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UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

CONVENTION ON THE PROTECTION OF THE UNDERWATER CULTURAL HERITAGE

FIFTH MEETING OF THE SCIENTIFIC AND TECHNICAL ADVISORY BODY

11 June 2014, UNESCO Headquarters, Room VI 7, place de Fontenoy, Paris 10 am – 6 pm

Information Document INF.1

Examples of Publicly Accessible Underwater Cultural Heritage Sites

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1. BARBADOS – SUBMARINE VISITS

Barbados, which featerues many shipwreck sites in its waters, offers an opportunity to descend to the ocean floor in a real submarine and view reefs, marine life, and wrecks. The submarine dives down about 130 feet (40m) and offers close looks at a large coral formation and impressive ancient shipwrecks.





Site, Preservation and Context	Four shipwreck dive sites, in different depth with diverse flora and fauna
Access provided	Access provided by dive club (Atlantic Adventures)
Effort to provide access	Access by submarine
Challenges (security, preservation etc.)	
Web sources	www.viator.com/tours/Barbados/Atlantis-Submarine-Expedition-Tour/d30- 2134SUB http://barbados.org/divesite.htm

Issues	Should the best practice list provide publicity for private companies?

2. CROATIA - METAL CAGE PROTECTION AND UNDERWATER DISPLAY

The Croatian part of the Adriatic Sea holds a rich archaeological heritage due, in part, to a large number of Roman shipwrecks. Underwater archaeological finds indicate that the Adriatic Sea served as an intersection between two main navigation routes in the early Roman Empire. In the Croatian waters, visitors are able to visit several shipwrecks which are protected by metal cages. For instance, guided tours take visitors to a Roman merchant vessel from the 2nd century B.C. and another sunken merchant vessel with cargo containing over 1,200 North African amphorae from the 3rd to 4th centuries B.C. However, sightseers will also visit younger sites, such as World War shipwrecks from the 20th century A.D. While visiting and enjoying these underwater archaeological sites, the visitor is taught to understand how important it is to protect them and to preserve them for the future.





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

Site, Preservation and Context	Well-preserved but fragile Roman wrecks off the Croatian Islands.	
Access provided	Access is allowed to dive clubs under contract, which pay a permit fee and obtain the keys to the protective cages.	
Efforts to provide access	Metal cages have been installed over Roman wreck sites. These cages are large and permit diving into them or to see through them. Algae is taken off in due intervals. Cost of installation was around 30.000-50.000 EUR per cage.	
Challenges (security, preservation etc.)	Metal cages can have negative effects on the underwater cultural heritage and may, under certain circumstances, be a risk for the visiting diver if they are not properly maintained. The cages must be cleaned, maintained, fixed, and monitored. Also, security precautions are needed. The cages must be regularly cleaned, otherwise algae grow over the cages and obstruct the visitors view of the relics.	
Web links	http://icua.hr/images/stories/publikacije/Exploring_Underwater_Heritage_in_Croatia.pdf	
Issues	 Can the cage be a trap to divers? Is the maintenance of the cage or/and the wreck a problem? Does metal erosion cause any problem? What are financial consequences of maintaining the cage? 	

3. CUBA – DIVING THE WRECKS OF THE SANTIAGO DE CUBA BATTLE

Cuba's warm waters are full of magnificent shipwrecks. One of the most interesting dive sites lies off the coast of Santiago de Cuba. Here, divers can explore wrecks from a naval battle of the Spanish-American War in 1898, led by Spanish Admiral Cervera. There are six vessels in total to be explored. These include the Spanish armored cruisers "Cristobal Colon", "Almirante Oquendo", and "Vizcaya", the destroyers "Furor" and "Pluton", as well as the U.S. steamer "Merrimac". Scuba diving tours are provided for visitors.





Site, Preservation and Context	Warm water with many shipwrecks and diversity of flora and fauna. The sunken remains are in very good condition.
Access provided	Scuba diving tours
Efforts to provide access	trail
Challenges (security, preservation etc.)	
Web links	www.taucher.net/edb/cuba_12.htm www.thescubadivingplace.co.uk/blog-post.asp?i=103884

What preservation strategies have been adopted?	Issues	 Are all the shipwrecks 100 years old? Is the tour organized by the state or private sectors? What preservation strategies have been adopted?
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4. INTERNATIONAL WATERS - TITANIC

The UNESCO 2001 Convention on the Protection of the Underwater Cultural Heritage applies to all traces of human existence having a cultural, historical or archaeological character which have been under water for at least 100 years. Thus, 15 April 2012 marks the moment when the Titanic wreckage is protected under the Convention.





