

A Real-time Experience of Underwater Archaeology: A New Approach to Museum

Shivani Dindayal kamdi (Research Scholar, Indira Gandhi National Tribal University (IGNTU), India Shivanikamdi93@gmail.com)

Rupesh Uttamrao Dhokane (President of SocietyCenter for Archaeological Studies and Research Amravati (CASRA), Maharashtra, India rupesh.dhokane@gmail.com)

ABSTRACT

“Museums are the mirror of what can be seen in reality” In this paper, a blueprint of a maritime museum is presented, as in what way a museum can be of underwater archaeology. The efforts are to bring together the real time experience of how an excavation is done in underwater situations, because it is not possible for each one to visit underwater archaeology sites. It will also comprise the conservation part of the artefacts retrieved from an excavation to be done in a museum. The experience of submerged sites will be established in the museum, along with the replica of the artefacts, and how conservation of the submerged artefact in seawater is done will be displayed. The expected outcome of this paper is to present a unique museum design that can result in a real time experience for the person visiting the museum and can even be a place of research for maritime archaeology.

List of Figures

Figure 1 Image of Exploration_01

Figure 2 Image of Excavation grid_02

Figure 3 image of excavation grid_03

INTRODUCTION

In the world of artificial intelligence and space research excellence, things have become more approachable and understandable. The concept of virtual reality has excelled in the way and has progressed manifold which gives an experience of anything a human can imagine of.

With excellence in technology day by day and its application in every single moment, it also has helped in education to grasp everything visually, auditory, and kinetically. Today things are achievable because the infrastructure chosen for the things to achieve has a great base of technology and interpretation. Infrastructure too plays a major role in transforming an idea into a new concept.

One such concept is the real-time experience in the field of museums. Real-time experiences do not involve fully AI or VR or Holograms and such devices but it works on role-play emphasizing creating and presenting the idea in front of the audience. Different types of museums use different methods to display their concepts to visitors. Categorically museums have a wide variety of themes such as natural science, art history, maritime and so on and so forth “Museum is a hi-tech classroom for all age groups to understand, learn and apprehend things.

CASE STUDIES

The concept of a Museum has come from the person’s personal collection and urge to collect and store things for their belonging. The museums we see today were exceptionally different from the time they all started. This is a place of contemplation, working on thought processes and learning. The museums functioned as royal private collection storage for things gifted to royals as well as collected by royal families.

Ennigaldi-Nanna’s museum is the first museum considered and dated to c.530 BCE. It was located in the state of Ur, modern-day Iraq. In an excavation, there they found dozens of artifacts neatly arranged side by side, and their ages varied by centuries; they were museum pieces. Those pieces had museum

labels consisting of clay cylindrical drums with three different languages engraved on them. Later in time, the public museums began to spring up in the 18th century, notables are the British Museum in 1759 and the Louvre in 1793. These museums had grown out of private collections in which artwork was displayed. These museums were also influenced by the Paris salons, where paintings jostled for spaces on walls hung floor to ceiling with art. Now artists captivated these public spaces and museums galleries were a frequent subject of early 19th-century paintings.

The story of museums dates back to the oldest civilizations of the world. Considering today's scenario of the museums, we have come so far in having the base of these old museums. Today technology in museums has made them a place of experiencing the past and gives them the chance to live those moments in the present. Today the definition of a museum has changed completely by introducing interactive technologies to the museums, they have made a revolutionary impact on the effect of learning and experiencing the knowledge gained in a museum. The Prado Museum in Madrid 2019 introduced its first innovative 360-degree immersive experience. The National Museum of Singapore launched its exhibition "Story of the Forest"; it offers the visitor a chance to step into another world with colourful projections and breathtaking displays. Through the use of the VR Science Museum, London in 2017 offered its visitors an experience of space travel, it is one of the greatest milestones in UK space travel and there are many on the list who have excelled themselves by using technology and adding it day by day.

