

## THE PROBLEMS ENCOUNTER IN THE PROTECTION OF UCH

*Zhang Wei / China*

director of the Underwater Archaeology Research Center in the National Museum of China

---

### **The Problems encounter in the Protection of UCH**

---

The ocean covers roughly 70.8% of the Earth's surface. Not only profuse natural resources are mined there, but also incredible quantities of cultural heritages are buried in this broad region. Hundreds of thousands of shipwrecks are spread over the bottom of the ocean. Scientists predict that the ocean's status and functions are becoming more and more outstanding in the human survival and development in the 21st century. A *Blue Revolution* aiming at exploiting the oceanic Living Resources, energy resources, water resources, and metal resources is flowing all over the world. This, however, brings great threat to the protection of the underwater cultural heritages (UCH). At the same time, more and more countries' governments and private forms are paying more and more interests into those ancient treasures lying underwater. A global enthusiasm of treasure-hunting rapidly is still growing, coursing more and more damaging to the underwater cultural heritage. The international academic community demands with one voice that it is urgent to strengthening the Work of UCH protection, containing and attacking the treasure-hunting, and developing the Scientific archaeology excavation.

China is an ancient civilization with a history of more than 5,000 years, preserving a rich variety of cultural relics. And it can't be ignored that China is a great maritime power, with a coastline of 18400 kilometers long and more than 3,000,000 square kilometers territorial waters and other sea areas under the jurisdiction, and used to have long maritime history advanced foreign trade a world famous "Silk Road on Sea". A vast quantity of cultural relics are sleeping underwater in the territorial waters, Interior r waters and other ea areas under the jurisdiction. They are important part of the cultural heritage of China. To enforce the research of underwater archaeology and to effectively protect the UCH is a very important topic of Chinese archaeology work.

### **The development of the protection on UCH in China.**

---

For some historical reason ns, underwater archaeology was remaining a gap until 1980's. In 1986, the government

decided to set up the work of underwater archaeology. Under the direct leadership of the SACH, the National Museum of Chinese History (nowadays, the National Museum of China) carried out the mission, and set up the Underwater Archaeology Research Center, which is still the only form in this area. After 18 years of diligent work, Chinese Underwater Archaeology has yielded substantial results, filled in the gaps in the fields of science and sped up the development of the protection of UCH.

At the same time, the Chinese government gives weight to the legislation of the protection of UCH, and China is one of the few countries with this area. In October 1989, the Ministry of Civil Affairs promulgated the Regulations of the People's Republic of China Concerning the Administration of the Work for the Protection of Underwater Cultural Relics. Presently, the SACH began the Revision of the regulation, to meet the need of the UCH protection in light of the new situation, in the with respect to the new law of cultural relics.

So far, the Underwater Archaeology of China is already beginning to take shape, and yielded substantial results.

### **1 A professional Science & Research team which can independently carry out large-scaled underwater excavations has been established.**

The Underwater Archaeology Career was began with the training of the professional staffs, in a way of giving training courses of diving and underwater archaeology to the well-qualified fieldwork archaeologists, which we called as "Go out and Call in", sending personnel abroad to get trained, or inviting specialists to China to give lesson. From 1987 to 1989, staffs were sent to Holland, Japan and US to receive diving and underwater archaeology course, then in 1989 and 1990, we co-held the 1<sup>st</sup> Country-wide Underwater Archaeology Specialists Training Course with the University of Adelaide from Australia, 14 people had joined the course. To ensure the sustainable development of this career, we further carried out the second and the third Country-wide Underwater Archaeology Specialists Training Course independently to nurture the national underwater archaeology staffs. Now we have a team with 44 specialists from heritage-protecting branches or

archaeological departments of coastal provinces. The SACH certificated these specialists and has the right to convene the team in accordance with work requirements. We think that such kind of national underwater archaeology team might be very rare worldwide, at least, it belongs to the Second to none in Asia.