Site, Preservation and Context	RMS Titanic was a British passenger ship that sank in the North Atlantic Ocean on 15 April 1912 at 2:20 am after colliding with an iceberg. Its sinking caused the deaths of 1,514 people. Its wreckage was discovered on September 1, 1985, during a joint French/U.S. expedition lead by Jean-Luis Michel of the French Research Institution for the Exploration of the Seas (IFREMER) and Robert Ballard. It was found approximately 340 nautical miles off the coast of Newfoundland, Canada 3,800 meters beneath the surface.
Access provided	Only by submarine, very small amount of visitors (less than 300)
Efforts to provide access	High degree of visualisation through 3D virtual tours based on scientifically recovered imagery. Sweeping images of the sunken ship were made by stitching together hundreds of optical and sonar images collected by deep-diving robots during a 2010 expedition. Exhibitions show artefacts.
Challenges (security, preservation etc.)	Large recovery of artefacts took place, damages were inflicted by vehicles bumping in the hull. Rusticle formation.
Web links	www.unesco.org/new/en/culture/themes/underwater-cultural-heritage/the-heritage/did-you-know/titanic

Issues	•	In situ visits are limited.
	•	Material was recovered unscientifically, but treated later correctly.

5. GRENADA – SHIPWRECK DIVING

Grenada is renowned for its large portfolio of shipwrecks and coral-covered artificial reefs. The most famous wreck is the 1961 shipwreck of the cruise liner *Bianca C.*, dubbed the "Titanic of the Caribbean". There are about 10 shipwrecks in the Grenada Shipwreck Diving program. They are located in different depths and vary in size. The ships are mostly metal and covered with marine plants, attesting to the fact that the wrecks may provide a beneficial habitat for flora and fauna to flourish. The combination of diving at different kinds of sites—wrecks, coral, etc.—along with taking diving courses, provides a unique opportunity to get to know about the underwater environment of Grenada and to obtain the knowledge necessary to prevent damaging underwater cultural heritage sites and artifacts.





Site, Preservation and Context	There are about 10 shipwrecks in Grenada Shipwreck Diving program. They are in different depths of water and vary in size. They are mostly metal ships covered with biofouling. Some of them provide good habitat for flora and fauna. However, the wrecks are mostly recent. The oldest one is the Bianca C, which sank in 1961.
Access provided	Aquanauts Grenada maintains two locations at the diver dedicated True Blue Bay Resort & Marina and is in close proximity to all major hotels on Grand Anse Beach on the property of Spice Island Beach Resort. A full service dive center at the islands, which is the only diver dedicated resort, is True Blue Bay Resort & Villas. The resort provides: dedicated snorkel trips; weekly night diving; day trips to offshore islands; digital photo studio; Nitrox up to 40%; SCUBAPRO rental equipment; UW scooter rental; 2 pools, and a class room. Grand Anse offers services for scuba divers, snorkelers, water sport enthusiasts, and children.
Efforts to provide access	Aquanauts Grenada Center has been established.
Challenges (security, preservation etc.)	The combination of diving on different kinds of sites—wrecks, coral, etc.—along with diving courses provides a good opportunity not only to get to know about the underwater environment, but also to obtain the knowledge to prevent damaging the sites and objects. This also highlights the importance of the underwater environment and it natural and cultural heritage.
Web links	http://scubadivinggrenada.com/wreck-diving.htm

Issues	•	Bianca C is not 100 years old
	•	Would the designation as good practice constitute publicity for private
		companies?

6. ITALY - THE UNDERWATER ARCHAEOLOGICAL PARK OF BAIA

The ancient city of Baia was a popular seaside resort for rich families of the ancient Roman Empire. By the end of the Roman Republic, it was a more influential and fashionable city than Pompeii or Herculaneum. However, due to volcanic activity and coastal subsidence, most of Baia is now submerged in the Bay of Pozzuoli. The site is close to Naples and Pozzuoli, the latter of which is also a culturally rich and interesting site. A special effort has been made to make Baia accessible by dive-trails and glass bottom boats. Thus, the protection of this submerged archaeological site lies not only in the hand of the authorities, but also depends on each individual diver accessing it.





