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Shipwrecked In Situ: Saving the Sunken Past or Scapegoat Archaeology?

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Whether leaving ancient and historic shipwrecks untouched to benefit future generations or allowing excavation – the uncontroversial cornerstone of land archaeology – deeply divides the field underwater. Under the banner of the UNESCO Convention on the Protection of the Underwater Cultural Heritage, current management embraces the *in situ* preservation of wrecks as optimum practice. When it comes to what UNESCO actually intends, a disturbing disconnect and lack of consistency emerges. Many countries that have ratified the protocol readily license excavation (France, Italy, Croatia). Others that have solely adopted the Convention's Annex Rules assume a totalitarian approach (UK). More often than not, what countries call *in situ* preservation is mere retention *in situ*. This article addresses what the UNESCO protocol intends, highlights inconsistencies and suggests the concept of *in situ* preservation needs to evolve to maintain relevance. Separately it is proposed that a more realistic approach to managing shipwrecks and extracting their evidential values is to consider significance as the optimum guiding management option.

KEYWORDS shipwrecks, archaeology, *in situ*, underwater cultural heritage, UNESCO, treasure, sustainability.

1. Introduction

The philosophy of the *in situ* preservation of shipwrecks is the dominant management ideology in underwater archaeology today, the beating heart of UNESCO's 2001 Convention on the Protection of the Underwater Cultural Heritage. The regulation has fast become enshrined as a sacred cow, its sanctity rolled out to justify why a site may or may not be licenced for excavation. In the church of the heritage crusaders the term is synonymous with good versus bad science.

In its purist de-politicized sense, the philosophy of *in situ* preservation strives to sustain underwater cultural heritage without deterioration to its fabric, hull or artefacts and so survive as a resource for future generations and the benefit of mankind. Interpreting the concept and getting to grips with why, when and how to employ it nevertheless divides opinion: who is the rule aimed at, when should it be enforced and how is its potential best unlocked? *In situ* is not tied to the wider global movement to sustain blue seas (cf. Earle, 2009; Rogers, 2019), but was primarily embraced as the core tool in UNESCO's arsenal to combat the perception of rampant treasure hunting across the world's oceans (Figs. 1-2). With the age of commercial government deals splitting and dispersing cargoes becomes an antiquarian model in the West – hard to justify and even harder to implement due to high-level political awareness of the unique, finite nature of the sunken past – the meaning of *in situ* as a real-world tool will need to evolve to justify its centrality to the Convention.

This paper explains how *in situ* has transitioned from a rescue archaeology setting on land to sea, where underwater theory is outdated. The major difference between formal stabilisation using covering and barrier techniques and retention *in situ* is emphasized. A reconceptualization of the first option for managing underwater sites is proposed. Based on the role of excavation as a unique opportunity to secure primary data – the very foundation of underwater archaeology – it is proposed that the significance of a site should be embraced as the first management option, the optimum means to maximise respect of the resource. While drawing on parallels from across the world, this study focuses most broadly on the extremist position of the United Kingdom.



Fig. 1. Is UNESCO right to identify treasure hunting, featured in the September 1931 edition of *Modern Mechanics & Inventions*, as the greatest threat to the world’s underwater cultural heritage?

2. Mixed Messages

In its final form the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage stipulates (Article 2.5) that “The preservation in situ of underwater cultural heritage shall be considered as the first option before allowing or engaging in any activities directed at this heritage.” Annex Rule 1 expands further that “The protection of underwater cultural heritage through in situ preservation shall be considered as the first option. Accordingly, activities directed at underwater cultural heritage shall be authorized in a manner consistent with the protection of that heritage, and subject to that requirement may be authorized for the purpose of making a significant contribution to protection or knowledge or enhancement of underwater cultural heritage.”

What this means precisely has stirred up a hornet's nest of frustration and anger due to misconceptions and, in cases, deliberate misrepresentation. By UNESCO's admission (Maarleveld *et al.*, 2013: 25-6):

'first option' is not the same as 'only option', or 'preferred option'. Partial or total excavation may be necessary under certain circumstances and preferable for a number of reasons. Reasons may be external, such as development projects for which many sites need to make way. If their character is fully understood, some sites will be considered sufficiently significant to warrant their preservation *in situ* in spatial planning processes...

The first option is not necessarily the preferred option. Reasons to decide against *in situ* preservation:

- 1) There are external factors that are prohibitive, and
- 2) There are substantive reasons to excavate partially or completely.

These substantive reasons are the intention to make:

- *a significant contribution to protection,*
- *a significant contribution to knowledge, and*
- *a significant contribution to enhancement.*

The argument for excavation should be convincing and will mostly include a combination of reasons. In exceptional cases a contribution to knowledge can be enough.

So far, so logical. Thereafter dense sea mist drifts in. Woolly commentary makes understanding the Convention's sense a subjective process open to easy misinterpretation. Mixed messages abound. With one hand UNESCO states that "wide acceptance of the cautionary approach prevails, promoting *in situ* preservation, *in preference to the recovery of artefacts and in preference to partial or complete excavation of the site*" (Maarleveld *et al.*, 2013: 25). But with the other hand the high priests of the Convention seem more relaxed in acknowledging that "recoveries of extensive underwater heritage, for instance those of the *Vasa* and the *Mary Rose* wrecks, have promoted the appreciation of underwater cultural heritage enormously" (Maarleveld *et al.*, 2013: 24).

If the meaning lies in the message, the official *Manual for Activities Directed at Underwater Cultural Heritage. Guidelines to the UNESCO 2001 Convention* (Paris, 2013) sends out a confused transmission (Fig. 3). There is no doubt that UNESCO requires *in situ* preservation to be considered first and foremost. Yet the projects it presents as enormously promoting underwater cultural heritage – the *Mary Rose* and the *Vasa* – by UNESCO's innate standards never adhered to the protocol's policies. Within the UK it is an inconvenient truth that the *Mary Rose*, the crown jewel of the country's marine archaeology, a wonderful ambassador for the worldwide appreciation of Britain's sunken past and a powerful tool for education and science, retrospectively fails every one of UNESCO's rules (Figs. 5-6).

By the same vision the alluring photos selected to illustrate UNESCO's good practice manual paradoxically promote the power of excavation far more graphically than the merits of *in situ*. Between the photos and captions recoils a linguistic bending over backwards to dilute the role of excavation as the illustrative star.



Fig. 2. UNESCO's pamphlet *The Impact of Treasure-hunting on Submerged Archaeological Sites* seeks to highlight the global threats of shipwreck pillage.

The manual's cover illustrates a "Site assessment of a wreck from the 3th [sic] century AD discovered in the Baia Salinedda, Sardinia, Italy". The same photo later reproduced alongside a caption advises that "Heritage should not be disturbed in the absence of good reasons" (Maarleveld *et al.*, 2013: 41). Fine, but what is actually illustrated is a wooden hull being recorded after full excavation. Looking back at the wreck report clarifies that the hull (4th, not 3rd century) was excavated in 1997 by tourists simultaneously undertaking a PADI "archaeological diver" certification (Riccardi, 2002) – technically by modern UNESCO standards a violation of applying *in situ* preservation as the first option, as well as Rules 22-23 requiring qualified personnel to undertake all activities.

The same tension between image and text unfolds page after page. Alongside a photograph of the Kyrenia II (Maarleveld *et al.*, 2013: 54), a replica ship reconstruction of the renowned late 4th-century BC Hellenistic ship discovered off Kyrenia, Cyprus, we learn that "Precise replicas can bring archaeological artefacts back to life and thus very directly promote understanding among the general public." Quite right, yet a sub-text could observe that the replica's assembly would have been impossible without the total excavation of the cargo and hull and the lifting of the wooden timbers for analysis and reconstruction (Steffy, 1985).

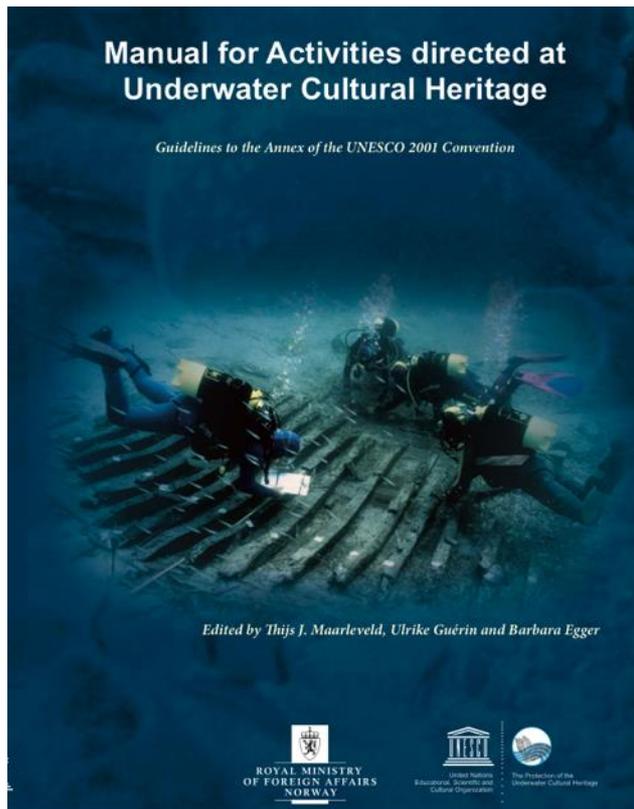


Fig. 3. UNESCO's Manual for Activities Directed at Underwater Cultural Heritage. Guidelines to the UNESCO 2001 Convention (Paris, 2013) seeks to clarify how the protocol works, but includes myriad mixed messages.

A “Planimetric survey” of the wreck of the *Triunfante*, sunk in 1795 in Sant Pere Pescador, Girona, Spain (Maarleveld *et al.*, 2013: 118), in reality depicts a gridded site with a diver actively excavating the hull by airlift. The “Diver exploring a 16th century merchant ship, Sveti Pavao shallows, Island of Mljet, Croatia” (Maarleveld *et al.*, 2013: 120) is not exploring at all, but mechanically excavating a fascinating 16th-century Venetian wreck, whose comprehensive exposure and excellent final report generated major international insights into commercial relations between the Ottoman world and trade routes to Europe (Beltrame *et al.*, 2014).

The airing of dirty heritage linen may come across as unnecessarily pedantic. However, the implications are serious. The discipline stands at a momentous tipping point. A critical problem – indeed system failure – exists when the idea of *in situ* preservation is either misunderstood or, worse, abused for political ends. Investigating UNESCO’s real sense is not pedantic when a professor and expert in maritime law informed the 2010 Institute for Archaeologists’ annual conference in the UK that this philosophy is the “preferred option”, only to be corrected by Ulrike Guérin, the Convention’s Secretariat, that the concept in fact functions as the “first option”.

