

In-situ preservation of underwater cultural heritage in Taiwan and related issues

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ABSTRACT

The preservation of underwater cultural heritage is a nascent matter in Taiwan, and it is necessary to accumulate experience from trial and error in order to establish appropriate and feasible practice. As far as the in-situ preservation of underwater cultural heritage is concerned, in accordance with the 'UNESCO Convention on the Protection of Underwater Cultural Heritage', the domestic 'Underwater Cultural Heritage Preservation Act' stipulates that 'underwater cultural heritage should be preserved in-situ as a principle', and thus the competent authority imposes strict restrictions on the practices of preservation and excavation of underwater cultural heritage. But such actions have caused debates, such as: 'Is in-situ preservation reasonable in theory or feasible in practice?'

In Taiwan, since 2006, the underwater archeology team of Academia Sinica commissioned by the Cultural Heritage Bureau of the Ministry of Culture has officially launched the archaeological investigation of underwater cultural heritage. It has so far collected more than 700 pieces of documentary records of shipwrecks and underwater cultural relics in the surrounding waters of Taiwan, and 500 of them have been preliminarily investigated and verified as significant underwater targets. Among the 500 targets, 97 were confirmed as the remains of shipwrecks and cultural relics, and 6 of them have already been listed by the competent authority as special underwater cultural heritage in accordance with the 'Act' by now. Many more underwater cultural heritages are being prepared for listing. The problem currently arising is that are all listed underwater cultural assets required to be preserved in situ? How can we appropriately preserve them in-situ? Undoubtedly, this is a subject that needs to be carefully evaluated and planned.

Keywords: underwater cultural heritage, in-situ preservation, underwater archaeology, protection zone of underwater cultural heritage

THE DEVELOPMENT OF UNDERWATER ARCHAEOLOGY IN TAIWAN

Taiwan has a vast sea area. Due to the factors of human history and natural environment, there are rich and diverse underwater cultural heritage, including the remains of human activities in the Paleolithic Age more than 10,000 years ago, the submerged coastal settlement sites, as well as various material remains of human navigation activities from the Neolithic Age to modern times, are an extremely important historical and cultural treasure trove, which not only contains scientific research materials and evidence, but also precious cultural heritage. Underwater archaeological investigations are certainly needed. In the past, the National Museum of History firstly conducted archaeological investigations on the ancient shipwreck of the 'Jiangjun No. 1' in the waters of Penghu in 1996, 1999, and 2001 (Luo Shengzong 2011). However, after the completion of this work, the underwater archaeological work in Taiwan died down, and there was no further development.

It was not until the end of 1995 when the Council for Cultural Affairs entrusted the underwater archaeological team of Academia Sinica to carry out a research project on 'the Investigation and Excavation of Ancient Shipwrecks in Magong Port, Penghu, and the Talents Cultivation Program for Underwater Cultural Heritage and Conservation Science', and underwater archeology in Taiwan has sprouted again since then. Afterwards, the work of underwater archaeology, including carrying out general underwater archaeological surveys and doing research on ancient documents, archives and oral history relevant to underwater cultural heritage have been persisting until now. The Underwater Archeology Team has so far collected more than 700 pieces of information about shipwrecks and underwater cultural relics in the surrounding waters of Taiwan, and about 500 of them have been preliminarily investigated and confirmed as underwater targets with significance. Currently, 97 of these underwater targets have been verified as cultural relics and 20 of them have been identified as historical shipwrecks. Currently, the competent authority has listed 6 shipwrecks as special underwater cultural heritage for management in accordance with the 'Underwater Cultural Heritage

Protection Act' (hereafter as 'Act') (Cheng-hwa Tsang 2003, (Cheng-hwa Tsang et al 2012, 2014, 2015, 2016, 2018, 2019, 2020).

LEGISLATIONS AND MANAGEMENT SYSTEMS FOR THE PROTECTION OF UNDERWATER CULTURAL HERITAGE IN TAIWAN

The 'Act' is the main law for the protection of underwater cultural heritage in my country. Article 1 of the 'Act' states that

'In order to preserve, protect and manage underwater cultural heritage, to establish the link between nationals and history, to promote the characteristics of this ocean Nation, and to value the spirit of the Convention on the Protection of the Underwater Cultural Heritage of the United Nations and relevant international agreements, this Act is hereby enacted.'

