

SUBMERGED ARCHAEOLOGICAL SITES: COMMERCIAL EXPLOITATION COMPARED TO LONG-TERM PROTECTION¹

While the commercial exploitation of underwater cultural heritage may bring short-term economic advantages long-term protection may allow achieving higher and sustainable benefits for national economies.

A. Commercial exploitation of underwater cultural heritage

The commercial exploitationⁱ of submerged heritage is accepted in several regions of the world. Causes for choosing this mode of recovery include the perception of shipwrecks as lost treasure and the pressure of the art market, which faces a decreasing availability of artefacts from dry land. It is moreover interesting for national authorities to obtain artefacts from priorily inaccessible sites through fund sharing agreements allowing the sale of repetitive artefacts.

A cursory count showed thus some 345 major ancient shipwrecks that had been commercially exploited worldwide over the last years. Their cargoes measured up to 500.000 pieces, enough for a museum dedicated to the respective wreck. The exact number of concerned sites is certainly higherⁱⁱ.

Nevertheless, the attraction of commercial exploitation may decrease in face of certain observed particularities:

Shipwreck exploitation appears to be a hazardous industry. In proposing a commercial recovery the cost of search, retrieval and conservation is usually disregarded, while potential profit is considered by drawing information from once-in-a-while reached top-pricesⁱⁱⁱ. If a site holds any sellable 'treasure' or the claimed wreck is also often unsure. Authorities are in consequence approached to permit interventions on a site, while lacking awareness of its scientific value or even identity. Often several sites are opened in search for sellable material, before one 'suitable' is identified.

An issue are also unreliable business practices^{iv}. National authorities have often been persuaded to permit activities with promises of profit shares, which they either never received or which did not include the most significant artefacts. This has resulted in a large number of court proceedings and even imprisonment of persons involved in commercial treasure-hunt schemes. The legal fees paid by the concerned national authorities and their administrative efforts were in many instances costlier than the value of the disputed fund-share^v.



Pillaged coins from the Spanish wreck Nuestra Señora de las Mercedes © Spanish Ministry of Culture

Also pillaging asks a heavy toll from submerged sites: In many regions only 5 to 10% of historical wrecks are left untouched in the water-depths of up to 60m (the relative maximum diving depth for an individual diver)¹. In 1974 studies showed that all known wrecks off the Turkish coast had been looted. By the 1990s, Israeli archaeologists estimated that up to 60 per cent of cultural objects originally immersed in Israeli waters had been recovered and dispersed with no trace in public collections. Similarly, French scientists estimated that, of all antique wrecks known to lie off the coast of France, only 5 per cent remain untouched.



Objects from a Vietnamese wreck for sale in Portsmouth, UK © U. Guerin/UNESCO

Misrepresentations on the potential sale value of artefacts serve also to finance the commercial recovery undertaking by increasing the sale of shares in the treasure-hunt firms. As they have to pre-finance high-risk interventions based on alleged treasure-tales, speculation takes the place of reliable information.

¹ The present note has been elaborated by the Secretariat of the UNESCO Convention on the Protection of the Underwater Cultural Heritage. None of the views expressed therein constitute an interpretation of the Convention.

Moreover, exploitation caused significant losses. Heritage is a limited asset. Destroyed site contexts cannot be reconstituted. However, commercial recovery enterprises appear in general not to pay the needed attention to site context. They have to calculate profitability at short term. Costly dive-hours, boat rentals, conservation efforts and documentation are thus regularly reduced to a minimum. As the project has to be made profitable through the sale of artefacts it focuses on sellable cargoes, and is usually hurried and unscientific^{vi}. The dispersion of collections by the sale of artefacts endangers furthermore long-term scientific research.