Why are sites submerged and why is there a need for underwater archaeology and its study?

Here the sea-level water rising issues and man made dam constructions play an important role in answering these questions. The effect of global warming and the rise in the sea level have made water occupy the area on land resulting in submergence. Prehistoric sites in some places got submerged due to sea level rise in places such as underwater archaeological sites called little salt spring, Warm mineral spring (Florida, USA), and Montague Harbour (British Columbia, Canada). Other sites include an Iron Age village in Swiss Lake, as well as crannogs in Ireland and Scotland. A few sites excavated within the last decade are Caesarea Maritima, Cosa Dvaraka, Hoff's Store, Kencherai, Pontia, and Port Royal.

First gallery

A museum First gallery which will be infused with real-time experience and its infrastructure will be like, visitors will experience being inside the sea, will enter the dark room with the exhibits displayed on both sides and over the head too, the same experience to be in a sea. The exhibits in this gallery will be on both sides in big tanks such as swimming pools and can peek through a glass barrier. The main part of this will be the person role-playing as an archaeologist and will perform the activities to inform the visitors regarding underwater archaeological exploration, sites, and their excavations. The whole picturization will give an overall idea and the amount of responsibility and risk on the shoulder of a person doing this job.

Mostly this gallery will give visitors a real-time experience, one of its kind and never experienced before. While role-playing is going on the water tanks a person (guide) will explain every movement of the person inside and will educate them about underwater archaeology and underwater archaeological sites. The environment here will be the replication of a deep sea, the idea behind this concept is to give an experience of the actual underwater site, which is not accessible, and it is an impossible place to visit any visitor.



Figure 1 Modified Image of Exploration_01 (Image Source:
<https://midwestnomads.com/2022/03/03/wonders-of-wildlife-museum-aquarium/>)

