General introduction

'Underwater cultural heritage' (hereafter UCH) is the term commonly used today to mean material found underwater, generally lying on – or embedded in – the seabed, which has the potential to yield information about past human existence. This information is acquired using archaeological techniques and for this reason UCH is sometimes defined in rough terms as material of archaeological interest. Although shipwrecks are the predominant form of UCH, the term encompasses far more than just shipwrecks; equally, while there is a tendency to associate archaeology with the study of very old things, the remit of modern archaeology extends to the material remains of recent times.

Archaeological remains of all kinds, by their nature, are a finite and non-renewable resource and, for various reasons, archaeological remains located in the marine environment are regarded as a particularly valuable part of that resource. Where remains are lying on or in the seabed, the water column acts as a natural shield against human interference and the rate of natural decay is likely to be slowed by the environmental conditions. Marine sites can also offer rare (sometimes unique) insights into past human life, including into matters such as the nature and extent of trade and human interaction throughout the ages; the true course of historic naval battles and engagements; and even the daily life and movements of prehistoric man. In the case of shipwrecks, an additional value is that they may form a 'closed deposit', in other words a site containing material all in use at the same time. Such 'time-capsules' are rarely found in terrestrial archaeology and contain important information for dating purposes.

Prior to the 1950s, UCH was generally well protected from human interference by its marine environment. However, since that time the combination of a revolution in marine technology and increasing

utilisation of the sea and its resources means that threats from human activities have vastly increased. Today virtually the entire global stock of shipwrecks and other UCH lying in the oceans is exposed to the possibility of human interference, deliberate or otherwise.

As in many other fields, the law has tended to respond fairly slowly and reactively to developments in relation to UCH. Nevertheless, there is now a growing body of law – at both domestic and international levels – that is designed to regulate human activity in the interests of UCH preservation. Attention to date, especially at the international level, has focused on the question of how to protect UCH from deliberate interference. In particular, the commercial exploitation of shipwrecks by those interested solely in profiting financially is a matter that has been of growing concern. For example, it has been estimated that in the last twenty years alone commercial exploitation has been responsible for the destruction of at least 345 major shipwrecks, as well as severe damage to many thousands of other sites.[1]

This extended introduction is designed primarily to provide readers (especially those who are not familiar with the subject, or do not have a legal background) with some general information they may find useful before reading other parts of the book. Section 1 provides a brief historical overview of the subject; sections 2 and 3 provide some information relating to legal matters of direct relevance; section 4 introduces the UNESCO Convention 2001; and section 5 explains the approach and structure of the book. Many of the issues raised in the General introduction are returned to in greater detail in the chapters that follow.

1. A brief historical overview

The development of interest in UCH and its legal protection took place in two distinct phases, each of which was prompted by significant technological advances.

1.1 Early developments

The recovery of material from wrecks on the seabed is an activity that is centuries old. In the seventeenth and eighteenth centuries the 'diving-bell' permitted access to wrecks lying at depths of up to eight fathoms

[1] Guérin, 'The 2001 UNESCO Convention on the Protection of Underwater Cultural Heritage', p. 5.

(approximately fifteen metres).[2] In the nineteenth century, the Deane brothers famously recovered guns from the *Royal George* off Spithead, Portsmouth, using a 'diving helmet and dress' that allowed them to descend to depths of more than twenty fathoms (approximately thirty-six metres).[3] At the start of the twentieth century, sponge divers using similar equipment made the first discovery of an ancient shipwreck on the seabed, a first-century BC wreck in fifty-five metres of water off the Greek island of Antikythera.[4] However, it was not until the invention of the aqualung in the 1940s, which led to widespread use of self-contained underwater breathing apparatus (scuba), that the need for some form of legal regulation of activities to afford protection to historically significant shipwrecks, and other UCH, began to be questioned.