## 2 Investigation and Salvage Excavation of UCH

Under the leadership of the SACH, the National Underwater Archaeology Team has conducted a series of investigation and excavation with a protecting or emergency rescue character, on UCH in the Bohai, Huanghai, East China Sea and South China Sea, and Changjiang River. Here are some examples::

A The excavation of the Sandaogang Shipwreck of Yuan Dynasty in Suizhong, Liaoning Province.

It is a merchant vessel which is full of iron tools and porcelains from Cizhou Kiln of Yuan Dynasty, located in a sea area named Sandaogang, southwest of Suizhong County, Liaoning Province. The shipwreck is 13-15 meters underwater, with a bad visibility of less than 20 centimeters and a bad Working Environment. From 1991 to 1997, we worked six quarters. It is the most long-lasting and breathing out project we've ever conducted. The project was titled as the One of the Ten Greatest Discoveries in 1993. It was the first time for our national underwater archaeology team to carry out a underwater excavation independently. And the report fully reflecting the fruit of this excavation had been published by the Science Press, and Zhang is the editor-in-chief of the book, the first report of underwater archaeology excavation in China.(See pic 2, 3)

B Exploration and excavation of Nanhai I Shipwreck of South Song Dynasty in Guangdong, making valuable progress.

The Nanhai I Shipwreck of South Song Dynasty in Guangdong has drawn the most attention since it was found in 1980's. In November 1989, it was explored by the Nanhai Shipwreck of China Investigation Team which was formed by the National Museum of Chinese History and Underwater Archaeology Institute from Japan. That was the first time for Chinese Archaeology circle to hold cooperation with foreign academic bodies since the reform and opening up. From 2001, we restarted the Nanhai I project. the SACH authorized the Underwater Archaeology Research Center in the National Museum of China to form the Nanhai I Shipwreck Underwater Archaeology Team. From 2001 to 2004, seven quarters of underwater exploration and excavation works were carried out. And the information collected from the shipwreck laid the foundation of science for the coming overall excavation of the shipwreck.

Up to present, thousands of antiques were unearthed from the shipwreck, most of them are porcelains, with a sum of wares made of gold, silver, tin, iron, and also some copper coins, animal bones and nuts. The porcelains were from different kilns as Jingdezhen, Jiangxi Province, Longquan, Zhejiang Province, and Dehua, Cizao in Fujian Province. After analyzing the belongings of the wreck, it was dated to South Song Dynasty by specialists. (See pic 4, 5) Now we believe that it was a merchant vessel for overseas trade, full of porcelains from Quanzhou of Fujian, Longquan of Zhejiang and Jingdezhen of Jiangxi, on its way to traditional trading area in that ear, when it encountered the disaster.

Nowadays, the plan of excavation and protection of this shipwreck is being formulated and demonstrated. In order to protect the whole data that the shipwreck conceived, we are looking for some method to take the shipwreck and all its cargos and belongings together out off water, if so, it would be pioneering work in the protection of UCH.

C. The Salvage Excavation of UCH in Xisha Islands.

From the end of 1998 to the beginning of 1999, we carried out underwater archaeology investigation and excavation in Xisha Islands as part of the South China Sea Islands Archaeology Project which is issued by the SACH. Remarkable results were gained, 13 UCH sites of Five Dynasties period, and Song, Yuan, Ming and Qing Dynasties were found among the Huangguangjiao, Beijiao, and Yinyu Reefs, and yielded many antiques as the porcelains of Song and Yuan Dynasties, anchor stone, and ivory. They are the most telling witness to show that Chinese are the people who had first arrived and developed the South China Sea Islands, which are located on thoroughfare of the Silk Road on Sea. And the Xisha Islands is an inalienable part of the inviolable territory of China. (See pic 6, 7) That project was the first time for our national underwater archaeologists to operate exploration and excavation in off-lying sea, demonstrating the substantial headway this team had made in its development of pelagic performing ability and problem-solving capability. The report, *Underwater Archaeology in Xisha Islands* is sent to the Science Press.