Daring to debate the term’s true intention also becomes an unavoidable obligation when a high-ranking official from the Marine Management Organisation, charged with assessing license applications for shipwreck excavation in the UK via the Marine & Coastal Access Act 2009, asserts on the record that his organisation, advised by Historic England as statutory advisor, considers *in situ* preservation to be the “preferred option”. This misunderstanding is not unique, although shocking for the

professional level at which it is aired. A Cold War has broken out between heritage and archaeology defending alternative approaches to fieldwork.

How did this state of topsy-turvy reasoning come into being?

UNESCO Crossed Wires

Key prohibitions in the UNESCO Convention oppose the commercial exploitation of shipwrecks (Article 2.7, Rule 2) and violations over sovereign rights to naval vessels (Articles 2.8, 2.11). Inconsistent standards are allowed to play out beyond the media glare of politicised projects. The Belitung shipwreck sunk off Indonesia around AD 826, the first Arab dhow found trading with China (Krahl *et al.*, 2010), is unquestionably one of the most important wrecks worldwide.

On the one hand UNESCO's pamphlet *The Impact of Treasure-hunting on Submerged Archaeological Sites* (Fig. 2) highlights how the "the only known Arab Dhow from the 9th century... was destroyed by commercial treasure hunters." Elsewhere UNESCO's Silk Roads Project celebrates the Belitung wreck as major heritage because "Wrecks of this age are rare finds and the Belitung was indeed the only 9th century vessel of that origin found until today. The Belitung has given two important archaeological discoveries: its cargo and its hull" (Fig. 7).¹ Which is it to be, politics or pragmatism? Under a hugely complex and problematic heritage regime (Flecker, 2002), would we rather see the remains salvaged and united in the public domain as they are today or broken up piecemeal and vanish into collectors' hands across the globe?

While Spain vigorously pursues its rights over historical warships wherever they lie, such as the *San José* lost off Colombia in 1708 and the *Nuestra Señora de las Mercedes* blown up off Portugal in 1804 (Negueruela Martínez *et al.*, 2015), no similar courtesy seemingly has been extended to the UK. The Deltebre shipwreck was an English military transport lost on 20 June 1813 during the Peninsular War carrying marines and allied troops, artillery, munitions, horses, mules, armaments and provisions. In 2008 a fisherman discovered the ship in the Ebro Delta off Catalonia, since when Spain has been "excavating it due to its historical interest and exceptional state of preservation, not only of its structure, but also the cargo. By great luck, the vessel has remained intact... The delta that imprisoned it in sand has preserved it for us, protected it with a layer of the mud brought down by the river to its mouth." The site has yielded a fascinating assemblage of cannon stamped with King George III ciphers, equipment bearing the English naval Broad Arrow, cannonballs, lead shot still stored inside barrels labelled in ink, parts of a sextant, shoes, leather bags, coins, swords, wine bottles and English and French artillery buttons (Fig. 4).² The wreck is even better preserved than the majestic *Invincible* in the Solent (Bingeman, 2010).

Spain ratified the UNESCO Convention in 2005. No project design is available for the Deltebre shipwreck or signs of any attempt to have considered *in situ* preservation as a first option. Quite the contrary. Despite its sovereign immune status (UN Law of the Sea Convention, Article 96), Freedom of Information requests submitted to the Ministry of Defence (MoD) and Historic England prove neither organisations are aware of the discovery or were contacted to discuss the site's ownership or management options. Against this backdrop UNESCO champions the Deltebre wreck as an example of best practice in underwater cultural heritage, even though it does not adhere to its own rules.³



Fig. 4. The Deltebre shipwreck, an English military transport lost off the Ebro Delta, Catalonia, on 20 June 1813 during the Peninsular War, is championed by UNESCO as an example of best practice in underwater heritage. But in situ preservation was seemingly not considered as a first option, the fieldwork did not draw on a project design and advice about its management as a sovereign immune vessel was not sought from the UK Ministry of Defence.

Before the iconic wrecks of Sir John Franklin's HMS *Erebus* and *Terror*, lost in the Northwest Passage in 1848, were gifted by the UK government to Parks Canada in 2018, Freedom of Information shows no project design was considered by the UK government in line with requirements issued in *Protection and Management of Historic Military Wrecks Outside UK Territorial Waters* (DCMS/MoD, 2014: 5). The transfer was based on an antiquated Memorandum of Agreement signed in 1997 between the Canadian and British governments. Canada was given the *carte blanche* "discretion to take any actions with respect to the wrecks and their contents that it considers appropriate" with the pro-commercial proviso that "any gold recovered from the wrecks, apart from coins considered to have been in private ownership, will after deduction of any share which may by law be due to any third party be shared equally between Canada and Britain" (Scovazzi, 2003: 31-2). The *Erebus* and *Terror* projects are centre stage in high-stakes political attempts by Canada to claim sovereignty over the region, the Arctic's oil riches and to help develop iron mining on Baffin Island at the eastern entry to the de-icing Northwest Passage into a lucrative 6 million-tonne production annual industry.⁴

All these projects are exciting, undoubtedly well managed and great for archaeology. The question remains, though, why are international standards allowed to waver so seismically?

3. *In situ* Incubation

UNESCO's adoption of *in situ* preservation underwater is neither unique to this organisation nor to the sea. Across Europe it is a crossover from land-based policy, where it began life as a fundamental plank of archaeological planning (Cornfield and Nixon, 2004: 2). For 25 years archaeological heritage management on land was rooted in a preference for the principle of preservation of archaeology *in situ* in response to rising threats from unauthorised excavations in the 1960s and major construction projects across Europe after 1980. In these years remains were destroyed at such an unprecedented scale that rescue archaeology could not keep up (Willems, 2012: 1)

To control the detrimental woes of development, the Convention for the Protection of the Archaeological Heritage of Europe (Revised Valetta, 1992) required that "Each Party undertakes to implement measures for the physical protection of the archaeological heritage, making provision, as circumstances demand... for the conservation and maintenance of the archaeological heritage, preferably *in situ*" (Article 4.ii). Further, practitioners needed to "make provision, when elements of the archaeological heritage have been found during development work, for their conservation *in situ* when feasible" (Article 5.iv). In this way material evidence could be "studied by later generations" (Article 2.ii). The concept's foundations were cemented.

Arguments for and against this management mechanism have played out on *terra firma* for decades, arriving at a real-world pragmatic consensus after much head scratching, trial and error. Observing how the dust settled has a direct comparative bearing on the current stasis surrounding the underwater counterpart today. In England a preference for preservation *in situ* was initially engrained in the 1990 document Planning Policy Guidance 16 (Part 13), whereby:

If physical preservation *in situ* is not feasible, an archaeological excavation for the purposes of 'preservation by record', may be an acceptable alternative... From the archaeological point of view this should be regarded as a second best option. The science of archaeology is developing rapidly. Excavation means the total destruction of evidence (apart from removable artefacts) from which future techniques could almost certainly extract more information than is currently possible. Excavation is also expensive and time-consuming, and discoveries may have to be evaluated in a hurry against an inadequate research framework. The preservation *in situ* of important archaeological remains is therefore nearly always to be preferred.

Into the early 21st century many archaeologists defended this default position religiously, locked in a "mitigation ghetto" (Clark, 2004: 202, 207), and applying the concept without understanding the holistic role of archaeology. The position changed in 2010 when Planning Policy Guidance 16 was replaced by Planning Policy Statement 5: Planning and the Historic Environment (PPG 5), in which reference to *in situ* was dropped. In its most robust section (HE12.1) the document merely stated that "A documentary record of our past is not as valuable as retaining the heritage asset."

PPG 5 did not last long, in March 2010 updated by the National Planning Policy Framework, at the heart of which stood “a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking” (NPPF: 4). The preference for *in situ* preservation was replaced by a severe policy advising that “Where a proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss...” (NPPF: 133). The idea of iron-fist sustainability that shapes underwater archaeology heritage management was online. A year later it was cut and pasted into the UK Marine Policy Statement formulated to ensure a sustainable marine environment promoting healthy, functioning marine ecosystems and to protect marine habitats, species and heritage assets.⁵

Initially adopted in the Chartered Institute for Archaeologists Code of Conduct, *in situ* preservation was later replaced by less rigid policy stipulating that “Where destructive investigation is undertaken, particularly in the case of projects carried out for pure research, the member shall ensure that it causes minimal attrition of the historic environment...” (Principle 2, Rule 2.2, CIfA 2014).

The current UK national advisory document *Preserving Archaeological Remains. Decision-Taking for Sites Under Development* (Historic England, 2016) assists, rather than enforces, the application of *in situ*. Advice includes the logical desire for ongoing reassessment as field evaluation progresses and the advice that “if nationally important and potentially unexpected material is revealed by excavation, the option of preservation *in situ* should be brought up as soon possible.”

4. The *In Situ* Debate

Whereas preservation *in situ* generally developed into a central dogma of European archaeological heritage management (Willems, 2012: 1), on land in England it settled into just one choice in the management locker covering the full gamut of options, including excavation. Formal preservation *in situ*, compared to retention, is relatively rare and focussed mainly on scheduled monuments subject to strong legal controls (Sidell, 2012: 381).

In a keynote speech to the Institute of Archaeologists in 1994, Martin Biddle (1994: 17) emphasised the self-defeating irrationality of preservation *in situ* as a catch-all ideal: if future generations upheld the ever-perpetuating concept, then excavation could be deferred to a never-arriving present and a site would in theory be preserved in perpetuity for no one, turning preservation into an oxymoron. Ultimately the flow of knowledge would cease. Biddle also queried how future archaeologists could really excavate better than today without experience and no sites to practice on (Lucas, 2012: 71). The same conundrum holds true for underwater archaeology today. Sceptics who dare advocate large-scale research-led excavation outside the remit of rescue archaeology have been accused of suffering from “*rabies archaeologorum*” (Olsen, 1980).



Fig. 5 (left). The Mary Rose wreck excavation, praised by UNESCO, today would have failed every one of the Convention's Rules. The recovery of human remains from historic warships is now managed by a preferred policy of avoidance. Photo: Sean Kingsley.

Fig. 6 (below). Pewter wares from the Mary Rose wreck excavation. The brave choices ultimately ending in a spectacular permanent exhibition in Portsmouth Dockyards would have been prohibited today under the Rules of the UNESCO Convention. Photo: Sean Kingsley.



In a forceful qualitative argument, Raimund Karl (2018) pulls no punches explaining how archaeological heritage management, long based on a preference for the preservation *in situ* principle, in practice only achieves what technically should be called 'retention' *in situ*. Studies in Austria and Germany, where the concept has become "a disciplinary dogma", have shown that "retention in situ does not lead to the best possible preservation of archaeology for future generations, but rather leads to near-total loss of most archaeology, especially archaeology in places where it is never threatened by development." Karl's research (2018: 21, 47) concludes that the

only fail-safe way to preserve archaeology as long as possible is not to retain it *in situ* at all, but to excavate as much and as rapidly as possible.