The competent authority of the 'Act' is the Ministry of Culture. Following the coming into effect of the 'Act' in 2015, 13 sub-laws or regulations related to the preservation of underwater cultural heritage have promulgated one after another. The most important ones among them are:

1. 'Rules for the Implementation of the Underwater Cultural Heritage Preservation Act' (2016),
2. 'Regulations for Notification and Management of Activities Involving Seabed or Subsoil' (2016),
3. 'Regulations for the Investigation and Management of Underwater Cultural Heritage before the Development and Utilization of waters' (2016), 'Regulations for Cultivating Professionals of Underwater Cultural Heritage' (2016),
4. 'Regulations for the Administration of Activities directed at Underwater Cultural Heritage' (2016),
5. 'Regulations for the Designation and Management of Underwater Cultural Heritage Protection Zones' (2016), and
6. 'Guidance on the Operations of Underwater Cultural Heritage Survey and the Technology of Instrument Detection' (2017).

Therefore, the legal system concerning the protection of underwater cultural heritage in Taiwan covers most of the relevant aspects of protection and management. It seems to be quite complete, and should be able to provide a good foundation for the implementation and development of underwater archaeology. However, after many years of implementation, there are still some problems in the practice and enforceability with these regulations. In the following, I will focus my discussion on three practical issues of preservation in-situ.

PRACTICAL ISSUES ARISING FROM IN-SITU PRESERVATION OF UNDERWATER CULTURAL HERITAGE IN TAIWAN

As mentioned above, there are a large number of sunken ships in the waters around Taiwan, and currently 6 of them have been listed by the competent authority as special underwater cultural heritage in accordance with the 'Act'. Many more underwater cultural heritages are being prepared for listing. The problem currently arising is that are all listed underwater cultural assets required to be preserved in situ? How can we appropriately preserve them in-situ? Undoubtedly, this is a subject that needs to

be carefully evaluated and planned. As far as the current situation is concerned, at least three relevant issues are worthy of discussion:

- (1) The issue of taking cultural relics out of water.
- (2) Problems in the supervision and protection of listed shipwrecks.
- (3) The dilemma of establishing protection zones for underwater cultural heritage.

1. The issue of taking cultural relics out of the water

Article 2, paragraph 5, of the UNESCO UCH Convention: ‘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.’ This has become one of the most important provisions of this Convention. Correspondingly, my country's ‘Underwater Cultural Heritage Preservation Act’ has a similar provision.

Article 27 stipulates that

The preservation in-situ of underwater cultural heritage shall be the first option before allowing or engaging in any activities directed at this heritage. The proper means for in situ preservation referred to in the preceding paragraph may include recordation management, protection zone, or other proper preservation measures.

Therefore, preservation in-situ is one of the most important criteria for the preservation of underwater cultural heritage in Taiwan. Its legislative intention is probably even stronger than that of the Convention. Therefore, the fifth chapter of the ‘Act’ has a special chapter on ‘Excavating Out of the Water’, in which there are very strict regulations for the excavation of underwater cultural heritage:

‘Underwater cultural heritage shall not be excavated out of the water except for the following situations:

1. the underwater cultural heritage related to historical status or recognition of the nation.
2. The absence of such underwater cultural heritage could be detrimental to a full understanding of human history.
3. The underwater cultural heritage is of substantial commercial value that cannot be protected without excavating it out of the water.
4. Excavation is necessary for the investigation and research of underwater cultural heritage.
5. The underwater cultural heritage cannot be sufficiently preserved, protected or managed without excavating it out of the water due to an emergency or the change of the existing environment.
6. Other situations in which the competent authority deems necessary to excavate out of the water.