D. The Salvage Excavation of Wanjiao (Bowl Reef) I Shipwreck of Qing Dynasty, in Pingtan County, Fujian Province.

This project is a typical case that we rescue UCH from treasure hunters. The shipwreck is located near the Wanjiao (Bowl Reef), southeast of the Yutou Island of Pingtan County, Fujian Province. When it was found by the fishermen in June this year, it was robbed by lawless crowd , they hired divers to salvage the cargos in the shipwreck.,

heavily damaged the surface of the site. Hearing this news, the SACH ask the administration branch, jointly with the public security department of Fujian Province and Fuzhou City to dealing severely with the illegal activities, and collected some of the robbed cargos. At the same time, the SACH authorized the Underwater Archaeology Research Center in the National Museum of China to carry out the salvage excavation on the shipwreck site. From mid-June the excavation began, and the initial results show showed that the cargo in the Wanjiao I Shipwreck are mainly the blue and white, and wucai porcelains which were judged by porcelain specialists to be produced in non-official kiln in Jingdezhen, Jiangxi Province and dated to Middle Kangxi Era, Qing Dynasty (around the year 1700). They were specially made for overseas trade. An initial statistics shows that there are about 50 types of ware and more than 100 kinds of decorations. The elegant porcelains are rich and colorful, bearing the historical and scientific importance and artistic value (See pic 8, 9, 10, 11)

### 3. Science and Research Base and the IT Application

Ratified by the SACH, the National Museum of China has built a Underwater Archaeology Research and Training Base which has a library, professional storeroom, network information highway, videoconference hall, Computer Control, IT security Center, and a display hall for underwater archaeology work and ship models. It is a place to do science research, training, data collecting and dealing, and international communication. In 2004, the 3<sup>rd</sup> Country-wide Underwater Archaeology Specialists Training Course was held here (See pic 12, 13). To enhance the IT Application of underwater archaeology, during the construction of the base, we built a high-quality and high-speed information platform. Through this platform, we will set up a data pool about the protection on UCH and related website to proclaim the information about the UCH in China which is released by the government, and collect the information of underwater archaeology and the UCH protection of other countries, following the UNESCO Convention on the Protection of the Underwater Cultural Heritage, promote the international cooperation and information sharing.

### The Main Problems Encountered in the Protection of UCH in China

As stated, China has earned notable achievement in the protection of UCH. According to the weakness of the underwater environment of the ancient cultural heritages, however, the protecting work is now facing a lot of problems. Comparing to the cultural remains on earth, the underwater cultural heritages are weaker. The weakness is manifested as

follow:

#### 1. The threat from the aquatic environment.

**A.** Wave, ocean current, tide, and the sediment movement along the coastal zone are very possible to do harm to the UCH, disturb the environments that they are located. For example the Donggu Warship of Zheng Chenggong of the Early Qing Dynasty in Dongshan County, Fujian Province, that was found in a small harbor in January 2000, within 20 meters near the bank. After lying under the sand for about 300 years, it was revealed by tide and current. We excavated the site, and found antiques as iron canon, bronze gun, bomb shells, gun powder, porcelains and a copper coin with the characters read “Yongli Tongbao” (See pic 14).

**B.** The corrosion that the salt and other chemical compositions in the seawater bringing to the UCH.

There are several kinds of dissolution salts in the seawater, the average salt content of the world is about 3.5%. The UCH, especially the porcelains were soaked by dissolution salts, when they are taken out off water, the glaze would be damaged by the precipitation of salts.

While some ancient porcelain types with special treatment, their surface would be damaged by reacting with some chemical compositions in the seawater. A recent example is the wucai porcelains that we found in the Wanjiao I Qing Dynasty shipwreck, Pingtan, Fujian, after soaking in the seawater for about 300 years, the decoration on the glaze used to be very colorful turns black (See pic 15).

**C.** The corrosion that seawater bringing to the metal wares and other damages by the marine organisms.

The seawater damages the metal wares badly, especially to the iron wares, with whatever chemical, physical or biological reactions. Iron wares played an important part in the cargos of ancient overseas trade and domestic trade of China. A large number of iron wares were found in the Song or Yuan Dynasties shipwreck sites in Xisha, or the Sandaogang Yuan Dynasty shipwreck, but none was in its original shape (See pic 16)

At the same time, there are damages coursed by the marine organisms. As many marine animals, plants and microorganism attached to the shipwreck, pulsing the corrosion of seawater, large numbers of iron wares and other cargos, like porcelains, are joint together and formed big blocks of Sediments. That also damages many antiques in shipwrecks. Such kind of phenomenon can be seen in the wreck site of the Sandaogang Yuan Dynasty shipwreck and the Nanhai I South Song Dynasty Shipwreck.