Compared to England, heritage preservation laws in Austria and Germany interpreted the 1992 Convention for the Protection of the Archaeological Heritage of Europe as a general prohibition against all unnecessary archaeological fieldwork, including research projects, sometimes disparagingly referred to as vanity excavations. For the approximately 1,100 scheduled archaeological monuments and 52,000 archaeological sites listed by the Austrian National Heritage Agency, in 2014 its work was restricted largely to writing Environmental Impact Assessments (2,139 cases), issuing archaeological fieldwork permits (537 cases) and conducting 88 rescue excavations. No formal preservation *in situ* actually took place (Karl, 2018: 25).

The belief that archaeology will survive for tomorrow if retained *in situ* today does not always stack up. Data collated since 1830 and examined by German State archaeologists revealed an annual general rate of attrition (site loss) of around 2%. Projected into the future, even after a mere 25 years almost 40% of the archaeology still in the ground today will have been destroyed, with only some 2% partly preserved by record (excavation and archaeological recording). After 100 years slightly more than 85% of it would be gone and just around 4.5% preserved by record. After 200 years, nearly 98% of all the archaeology still *in situ* today would have been wiped off the face of the earth, with only some 5.1% preserved at least partly by record (Karl, 2018: 30, 31). On this basis Karl concluded that on land the principle of *in situ* preservation is fundamentally flawed because it mistakes the act of leaving archaeology where it is as preservation *in situ*. Ultimately, “Retention *in situ* is no sound principle of preserving the archaeological remains of the past *‘for future generations’*... but at best a massive self-deception, and at worst gross malpractice” (Karl, 2018: 48).

Elsewhere, the 1995 Monuments at Risk Survey (MARS) Project quantified the threat level caused by ploughing by sampling 5% of England in the form of 1,297 randomly distributed transects measuring 1 x 5km containing 14,591 recorded monuments. The results revealed that cultivation was the single greatest hazard to the archaeology, accounting for 10% of its wholesale destruction and 30% of the piecemeal loss (Darvill and Fulton, 1998: 3, 8). These unstoppable site losses in terrestrial environments capable of far easier access and monitoring than underwater, where the very existence of vast swathes of shipwrecks remain unrecorded on national registers, cautions a need to be hyper-realistic about managing capabilities.

Despite this body of practice and theory, in much of Western heritage management practice preservation remains the orthodoxy to such an extent that *in situ* has turned into an unreflexive mindset that governs decisions by governmental heritage managers and decision makers. It is presumed to be the good thing to do and has become a goal in itself (Willems, 2012: 1).

5. Beneath the Waves

Beneath the waves the road to *in situ* preservation has witnessed a complex trajectory. Rather than linked to major threats of development like on land and to rescue

archaeology, from the very beginning with the 1978 Council for Europe Roper Report the fear of treasure hunting – seen as “modern piracy” – dictated underwater cultural heritage management (Dromgoole, 2013: 37-8). By 1985, on the back of this concern, Articles 3(1) and 6(2) of the Council of Europe’s Committee of Ministers’ Draft European Convention required that “Contracting States shall ensure as far as possible that all appropriate measures are taken to protect underwater cultural property *in situ*” and “shall require the discoveries of underwater cultural property leave this property, as a principle, where it is situated” (Dromgoole, 2013: 40-1).

In 1988 the International Law Association’s Committee on Cultural Heritage Law grasped as its first task the preparation of a draft convention on protecting underwater heritage (Shefi, 2013: 120-21). The third version was adopted in 1994, annexed by the Charter for the Protection and Management of the Underwater Cultural Heritage prepared by ICOMOS (Rau, 2002: 389-90), and forwarded to UNESCO for consideration. Through this path it became the blueprint for developing the 2001 Convention on the Protection of the Underwater Cultural Heritage (Dromgoole, 2013: 49, 50).

In 1990, meanwhile, the ICOMOS Charter for the Protection and Management of the Archaeological Heritage emphasized in Article 3 that “Legislation should afford protection to the archaeological heritage that is appropriate to the needs, history, and traditions of each country and region, providing for *in situ* protection and research needs.” Two years later the European Convention on the Protection of the Archaeological Heritage (Valleta Convention 1992, Revised) extended its concern over site destruction to the underwater realm (Article 1.3). Excavation was now considered a final and by no means inevitable stage of archaeological investigation, and an overall preference for protection *in situ* was enshrined in Article 4.ii (see above and Dromgoole, 2013: 45, 47).

Concern about tightening underwater legislation was on the rise independently at UNESCO, where a 1993 feasibility study highlighted the threat of sophisticated technological equipment and the resultant fear that “The cost of this technology is dropping rapidly and can be used by ‘treasure hunters’, whose interest is solely in the recovery of commercially valuable material, without regard to the proper methodology of archaeological excavation” (Dromgoole, 2013: 52).

Once more motivated by concerns over increased shipwreck looting internationally (Shefi, 2013: 3-4), ICOMOS developed its thinking to require in Article 1 of its revised 1996 Charter on the Protection and Management of Underwater Cultural Heritage for the first time that “The preservation of underwater cultural heritage *in situ* should be considered as a first option” and that “Non-destructive techniques, non-intrusive survey and sampling should be encouraged in preference to excavation”. A flexible Article 10 made allowance for fieldwork, whereby “A programme of site management must be prepared, detailing measures for protecting and managing *in situ* underwater cultural heritage in the course of and upon termination of fieldwork.”

Interpretation of UNESCO’s overall intent for the 2001 Convention wavers quite widely according to practitioners’ personal biographies and political agendas. The

most common pillar explaining *in situ*'s development is as a means to remove underwater cultural heritage from the commercial market (Lund, 2006: 18) by preventing the looting of sites and illicit traffic, which since the early 1960s were a major concern for the majority of UNESCO's member states (Prott, 2006: 146). Both activities are described as inevitably leading to "site decimation with minimal or no returns, particularly in terms of cultural information" (Nutley, 2009: 74).

The same acute concern over wreck looting on an unprecedented scale in the Americas was raised by a School of American Research Advanced Seminars conference held at Sante Fe in May 1981, which generated a Statement by Seminar Participants on the Present Looting of Shipwrecks in Florida and Texas (Gould, 1983: xiii). A more specific pivotal moment in the development of international legal protection was the discovery of the *Titanic* in 1985 and the recovery two years later of 1,800 artefacts. Finding the ship of dreams at a depth of 3,800m, some 300 miles from shore, "represented the notional point in time when the physical protection previously afforded 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" (Dromgoole, 2013: 5). The ideal target of treasure hunters, futuristic technology and access to all seas was born.

For Grenier (2006: 110) all the important ship excavations of the last half century – the *Vasa*, *Mary Rose*, *Batavia* and *Cattewater* and Red Bay vessels – were accomplished exclusively by archaeologists, "whereas the score attained by commercial treasure hunters in the so-called saving of shipwrecks is zero. There is not a single shipwreck in the world that has been properly excavated, analysed, completely recovered, preserved and displayed by a treasure hunter."

Almost three decades later, heritage groups campaigning to pressure governments into ratifying the UNESCO Convention still use the imminent threat of rampant treasure hunters as the main tool in their arsenal. One of the most vociferous campaigners to this end in the UK, Robert Yorke, Chairman of the Joint Nautical Archaeology Policy Committee, seized the opportunity at the opening of the third Internationaler Kongreß für Unterwasserarchäologie (IKUWA) in London in 2008 to play up to this clichéd fear (Yorke, 2012: 1):

Across the globe, the international underwater heritage is facing an unprecedented and increasing threat, which would have been unimaginable even 10 years ago. Beyond our country's territorial waters, the huge depths and the limitations of technology were usually the great protectors of historic wreck sites. However, recent technological advances in underwater survey techniques, positioning systems and remote excavation have effectively stripped away this protection.

Taking an example from here in the UK, we know that Odyssey Marine Exploration, a commercial archaeology salvor based in Florida USA, has made no secret of its plans to survey the whole of the UK's South Western Approaches and English Channel during 2008 – a systematic harvest of archaeology from beyond Lands' End to Dover. As we stand here they are probably searching for our ships.

6. Theory Versus Reality

A different class of leading field practitioners has sought to adjust the interpretation of the UNESCO Convention. *In situ* is undeniably and strictly the first option that must be considered for managing any archaeological site underwater. However, it is “important to note that it forms just one part of management, and not – as often interpreted – the only right way forward. Excavation and preservation *ex situ* remain options of consideration but must be backed up with strong arguments and a detailed description of planned execution” (Manders, 2008: 31-2).

One of the most rational interpretations of preservation management clarifies (Gregory, 2009: 1-2) that:

in situ preservation should not be a case of leaving a site where it is – out of sight, out of mind – and hoping that it will be there when archaeologists and conservators have the capacity, research questions and desire to investigate these finds, in the future... With a few notable exceptions, it has primarily been a pragmatic solution for the immediate protection of a site following its exposure due to natural causes, to stabilise a site after its partial archaeological excavation or for the long term storage of finds when resources are not available for conservation and curation.

Even full recovery projects like the *Mary Rose*, *Vasa* and *Batavia* can be entirely consistent with the principle of *in situ* preservation (Nutley, 2009: 74). Rule 1 does not prohibit excavation, but emphasizes a precautionary approach, whereby fieldwork no longer means automatically bringing everything back to the lab (Van Tilburg, 2006: 121). Recoveries have to be undertaken for sound reasons (Forrest, 2010: 341).

Ultimately, Ulrike Guérin (2012: 4-5), the administrator of the 2001 Convention, has confirmed both the protocol’s role in preventing looting and corrected assertions that *in situ* preservation forbids intrusive activities:

The Convention castigates interventions made for reasons of commercial gain, but it does not admonish professional archaeology, when correctly executed in accordance with State authorities. Equally it does not reprimand excavations, but merely requires that they are done under the supervision of a competent archaeologist and according to a well planned project... The UNESCO 2001 Convention represents the answer for the international community to this pillaging and commercial exploitation. It provides the ‘largest museum of the world’, which is constituted by the oceans’ seabed, with guardians, an alarm system and legal safekeeping.

7. In Situ Solutions

In situ preservation has become a first option amongst international standards for shipwreck management for several reasons (Manders, 2011: 9):

- It preserves for the future.
- It has a well-developed legislative system to protect sites.
- To manage the enormous number of newly discovered sites.
- It may be cost effective.

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- There is usually a time gap between discovery and excavation.
 - It allows for implementation of improved conservation methods in the future.