Site, Preservation and Context	In 2002, the Underwater Archaeological Park of Baia was established. It prohibited all navigational activity surrounding the submerged archaeological site. Measures were taken to protect the marine archaeological area. Over the last years the Underwater Archaeological Park of Baia has seen an increase in the number of visitors with the high season being from April to October, coinciding with the summer months which are most conducive with comfortable access to the archaeological remains <i>in situ</i> . The number of diving centers has also increased in the area fostering the economic activity of this specific area.
Access provided	Visitors may take the guided dive tour organized by the National Marine Protection Area in the Bay of Pozzuoli in Italy and follow the route to discover the underwater city of Baia and admire the arcades and passages. Along one side of the route, one may view the thermal baths; while on the other are several rooms that served as hallways and entryways to the maritime area and the large fish breeding pools beyond. Also, glass-bottom boat visits are permitted.
Efforts to provide access	An agreement was signed between the authorities and diving clubs in order to provide the means to allow public access to the site.
Challenges (security, preservation etc.)	Many of the underwater relics, especially statues, were endangered by the environmental conditions and had to be replaced by replicas.
Web links	http://underwaterarchaeologicalparkbaia.blogspot.fr

Issues	 Some pieces (statues) are replicas and the originals were moved out of
	the water for preservation.

¹ Soprintendenza Speciale per I Beni Archeologici di Napoli e Pompei.

7. ITALY- GAIOLA UNDERWATER PARK

The Gaiola Underwater Park offers in one location with ancient archaeological remains and flourishing animal and plant life. Its spectacular submerged Roman ruins are accessible to the public and a special effort has been made to make them readily available for all to visit.





Site, Preservation and Context	The Park has been set up in 2002 to protect the important remains of an ancient Roman villa lying under water due to bradyseism, which caused the lowering of the soil by 3 – 4 meters since Roman times. The site includes a nymphaeum, a Roman harbour. and Roman moray eel ponds; in addition to many other ancient structures. The visit of this park is also interesting from a geological point of view because the hillside of Posillipo is the eastern limit of the volcanic area of the Phlegrean Fields. The overall morphology of the Phlegrean Fields is the results of the intensive eruptive activity of the enormous Phlegrean Caldera. In particular, the massive presence of tuff was caused by an eruption 12.000 years ago called the "Neapolitan Yellow Tuff Eruption".
Access provided	Glass-bottom boat tours are offered starting from the Gaiola MPA Visitor Centre. Before embarking, a guide shows a DVD to explain what the visitor can see during the tour. The boat has a special see-trough-surface to make it possible to see the underwater remains. The trip goes to Marechiaro, the Gaiola islets and to Trentaremi bay. Snorkelling can also be used to see the underwater remains, starting from Gaiola MPA Visitor Centre. Before the visit a guide explains the sites. Diving visits are offered for those who possess a diving licence starting from Gaiola MPA Visitor Centre. The visits can be completed by a land-based visit of the Pausilypon Park passing through the Seiano's cave. The park is located where in Roman times stood the villa of the rich equestrian knight Publio Vedio Pollio.
Efforts to provide access	A visitor centre has been installed.
Challenges (security, preservation etc.)	The installation of the Park did achieve the safeguarding of the remains as well as the environmental condition of the coastline, making it an interesting archaeological and environmental reserve.
Web links	www.areamarinaprotettagaiola.it

Issues	None observed.

8. ITALY- USTICA UNDERWATER ARCHAEOLOGICAL ITINERARY

The natural marine reserve of the island of Usticain Sicily offers visitors an underwater archaeological itinerary in the area of Punta Gavazzi. Photography is permitted. Visitors can also see the remains on board a boat with a transparent bottom.





Site, Preservation and Context	The discovery of a wreck datable to the beginning of the 5th century A.D., at Punta Alera (south coast) at 18 meters depth was made by the former Group for Underwater Archaeological Investigation of the Sicilian Region, which today is part of the Marine Superintendenze, with the technical support of the Diving Unit of Palermo City Police and the contribution of the Nature Reserve and Commune of Ustica.
Access provided	The underwater trail, in addition to a boat with a transparent bottom, provides access to visitors. The trail ranges from a minimum depth of 10m to a maximum of 24m. Signs giving directions using different colored lines underwater make it easy to find all the archaeological remains, in addition to plastic guides that are offered to the tourists for underwater visits. These include lead anchors, amphorae and other kinds of pottery. Special panels describe the function, date and provenance of each find; general information on navigation in antiquity; the different types of anchors and amphorae used and produced at that time; and maps of the itinerary and the rules with which visitors must comply.
Efforts to provide access	Access has been provided through MUSEI DEL MARE.
Challenges (security, preservation etc.)	The project managers tried not to break the contexts of the sites. Hence it is tried to leave materials in the original contexts, where this is possible.
Web link	www.museidelmare.org/frontend/musei/palermo_soprintendenza/collezione_en.swf www.webalice.it/giovanni.marola/Scuba/Isole/ustica.htm

Issues	None observed.	
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9. PORT ROYAL- SITE

One of Jamaica's most famous underwater sites is Port Royal or the "City that Sank". On June 7, 1692, an earthquake struck that largely destroyed the city and caused two thirds of it to sink into the sea. It is considered the most important underwater archaeological site in the western hemisphere.