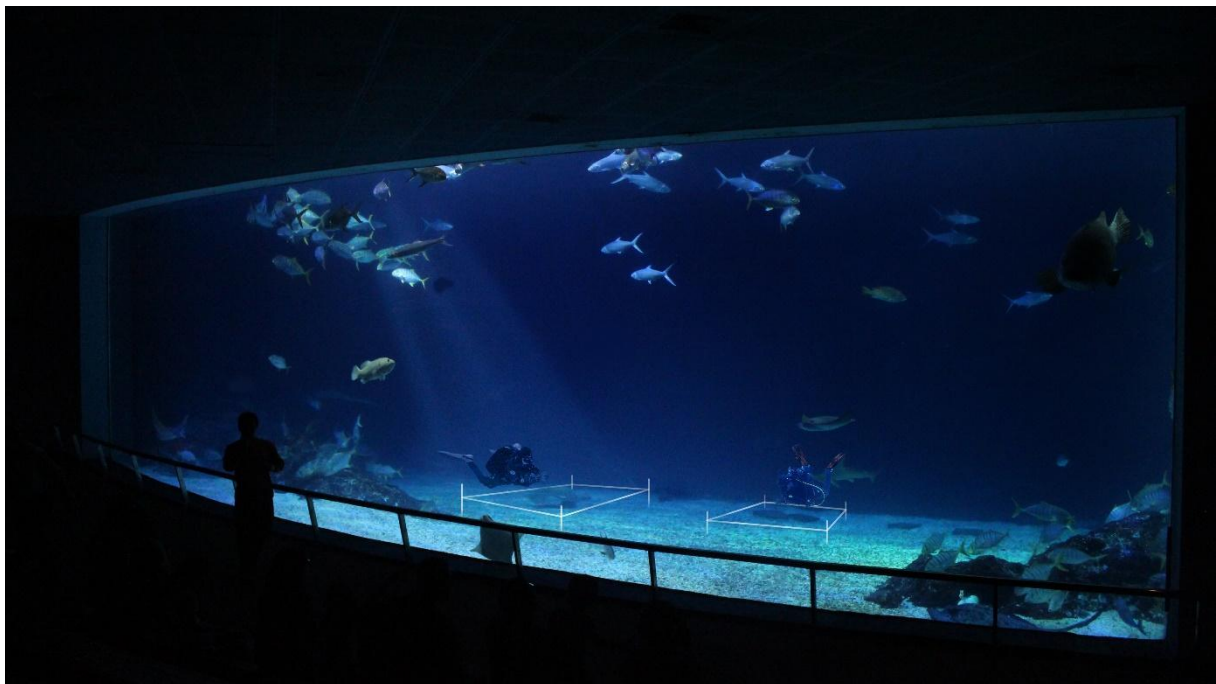


Figure 2 Modified Image of Exploration_02 (Image Source:
https://en.wikipedia.org/wiki/National_Museum_of_Marine_Biology_and_Aquarium#/media/File:ROC-NMBA_Open_Ocean_Aquarium_20160515b.jpg)

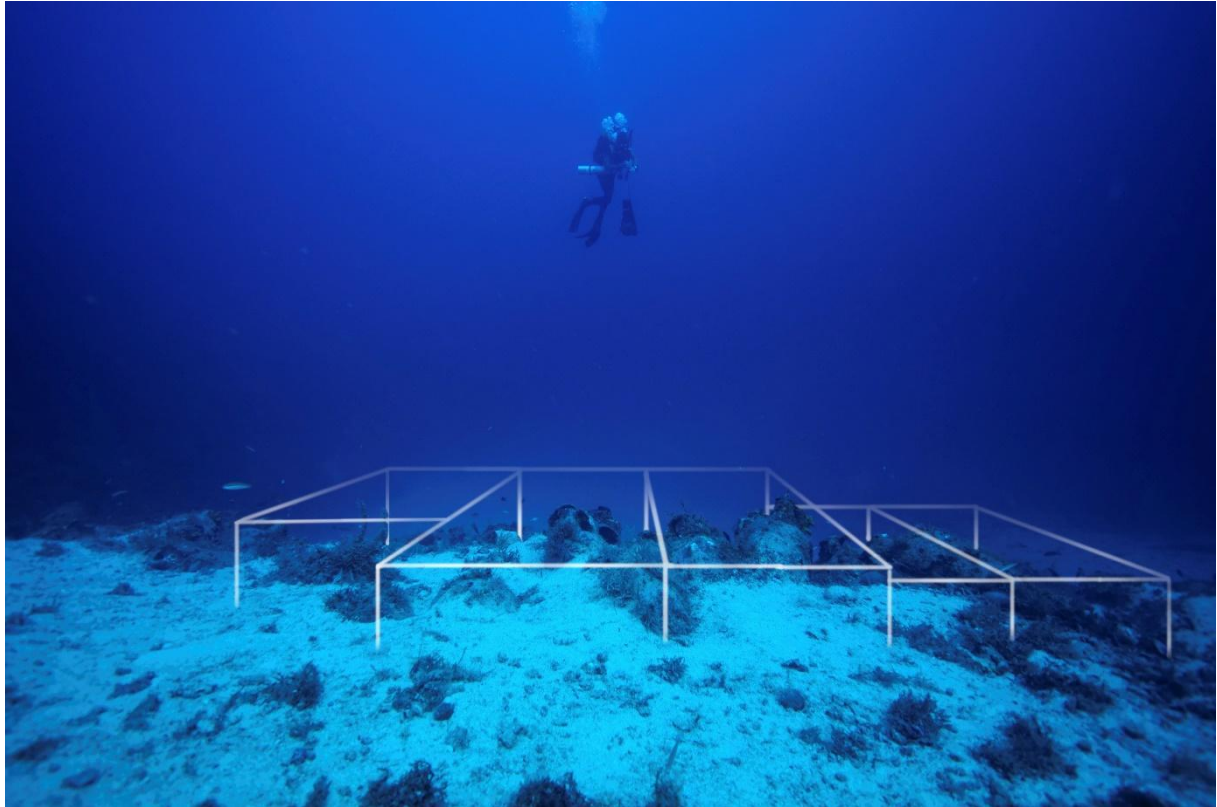


Figure 3 Modified Image of Exploration_03 (Image Source:
<https://www.weforum.org/agenda/2020/10/deep-sea-coral-reefs-biodiversity/>)