Before any specific technique is implemented to seek to reduce deterioration in the fabric of a shipwreck, a non-destructive and non-disturbance site assessment is necessary to record threat levels. Formal assessment of a site's natural environment and how it interacts with the synergy of cultural remains (from hull to artefacts) is essential to understand implementation. Five fundamental steps need analysis to ensure correct, successful and responsible *in situ* preservation (Gregory, 2009: 1-2) by understanding:

- 1) The extent of the site to be preserved.
- 2) The most significant physical, chemical and biological threats.
- 3) The types of materials present and their state of preservation.
- 4) Strategies to mitigate deterioration and stabilise the site from natural impacts.
- 5) Subsequent monitoring and implemented mitigation strategies.

At the present curve of development, optimum stabilization approaches tend to rely on the simultaneous trialling of alternate techniques to test what works best in a specific environment. Very few sites are subject to formal *in situ* preservation stabilisation. Techniques suitable to drastically reduce or halt physical deterioration or biological deterioration on wooden shipwrecks pioneered over the last two decades have resulted in a standardized consensus. In all cases the aim is to reconstruct and sustain anoxic conditions and prevent any incursion by marine borers, principally the *Teredinidae* shipworm species (Palma and Santhakumaran, 2014). Blocking food paths for these assassins of the seas requires burying hull remains in depths of at least 50cm or artificially generating an accumulating sediment coverage to a similar height above exposed timbers (Manders, 2012: 8).

Preferred covering and barrier methods range from sealing vulnerable parts of a site with sandbags to moulding geotextile around hull timbers to prevent shipworm larvae settling. Additional options include laying down artificial sea grass mats to attract sediment accumulation and covering wreckage with debris netting through which fine sediment falls to form a burial mound. Rudimentary alternatives include site backfilling, sediment drops and reburial (Manders, 2011: 26-37; Manders, 2012: 8, 20-7).

The most effective *in situ* protective options are site specific and dependent on the marine environment and archaeological character. The wreck of the *William Salthouse*, built in Liverpool in 1824 as a two-masted brig of 251 tons, and lost off Point Nepean on 27 November 1841 with a mixed cargo destined for Melbourne, has experienced 25 years of stabilization and monitoring (Staniforth, 2006). The 25 x 8m site was discovered in 1982 with exposed barrels of cargo and straw packing *in situ*, after which it was designated an Historic Shipwreck under the state of Victoria's Historic Shipwrecks Act (Steyne, 2009).

Neither the placement of five small fences on the *William Salthouse* in 1985 or a sediment dump attracted increased sediment levels. In 1998 sandbags were identified

as the best short-term measure to support the exposed hull. Artificial seagrass matting of 90cm, 120cm and 150cm lengths was turned to in 1990 for the first time as the only viable solution. After six months the scour holes had filled in and erosion halted. The wreck was opened to permitted divers in 1993 after being judged to be stable. Significant changes emerged once more in 2008 in the form of fresh erosion and sand deposition. Of particular concern was a deep scour at the stern, where the full length of the seagrass was exposed for 120cm down to its metal frame, and a scour hole appeared within the hull. The case of the *William Salthouse* goes to show that *in situ* preservation is dependent on ongoing monitoring and being able to adapt to change over even the short term to maintain stability.

A different measure was adopted in 2002 when 4,000 square metres of polypropylene nets were anchored over the entirety of a 6-9m-deep apparent German merchant ship (wreck BZN 10) lost in the Wadden Sea in the second half of the 17th century while transporting Spanish olive jars, grapes in oak casks and pine wood boxes with schist slates. Ongoing monitoring of the 40 x 25m site by multibeam sonar has confirmed the robust stability of the protective scheme (Manders, 2006).

Experimental stabilisation on the 74-gun Royal Navy ship HMS *Colossus*, by contrast, which sank off the Isles of Scilly in 1798, was trialled after excellently preserved timbers, “perfect with fine surface detail”, were first exposed in 2001 and rapidly succumbed to wood-boring organisms. By May 2003 the timbers were decayed and gribbled. In two years of trials, mesh mat became torn and tangled within three months of deployment and was subsequently fouled by kelp. Anti-scouring floating frond mats also became tangled with kelp, sinking rather than floating. Ultimately geotextile mats (Terram 4000) laid across an area of a 5 x 2.5m outperformed the other methods in terms of sediment depth achieved and was the only method that did not cause maintenance issues (Camidge, 2009).

8. Monitoring Loss

Beneath the focus on covering and barrier techniques lies the reality that these methods are only being implemented in a minority of cases worldwide, more often than not as high-profile test cases. Since authority over the UK’s Protected Wrecks passed to English Heritage in 2001 (renamed Historic England in 2015), a small minority of sites have been formally stabilised *in situ* (HMS *Colossus* and Swash Channel). The fate of the third-rate English warship the *Stirling Castle*, lost on the Goodwin Sands in the great storm of 1703, is a national embarrassment. The wreck’s environment is extremely dynamic and its licensees have long been left unsupported to watch the site deteriorate and try to record the collapsing hull, once the best preserved 18th-century warship wreck in UK waters.

When discovered in 1979 the site was dramatically reported to have been “littered with human bones, organic artefacts, rope, intact gun carriages and much else. Divers looking down through hatches [saw] intact barrels stowed in tiers, and one claims to have seen a skeleton still clothed in a leather jacket” (Lyon, 1980). Since then the vessel’s stern, intact when first found to the top of the rudder, almost completely collapsed along with the port quarter. A passive policy of *in situ* preservation adopted

without any formal physical protection has led to the wreck's destruction over the last decade.

Sad experience proves *in situ* does not work in such a hostile environment. Because of a dogged adherence to this policy and English Heritage's refusal to grant even a surface recovery permit, the licensee, Bob Peacock (2012: 152-53), has advocated the need for greater honesty by changing the terminology from *in situ* preservation to a more accurate "staged and managed neglect". Pascoe's assessment of the *Stirling Castle* (2012: 187) concluded that "Information of enormous importance to British maritime culture and heritage will be lost unless such vulnerable sites are developed through research led excavation and recovery in an archaeologically responsible manner." English Heritage's 2008 conservation and management plan for the *Stirling Castle* essentially rejected the proactive saving of the site, concluding that:

If retaining any significant part of the *Stirling Castle* is not reasonably practicable, its potential to inform us about the past will be exploited. This involves the recovery of information through prior investigation, followed by analysis, archiving and dissemination of the results at a standard appropriate to its significance.

Too complicated and problematic, in other words the *Stirling Castle* was to be left to nature's roll of the dice even though such a dubious management option conflicts with the very essence of the UNESCO Convention (see Article 3). The *Stirling Castle* stands as a serious system failure that the UK prefers to ignore.

On occasions a discovery's enormous rarity should have triggered immediate contextual recording and recovery. The looting of the 10,000 years-old Young Man of Chan Hol II in 2010 from a *cenote* in the Yucatán Peninsula compelled the Instituto Nacional de Antropología e Historia in Mexico City to post Wanted posters in supermarkets, bakeries and dive shops in and around the nearby town of Tulum. INAH researchers lack the resources to guard hundreds of sites dotting the peninsula from the creeping theft of human bones (Nowikowski, 2012). The decision not to excavate and recover has lost a key source for studying one of the first humans to inhabit the Americas. Mexico was the eighth country to ratify the UNESCO Convention in 2006.

The dilemma of recovering human remains while meeting the requirements of *in situ* preservation has also tested the ethical compass of oceanographers working in the Black Sea. When discovered in 2011 the Early Hellenistic Ereğli E shipwreck was one of the most important sites detected in this body of water. When the team returned in 2012, fishing trawling had almost destroyed the entire site. More than half of the late 4th or early 3rd-century BC surface artefacts previously visible were broken and hull planking had been uprooted and displaced. Rare human bones, including a femur, a tibia and teeth, were lost alongside the opportunity to study ship construction techniques (Brennan, 2016: 83-4).

This data loss can hardly have come as a shock. Eight of twelve wrecks recorded at depths of 101-114m off Sinop and Ereğli in Turkey's southern Black Sea have been trawled through. The damage is severe. For instance, the timbers on the 6th-century

AD Ereğli C Byzantine wreck had again been displaced and lay “in a jumble of disarticulated fragments atop the wreck mound, although individual timbers lie scattered about the perimeter for several dozen meters, with a few located over 200 m from the main mound” (Brennan *et al.* 2013: 97, 99). Repeat recording of the preservative condition of amphora cargoes first recorded by photomosaics in 2000 found that by 2011 the damage to the storage jars on the 4th-6th century AD Sinop A wreck had more than doubled in the intervening years from 21% to 59% (Brennan *et al.*, 2013: 99). Even a sensor package deposited at a depth of 103m off Sinop in 2007 to assess long-term environmental change was blitzed by a trawler by 2011, raising the “question of how such long-term data sets can be collected while avoiding trawling” (Brennan *et al.* 2013: 100).

The team’s assessment of the best way to manage this rich seam of maritime history is conflicted. The physical changes to the sites forced the team to conclude that “Due to the extent of this damage, some of the more heavily impacted wooden wrecks can only be assessed on a rudimentary level with little to no diagnostic evidence of their origin or date” (Brennan *et al.* 2013: 100). Despite the severity of ever-rising heritage loss, the team’s philosophy appears to be counterintuitive to the core aims of archaeology (Brennan, 2016: 87):

Even in light of this research, we continue to work toward the UNESCO recommendation that in situ preservation is the proper first approach for managing and protecting these sites. This research presents a strong case for establishing MPAs [Marine Protected Areas] in areas such as those off Sinop and Knidos where a large density of cultural sites has been found and documented in regions of heavy trawl activity.

This desperate will to be seen to adhere to the perceived spirit of UNESCO is not only an incorrect reading of the 2001 Convention – there is absolutely no doubt that in this instance and after such extensive monitoring excavation and recoveries would be more than warranted – it is also questionable practice. Limited intrusion geared towards select trenching and sampling of artefacts from the most important wrecks would enable the sites’ formations, origins, cargo composition, hull construction forms and dates to be characterized and preserved as a record for future generations.

Sadly, the Black Sea is far from a minority case. Widespread bottom fishing damage continues worldwide and remains one of marine archaeology’s greatest threats. Marine Conservation Zones are undoubtedly the ideal for protecting rare species and to allow fishing stocks to regenerate. Even where sound economics exist to justify MCZs – the World Bank report *The Sunken Billions* highlighted that major world stocks would produce 40% more if fished less – scientists are fighting an uphill battle. Today just three-fifths of 1% of the world’s seas are protected in conservation zones, a far cry from the necessary 30% proposed by environmentalists (Kingsley, 2015a: 113-14). As much as we would like Turkey to legislate MCZ’s around the southern Black Sea’s hugely important underwater heritage, the political climate shows little appetite for such compromise.

