

Underwater Archaeology in India: Initiatives of Archaeological Survey of India

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ABSTRACT

India is surrounded by a vast coastline and encircled by a terrific riverine system. Due to this travellers and merchants easily managed to reach India through sea and riverine connections along with the land routes. The trade aspect enhanced other integral aspects like cultural interactions and economic exchanges which is why India is known to all other countries since antiquity. Archaeologically, a wide range of studies have been carried-out in India, however, the underwater archaeological studies are quite meagre. The history of India cannot be completed without the inclusion and proper study of its underwater cultural heritage.

To complete a wide gap in underwater archaeological studies, the Archaeological Survey of India (ASI), Ministry of Culture (MOC) has been involved in underwater explorations since the 1980s. Collaborations with the National Institute of Oceanography were done initially for studying and analysing underwater cultural heritage in India. During this period, many sites were explored along the west coast in the Arabian Sea and along the east coast in the Bay of Bengal. Sites on the west coast viz. Bet Dwarka, an island in the Gulf of Kachchh, Dwarka, Sopara, Elephanta and on the east coast such as Arikamedu and Mahabalipuram was explored and investigated. Giving the subject a more serious thought, an Underwater Archaeology Wing (UAW) under the purview of the Archaeological Survey of India (ASI) officially came into existence in 2001. Thereby several activities commenced viz expedition at Bangaram Island, Dwarka, Mahabalipuram, Loktak Lake (Manipur), Elephanta Island, etc. The topic of this abstract fits best within session '29. Underwater Cultural Heritage and Maritime Museums' because it will highlight the activities of UAW carried out so far in India along with a glimpse of a maritime gallery in the Archaeological Site Museum, Goa and new initiatives and challenges in the field of underwater cultural heritage.

Keywords: Underwater Archaeology, Maritime Gallery, Archaeological Survey of India, Chinese porcelain

Abbreviations: Archaeological Survey of India (ASI), Underwater Archaeology Wing (UAW)

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INTRODUCTION

Underwater Archaeology also known as marine archaeology is a scientific field wherein material remains of humans, and his past activities on the sea or river are studied. Worldwide, several underwater expeditions have been carried out till date, however, in India, it is still a young discipline. Considering a scientific field, it requires specialised training and expertise not only in archaeology but also in underwater related investigations. With the advancement in technology to study the underwater archaeological remains, an investigation for the submerged remnants of Pimpri, Tamil Nadu was carried out by a team of oceanographers somewhere in 1981 (Vora 1987, 159-164). This survey is regarded as the commencement of underwater archaeological research in India. Thereafter, S.R. Rao, a retired archaeologist from the ASI started a project namely 'Marine Archaeological Studies in Indian Waters' (Tripathi 2020, 150). The project gained wide publicity with underwater investigations at Dwarka, Gujarat. Due to stories behind the lost city of Dwarka, underwater archaeology as a discipline became popular in India. This was the moment which became the foundation of underwater archaeology in India. As a result, scientists, oceanographers, and archaeologists of Archaeological Survey of India (ASI) and National Institute of Oceanography (NIO) joined hands and thereafter collaborated for several other

underwater investigations in India. On the other hand, the project also led to illegal activities and underwater treasure hunting.

Even though there is paucity of underwater archaeologists in India, still, the number of works carried out by the Underwater Archaeological Wing (UAW) of the Archaeological Survey of India (ASI) since its inception in 2001 are noteworthy. To name a few sites related to underwater cultural heritage like Dwarka, Mahabalipuram, Loktak Lake (Manipur), Elephanta Island, etc. were extensively examined by the UAW. Considering the works of UAW, the present paper will highlight some of the significant activities and achievements of the Wing, new initiatives, and challenges in the field of underwater cultural heritage along with a glimpse of a maritime gallery in the Archaeological Site Museum, Goa.

A Beginning: Underwater Archaeology Wing

A wide range of archaeological studies have been carried-out in India; however, the underwater archaeological studies are quite meagre. The historical past of India cannot be completed without the inclusion and proper study of its underwater cultural heritage.