In the period between 1950 and 1980, the rapid expansion of 'scuba-diving' in coastal waters for recreation and other purposes led to the discovery of many shipwrecks and other archaeological remains. In the absence of legal regulation, it also led to a great deal of damage to sites and dispersal of recovered artefacts. The impact of these developments was felt first, and most keenly, in the warm and archaeologically rich waters of the Mediterranean Sea, where many sites were ransacked in the 1950s and 1960s.[5] However, during the 1960s and early 1970s, other parts of the world were increasingly affected, including Australia, where four Dutch East Indiamen were discovered and plundered by treasure seekers, and the USA, where the proximity of sunken Spanish colonial-era shipwrecks to the coasts of Florida led to the emergence of treasure-hunting activity on an industrial scale. Even in the less hospitable waters of northern Europe, a spate of notorious incidents occurred. These included the ransacking of several historically significant shipwrecks off the coasts of the UK; the recovery of treasures from a number of Spanish Armada wrecks located off the west coast of Ireland; and the salvage of large numbers of gold and silver coins from the Dutch East Indiaman *Akerendam*, lying off the Norwegian coast.

[2] See, generally, Earle, *Treasure Hunt*.
[3] See, generally, Bevan, *The Infernal Diver*.
[4] See, generally, Weinberg *et al.*, 'The Antikythera Shipwreck Reconsidered'.
[5] A survey undertaken in 1973 reported evidence of widespread looting of Classical Age wrecks off the coast of Turkey: Bass, 'Turkey: Survey for Shipwrecks, 1973'. In the early 1980s, it was reported that, off the French Mediterranean coast, divers had reputedly 'plundered every old wreck lying above a depth of 50 metres': Marx, 'The Disappearing Underwater Heritage'. (The depth of fifty metres is significant because it is the approximate limit of standard scuba equipment.)

As discoveries were made, the archaeological potential of the seas began to be appreciated. Two defining moments in the gradual evolution of maritime archaeology into a distinct sub-branch of archaeology were the employment, in the late 1950s and early 1960s, of 'classically correct' archaeological techniques by Bass and Throckmorton to investigate sites in the Mediterranean Sea,[6] and the publication – in 1978 – of Keith Muckleroy's seminal text on maritime archaeology, which set out the principles, theories and methods of the new sub-discipline.[7] The raising of the *Vasa* in Sweden in 1961, and the *Mary Rose* in the UK in 1982, demonstrated that maritime archaeology was a subject that was not only of academic interest but also one that had the potential to engage enormous public enthusiasm as well.

During the 1960s and 1970s a number of cases arose before the admiralty courts of common law jurisdictions requiring them to adjudicate on competing claims to historic shipwrecks. In doing so they used the law of salvage and other traditional principles. These are designed to determine private rights with respect to *recent* marine casualties and encourage recovery of material without regard to its potential cultural value. However, at the same time the first domestic legislation providing protection specifically for UCH was also enacted and there was a stirring of interest at both regional (specifically European) and global levels in the question of legal protection for UCH. Among other things, this led to the inclusion of two articles addressing the matter in the UN Convention on the Law of the Sea 1982 (hereafter LOSC).

1.2 *1985: A turning point*

In 1985, scientists from two oceanographic institutions engaged in testing the capabilities of a new generation of deep-water submersible vehicle set for themselves a particular challenge: to locate the wreck of RMS *Titanic*. Employing deep-towed submersibles equipped with sonar imagery and video equipment, they undertook systematic search operations in an area of the North Atlantic Ocean 150 square-miles in size, situated 300 miles or so from shore. After two months of effort, they found the wreck lying at a depth of approximately 3,800 metres; two years later, around 1,800 artefacts were recovered from the site with the aid of a submersible fitted with manipulator arms.

[6] Bascom, 'Deepwater Archaeology', p. 263. [7] Muckleroy, *Maritime Archaeology*.

The discovery of the *Titanic* proved to be a pivotal moment for the development of international legal protection for UCH. It represented the notional point in time when the physical protection previously afforded to UCH in the open oceans by the limitations of scuba came to an end and the question of how to protect deep-water sites lying far from shore became of some practical relevance. The discovery also sparked interest in a whole host of questions, including the ownership of the *Titanic*, its cargoes and the personal items on board; the value of the wreck in cultural and other terms; and the ethics of interfering with wreck sites, particularly where they represent major gravesites.