This port also incorporates pirate history. Pirates from around the world congregated at Port Royal coming from waters as far away as Madagascar on the far side of Africa. Several 17th and early 18th A.D. century pirate ships lie within the harbor.

There is great tourism development potential in Port Royal and the economy of the town needs to be rejuvenated. The sunken remains of the city are in an archaeological preserve and diving is not permitted without a permit.





Site, Preservation and Context	The remains of the sunken city are an archaeological preserve.
Access provided	Diving allowed, no other effort made.
Efforts to provide access	Diving allowed through official permit. Diving must be monitored and safe guards established to protect the architectural remains and artefacts.
Challenges (security, preservation etc.)	The land-site environment is not secure.
Web links	www.icomos.org/risk/2006/17hamilton2006an.pdf www.atlasobscura.com/places/sunken-pirate-stronghold-at-port-royal

Issues	No effort was made to facilitate public access.

10. LIBYA-DIVE TRAIL OF APOLLONIA ON GLASS-BOTTOM BOAT

The Mediterranean Sea has been connecting nations since antiquity. More than 150 sunken cities or ports are now found on its coast due to rising sea levels, subsiding soil, or disasters. Sites such as Apollonia, on the Libyan coast, are examples of this. Apollonia is located about 20km from the ancient city of Cyrene in the region of Cyrenaica. The origins of Apollonia begin when it was founded as a Greek colony in B.C. 631 by the citizens of the island of Thera. During the Greek period, it was exclusively used as a harbor for Cyrene but then, during the1st century B.C., it became a distinct city with the name of Apollonia.







Site, Preservation and Context	Apollonia is currently the largest submerged city of the classical Greek period. This site has a high potential for underwater heritage tourism, even if much is yet to be done in terms of underwater archaeological research and providing access to the public. Preserving Apollonia's artifacts and taking advantage of its vast archaeological potential significantly depends on public support and responsibility.
Access provided	The ancient harbour and its structures allows one to envisage the establishment of a park with an itinerary for divers and a glass-bottom boat for people to see from the surface.
Efforts to provide access	A project plan for the creation of an underwater archaeological park in Apollonia has been elaborated, but not yet put into place.
Challenges (security, preservation etc.)	Problems include the pollution of sewage, which started in 2003, and the Al Manara Hotel, which is too close to the archaeological site and discharges liquids on the west of the modern harbour.
Web links	www.ingentaconnect.com/content/sut/unwt/2012/00000030/00000004/art00007" www.megalithic.co.uk/article.php?sid=17741

Issues	No effort has been made to foster access.

11. MEXICO-UNDERWATER ARCHAEOLOGICAL MUSEUM

In the Mexican State of Campeche lie some of the most important submerged cultural heritage sites of Mexico, among them Spanish vessels from the XVII century A.D. Campeche is one of the best areas in the world for practicing scuba diving amidst archaeological sites. The most popular shipwrecks include a Spanish ship from Cadiz, Spain, which sank during a furious storm in 1631 A.D. and the wreckage of the "The Fishing Boat", an English galleon that sank two hundred years ago. Several diving tours offer a visit to the submerged archaeological sites and provide tours to visitors with different levels of diving skill. Other underwater heritage sites are the famous Cenotes. They hold a very rich, but fragile, heritage and not all of them are accessible. Responsible behaviour towards this heritage is requested of all divers. Only this responsible behaviour by all can ensure these sites will survive for the future.





Site, Preservation and Context	Parallel to the field study, authorities have begun to transform some underwater sites into museums along the coastal waters. These will be opened to the public, under the surveillance of an official guide, as a recreational and educational visit. The most popular shipwrecks in the gulf are: - A Spanish ship sailing from Cadiz, Spain, which sank during a furious storm in 1631 A.D - The wreckage of the "The Fishing Boat", an English galleon that sank two hundred years ago.
Access provided	Visit via diving tours.
Efforts to provide access	Several diving tours include a visit to the submerged archaeological sites and even amateur divers can dive and visit the sites. More is in development.
Challenges (security, preservation etc.)	Currently, there are no exhibition areas to showcase elements found in the waters, making this museum one of the first of its kind in Mexico.
Web links	www.campecheplaya.com/images/pdf/museodearqueologia_en.pdf www.icomos.org/risk/2006/06luna2006an.pdf

Issues	•	The access is provided through private sector entities (Resort developers), should the best practices designation be publicity for them?
	•	Does the access comply with cultural heritage ethics? Any state related initiations or collaborations?