Since the 1980s, the Archaeological Survey of India (ASI), Ministry of Culture (MOC) has been involved in underwater explorations. Initially, ASI joined hands with the National Institute of Oceanography (NIO) to study and analyse underwater cultural heritage in India. During this period, many sites were explored along the west coast in the Arabian Sea and along the east coast in the Bay of Bengal. Sites on the west coast like Bet Dwarka, an island in the Gulf of Kachchh, Dwarka, Sopara, Elephanta and on the east coast such as Arikamedu and Mahabalipuram were explored and investigated. Giving the subject a more serious thought, an Underwater Archaeology Wing (UAW) officially came into existence in 2001. Same year, UAW carried-out its first underwater expedition in Lakshadweep.

First underwater expedition in India by UAW - *Bangaram Island* (2001-02)

After the creation of UAW, the first underwater exploration in India by this Wing was carried-out in 2001 off-Bangaram Island in Lakshadweep. The exploration led to the excavation. In May 2002, ASI collaborated with the Indian Navy for excavating a British shipwreck, Princess Royal, belonging to the 18th or 19th century which had sunk off the coast of Lakshadweep. INS Jamuna equipped with the latest survey equipment was deputed to carry out an underwater survey. The INS Nireekshak was deployed for underwater archaeological excavation.

The wreck of Princess Royal was found at a depth of 54 metres (Tripathi 2004, 1246). The Indian navy showed great enthusiasm in the project and extended full cooperation. As a result, it was the first systematic underwater excavation in India conducted by UAW. The excavation was recorded through videography and photography using underwater cameras and latest available technologies like side sonar, echo sounder, magnetometer, gravimeter, and satellite navigation system.

The Wing always focused on the *in-situ* preservation, and which is why the excavation was documented considering all the archaeological norms. This excavation yielded brown glazed pottery (*martaban* ware) in large numbers, Chinese porcelain along with objects of copper, iron, wood, etc. (Tripathi 2004, 1246-1250).

Mahabalipuram (2004-05)

Underwater exploration off Mahabalipuram in Tamil Nadu was carried-out in 2004. In February 2004, UAW along with the Indian Navy carried-out extensive diving and exploration here. The survey ship of Indian Navy, INS Darshak was deputed for the underwater explorations. Divers of ASI and Indian navy

made extensive diving near submerged rocks near the north side of the Shore temple. Though the surveys had to be limited due to the tsunami which occurred in December 2004.

In 2005, following the preliminary research UAW decided to do another round of extensive diving in Mahabalipuram (Tripathi 2007, 127-139). The Indian navy again joined hands with the ASI for the work. The entire project was well planned and documented using various means of photography. Several submerged rocks having marks of human activities and architectural members were identified and examined.

Besides, areas near the shore temple were excavated wherein remains of temples were observed. The evidence like square sanctum and entrance porch emphasised a temple like structure. Interestingly, a terracotta ring well was also discovered near the temple. The excavations shed a light on change in shorelines and submergence of structures in the sea.

Dwarka (2006-07)

In 2006, an exploration was conducted offshore and onshore in Dwarka, Gujarat, to understand the submerged archaeological remains. The coastal areas were examined during low tide wherein sculptures, and two stone anchors were discovered.

Based on explorations, underwater excavations were carried-out in 2007. The objective of the excavation was to know the antiquity of the site, based on material evidence. In this offshore excavation, the ASI's trained underwater archaeologists and the divers of the Navy searched the sunken structural remains. Findings like submerged remains, circular structures, scattered architectural members and stones were studied and documented.

Apart from underwater excavations, an area near the Dwarkadheesh temple was excavated in January 2007 (Tripathi 2013, 103-124). The entire area was full of successive structures; therefore, due care was taken to document all the features through drawings and photography. Different areas separated by structures were marked and documented in detail. The excavation yielded many antiquities which includes terracotta objects, beads, fragmented bangles, copper rings, iron ingots and pottery.

Loktak Lake (2009)



Figure 1 Floating huts: Loktak Lake (source: Archaeological Survey of India)

The UAW in 2009 focused the attention on the north-eastern part of India. Considering it, exploration in and around the Loktak lake in Manipur was carried-out in May 2009. The objective of the exploration was to find evidence of old settlements in the lake. Dwellings on floating islands in the lake are known to be quite an old tradition. These dwellings were made of organic materials which deteriorate very fast, and it is difficult to find their remains on land. But at the same time these organic materials get preserved when buried underwater. The remains of ancient dwellings in the lake could only be found through underwater archaeological investigations. Another objective of the exploration was to study ancient sites around the lake to study the changes in the lake and its impact on communities around the lake.