Based on these provisions, the competent authority has become very cautious about the underwater cultural heritage being taken out of the water. Even for approved underwater archaeological investigations, any action of taking underwater cultural relics must be reported for approval in advance. Even if there is an urgency for research or even maintenance, it must first be reported to the competent authority for deliberation and approval. This administrative rule that sticks to the law may

not be appropriate. Not only may it hinder the research needs and understanding of underwater cultural heritage, but also increases the risk of underwater cultural heritage preservation. This is because cultural relics preserved in water may not be absolutely safe, and they are often destroyed or vanished due to various human or natural factors. Therefore, whether cultural relics should be or not should be out of the water should be based on whether the measures of in-situ preservation can be better protected and maximize their benefits. And it should be evaluated and judged based on professional knowledge, not just a rigid legal clause.

2. Issues on the supervision and protection of underwater cultural heritage

Article 27(2) of the ‘ Act ‘ stipulates that

The proper means for in situ preservation referred to in the preceding paragraph may include recordation management, protection zone, or other proper preservation measures.

In my country, there is so far no underwater cultural heritage protection zone that has yet been established so far. The only way to protect the 6 listed special underwater cultural heritage is recordation management, which consists of monitoring and recording. The monitoring work is an attempt to observe the preservation state of the shipwrecks and to observe any change caused by either natural or human factors. The recording work aims to collect basic environmental data related to the preservation of the shipwrecks, mainly including: (1) sea area hydrology: current velocity, flow direction, tide, water temperature. (2) sea water quality: salinity, pH value. (3) sea organisms: planktons and benthic organisms. (4) sediment and topography of the sea bed: sediment morphology, water depth, seabed topography, and slope. Based on years of experience, it seems that there are still some deficiencies that need to be improved in the future. For example, in-situ preservation is not only necessary to avoid intrusion and interference by human and natural factors, but more importantly, to conserve the underwater cultural heritage on site. Professional understanding of the state of the in-situ preserved underwater cultural heritage, such as the decaying condition of the wooden relics, the degree of corrosion and decomposition of the metal objects, etc., will provide valuable information for taking appropriate maintenance measures. This kind of work is undoubtedly a very important part of in-situ preservation of underwater cultural heritage. Every underwater archaeological operation should be joined by professionally trained conservation personnel. It can assist underwater archaeologists to take immediate protection measures and provide suggestions for further actions to improve them. However, there is a complete shortage of personnel in this area and there is an urgent need to train them in my country.

3. The dilemma of establishing protected area for underwater cultural heritage

Article 28 of the Underwater Cultural Heritage Protection Act stipulates that

When the review committees make a decision that it is necessary to designate a specific underwater cultural heritage protection zone, the competent authority should consult with relevant authorities to designate and publicize an underwater cultural heritage protection zone within such a water area to preserve the underwater heritage in situ.

In order to implement the establishment of Underwater Cultural Heritage Protection Zones, the ‘Regulations for the Designation and Management of Underwater Cultural Heritage Protection Zones’ (hereafter as ‘Protection Zones’ coming into effect in 2016. Article 2 of this regulations stipulates that

The criteria for designating underwater cultural heritage protection zones are as follows:

(1) It has important historical, cultural, archaeological, artistic or scientific value and must be preserved on site in the form of a protected area.

(2) The texture of the underwater cultural heritage is fragile and prone to man-made or natural damage. In order to ensure the safety of the underwater cultural heritages, they must be preserved on site in the form of protected areas.

(3) The remains of underwater cultural heritage are widely distributed or are closely related to the surrounding environment. It is not enough to present a complete context unless preserved underwater, and must be preserved on site in the form of protected areas.

(4) Other needs for the preservation, protection or management of underwater cultural heritage.

Although the government has established comprehensive regulations for the establishment of underwater cultural heritage protection zones, no protection zone has been able to achieve so far due to many difficulties. According to Article 14 of the 'Protection Zones', the competent authorities may designate protection zones and make public announcements in accordance with the provisions of Article 28 (1), of the 'Act'. In addition, according to Article 30 of the 'Act', after the announcement of the protection zone, the competent authority should formulate to set up a management and protection plan, and may designate the following zones as appropriate: 1. core zone; 2. buffer zone. However, these provisions seem to be over idealized.

