990.
[27] Tenenbaum 1990.

Areas" to protect vulnerable ecosystems, marine biodiversity and underwater cultural heritage. The example of those developments could lead to political possibilities for the use of underwater cultural heritage. Creating Marine Protected Areas in underwater archaeological sites would leave that part of the seas isolated and unspoilt when tracing the submarine cables. Thus, along with creating and following a protocol where companies have to declare the find – casual or otherwise – of an underwater site, the values of preservation and development could co-exist.

Conclusions

New uses of the oceans and their patrimony are continuously challenging the law. New rights are demanded by relevant international Law of Sea actors and their instruments, and the existing rules have to be modified to adequately deal with these new users and uses.

Development and operation of new sciences and technologies – such as further investigation, development and laying of submarine cables – is occurring. The current state of a freedom of the High Seas on laying submarine cables leads the companies to execute surveys and removal of underwater cultural heritage without breaking any law. Therefore, the first recommendation of the present article is that this industry, crucial to the wellbeing of humanity, needs to incorporate enforced offshore heritage policies.

The second recommendation is to pay special attention to Article 143 of UNCLOS, since it opens up a whole new perspective: the creation of underwater archaeology parks protected for the benefit of mankind, which would leave those routes outside of the tracing of new routes of submarine cables.

Although states need to protect underwater cultural heritage under Article 303 of UNCLOS, prioritisation of the uses of the oceans and their users is required. Guidelines for management of underwater cultural heritage are necessary for future new uses of the oceans, so the last recommendation is that it is perhaps time to foster the concept of sustainability in underwater cultural heritage protection, where the past and future will reach equilibrium for the preservation of heritage and the development of new technologies.

Bibliography

Alderman, K. (2010). High Seas Shipwreck Pits Treasure Hunters against a Sovereign Nation: The Black Swan Case. *American Society of International Law Cultural Heritage and Arts Review, Spring 2010 Univ. of Wisconsin Legal Studies Research* Paper No. 1135 .

Aznar-Gomez, M. and Varmer, O. (2013). The Titanic as Underwater Cultural Heritage: Challenges to its Legal International Protection. *Ocean Development & International Law*, 44 (1): 96-112.

Bass, G. F. (2005). *Beneath the seven seas: adventures with the Institute of Nautical Archaeology.* London: Thames and Hudson.

Beckman, R. (2010). Submarine Cables – A Critically Important but Neglected Area of the Law of the Sea. *Indian Society of International Law: 7th International Conference on Legal Regimes of Sea, Air, Space and Antarctica*. 15-17 January 2010, New Delhi. http://cil.nus.edu.sg/wp/wp-content/uploads/2009/10/Workshop-Report-29-Jan-2010.pdf

Boesten, E. (2002). *Archaeological and/or Historical Valuable Shipwrecks in International Waters: Public International Law and What it offers*. The Hague: T.M.C. Asser Press.

Carter L., Burnett D., Drew S., Marle G., Hagadorn L., Bartlett-McNeil D., and Irvine N. (2009). Submarine Cables and the Oceans – Connecting the World. *UNEP-WCMC Biodiversity Series,* 31. ICPC/UNEP/UNEP-WCMC. http://www.iscpc.org/publications/ICPC-UNEP_Report.pdf

Convention for the Protection of Submarine Telegraph Cables 1884. Available at: http://cil.nus.edu.sg/wp/wp-content/uploads/2009/10/Convention_on_Protection_of_Cables_1884.pdf

Crowley, J. (1987). International Law and Coastal State Control over the Laying of Submarine Pipelines on the Continental Shelf: The Ekofisk-Emden Gas Pipeline. *Nordic Journal of International Law,* 56 (1): 39-68.

Dromgoole, S. (2003). Murky waters for government policy: the case of a 17th century British warship and 10 tons of gold coins. *Marine Policy*, 28: 189-198.

International Tribunal for the Law of the Sea, Verbatim Record. The M/V "Louisa" Case (Saint Vincent and the Grenadines v. Kingdom of Spain). Public sitting held on Tuesday, 9 October 2012, p.m. http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_18_merits/ITLOS_PV_12_C18_9_E.pdf. Experts declaration.

O'Keefe, P. J. (2002). *Shipwrecked heritage: a commentary on the UNESCO Convention on Underwater Cultural Heritage.* Leicester, Institute of Art and Law.

Sturges, M.L. (1998). Who Should Hold Property Rights to the Human Genome? An application of the Common Heritage of Humankind. *American University International Law Review,* 13(1): 219-261.

Tenenbaum, E.S. (1990). A World Park in Antarctica: The Common Heritage of Mankind. *Victoria Environmental Law Journal*, 1: 109-112.

UNCLOS 1982. United Nations Convention on the Law of the Sea. Available at: http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf

UNESCO 2001. Convention for the Protection of the Underwater Cultural Heritage. Available at: http://unesdoc.unesco.org/images/0012/001260/126065e.pdf

Willis, S. (2008). *Shipwrecks: A History of Disasters at Sea*. BCS Publishing Limited, Oxford.