#### 2. The Threat from the Humanity Environment.

Comparing to the threaten from the natural environment,

the damage to the UCH course by human activities are more straight and severe.

#### A. The Robbery by the Treasure Hunter.

Driven by the commercial interests, there are many treasure hunters who are focusing on the salvage on UCH. They are in a stage of great fury in the South China Sea. The South China Sea is located on thoroughfare of the Silk Road on Sea. Great numbers of ancient antiques and wreck sites are spread in this area, they are the cultural heritages of all the human beings in the world. The robbery by the treasure hunters destroyed the UCH seriously, brought bad effects to the protection of UCH. Now the protection work about the UCH in coastal areas are encountering serious situation. The antique dealers' activities are increasingly rampant, driving more and more individuals joining the treasure-hunting activity. Such kind of disaster was happened in the Wanjiao I shipwreck, the site was heavily damaged.

#### B. The Threaten by Fishery

Since the reform and opening up, Chinese fishery and aquaculture developed rapidly, more and more fishing boat are crowded on sea. The overfishing not only hurts the fishery resources, but also threatens the UCH. The chances for fishermen to find ancient antiques underwater in trawl fishing growing are getting more and more. If these people don't know the value of the antiques, they might drop them back into the water, on the contrary, they would carry out illegal salvage for commercial interests. At the same time, more and more fishermen learn the skill of diving, they are destroying the UCH when they dive for fishing. When the fishermen found the shipwreck in Huangguang Reef in Xisha Islands, they bombed the surface of the site to get the cargos, lots of porcelains were lost in the robbery (See pic 18).

#### C. Threat from Large-scale Capital Construction and Exploitation of Maritime Resources.

The development of maritime environment, such as the constructions of harbor, bridge and the channel dredging might threaten the UCH directly, or potentially. For example, in 1995, during the construction of the harbor of Guang'ao, in Shantou, Guangdong Province, a warship of Zheng Chenggong was found. Although underwater archaeologists had explored and positioned the shipwreck, it can't be found now as the local government had not taken any measures to protect it. The operational mechanism to carry out archaeology investigation before capital construction on earth has been built for years, but such kind of investigations underwater are just few cases, far from a enforced rule.

### 3. Other Problems.

#### A. The Value and Its Protection of UCH are not fully

respected.

The Chinese traditional Culture always lack the cognition of the Blue Civilization, the agriculture civilization had occupied a predominant position, the understanding of the ocean was lacked by both the rulers and the general public in ancient China. Even in the contemporary time, it is still weak. Maybe still many people don't know that 9,600,000 square kilometers territory on land, but also 3,000,000 territorial waters. The protection of UCH has not drawn sufficient attention of the general public.

B. China has now taken the exploration of marine resources as an important part of the National Development Strategy, the development of a marine economy is considered to be an important measure taken in Revitalizing the economy. However, the protection of the UCH can't be ignored during the exploitation of the marine resources. This work is exposed to diplomacy, military, communication, oceanic, and oil exploration sectors, a Coordinating Mechanism is now mostly needed to enforce the information share and cooperation in different sectors.

#### C. The Limitation Caused by the Scale of the Underwater Archaeology Work.

The Chinese Underwater Archaeology work started very late, and is limited by various conditions. Comparing to the developed states, our capability of comprehensive research is still inadequate. The scale and ability of our professional team is too weak to carry out the work of protecting the great sum of UCH in our country's 3,000,000 square kilometers territorial waters.

## Countermeasures

---

Our human being is so small, we can do nothing about the irresistible natural disasters, but we can deal with the threat and damage from human activities. We can find the countermeasures to solve such kind of problems.