Second gallery

The second gallery will be displaying the artefacts that need conservation. Here in this gallery, the exhibits will be in the way that the actual work of conservation is on display for the visitors. Artefacts retrieved from the underwater excavations have to be kept for a period in saltwater and gradually with fresh water; it has to be replaced to treat the artefact and conserve it. This gallery will aim for displaying the artefacts which are chemically conserved and the ones which are in the process of conservation.

Third Gallery

The Third Gallery will comprise an information centre housing all information related to underwater archaeology, its scope, and its importance and will compile the smallest of its details for research purposes, tools instruments and equipment needed for underwater archaeology will be displayed here. This information centre gallery will lead the way to study the basics of oceanology, ultimately this becomes an important related field of study in understanding and dealing with underwater sites. Along with oceanology, nautical science becomes the second important branch. The information centre gallery will pave the way for young aspirants and young researchers with knowledge under one roof. This will give an insight into the related field of studies of underwater archaeological analysis and help to increase the community of researchers studying this field.

Fourth gallery

The fourth gallery or the visitors' space will be the area where it will house an activity area for children where they can experience diving and likewise, activities to keep this age group of visitors engaging, and others will be the receptive audience for engaging their children in likewise activities.

This will also serve as the photo gallery, it will house all the photographs of underwater archaeology and related knowledge-based photographs.

CONCLUSION

An Archaeological site plays an important role in the reconstruction of its past scenario. Terrestrial sites are easily approachable therefore it is conducive even in adverse circumstances to explore and excavate them, as a result of that archaeological museums are full of artefacts excavated on land. In comparison to this for underwater archaeological sites it's not possible to excavate them as frequently as it's done on land. It involves a high percentage of risk and expertise to dive in and excavate an underwater site, plus retrieval of the artefacts and conserving them is way pricier and time-consuming in comparison with the artefacts retrieved from the land. Despite its challenges, it is one of the important branches of archaeology which is mostly neglected due to its risk and challenges and even lack of expertise involved in it, therefore museums for such streams become very important to set up and make people aware. Museums are the best place to make people aware and add knowledge to already aware ones. The involvement of technology in museums has made them more experienced than ever before and made them more engaging. The main idea of this whole paper is to provide a blueprint for an infrastructure of a museum, which will give its visitors the actual situations without using any AI or VR or animated themes but to make them realize the effect of underwater sites and it's the never-ending effect on their minds which will be one of the milestones in setting higher standards for museums and its experience.

BIBLIOGRAPHY

- Barstad, Janet F. *International Handbook of Underwater Archaeology*. Edited by Carol V. Ruppé, Janet F. Barstad -Springer US (2002)
- McKinnon ,Jennifer F. Archaeology and the Emergence of Fields: Maritime, *Encyclopedia of Global Archaeology* - pp 414-420)
- Leshikar-Denton_ Margaret E., Erreguerena, Pilar Luna, and Aviles, Jeronimo . *Underwater and Maritime Archaeology in Latin America and the Caribbean*-Left Coast Press (2008)
- Dellino-Musgrave,Virginia. *Maritime Archaeology and Social Relations*, British Action in the Southern Hemisphere (The Springer Series in Underwater Archaeology) (2006)

Other:

1. History of the Museum Movement in the World:

https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000829IC/P001546/M024845/LM/1510309011P15-M04-HistoryofMuseumMovementintheWorld-LM.pdf

2. J. V. Maranto - The history of museums