Many commercial enterprises focusing on ancient shipwrecks assert nevertheless to do archaeological work. A scientist will however intervene for a research question or for public benefit, while the commercial enterprise needs to look for easy-recoverable, low-conservation material that will sell. It is not the contribution to science that will decide on the question if an excavation will be undertaken, but if the site holds enough sellable material to fund the activity directed at it. It has been stated that only superfluous material, which would otherwise threaten to overflow a country's museum storages, would be 'de-accessioned' to finance the work on the wreck^{vii}. However, the practice of de-accession does not cover an activity, in which from the outset items are collected from a previously untouched archaeological site to finance it. Archaeological work avoids unnecessary site disturbance.

B. Respect for heritage values and lack of urgency

A side-effect of allowing commercial exploitation is the negative influence on the respect for heritage. The vast majority of archaeological sites under water do not hold treasure. Exceptions, like the Spanish *Nuestra Señora de las Mercedes* wreck^{viii} and the Colombian *San Jose* wreck make the public imagination however 'explode' and give an incentive for treasure hunt.^{ix} Even if indeed a 'treasure'-wreck is found, it is therefore not recommendable to allow its commercial exploitation. The history of land-based archaeology shows that a hundred years ago the search for 'treasure' was the principal goal for (re)search on land-based sites. Ideas have changed through education. For underwater cultural heritage this is still to be done. A government authorized treasure-hunt on even one, exceptional, submerged archaeological site would have in this light a devastating effect.

There is furthermore no urgency to undertake excavations and to allow the commercial use of sites. Arguably pillaging, industrial activities and trawling pose



Ceramics from an Asian wreck recovered by a commercial enterprise and damaged by the exposure to air. High quantities of non-sellable artefacts were thrown back into the sea. © 2007, U. Guerin, UNESCO

Already the contractual outsourcing of archaeological services reduces the scope of researched material. A national authority informed UNESCO that since the outsourcing of its services almost no iron material was found anymore. The reason was that the conservation of iron is costly and makes the intervention unprofitable for the contracted enterprise.

An even more profit oriented approach can be expected from a firm that is not paid by money, but through artefacts. The recovery of the cargo of the Belitung wreck, a crucially important wreck in Asia and only wreck of its type ever found, was for instance prepared in eight days. No site documentation was done during the whole first recovery season. Usually, an archaeological excavation of a site of such importance is prepared during months of careful survey and project design considering documentation, storage, conservation and the security of funding.



Coins from the pillaged Nuestra Señora de las Mercedes wreck © Spanish Ministry of Culture; Chinese ceramics from the commercially exploited Cirebon wreck © U. Guerin, UNESCO

Even large piles of all the same artefacts have their scientific information. They can convey an impressive message.

An impressive message is for instance the extent of exploitation of a population for the sake of the recovery of silver and gold. A cargo like that of the *San José* or of the *Nuestra Señora de las Mercedes* wrecks can show the scope of the greed and imposed sufferance that pressed its mark on the history of whole continents. They are the only remaining testimonies and only the entirety of their cargo can fully relay the message the respective wreck holds.

a threat to some submerged sites, however:

Pillaging can be avoided by border control and the monitoring of the movements of boats. Today, any large boat has to report its movements via satellite to the coast guards. As soon as the boat stops, it arouses suspicion and control. This is effective to fight smuggling, drug traffic, and illegal fishing. It will also work to protect submerged heritage.

Trawling damage can be avoided by the mapping^x of concerned areas, the identification of sites and the declaration of protected marine areas.

Development and resource extraction projects can be obliged to undertake a prior mandatory assessment of the concerned area to identify heritage contained therein. The developers can then be obliged to provide funds for research and the mitigation of damage.