The *Titanic* was discovered only three years after the adoption of the LOSC and almost a decade before that treaty entered into force. However, even at this stage, there was a widespread view that the two provisions in that treaty relating to UCH did not afford adequate protection to UCH. In 1988, the International Law Association took up the task of drafting a treaty that would remedy the inadequacy.

1.3 *More recent developments*

The discovery of the *Titanic* marked the start of a revolution in marine technology and an era of deepwater exploration that continues to this day. In the late 1980s, sophisticated sonar equipment and remotely operated vehicles (ROVs) were used to locate the SS *Central America*, located at a depth of approximately 2,400 metres, and to recover a substantial quantity of gold from the wreck. In the mid-1990s, similar equipment was used to recover 179 tons of copper and tin ingots from the SS *Alpherat*, lying at a depth of 3,770 metres.[8] Today, there are ROVs capable of operating at depths in excess of 6,000 metres,[9] opening up access to virtually the entire ocean floor.

Although ultra-deep search and recovery operations (in waters exceeding 1,000 metres in depth) are still few and far between, similar tools and techniques are available for use in a wide range of applications

[8] This feat set a world record for the deepest shipwreck salvage operation, a record which may not yet have been broken (see www.bluewater.uk.com/achievements.htm). Blue Water Recoveries, the British-based company which undertook this operation, has discovered a number of deep-water shipwrecks including M/V *Derbyshire* at a depth of 4,210 metres, DKM *Bismarck* at 4,700 metres and M/V *Rio Grande* at 5,762 metres.

[9] See, for example, the capabilities of the Towed Ocean Bottom Instrument (TOBI), a deep-towed system operated by the National Oceanography Centre, Southampton (http://noc.ac.uk/research-at-sea/nmfss/nmep/tobi).

in all parts of the seas. Acoustic and magnetic imaging devices are now standard equipment for those engaged in exploring the ocean floor: side-scan and bathymetric sonar systems are employed to identify seabed protrusions and indentations; sub-bottom profilers provide cross-sectional analyses of the sub-sea strata to enable identification of material buried in sediment; and magnetometers can locate ferrous material.[10] While manned or unmanned submersibles are required to provide direct physical access to very deep parts of the seafloor, divers employing specialised gas mixtures and other sophisticated equipment now quite routinely work at depths up to and even exceeding 100 metres.[11] Since it became available for civilian use in the mid-1990s, global-positioning system (GPS) technology has become common ship-board equipment,[12] providing an indispensable tool for vessels that need to pinpoint their positions with precision, including those engaged in salvage or archaeological research in the open oceans.

The activities of an American-based marine exploration and shipwreck recovery company, Odyssey Marine Exploration (hereafter OME), illustrate how modern technology has revolutionised the field of shipwreck search and recovery. Over recent years OME has surveyed and mapped thousands of square miles of seabed and discovered hundreds of wrecks, ranging from Roman and Phoenician vessels to German U-boats and modern fishing vessels. Among its discoveries have been the eighteenth-century British warship, HMS *Victory*, in the English Channel, and the Spanish colonial-era warship, *Nuestra Señora de las Mercedes*, off the coast of Portugal. OME's activities, which are undertaken on a commercial basis but take some account of cultural values,[13] have given rise to heated debate concerning the ethics of the sale of commercially valuable cargoes from historic shipwrecks; whether it is possible to combine a profit motive with good archaeology; and whether appropriate archaeological methodology can be employed to excavate deep-water sites beyond the range of divers.