In light of confusion understanding when it is permissible to transition from an *in situ* preservation ideology to recovery mode, it is hardly surprising that an industry questionnaire determined in 2008 that 35% of respondents chose not to use *in situ* preservation and storage due to a perceived lack of supporting research (Ortmann *et al.*, 2010: 33). A Wreck Watch study found in 2011 that 57% of respondents felt that as an overall fundamental management policy the application of *in situ* preservation to underwater cultural heritage was a positive strategy. A further 46% felt that it was not.⁶ Effectively perception is split right down the middle.

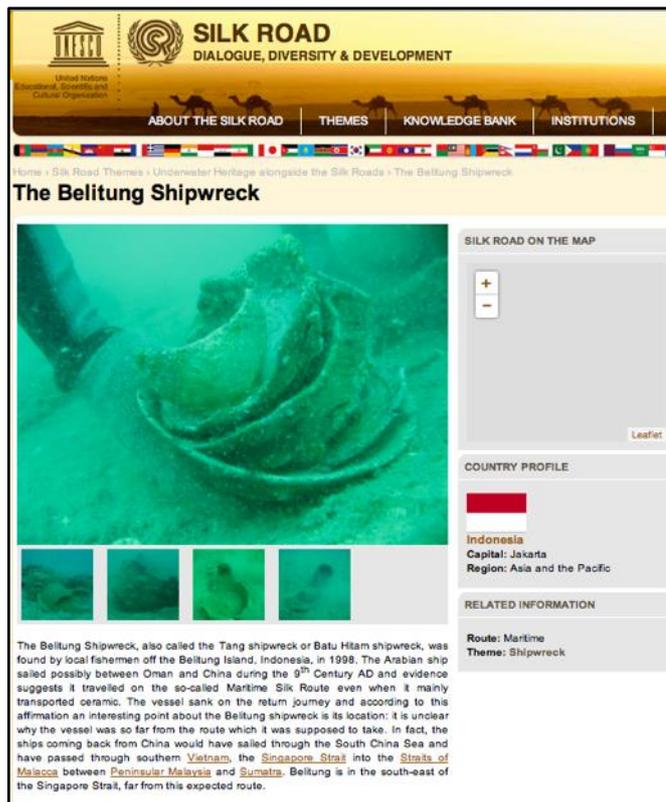


Fig. 7. UNESCO castigates the Belitung shipwreck recovery off Indonesia, an Arab dhow from the 9th century, for its destruction by commercial treasure hunters. Elsewhere (left) the same organization highlights the wreck as major heritage with an important archaeological cargo and hull (above).

9. Beyond the Noah Complex

Underwater archaeology still lags far behind theory developed and processed on the terrestrial stage. In the same way that a great deal of good faith thinking about heritage and preservation has been shredded as unrealistic above the shoreline, the current all-encompassing romancing of *in situ* for the sunken past is naïve Utopianism.

The threat of treasure hunting and its role in uniting the ‘preserve now’ police is greatly diminished since its heyday in the 1970s and 1980s. Emblazoned across magazine covers and television documentaries, treasure’s power for publicity has always attracted a mania that far exceeds its proportionality as a resource. Stemm (2011: ix-x), for instance, has estimated that wrecks with sufficient economic value to attract the attention of commercial groups represent 0.02% of the three million worldwide inventory.

The underwater heritage industry will be obliged ultimately to move on from manipulating the threat of treasure hunters to scare governments into signing the

Convention – observed in obsessive and unpleasant winner take all campaigning in the UK in the last decade. Already some commentators envisage the need for increasingly more hydrocarbons as the greatest risk to the resource (Flatman, 2012: 167). Others point to the great damage, largely uncontrolled, caused by bottom fishing (Kingsley, 2015a).

Only time will tell beyond the horizon how many sites are formally stabilised by *in situ* techniques, how many simply retained without proactive stabilization methods and how many wrecks are excavated as a measured understanding of *in situ* preservation settles down. What is certain is that the present has no way of predicting what the future wants or, indeed, how future scientists may judge our stewardship of the past on their behalf. The excuse that we impose *in situ* for future posterity is something of a smokescreen.

Dressing up heritage management as the sacred work of diver Time Lords saving the sunken past for the future looks perfectly reasonable on paper as global warming, over-fishing, hydrocarbon harvesting, radiation damage, deforestation and terrorist despoliation of classical ruins make parts of the Earth unfit for humans. The Second Coming cannot arrive too soon. Whether the very idea of sustainability is sustainable, however, is seriously questionable.

Sustainability is an iconic term in conservation stewardship implying a commitment to manage natural and cultural resources to ensure their continuance into an indefinite future. Archaeological remains hit a particularly sensitive nerve because they lack the propensity for self-generation, do not breed, do not renew themselves and are held to be finite and non-renewable (Carman, 2004: 256). Once they are gone they cannot grow back or regenerate. The most common underlying rationales to support futurist arguments for sustainability (Lowenthal, 2005: 20) are:

- Ethical: future generations should inherit a world that we have not shorn of health and wealth.
- Conscientious: we prefer to be blessed as good stewards rather than be cursed as despoilers.
- Familial: we hope that our grandchildren will inherit a world at least as fruitful as our own.
- Pragmatic: intergenerational equity is not merely just, it also promotes social stability and political well-being in the present.

This backdrop, however, may be a mirage. The biologist Edward O. Wilson determined that evolution only allows the human brain to commit itself emotionally two or three generations into the future, while Charles Galton Darwin, author of *The Next Million Years* (1952), concluded that most people only care about conditions that will affect their children and grandchildren. Beyond that point in time the situation seems too unreal and uncertainties too great. The concept of stewardship is now out of fashion, except among environmentalists (cf. Lowenthal, 2005: 29-31). As cynical as it may sound, but as any policy maker knows, the ‘future’ is a hazy concept that rarely exists beyond the four to five-year timeline of politicians driven by re-election cycles.

Flavour of the year policy documents go out of date swiftly in future visions terms. Current thinking instead acknowledges that since the future cannot be visited, we must recognise that what we are actually doing is preserving the past for our own benefit (Spennemann, 2011).

When UNESCO firebombs society with the threat of looted shipwrecks – and in some cases the concerns are real and immediate – it follows the emotion-laden rule that notions of endangered existence and a need for conservation attract considerable currency, goodwill and material support (Holtorf and Ortman, 2008: 84). Like saving animals from endangerment by putting them in zoos, such organisations plug into “our narcissistic desire to feel like we are grandiose heroes and saviors, on the side of right”, according to Ken Sanes in *Disney’s Distorted Mirror* (cf. Holtorf and Ortman, 2008: 84). The safeguarding of well-preserved wrecks in steel cages off Croatia has attracted mass applause, even though its architects emphasize as a tool for *in situ* preservation “the benefits of the methodology to date still do not outweigh the drawbacks” due to problems of biofouling requiring constant cleaning (Radić Rossi, 2014: 58-60). As Sarah May eloquently explains (2011: 77):

Like zookeepers, professional archaeologists always highlight how rare and vulnerable the material they study is. This shifts the focus from the intellectual and emotional results of our work to the need to protect it. This can neutralize uncomfortable political aspects of argument so that learning from the past become less important than ‘saving the past for our future’.

Forward-thinking catchphrases typified by ‘preserving the past for the future’ may be little more than clichés “that seem to pull at the heartstrings of the audience in order to mask their own befuddlement” (Spennemann, 2007: 92). Some commentators have diagnosed the historic heritage approach as a ‘Noah complex’, a cult of excessive conservation in our age creating a generation of citizens and experts increasingly unable to get to grips with some inevitable, unstoppable and indeed desirable processes of extinction and destruction (Holtorf and Ortman, 2008: 87).

Land based studies have arrived at the inevitable conclusion that the sustainability of archaeological sites is illusionary. Since we cannot predict changes to any given maritime seascape or the emergence of developmental pressures that currently do not exist, there is simply no scientific means to calculate how long a site, stable today, will remain so. When change comes it can come very swiftly.

By rolling terrestrial policy into the seas, the elder fathers of underwater cultural heritage treat shipwrecks as if they are monuments – large fixed structures seated in their original landscapes that are worthy of protection, becoming more heritage than archaeology. These landscape features become sources of amenity and aesthetic value, but tell us little about the past, which surely is the *modus operandi* of archaeology. “In effect, treating sites as monuments”, argues Carman (2002: 50), “removes them from the archaeological realm altogether and places them on a par with other kinds of static heritage object.” The monument is subjected to criteria for measuring significance that can rarely foresee issues arising in the future and in some views has nothing to do with archaeological research but is a bureaucratic practice.

This is one reason (alongside the inheritance of disorganized archives) why precious few preliminary, let alone final, archaeological site reports have been published since the UNESCO Convention came on line. What we do has become a cult of protectionism. How best to harvest knowledge is not a priority.

In a purest sense this academically anaemic state of affairs again fails to comply with UNESCO requirements that a final synthesis of a project be “made public as soon as possible, having regard to the complexity of the project and the confidential or sensitive nature of the information” (Rule 36a). The US Register of Professional Archaeologists takes a more sensible, finite resolve about publication, asserting (Standards of Research Performance 6.3) that:

Failure to complete a full scholarly report within 10 years after completion of a field project shall be construed as a waiver of an archaeologist’s right of primacy with respect to analysis and publication of the data. Upon expiration of such 10-year period, or at such earlier time as the archaeologist shall determine not to publish the results, such data should be made fully accessible to other archaeologists for analysis and publication.

The publication black hole reinforces the concern that what we do has stopped being archaeology. Underwater cultural heritage has transitioned into the art and industry of protectionism. Less about knowledge of the past, *in situ* preservation has become in some hands a tool abused for political power, control and authority of the few. As our discipline stops excavating, thinking and reconstructing past societies and economies, the decline in fieldwork will inevitably mean less student interest in studying archaeology. It is a self-harming exercise.

UK Censorship

The UK may not have ratified the UNESCO Convention on the Protection of the Underwater Cultural Heritage, but after the Department for Culture, Media & Sport (DCMS) adopted the Rules to its Annex as best practice it wields the protocol like a biblical eleventh commandment. Yet the standards applied are highly inconsistent. While Historic England seeks to keep control in the hands of associates with the right colour wetsuits – UNESCO Good – other equally robust projects are condemned to heritage purgatory – UNESCO Bad.

The *London* shipwreck project has long found itself ensnared in unsurmountable red tape. The unique wreck of the *Victory* has been eagerly embraced as the flagship whipping boy to promote consensual paranoia about threats to the country’s sunken past. No matter the site lies outside UK territorial waters, 80km southeast of Portsmouth, where no English organisation has ever conducted a deep-sea archaeological project or that the Ministry of Defence, Marine Management Organisation (MMO) and Historic England has zero funds for fieldwork and protection in the Exclusive Economic Zone. The consistently transparent publication programme and the multidisciplinary scientific record are simply ignored (Cunningham Dobson and Kingsley, 2010; Cunningham Dobson and Tolson, 2010; Trollope, 2011; Van de Walle, 2011; Kingsley *et al.*, 2012; González *et al.*, 2013; Prave *et al.*, 2013; Seiffert *et al.*, 2013; Cunningham Dobson *et al.*, 2014; Kingsley, 2015b; Kingsley, 2015c; Newman, 2015).