### **1. The Protection Work of UCH should be involved in the National Overall Strategy of Marine Development.**

The ocean is an important space for Chinese people to live and develop. The large-scale marine exploitation is the tendency of the future socio-economic development. This exploitation should be based on Sustainable Development. In this historical process, the government should attach great importance to the research, protection and exploitation on the UCH, coordinate the related sectors of administration, and built a network of control for the protection of the UCH, effectively prevent the damage to the UCH, institute a hard-core crack-down on treasure hunting activities, and

protect the UCH under law.

## **2. Country-wide general survey on Coastal UCH**

In the coming 8 -10 years, we will finish a general survey of coastal UCH and establish and maintain a file containing documents about UCH of China, proclaim the important sites as cultural relic protection units as soon as possible, and formulate positive measures to enforce the protection. China has a coastline longer than 18,400 kilometers, the capability of the cultural heritage administration sectors are limited, we need the cooperation with navy, and marine administration, Land and Resources administration, science and institute, and oil exploration sectors to accomplish the mission.

## **3 Enforce the Research of Soft Science, and formulate the Plan of the Protection of UCH and Underwater Archaeology Research.**

The South China Sea Area is the main-point of this plan, it is located on thoroughfare of the Silk Road on Sea, and also a meeting-point of the East and West Maritime Civilizations, a lot of historical shipwrecks are buried underwater, The State Administration of Cultural Heritage has authorized the Underwater Archaeology Research Center of the National Museum of China to frame the *Underwater Cultural Heritages Protection and Archaeology Work Plan*, and to start the following projects as soon as possible.: the overall excavation of the Nanhai I South Song Dynasty Shipwreck, the excavation on a Song Dynasty shipwreck which is located near the Huaguang Reef in Xisha Islands, one or two excavations on shipwrecks in Nansha Islands, based on the results of the coming underwater archaeology investigation. The results from the excavation can demonstrate that China has the unarguable sovereignty of the South China Sea Islands.

## **4. Speed up the Process of acceding of the UNESCO Convention on the Protection of the Underwater Cultural Heritage**

The UNESCO had organized the research and drafting of the convention on the protection of underwater since 1994. The specialists and officials from the SACH had joined the whole process. The Convention on the Protection of the Underwater Cultural Heritage was voted by ballot in the 31<sup>st</sup> plenary meeting, it was passed by 87 votes for it, 4 against it and 15 abstention votes, China cast a vote. This is the fourth convention on the protection of cultural heritages by the UNESCO. It offered guiding principles on the protection of UCH for the interests of the human beings. The Accession of this convention will be good for China to promote the protection of UCH, safeguard national interests and marine interests, conduct international cooperation and stop treasure hunting on UCH.

## **5. Enforce the disciplinary development, Broaden the Foreign Cooperation, Improve overall Performance of Chinese Underwater Archaeology**

We will take powerful measures to secure the Sustainable Development of underwater Archaeology work, promote the specialist training courses, expand the professional team, and enforce the cooperation with foreign institutes, improve our scientific research, and promote our influence in the world; speed up the construction of the Underwater Archaeology and UCH Protection Base, add investigating boat, deep dive and exploring equipments and develop specially adapted technology and equipments.

As mentioned in the beginning, the 21<sup>st</sup> century is a Maritime Century, it is a era of human beings to move toward the ocean and exploit the ocean. This, however, brings problems to China and to the world on the protection of UCH. At the same time, it is also a chance to enhance international cooperation and to create a new situation to protect the Cultural Heritages of human beings.

### **Abstract**

As a coastal great power, China has a long maritime history and is famous of the “Silk Road on the Sea”. In our territorial sea, inner waters and other jurisdiction areas, there are thousands of underwater cultural relics which are an important part of our national cultural heritage.

#### **1 The Development in the Protection of UCH in China.**

From the 1980s, the Chinese government began to pay more and more attention to the protection of UCH. The career of Underwater Archaeology has been set up and developed quickly, and gains great achievement under the directing and funding by the government.