I herewith just mention three cases which show the difficulties of establishing a protection zone.

Case 1: The Green Island No. 1 was an important mid-19th century European trading vessel, the wreck of which is located in the water near the southeast coast of the offshore Island of Green Island in Southeastern Taiwan, and it is necessary indeed to designate it as a protection zone because of its underwater cultural heritage value. However, since its location is near the main port of Green Island and close to a recreational diving spot, it has immediately encountered resistance from local residents and tourism operators when a protection zone is proposed to set up there.

Case 2: The British steamship SS Sobraon wrecked near the northern coast of the Dongyin Island of the Mazu archipelago in 1901, the site of which is located in the military artillery shooting range. Although it can produce the effect of protecting underwater cultural heritage if a protection zone is set up there, the security of national defense must also be taken into consideration. Because Article 31 of the Underwater Cultural Heritage Preservation Act states:

Activity undertaken for the needs of national security or emergency may not be subject to the restrictions....., Any activity undertaken thereafter should be reported to the competent authority, except that a military or national defense secret involved.

Case 3: The underwater archaeological team has discovered a large number of sunken ships within and surrounding Dongscha Atoll in the South China Sea. This atoll is located in the South China Sea and is a very isolated island group, which seems to be a very ideal place for being designated as an underwater cultural heritage protection zone. But, it is exactly due to its remote and isolated geographical location, which makes supervision and management extremely difficult. Even if the protection zone is designated, it is difficult to achieve the effect of protection. Even today, fishermen from different countries sometimes come here to dismantle iron shipwrecks and salvage underwater cultural relics.

It is clear that the designation of an underwater cultural heritage protection zone requires consideration of many factors and is not an easy task. As Article 13(2) of the 'Protection Zone' states:

When deliberating the management and protection plan of the protection zone, the review committee may consider whether it will have a major impact on the rights and interests of stakeholders as well as underwater cultural heritage and their

context, including economic activities, research, education, tourism, leisure and entertainment that rely on the area, activities and other related rights and interests, fishery rights, aboriginal culture, ceremonies, or self-use behaviors that conform to sustainable use.

In 2021, Chapter 5 of the ‘Regulations for the Designation and Management of Underwater Cultural Asset Protection Areas’ was amended to include new regulations on access to underwater cultural heritage protection zones for tourism diving, including the requirements for qualifications for underwater tour guides. For the purpose of enhancing this provision, the competent authority has recently conducted training programs for underwater cultural heritage tour guides and hope to make preparations for opening some of the underwater cultural heritage protection zones in the future. However, If the establishment of the protection zones can finally be realized, sufficient planning must be completed before it is opened for diving tourists, especially for those who want to go underwater for guiding tours, the requirements for professional qualifications and knowledge training must be strengthened. Otherwise, it will be difficult to avoid irreparable harm to underwater cultural heritage.

CONCLUDING REMARKS

Although the investigation of underwater cultural heritage in my country has not been developed for a long time. A large number of underwater cultural heritage sites have been discovered, and it has aroused the general attention of the state and the people. Finally, the ‘Underwater Cultural Heritage Preservation Act’ was promulgated in 2015, but since its implementation is still a new matter, it still needs to accumulate experience from trial and error in order to establish appropriate and feasible ethics and norms. Among the many issues currently facing, the implementation of in-situ preservation is the most controversial. This may be due to the fact that the competent authority has been misled by the principle that ‘The in- situ preservation of underwater cultural heritage should be considered as the first and preferred option before allowing or engaging in any activities directed at this heritage.’ stated in the ‘Convention’. On the other hand, it may be due to the lack of understanding of the actual immediate hazards faced by underwater cultural heritage and the environment in which they are located. As a result, many strict restrictions have been set for subsequent excavations and removal of cultural relics from the water. Although the current situation has gradually improved after continuous communication between underwater archaeologists and the competent authority. But, the issues of the supervision and protection of the listed shipwrecks and other underwater cultural relics as well as the difficulties faced in designating protection zones for underwater cultural heritage are still important issues to discuss and find solutions.

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