C. The loss for the State of origin caused by commercial exploitation and pillage

Two examples demonstrate that commercial exploitation does indeed not pay for the State involved and that a long-term safeguarding may be more beneficial:

The Belitung wreck:

The Indonesian Belitung wreck was commercially exploited in 1998. The cargo was sold for 32 Million USD to a private entity in Singapore. The 'fund share' given by the treasure-hunters to Indonesia was only 5 Mio USD. The 60.000 Belitung artefacts will now tour the world before going on permanent display at a Singapore museum. This museum charges 8 USD entry fee. Should it welcome, like the Swedish Vasa Museum, 1 Mio visitors a year, the acquisition fee returns to the cash boxes within 4 years. The collection increased Singapore's attraction to cultural visitors as well as to the local population. It also increased the surrounding economic activity. In comparison, Indonesia has lost an asset that could have fostered its economic development. A maritime museum is planned close to the original shipwreck site, but the artefacts that would have constituted its prized possession are gone. The hull of the wreck was destroyed. Considerable legal fees and efforts were furthermore spent on the pursuit of the commercial enterprise.

The Florida Key wrecks:

Another calculation, for Florida and the exploitation of the more than 35 wrecks of the Florida Treasure fleets, proves similar. Peter Throckmorton, pioneer underwater archaeologist, writes in 1990 in his well-known article 'The economics of treasure hunting with real life comparisons'^{xi}:

'what had been a relatively gentle weekend hobby as practiced in the Keys [...] became a gold-rush. [...] Florida's policy towards its underwater antiquities has cost the State millions. The State's 25 per cent share from the treasure grubbing of the past 20 years is a collection worth only about USD 5 million today. The Florida State museum has in its possession approximately 1,500 gold coins worth on the market about USD 2,000 each, and about 20,000 silver ones, worth USD 80 to USD 150 each. This represents the State's 25 per cent of all treasure recovered in Florida pre-1982. The collection has cost more than its value to maintain, especially if one includes the cost of the continual legal cases that have resulted for the State's policy. If Florida had used that State money, and invested USD 10 million in two great maritime museums back in the 1960s, instead of giving leases to salvors, the State would be nearly half a billion dollars richer each year, if the Swedish example [of the Vasa museum] applies to Florida.'

D. Benefits of Protection

Underwater cultural heritage holds a vast potential for sustainable development. It is a very interesting and attractive form of heritage, appreciated by the public. It opens therefore long term **tourism and economic development** opportunities.

The investment in museums on underwater archaeology, dive trails and other forms of access for the public promise a beneficial and lasting return. Studies show that every USD invested in heritage increases the economic activity around the site by a factor between 1.2 to 8, depending on the significance of the site and the form of its valorization by museums and individual access. This is in particular to be noted as raise in employment and gain (hotels, food sales, transport benefit, guides), raise of cultural and educational levels in a region and improved consideration of heritage and local pride. Concerned forms of tourism in the case of underwater cultural heritage are cultural, dive and cruise tourism.

A new, especially promising effort goes currently towards the establishment of underwater museums and museum-aquarium settings. This is the case of the Chinese Baiheliang and Maritime Silk Road (Nanhai No 1) museums. Worldwide national authorities also create dive trails to foster diving tourism economies^{xii}. This is of special importance for States bordering the ocean, in particular also Small Island Developing States (SIDS), which can greatly enhance their tourist attractiveness through the valorization of submerged archaeological sites.

Exceptional underwater heritage can furthermore be a strong factor for **urban development**. The Vasa, Mary Rose, Bodrum and Roskilde Museums have considerably changed the way Stockholm, Portsmouth, Bodrum and Roskilde look today. When the construction of the Underwater Museum of Alexandria was proposed this was met by international support. Above all, it however met the support of the Mayor of Alexandria. The project was the ideal component to revive the city and develop tourism^{xiii}.

The **scientific research potential** of submerged sites is furthermore immense. Sea levels have been lower than now for 90 per cent of human history and a significant part of human development took place on coastal regions that are now under water. Ancient sites from up to 300.000 years ago have been found. Historic shipwrecks provide furthermore vital information on trade and exchange. Sunken cities, dwellings and religious sites reveal information on local life, religious ceremonies and sacrifices. Results of research can be used for education and for creating a deeper understanding between people from different cultural backgrounds.



Reconstitution of the Vasa shipwreck © Swedish Maritime Museums

Some countries with a rich underwater heritage have already constructed major museums achieving a lasting benefit.