It is not just well-financed commercial organisations or oceanographic institutions that are making use of advanced technology in

[10] See, generally, Mather, 'Technology and the Search for Shipwrecks'.
[11] For example, in 2007, divers accessed the wreck of RMS *Carpathia* off the coast of Ireland, which lies at a depth of 156 metres: Parham and Williams, 'An Outline of the Nature of the Threat to Underwater Cultural Heritage in International Waters'.
[12] The Navstar global positioning system (GPS) was originally developed for US military use. It was made available to civilian users in 1996.
[13] See further, Chap. 6.

the context of UCH. Increasingly, marine archaeologists employ such technology in their day-to-day work. As a result, the full archaeological potential of the marine environment, especially with respect to *non-shipwreck* remains, is becoming better understood. In 2009, an Anglo-Greek archaeological team utilising digital technology was able to identify and map the layout of the streets and buildings of the submerged Bronze Age city of Pavlopetri, a site extending over 30,000 square metres of seabed.[14] Technology of the same kind has also enabled archaeologists to identify submerged land-surfaces on parts of the continental shelf that were exposed during the Ice Ages: recent discoveries by Scandinavian archaeologists of Mesolithic dwelling remains, graves and fishing structures illustrate the potential these land-surfaces have to yield unique evidence about the life of our early ancestors.[15]

Recoveries of large quantities of hand axes and the bones of mammoths and other land animals by fishermen and dredging operators working in the North Sea provide further evidence of the archaeological potential of the continental shelf, but also demonstrate that commonplace commercial activities in the marine environment have considerable potential to interfere with archaeological evidence. Trawling by fishermen, dredging for marine aggregates, pipeline- and cable-laying, and the construction of wind-farms and other installations all pose a substantial threat. As the scale and intensity of such activities increase, so does the risk of harm to UCH in all its forms.

Many states now have legislation in place to protect UCH in their coastal waters. While much of this legislation is designed to regulate deliberate human interference, increasingly it is being supplemented by measures to minimise incidental damage and destruction by general marine activities. Today, when domestic courts are called upon to adjudicate in cases relating to historic wrecks, they are showing increasing awareness of cultural values and considerations. After six years of effort, in 1994, the International Law Association (ILA) handed over to UNESCO a draft text for a treaty on UCH protection. This became the basis for the development of the Convention on the Protection of the Underwater Cultural Heritage, adopted in 2001.

[14] 'Lost Greek city that may have inspired Atlantis myth gives up secrets', *Guardian*, 16 October 2009.

[15] See Grøn and Mortensen, 'Stone Age in the Danish North Sea Sector'. The discoveries are apparently 'unparalleled' by dry sites.

2. Relevant branches of law

From a legal point of view, what makes this field fascinating – but at the same time complex – is that it lies at the interface between three distinct branches of law: admiralty/private maritime law, the law of the sea and cultural heritage law. These legal areas are quite different in nature and are designed to perform very different and not always compatible functions.

2.1 Admiralty/private maritime law

Admiralty law is an area of private law relating to maritime activities. As an area of private law, it governs relations between individuals or other private entities and, among other things, determines competing private rights and interests. It is administered by domestic courts and, specifically, the admiralty courts of the common law jurisdictions.

The principles applied by the early English admiralty courts were derived from classical and medieval codes originating in continental Europe; they were then developed and passed on to other common law jurisdictions, including Australia, Canada, Ireland, New Zealand, Singapore and the USA. While admiralty law is a feature of the common law world, civil law systems have their own equivalent principles for dealing with maritime disputes. However, although the common law and civil law principles have common roots, they developed along quite separate lines and operate in different ways today. In the context of UCH, it is the admiralty law of the common law world that has had the most significant impact.

Admiralty law is designed to provide certainty and predictability for private parties with respect to their dealings. It also fulfils broader public policy objectives, such as safety of life and property, and protection of the marine environment. The remit of the admiralty courts extends to the 'rescue' of maritime property in peril and the determination of rights to such property through application of the laws of salvage and 'wreck'.[16] In some jurisdictions, admiralty courts also occasionally apply the law of finds to such property. Given that admiralty law relates to trans-border activity, and ships and individuals can move about quite freely in the marine environment, there are special rules for dealing with matters of enforcement and jurisdiction.

[16] 'Wreck' is a technical term. See, further, Chap. 2, section 2, esp. n. 10.