12. PORTUGAL-DIVE TRAIL ON THE OCEAN SHIPWRECK

Portugal has a rich seafaring history which is filled with discovery, commerce, but also conquering. At present, numerous Portuguese shipwrecks still remain in the oceans and seas all over the world as a result of Portugal's participation in the Age of Exploration, which lasted from around the 15th century until the 17th century A.D. Unfortunately, many of these wrecks have become victim to pillage or commercial exploitation. However, many of the wrecks have not been researched yet, either. Luckily, several underwater trails have been created in Portugal to allow the public to learn about this history and to provide access to these underwater sites, such as those of the Océan, Faro A, and the Pedro Nunes/Thermopylae. Visitors on the trails may follow signposts with captions in Portuguese and English and find that it is a fascinating way to learn about history and embark on a culturally rich and unique diving trip. The knowledge gained from visiting one of the Portuguese shipwreck sites makes it immediately obvious how important it is to protect such sites from being looted by souvenir hunters or commercial firms.





Site, Preservation and Context Access provided	In 1993 an analogous system was set up at the site of the wreck of the French flagship Océan, which sunk on 18 August 1759 off Salema beach, at a depth of around six to nine meters, west of the Algarve during the Seven Year War. Diving through the museum tours on trails.
Efforts to provide access	An underwater trail was established for visitors. In 2005, this trail was renewed using new signposting material, 316 stainless steel plaques screwed onto a concrete base/pedestal, with captions in Portuguese and English over a laser-engraved background image. The two other pilot projects by the CNANS in this area are the trail of Faro A and that of the Pedro Nunes/Thermopylae.
Challenges (security, preservation etc.)	
Web links	www.icomos.org/risk/2006/29alves2006an.pdf

Issues	None observed.

13. SPAIN- MUSEUM OF UNDERWATER ARCHAEOLOGY AND MARITIME MUSEUMS

The National Spanish Museum of Underwater Archaeology ARQUA, located in Cartagena, is a reference for discovering Spanish underwater cultural heritage. Amphorae, lead ingots, anchors, a life-size replica of the shipwreck Mazarron II, as well as the original hull remains of the Mazarron I—both of Phoenician influenced-form part of the collection on display in this museum. The visit offers a journey through the history of maritime activities, trading, and transportation; with particular emphasis on the Phoenician and Roman times. The Museum stresses the importance of the protection of the underwater cultural heritage and research, the principles of the 2001 Convention and shows to the visitors the work of underwater archaeologists as well as the restauration processes to be taken into account.





Site, Preservation and Context	The objects have been dislocated and the objects are in museums.
Access provided	No underwater access.
Efforts to provide access	Museum and replica
Challenges (security, preservation etc.)	
Web links	http://museoarqua.mcu.es/

Issues	•	This is a terrestrial museum with displaced artefacts
	•	No <i>in situ</i> access to the sites is provided.

14. SPAIN- SITE VISIT TO ARCHAEOLOGICAL EXCAVATION

Spain's underwater cultural heritage encompasses numerous ancient wrecks and submerged structures. The Catalan Federation of Underwater Activities (FEDCAS), together with the Underwater Archaeology Center of Catalonia (CASC – Centre d'Arqueologia Subaquàtica de Catalunya) offer, in collaboration with several dive clubs, public access to underwater archaeological sites in Catalonia. A particularly unique special attraction is the ability to visit underwater archaeological sites while field work is in progress. Thus, one is able to look behind the scenes of scientific work while obtaining a glimpse into history. Such an experience also enables the diver to fully understand the historical and archaeological importance and fragility of this submerged heritage.





Site, Preservation and Context	Varies from site to site.
Access provided	Guided visit on the sites and the excavations through the Catalan Federation of Underwater Activities (FEDCAS) and the Underwater Archaeology Centre of Catalonia (CASC).
Efforts to provide access	The FEDCAS organizes <i>in situ</i> visits to underwater archaeological sites while field work is in process by the CASC team. In addition, visits to research centres of underwater archaeology, laboratories and museums have been organized to show the post excavation process in any historical study of archaeological data.
Challenges (security, preservation etc.)	Diver security
Web links	www.fecdas.cat/agenda list.php?modal id=41&dep nom=Protecci%F3%20Pa trimoni%20Arq.%20Sub.&osCsid=va2hpvigai84imf43fpqjug0u2 www.mac.cat/Seus/CASC

Issues	•	There is no permanently open site, only occasional access according to the excavation and research seasons.
	•	Best practice would be the offering of the (temporary) activity not connected to particular sites.
	•	Sustainability of access.