As per the plan for the exploration, the team (author of this paper was a part of the team) explored following areas around the Kangla fort, which includes some monuments and a site near the now dried-up Imphal River (Manipur River) where excavation was carried out by the Department of Archaeology, Manipur State. Nearby areas in Bishnupur district were also explored by the team.

The most interesting part of the exploration were islands namely Karong and Thanga in the Loktak lake. These are the two most densely populated islands among the 14 islands in the lake. The floating dwellings, namely, *phumdi* (floating huts/ islands) were also examined and documented (fig. 1). The location of Phubala in district Bishnupur was visited by the team to document a dugout canoe used by the people in the area. Ethnoarchaeological aspects were emphasised during the exploration to understand the culture and society.

Elephanta Island (2009)

The area around the Elephanta in Maharashtra has a rich historical and archaeological significance. The coastline of Elephanta has evidence of foreign pottery along with ancient coins and other artefacts. Considering the possibility of locating ancient port sites and shipwrecks, the area was chosen for preliminary offshore explorations. The area mentioned in ancient records namely Rajbandar was explored in October 2009 by the UAW in collaboration with the Indian Navy.

INS Sarvekshak of the Indian Navy was deputed for the exploration. Divers of the Indian Navy along with the team of ASI (author of the paper was part of the team) explored the entire area using technologies like sonar scanning survey (fig. 2). Samples were collected for further examination and documentation.



Figure 2 Exploration: Elephanta Island (source: Archaeological Survey of India)

Besides, explorations around the nearby villages - Rajbandar and Morabandar were carried-out wherein foreign potteries like glazed ware, Chinese porcelain, roman amphorae along with semi-precious stones, copper coin, etc. were discovered (personal record).

Maritime Gallery at Archaeological Museum, Old Goa

Considered a hub of maritime history, a gallery at Archaeological Museum, Old Goa was planned. It highlights a wooden model of Portuguese ship alongside narrations about the maritime trade activities between Portuguese and Indians. The gallery was made to highlight the underwater cultural heritage of Goa. Though, it is a small gallery but holds plenty of information on the trade and cultural interactions which were carried-out through maritime routes. The gallery is maintained and managed by the Goa Circle of ASI as it is a part of the museum (fig. 3).



Figure 3 Maritime Gallery, Old Goa (source: Archaeological Survey of India)

Challenges and achievements of Underwater Archaeology Wing

UAW has taken-up a few challenging works in India as mentioned above. The hardest part was the lack of underwater archaeologists in India. However, collaborations with the Indian Navy opened a new way and as a result a lot could be done. The much challenging part remains the same – training and expertise in the field of underwater archaeology.

The need for training to carry-out proper underwater expeditions have been thought-up meticulously. Considering a young brigade of archaeologists, ASI is in the planning phase of extending training to youngsters. Plan also includes practical training besides theoretical lectures. Attempts are being made to materialise the process of selection of interested candidates and further training.

Besides training, the need of awareness among masses towards underwater cultural heritage has also been regarded as necessary. Keeping this aim in mind, planning to include students of archaeology from

different universities for theoretical lectures has been done. This step would encourage youngsters to gain basic information on underwater archaeology which will support in understanding this subject.

CONCLUSIONS

After the inception of UAW, legal provisions for the protection and preservation of underwater cultural heritage were pipelined. It generated a huge impact on underwater archaeology as a discipline and encouraged research in the field. Carrying out underwater expeditions at several significant sites in collaboration with the India navy was another star on the hat of this Wing. The excavations led to the international conferences wherein officers from the Indian Navy, archaeologists, scientists, and oceanographers discussed best practices.

During the underwater archaeological works, UAW had also trained archaeology students and enthusiasts. Though, professional training in diving is the need of hour and collaborations with other organisations to acquire it is being done. More trained professionals mean awareness of this discipline and less illegal practices. UAW established a parameter with well documented underwater explorations and excavations in India which will further be enhanced by training more archaeologists.

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