The principles of modern admiralty law derive from domestic case law and statutes, but there is now also a significant body of relevant international law in the form of treaties developed under the aegis of international organisations such as the Comité Maritime International (CMI) [International Maritime Committee] and the International Maritime Organisation (IMO). Of particular pertinence in the present context is the IMO's International Salvage Convention of 1989.

2.2 The law of the sea

The law of the sea is an important sub-category of public international law, a major area of legal specialism with its own distinct principles, enforcement mechanisms and tribunals. As an area of public international law, the law of the sea is generally concerned with relations between states.

The modern law of the sea is largely a product of the twentieth century, although, like admiralty law, its roots are deep in the past. Its objective is to establish legal order over maritime space by establishing a framework of rules for determining the rights and duties of states in respect of their use of the oceans. A central feature of this framework is the division of the oceans into distinct maritime zones, each with its own specific legal regime.

Throughout its history, the law of the sea has been characterised by a tension between the concepts of 'closed seas' and 'open seas', and this tension has had a profound influence on its development. The right of a coastal state to control a narrow belt of water immediately adjacent to its shores has been accepted for centuries. However, a debate, originating in the seventeenth century and continuing to this day, concerns the extent to which the broader maritime space should be subject to national control. While the concept of open seas – embodied in the notion of freedom of the high seas – has generally tended to prevail, during the twentieth century it has been subject to a certain degree of erosion. Today, in the international arena, the debate is conducted by two opposing political groupings. The predominant interest of 'coastal states' is in preserving the integrity of their rights over their coastal waters and, at times, in extending those rights; the predominant interest of 'flag states' (or 'maritime states') is to preserve their navigational freedom so that their merchant and military fleets can move freely about the globe.

Until the twentieth century, the rules of international law of the sea had developed through the custom and practice of states. However, during that century there were a number of attempts to codify those

rules in treaty form. Most notably, the UN held three diplomatic conferences on the law of the sea. The first UN Conference on the Law of the Sea (UNCLOS I) resulted in the four Geneva Conventions of 1958: the Convention on the Territorial Sea and the Contiguous Zone; the Convention on the High Seas; the Convention on the Continental Shelf; and the Convention on Fishing and Conservation of the Living Resources of the High Seas. The second conference (UNCLOS II), in 1960, failed to produce any agreement. The outcome of the third conference (UNCLOS III), which began in 1973 and concluded in 1982, was the LOSC. This treaty is the pre-eminent source of the law of the sea today.

2.2.1 UN Convention on the Law of the Sea 1982

The initial driver behind UNCLOS III was the question of governance of the deep seabed in light of growing interest in the possibility of commercially exploiting deep seabed mineral resources. There were concerns on the part of the developing world that industrialised states would be free to exploit for themselves these potentially hugely valuable resources unless a regulatory framework was put in place providing for the sharing of the resources. Another general driver behind the Conference was the emergence on the international scene of a large number of newly independent states whose interests were very different from those of the maritime powers that had dominated proceedings at UNCLOS I. The new states sought various changes to the international legal order governing the oceans, including greater rights over the natural resources of their offshore waters. It was concluded that a comprehensive review of the law of the sea needed to be undertaken and that its outcome should be a single instrument to replace the four Geneva Conventions. The ultimate objective was to produce 'a comprehensive constitution for the oceans that would stand the test of time'.[17]

After fifteen years of preparatory work, including nine years of substantive negotiations, the LOSC was opened for signature at the final session of UNCLOS III, held at Montego Bay, Jamaica, in 1982. This mammoth treaty comprised 320 articles, set out in seventeen parts, along with nine annexes. It created two new maritime zones; fixed the maximum breadth of the territorial sea at twelve miles; set out rules governing all the recognised maritime zones; created special regimes for

[17] See 'A Constitution for the Oceans: Remarks by Tommy B. Koh, President of the Third United Nations Conference on the Law of the Sea' (available at www.un.org/Depts/los/convention_agreements/texts/koh_english.pdf).