#### **2 The main problems encountered by the protection of UCH.**

The frangibility of the underwater cultural heritage itself, the threat from the natural environment, the threat from the humanity environment, and other social liability to the UCH.

#### **3 Measures.**

the protection of the UCH has been involved into the national general stratagem of the oceanic exploitation, an overall UCH investigation along the national coast has been set out,

the process of joining the Convention on the Protection of the Underwater Cultural Heritage is being accelerated,

the capability of our Underwater Archaeology is being strengthened.

## THE PROBLEMS ENCOUNTER IN THE PROTECTION OF UCH

*Zhang Wei / China*

director of the Underwater Archaeology Research Center in the National Museum of China



Fig. 1 The third Country-wide Underwater Archaeology Specialists Training Course



Fig.2, 3 Porcelains were unearthed from Shipwreck of Yuan Dynasty in Suizhong, Liaoning Province-Playing child jar, Dragon and phoenix jar



Fig. 4,5 Porcelains were unearthed from The Nanhai I Shipwreck of South Song Dynasty in Guangdong



Pic.6,7 Excavation in Xisha Islands and Relics



Fig. 8 The salvage excavation of Wanjiao (Bowl Reef) I Shipwreck of Qing Dynasty, in Pingtan County Fujian Province

Fig. 9 Porcelains stole by treasure hunters

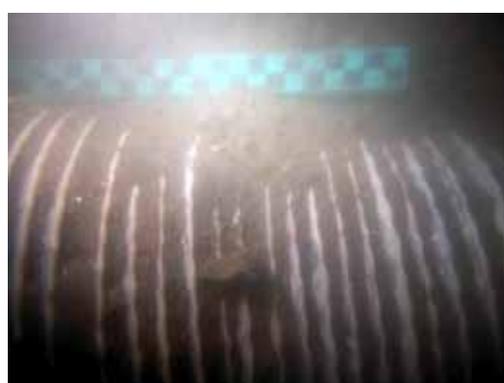


Fig. 10 Surface of the wrecksite



Fig. 11-A Blue and white porcelains were unearthed from Wanjiao I Shipwreck

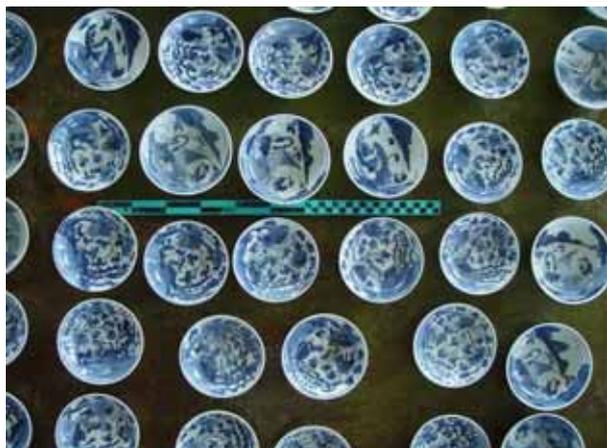


Fig. 11-B Blue and white porcelains were unearthed from Wanjiao I Shipwreck



Fig. 12 Underwater Archaeology Research and Training Base



Fig. 13 “Father of underwater archaeology” Geoge. Base in base, May 2004.



Fig. 14 Donggu Wardhip Site

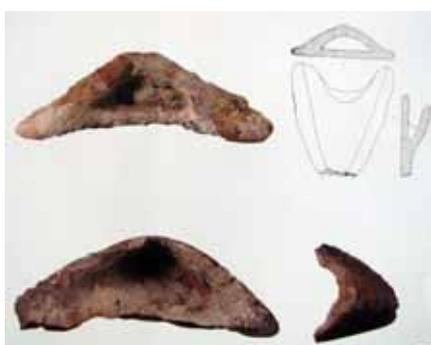


Fig. 16 Iron ware from Sandaogang Yuan Dynasty shipwreck



Fig. 15 Wucai Porcelains from Wanjiào I Qing Dynasty shipwreck





Fig. 17 Block



Fig.18 Surface of the wrecksite bombed by fishermen, Huangguang Reef in Xisha.