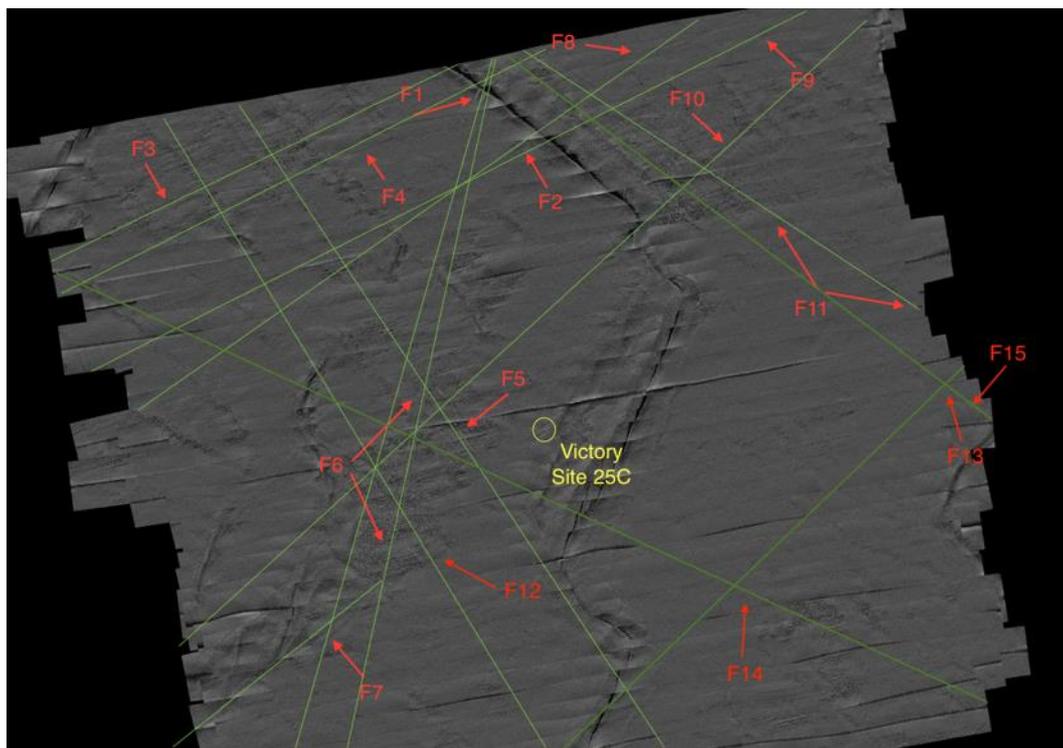
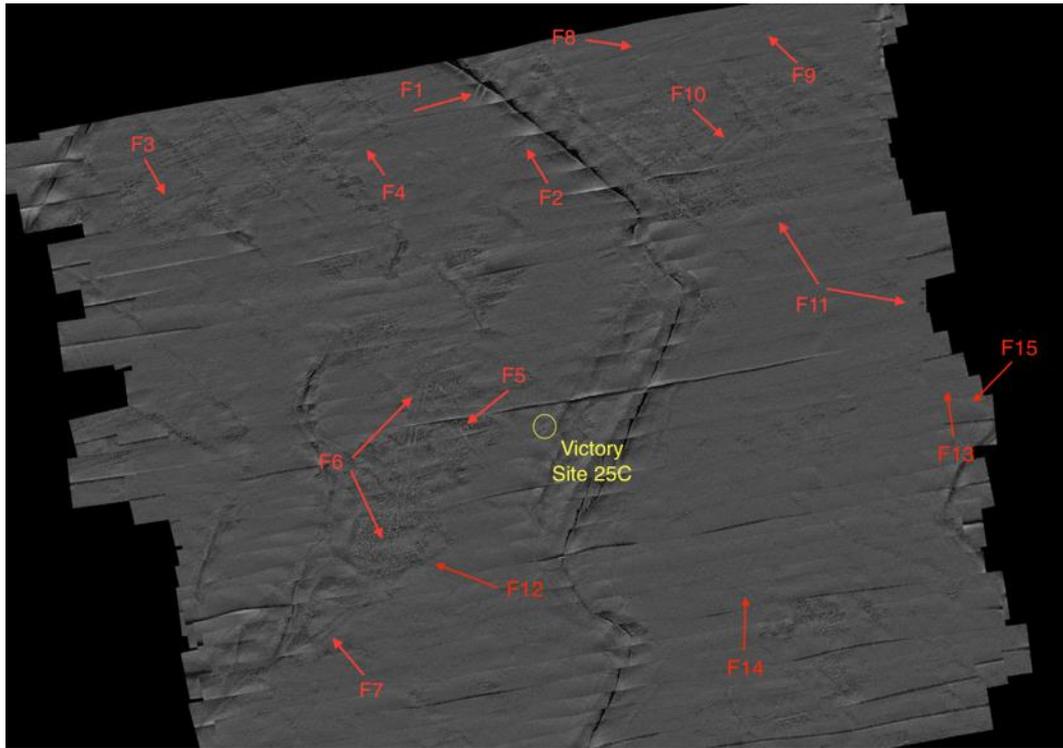


Fig. 8. In 2012, 15 fishing trawler furrows were recorded on side-scan sonar from a single moment in time ringing the wreck of the Victory (1744). Campaigners argue evidence for fishing impacts are invented. Photos: courtesy of the Maritime Heritage Foundation & Odyssey Marine Exploration.

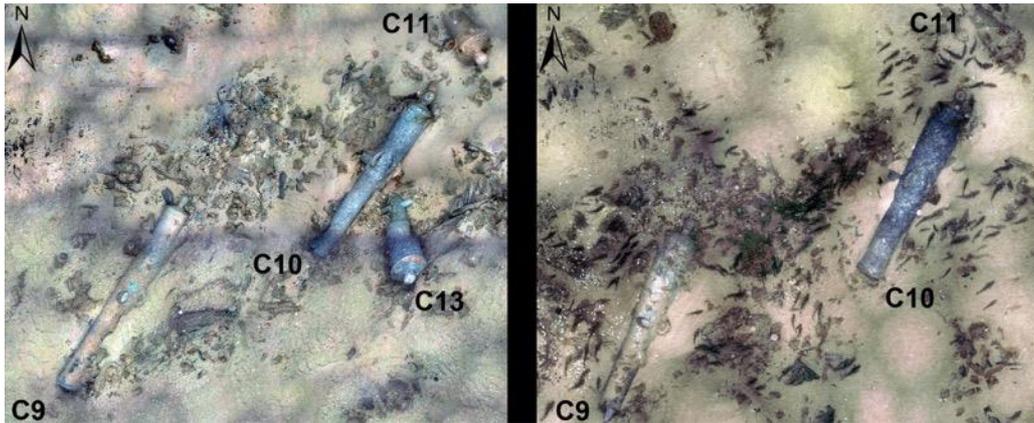


Fig. 9. The 3-ton bronze cannon C13 was one of three possible guns looted from the wreck of the *Victory* in July 2011, as seen in before and after survey photomosaics. Photos: courtesy of the Maritime Heritage Foundation & Odyssey Marine Exploration.

Fact is an inconvenient truth in the all-out battle to scare the UK government into formally ratifying the UNESCO Convention. When the *Victory* was looted by Dutch salvors in July 2011 the team's archaeologists were left to make sense of a disturbed site (Fig. 9). Historic England offered no attempt to share their intelligence about the incident. As late as 2019 the wreck owner, the Maritime Heritage Foundation (MHF), was refused permission from the Ministry of Defence to assess the condition of the looted gun, left unconserved and corroding, and to create a 3D record. Clear evidence of localized fishing trawler impacts in the form of side-scan sonar (Fig. 8), AIS surveillance (Fig. 10) and on-site artefact movements in 2008-2017 are brushed aside as make believe. In 2019 the Ministry of Defence (MoD) refused to share with the MHF further information about another reported pillage of the *Victory* at the same time the Royal Courts were asking it during a judicial review if the wreck remained at risk.

A constant claim of anti-*Victory* campaigners is that the project design produced by the MHF is not fit for purpose under UNESCO Convention terms, yet the very same document went through four versions of development under direct oversight from the government Advisory Group (MoD, National Museum of the Royal Navy, Historic England) and resulted in the 2014 government decision and acceptance by MoD and DCMS, as officially announced in parliament.

Historic England, a founding member of the Advisory Group which closely helped steer the project design, seemingly failed to remind the MMO of this due diligence. In 2015 the MMO claimed they could not process the application for *Victory* because no project design existed and thus the proposed plans violated UNESCO Rules. No information on the MMO website stated a requirement for such paperwork and at a pre-application meeting the MMO failed to flag up the requirement. Why Historic England, the MMO's statutory consultee, forgot to inform the MMO of the reality remains unexplained despite a Memorandum of Agreement between the two organisations agreeing that "The parties will keep each other informed of any data, research, collected information, deposit of project archive or other work or development that might influence the decisions or activities of either party... The relational will thrive on a policy of transparency and 'no surprises'..."

Other UK wreck projects are readily passed fit for excavation without anything like the same degree of scrutiny. Applications for the Swash Channel wreck (February 2012), HMS *Colossus* (January 2015), HMS *London* (March 2015) and HMS *Hazardous* (September 2014) were rubber-stamped by the MMO between four weeks and two months without mentioning the UNESCO Convention whatsoever. Based on available project designs, compliance rates with the Convention's 36 Rules, including the *Invincible* (licensed April 2017) and the *Rooswijk* (June 2017), range between an estimated 44% and 80%. The *Victory* project design fully refers to and addresses UNESCO Rules with an estimated compliance rate exceeding 90%. When Historic England wanted to excavate the Tankerton wreck in Kent, buried in clay and not at imminent risk, proposals were licenced within one day, allowing for up to 20 trial pits (4 x 2m maximum each) without the existence of a reviewed project design. The timbers of this delicate Tudor hull ended up being cleaned by amateurs using hard-bristle household brushes, a curious interpretation of best practice UNESCO standards.