The *Vasa shipwreck museum* in Sweden is visited by 1 Mio visitors a year and constitutes the most important museum of the country. These tourists spend typically one day more in Stockholm as they would otherwise have done. At an average rate of 200 Euro per tourist per day spent in hotel, meals and other expenses this amounts to the attractive sum of 200 million Euro benefit for the city of Stockholm per year. Not yet included are the museum entry fees.

The *Bodrum museum* in Turkey is another example. When excavations of the Uluburun wreck started in 1959 Bodrum had approximately 5,000 inhabitants. Through the valorisation of the wreck in the Bodrum castle tourism was increased. The castle is now the second most visited museum in Turkey. The city had a population of 118,237 persons in 2009 and tourism is a main factor for local economy.



The interior of the new Nanhai No 1 – Maritime Silk Road Museum © U. Guerin/UNESCO

China planned to develop tourism on Hailing Island that had not much attraction besides the beach. However, it lay close to a very important ancient trade route, the Maritime Silk Road. An ancient shipwreck was discovered. Searching for the best way to bring this cultural attraction to the island and to render the island more attractive, a world-first aquarium museum was built and called 'Maritime Silk Road Museum'. The wreck, called Nanhai No.1, was recovered and brought to the aquarium still preserved in the surrounding silt. It is now excavated and will be shown, under water, to the visiting public. The touristic attraction of the island has been increased and local development fostered.

A. NEW WAYS TO FINANCE RESEARCH

New approaches and valid alternatives to commercial exploitation of sites are under consideration in order to finance underwater archaeological research:

Dive club guardianship of sites^{xiv}: Permissions for exclusive access to selected sites can be negotiated by the national authorities with controlled dive clubs. These pay for the permission to access the sites with their clients collecting an entry fee, which benefits the national authority. They also guarantee the integrity of the site and monitor it regularly.

By organizing paid and controlled **public visits of archaeological work** this can also be financed and even valorised. In some cases it is also possible to involve divers as paying volunteers in the team.

A third approach is the **evaluation of cultural development needs**. Before deciding on which archaeological site should be excavated a pre-evaluation of needs of regions can be undertaken from a scientific, but also a development point of view. Instead of researchers responding to chance finds and museums being created out of a need to store material, it is promising to evaluate if a museum would be needed for a region's cultural development. Limited research budgets can then be attributed in priority to one site instead of another, to achieve a highest possible benefit.

Stronger attention can also be paid to **tour and exhibition opportunities**, as well as **film and book rights** in planning archaeological excavations.



Cage protecting a Roman wreck © Frka, Ministry of Culture of Croatia

In Croatia metal cages have been installed over Roman wrecks and access has been allowed to Dive clubs under contract. In France a semi-replica site has been constituted with a collection of amphorae that had been recovered, researched and was then retransferred to an underwater location (not the original location) that was shallow enough for diver access. This place has now been there for three years and until now none of the amphorae has disappeared. The visits are welcomed by divers like a land-based cultural visit.

ⁱ Under commercial exploitation is here understood any form of recovery of artefacts from an archaeological site, in which's result a part or the entirety of the artefacts will be sold or bartered. Paid archaeological services, in which no artefact is alienated, are not meant by this term.

ⁱⁱ A large part of the information available on Asian shipbuilding and sea fare stems from the incomplete study of artefacts recovered from wrecks with destroyed context. Much of the information on ships of the Portuguese and Spanish discoverers and colonial powers has equally been destroyed. The originally available information on Portuguese shipbuilding has in large parts been destroyed by the disastrous 1755 Lisbon earthquake, which ravaged the libraries holding that information. The second destruction of the information was undertaken by commercial enterprises seeking for treasure.

ⁱⁱⁱ A **common error in profit-calculation** for shipwreck exploitation is the unreliable value of ancient coins. While a single example of a coin may sell at a very high price once, this price, set by aficionado-market demand, falls considerably if a coin-type is put on the market in large quantities. To be considered are also conservation costs. While gold does need almost no conservation, silver and other material has to undergo a quite costly treatment.