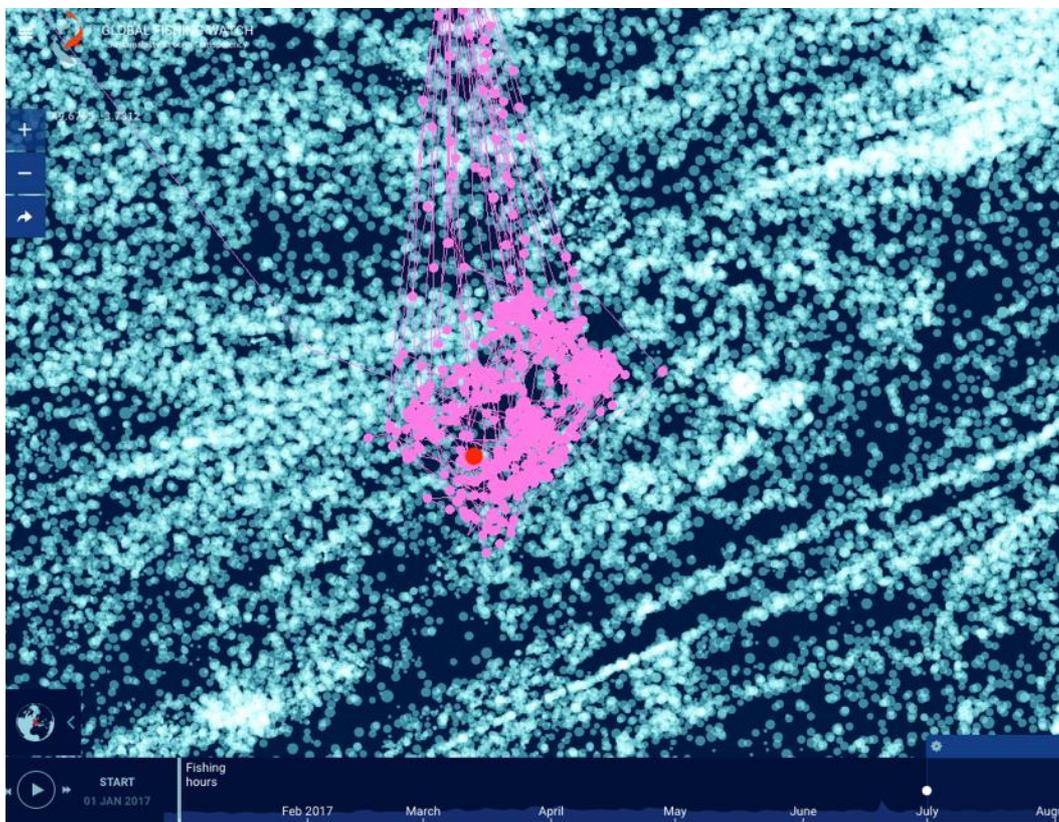


Fig. 10. Active trawlers fishing through the wreck of the *Victory* (1744) (solid red circle) in July 2017 documented in Global Fishing Watch AIS data.

10. Conclusion: To Dig or Not to Dig?

The UNESCO Convention on the Protection of the Underwater Cultural Heritage impacts different countries in different ways. For undeveloped or developing nations it is a highly beneficial off the shelf guide for protecting the sunken past and promoting awareness of acceptable standards. For countries with long traditions in underwater archaeology its ratification is often a decision as political as it is practical, facilitating the centralization and enhancement of power over the resource.

The Convention is not the same beast as when it was first drafted and rolled out in 2001. The world has moved on. Its content was initially moulded largely by the hands of lawyers and classical archaeologists with limited or no experience working on ancient or historic shipwrecks. Now handed down to the archaeologist as modern commandments, heritage managers, divers and signatories have to make sense of a Utopian guide in the here and now. To be clear, in its totality the Convention is something to aspire to, to adopt as far as possible, but contains sections of dubious applicability in the real world. How various States apply the Convention has little to do with UNESCO, and everything to do with national traditions and laws. The Convention is only as useful as its legal enforcement by the countries that have signed on the dotted line.



Fig. 11. Palestine's attempted sale of the life-size bronze Apollo of Gaza for \$500,000 on eBay, and its subsequent seizure by Hamas and disappearance, has been met by silence from UNESCO. Palestine is a Convention signatory. Photo: APA Images/STR/APA/Landov.

Across the globe, it is alleged, some countries seemingly ratified the Convention as *quid pro quo* agreements supporting social welfare and education programmes. In Algeria, Bahrain, Barbados, Benin, Bolivia, Bosnia and Herzegovina, Cambodia, Cuba, Congo, Ecuador, Gabon, Ghana, Grenada, Guatemala, Guinea, Guyana, Haiti, Honduras, Iran, Jamaica, Jordan, Lebanon, Libya, Lithuania, Madagascar, Morocco, Namibia, Nigeria, Palestine, Panama, Paraguay, Romania, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Saudi Arabia, Togo, Trinidad and Tobago, Tunisia and Ukraine – 72% of the 55 countries that have ratified the UNESCO Convention – the impact of the Convention seems to have been negligible in terms of enhancing standards, access to resources and scientific dissemination.

Of other countries to sign, the Illyrian Coastal Exploration Program in Albania, Croatia and Montenegro incorporates artefact recovery sampling as standard practice (Royal, 2009; Royal, 2012). Spain, on paper a religious disciple of the letter of the *in situ* law within the Convention framework, has recently loosened its belt with the politically sensitive deep-sea recoveries from the wreck of the *Mercedes* (Negueruela

Martínez *et al.*, 2015) and the large-scale excavation of the Deltebre wreck, an English military transport sunk in 1813 off the Ebro Delta of Catalonia during the Peninsular War.⁷ UNESCO considers the excavation of the Deltebre project (Fig. 4), alongside excavations of Roman wrecks off Cap del Vol and Cala Cativa, as examples of best practice in underwater heritage management.⁸

No management portfolio seems to exist in Palestine to lock into its huge potential for discovering and protecting ships dating to the Late Bronze Age onwards that once sailed the major sea lanes between Egypt and the Levant. Unsurprisingly given the country's profound social and economic pressures, the Convention, signed in 2012, is considered a beneficial political tool to “further efforts to assert control over Palestine's waters, off the coast of the Gaza Strip, where Israel has been imposing a prolonged naval blockade” and “the legal right to assert a contiguous zone for the purposes of underwater cultural heritage protection” (Keane and Azarov, 2013: 332, 335). The attempted sale of the Apollo of Gaza for \$500,000 on eBay and its subsequent seizure by Hamas has been met by silence from UNESCO (Fig. 11).

While lip service is paid to the idea of *in situ* preservation with bowed heads, the collective evidence indicates a quiet permissive preference for the sampling of artefacts and hull timbers for dating and species analysis followed by excavation where it fits national cultural or heritage interests. Policies differ nationally from the liberal (France, Croatia) to the prohibitive (the UK). The signs seem to be moving in the direction of ratified States relaxing attitudes towards archaeology rather than policy-led heritage, generating knowledge in preference to retaining sites for a notional future. A slow melt is underway.

How has the divide between the core ideals of archaeology and heritage come to clash so gratefully? Bureaucratic heritage groups are (often unfairly) considered to be almost universally disinterested in the pursuit of knowledge, something that has no place in their organizations, but instead see their role as policy advisors, regulators and facilitators. Preservation *in situ* as a policy fits their mission to preserve the past for the future. It is a comparatively cheap approach and a source of considerable power. Consequently, fewer properly resourced excavations are permitted, less is learnt about the past and the social role of archaeology diminishes. In the final analysis this approach is self-defeating: to be useful and relevant today, heritage needs to be based on research to produce stories for interpretation (Willems, 2012: 2, 4).

For these specific reasons the policy-led appliance of *in situ* preservation as the first option in approaching underwater cultural heritage seems to me to be counter-productive because it fails to maximize utility of the resource. The optimum and most productive first option should instead focus on a site's significance. Intervention should always be as minimal as required to answer a specific research plan. Here arguably the strongest component of the UNESCO Convention kicks in, the need for standardised project designs – still surprisingly rare as publicly accessible documents – to justify intrusive recoveries. In some cases sufficient archaeology may be exposed as surface features to fulfil a research agenda by basic *in situ* recording and nothing less. At times this will inevitably need to be complemented by small-scale artefact and ecofact sampling.

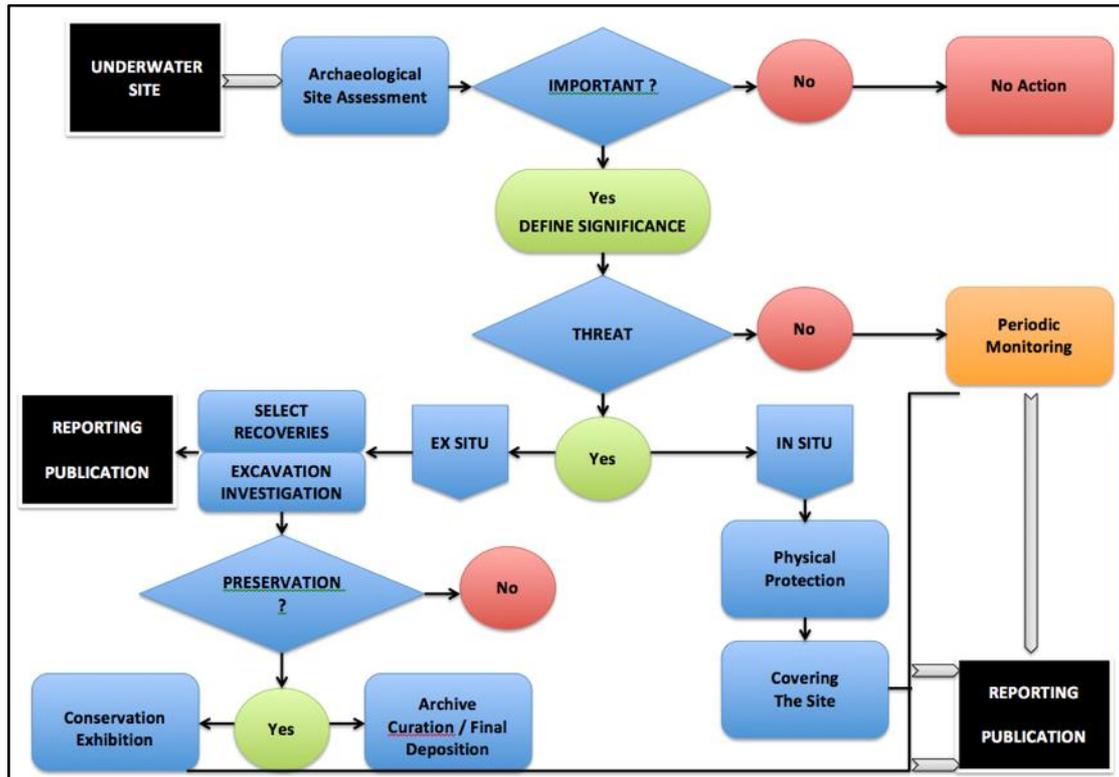


Fig. 12. A proposed reassessment of the values of underwater cultural heritage placing importance (and not in situ preservation) as the most valuable primary criterion to guide all management options.