^{iv} Indeed **treasure hunting is rarely profitable** even for larger firms. In 2010 the US based commercial salvage firm Odyssey Marine Explorations published on its website www.shipwreck.net the **loss** of USD 23.3 million, following a net loss of USD 18.6 million the previous year. For the year 2011 Odyssey "reported revenue of \$15.7 million [...] The net loss for the year was \$16.2 million". - The majority of the USD 15.7 million cited as revenue earned in 2011 was generated through expedition charters for deep ocean mineral exploration, not the salvage of ancient shipwreck cargo. The situation got worse for the first quarter of 2012. The company was ordered by the US courts to return to Spain the 17 tonnes of silver coins taken illegally from the Senora Nuestra de las Mercedes wreck. It also faces the very considerable legal charges.

^v **Court battles** concerning shipwreck artifacts have been numerous. They included proceedings concerning very well-known wrecks, like the Titanic, located in international waters, and the San Jose, located supposedly off Cartagena in Colombia. For both wrecks very lengthy legal proceedings took place over the question of the rightful recovery or treatment of artefacts and the future whereabouts of the pieces. In the case of the Indonesian Cirebon wreck two employees of the Belgian commercial enterprise that recovered the wreck went temporarily to prison on the grounds that some artefacts had not been reported. The efforts incurred were often immense. The US Government has thus for example expended thousands of hours of legal resources in a number of different actions to enforce environmental and historic laws against looters and commercial salvors in cases like *US v Fisher, Lathrop, US v Craft* (the Channel Islands case). Thousands of hours in legal services were expended in opposing treasure hunter Mel Fisher in the Atocha shipwreck case. In the case of the Titanic the US Government expended thousands of attorney hours to prevent commercial exploitation and require that the collection of salvaged artifacts be conserved, curated and made available to the public in manner consistent with the Rules of the 2001 Convention's Annex.

^{vi} Researchers state that only 20 % of the work on a submerged archaeological site concerns recovery – these are the only 20 % ensured by treasure-hunters in disregard of the rest of the work that would normally be done in a scientific intervention.

^{vii} **De-accessioning** is the formal process of the removal of an object from a collection, register, catalogue or database. One of the reasons why materials can be de-accessioned and disposed of is that they are duplicates. Usually a de-accession, expressing the lack of necessity of the object for the museum, is not planned before the object has even been found or recovered.

^{viii} The coins recovered from the Spanish wreck Nuestra Señora de las Mercedes have been under salt water for two centuries, where they have been affected, were clumped together in blocks and need costly conservation.

^{ix} The South African Grosvenor wreck was 'hunted' as it was supposed to hold the valuable Peacock throne – which it did not.

^x See the recommendation of the Scientific and Technical Advisory Body of the 2001 Convention Recommendation 3/ STAB 2

^{xi} See under i

^{xii} Endeavours to facilitate **public access** are much welcomed by diving associations and the World Underwater Federation CMAS supported recently the protection of submerged heritage and the ethics of the 2001 Convention perceiving this to be in the best interest of divers and dive clubs worldwide.

^{xiii} After the **Alexandria museum creation**, direct benefits were expected to include the creation of employment to operate and maintain it (staff, curators, tellers, security guards, personnel of suppliers and maintenance). A project of this scale was also immediately recognized to generate indirect benefits, in terms of consumption through services, like restaurants, hotels, transport, construction, maintenance. Other expected indirect effects were that the investment in the museum would encourage investors to invest in the development of the neighbourhood, i.e. hotels, services, infrastructure, entertainment, cruises, guided tours, weekends organized to combine Alexandria, north east and west coasts to Alamein or to Port Said and the Suez Canal. Urban development and cultural heritage protection were recognized to go hand in hand and therefore, protection is worth the effort.

^{xiv} The 2001 Convention does expressly encourage the public access to sites for observation, as long as this does not endanger protection.