How extensively a site may or should be excavated touches a sensitive nerve ending that exposes the tension between heritage and academia. The former will always aim for a *de minimis* programme, while the latter aspires to comprehensive fieldwork. George Bass’s abundant experiences (2011: 10) led to the conclusion that “A shipwreck being a coherent whole, is more like just one burial. It is hard to imagine an archaeologist excavating only part of a skeleton and leaving the rest... Sampling wrecks can only lead to historical inaccuracies. The debate should be closed.”

By way of explanation, Bass (2011: 10) laid bare the error of initially publishing the 11th-century Serçe Limani wreck off Turkey as a Muslim merchant venture after initially excavating a vast cargo of Near Eastern Islamic glass. In the following season pig bones, lead seals bearing Christian images and fishing weights inscribed with Christian crosses and the name of Jesus crystalized the realisation that far from being Muslim traders the ship and its crew were Christian Bulgarians from the Sea of Marmara. The return to the 7th-century shipwreck at Yassiada, Turkey in the early 1980s, and recovery of all amphoras with their rich *graffito* and *dipinti* left on site in 1964, similarly inspired a radical reanalysis of the ship from a case of private entrepreneurial commerce to a war cargo commandeered from an ecclesiastical estate for the Emperor Heraclius’s *annona militaris* war needs (Van Alfen, 1996).

Similar problems of identification endure more recently. Off St Malo the names of two sunken corsairs were only confirmed after multiple seasons of large-scale excavations. At the end of the second season the wrecks were thought to be the frigates *Saint-Esprit* or *Sainte-Famille* (L'Hour and Veyrat, 2001: 70). Into the third season the project was convinced the remains pre-dated 1743: “elle virtuellement imposée comme une sorte de frontière psychologique qu’au demeurant nul document ni indice archéologique ne nous incitait à franchir.” The discovery of rectangular iron ballast blocks inscribed with the date of manufacture between 1746 and 1747 forced team researchers to return to the historical archive, whence the Natière 2 shipwreck was finally correlated with the *L’Aimable Grenot*, lost later in 1749 (L'Hour and Veyrat, 2002: 61).

Into the fourth season the Natière 1 wreck was thought to be the *Saint-Jean Baptise Cydevant La Faluère* sunk in 1713. The discovery of a spoon engraved ‘170?’ suggested a new *terminus post quem* of 1700-1709, pointing towards the most plausible identification as the *Monarque*, which foundered in 1701 (L'Hour and Veyrat, 2003: 80-81, 94), although the question was still disputed into the fifth annual campaign (L'Hour and Veyrat, 2004: 97). Only later in the final reckoning did the team settle on the *La Dauphine* of 1704 (Veyrat, 2017).

Determining the identities of warships lost in the Goodwin Sands during the great storm of 1703 similarly relies on artefact recoveries. The site of the third-rate warship the *Northumberland* could only be proven because the lifted bell was stamped ‘1701’ and a pewter plate was marked ‘JG’, the initials of Captain James Greenway (Pascoe and Peacock, 2015: 3). Although designated as a UK Protected Wreck in 1981, an unexcavated wreck mound nearby “could represent the remains of either one wreck in two fragments, or the remains of both the *Restoration* and the *Mary*”.⁹ Without intrusive work it is impossible to clarify.

The Norman’s Bay shipwreck off east Sussex has also eluded identification in the absence of targeted intrusive work. Designated as a Protected Wreck in 2006, the site was initially believed to be any one of a number of Dutch vessels lost during the Battle of Beachy Head in 1690 or the third-rate *Resolution* sunk in the great storm of 1703. An alternative candidate was an unidentified vessel that foundered in the same area in 1667.¹⁰ Dendrochronology sampling subsequently placed the felling of the ship’s trees after 1659 in the eastern Netherlands or Westphalia, favouring identification as one of the casualties of the Battle of Beachy Head (Nayling, 2008). Which of the seven lost Dutch ships equates to the Norman’s Bay wreck remains undetermined. The naming of the Swash Channel wreck as the Dutch ship the *Fame*, lost in 1631, only escaped the mists of time after full excavation and intensive post-excavation research of the finds and hull.

These examples highlight the pitfalls of extricating a correct identity for a ship listed in historical records without recovering and studying physical remains. The values of a wreck needed to maximise understanding of a resource can only be realised by confirming an identity – whether the ship’s name or a basic characterisation of origin, date, cargo and trade route. Without formal ground truthing, assigning the values and

significances desired to foster management options for the present or future is illusionary.

Before being accused of suffering from *rabies archaeologorum maris*, or seeking excuses for commercial companies to work sites, it must be strongly emphasized that my views are based on the sole resolute belief that shipwrecks are first and foremost about making sense of past societies and communicating that knowledge to the present and future. I advocate considering sites primarily not as heritage resources or assets, but as archaeological entities as the only means to maximise understanding and respect of the ever-diminishing power to learn from the past. Approaching wrecks solely or primarily as heritage resources, assets or monuments neutralises those values. *In situ* preservation as a first option rarely contributes to the writing of long-term history and does not allow present practitioners to build on the backs of those illustrious archaeologists or historians who came before us.

To be absolutely clear I am not advocating open season on the large-scale, open-plan extraction of our shipwrecks *en masse*. Sites of major importance warranting intervention will always represent a tiny minority of global totals. By way of example, out of 37,000 shipwrecks historically documented as losses in English waters, 6,000 are believed to have formed actual wrecks. Just 72 sites in England, Scotland and Wales (1.2%) are currently considered sufficiently significant to warrant designation under the Protection of Wrecks Act 1973 (cf. Cant, 2013: vii, 235, 240). If extended worldwide, these figures become far less daunting.

In my view the first consideration when approaching any shipwreck should be its importance, its ‘deep relevance’ for identifying and rediscovering aspects of the past inaccessible by any other means and to reconstruct long-term trends of change and continuity through time (Rockman, 2012: 4) (Fig. 12). If the scientific and education values are unique or high, I posit that it is a matter of human logic and correct custodianship, engrained in society’s DNA, to maximise understanding of a wreck as a moral public contract. The question then plateaus out to a matter of what techniques are appropriate to secure research answers.

Select sampling 5% of a ceramic cargo to generate a typology, permit analyses of storage jar capacity standardisations or divergences may be sufficient to fulfil a research plan. In other instances full excavation and total recovery of exposed cargoes and crews’ domestic assemblages may be essential, followed by *in situ* protection of the hull. A 20% exposure of a hull to examine wood species and thus origin of ship construction, as well as assembly methods, may suffice. In all instances stabilisation programmes should be considered from the outset for any intrusive work, whether it be the basic reburial of remains or covering a hull in geotextile before, during or after fieldwork.

The driving point is that all options – not just one – should be on the table from the outset. To deny the core creativity and beneficial power that excavation can generate from the offset is counterintuitive to the human condition of seeking meaning from existence and pushing the boundaries of understanding to leave the Earth a wiser place than when we found it.

Lest we forget why we signed up to study the past in the first place, as Renfrew and Bahn (2000: 11) summarize:

Archaeology is partly the discovery of the treasures of the past, partly the meticulous work of the scientific analyst, partly the exercise of the creative imagination. It is toiling in the sun on an excavation in the deserts of Iraq, it is working with living Inuit in the snows of Alaska. It is diving down to Spanish wrecks off the coast of Florida, and it is investigating the sewers of Roman York. But it is also the painstaking task of interpretation so that we come to understand what these things mean for the human story. And it is the conservation of the world's cultural heritage - against looting and against careless destruction.

Preservation is a key cog of the archaeological process, crucial to slow down or prevent site loss. But it should not become the be all and end all demanded by a Big Brother regime. That philosophy is a road to intellectual ruin. In the words of Bill Lipe (1996: 27):

In sum, what should drive archaeological preservation is the social benefit that archaeology can provide to society over the long run. That benefit is primarily the contribution of knowledge about the past derived from systematic study of the archaeological record... Long-term, frugal consumption of the archaeological record by well-justified research – both problem-oriented and mitigation-driven – must be an accepted and integrated part of the preservation program. If the research doesn't get done, or if it gets done and we don't learn anything from it, or if only scholars learn from it and the public is shut out, then preservation will have been in vain, because its goals will have not been achieved.

The study of the past must be research led and not dictated by short-term trends or policy-led bureaucrats seeking to simplify their heavy administration or boost their power base. At the very least it is nigh on time we started contemplating more seriously definitions of the future we are curating (cf. Manders, 2008: 32), perhaps defining the arbitrary horizon more precisely in terms of short-term (one generation), medium-term (three generations) and long-term (ten generations) for preservation goals (Holtorf and Högberg, 2015: 520).

Ultimately this paper addresses the fear, intimidation and censorship that the UNESCO Convention has been allowed to engender in some circles. From university professors to heritage managers, students and divers, freedom of thought and its open expression is a fundamental human right. Censorship of the opinions of all our fellow stakeholders is surely to be abhorred, even if we vehemently disagree with their views.

Notes

1. See: <https://en.unesco.org/silkroad/silk-road-themes/underwater-heritage/belitung-shipwreck>. Accessed 8.10.19.
2. *Deltebre I. La història d'un naufragi. Museu d'Arqueologia de Catalunya* (Girona, 2014).
3. See: <http://www.unesco.org/new/en/culture/themes/underwater-cultural-heritage/underwater-cultural-heritage/best-practices-of-underwater-cultural-heritage/deltebre-i-shipwreck-spain>. Accessed 8.10.19.

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4. Reel, M., 'How a 19th Century Shipwreck Could Give Canada Control of the Arctic'. See, <https://www.bloomberg.com/news/features/2015-05-20/how-the-hms-erebus-shipwreck-could-secure-canada-s-arctic-control>. Accessed 18.5.17.
 5. *UK Marine Policy Statement* (2011), 3. See: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69322/pb3654-marine-policy-statement-110316.pdf. Accessed 11.5.17.
 6. See: Kingsley, S., 'The Sunken Past: Shipwrecks Lost in Translation'. *The Undertow*, 28.9.11. See: <https://wreckwatch.org/2011/09/28/the-sunken-past-shipwrecks-lost-in-translation>. Accessed 12.10.19.
 7. *Deltebre 1. La història d'un naufragi. Museu d'Arqueologia de Catalunya* (Girona, 2014).
 8. See: <http://www.unesco.org/new/en/culture/themes/underwater-cultural-heritage/underwater-cultural-heritage/best-practices-of-underwater-cultural-heritage/cap-del-vol-and-cala-cativa-shipwrecks-spain>. Accessed 9.10.19.
 9. *Restoration. Goodwin Sands. Designated Site Assessment* (Wessex Archaeology, 2006), 4.
 10. *Norman's Bay Wreck, East Sussex. Designated Site Assessment* (Wessex Archaeology, 2007), 8-9.

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