

Marine Heritage Museum Of Shivaji Maharaj

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Abstract

The 'Marine Heritage Museum of Shivaji Maharaj' is envisioned as a cultural and educational institution dedicated to preserving the naval legacy of Chhatrapati Shivaji Maharaj. This research explores the significance of his maritime strategies, shipbuilding advancements, and coastal defense systems, which played a crucial role in shaping India's naval history. By analyzing historical records, architectural principles, and museum design strategies, the study aims to propose an interactive and immersive museum experience.

The research examines the role of technology in heritage conservation, integrating virtual reconstructions, augmented reality (AR), and interactive exhibits to enhance visitor engagement. Sustainability is a key consideration, emphasizing eco-friendly materials and adaptive reuse of coastal infrastructure. Comparative analysis of global maritime museums provides insights into best practices for effective storytelling and heritage interpretation.

Findings highlight the museum's potential to serve as an educational hub, fostering historical awareness, promoting tourism, and contributing to maritime research. This study establishes a framework for designing a marine heritage museum that not only conserves historical artifacts but also creates an engaging and informative experience for future generations. The research underscores the importance of preserving Shivaji Maharaj's naval contributions and their relevance in contemporary heritage discourse.

Key words:- Shivaji Maharaj, Maritime Heritage, Museum Design, Heritage Conservation, Interactive Exhibits

Introduction

Museums are places that preserve and showcase objects of cultural or scientific importance to society.

As a form of attraction, public museums that offer exhibitions and interactive activities tend to receive tourists from both within and outside the country, which makes them some of the most visited places in the world, garnering millions of yearly visitors. Various museums have collections that are publicly exhibited while some possess private collections that serve the purpose of research. Unlike libraries, museums focus on a wider variety of objects like art, science, natural history, or even regional history.

Ever since the first noted museum opened in antiquity, museums have been affiliated with scholarship, as well as collecting antiquities. A museum began as a private collection of curios, and it was only much later that purposes to educate the public were set.

Natural history museums, in the last quarter of the nineteenth century, were the manifestation of the scientific impulse to order life and the world. Their main focus was to gather specimens from many disciplines for research and public exhibition purposes. At the same time, expanding American universities created natural history collections to serve their students better. Scientific investigation, however, began to focus on cellular biology toward the end of the nineteenth century, so the most advanced work began to be done in university laboratories instead of museums.

The Smithsonian Institution and other major museums continue to function as research outposts, but for most museums, research is no longer their primary activity. Although the controversies on how collections are to be interpreted rage furiously, all museums share one basic duty to keep cultural and historic objects for the next generations.

A maritime museum (or nautical museum) is a museum that manages a collection of artifacts related to ships and other aspects of seafaring and maritime activities. The collection is usually very broad because it encapsulates the history, technology, economy.

Indus Valley Civilization (3000 BCE - 1500 BCE) - The earliest evidence of maritime activity in India comes from the Indus Valley Civilization, were port cities like Lothal in present-day Gujarat served as important trade centers.

The people of this civilization had knowledge of shipbuilding and navigation, facilitating trade with Mesopotamia, Egypt, and other ancient civilizations. The presence of dockyards and marine artifacts indicates an advanced understanding of maritime activities.

Mauryan Empire (321 BC - 185 BCE) - Under the leadership of Chandragupta Maurya, the Mauryan Empire established one of the first organized naval administrations in India. A minister known as Nav Adhyaksha or Superintendent of Ships was in charge of naval matters. Emperor Ashoka also advanced the military and commercial capabilities of the Mauran navy. They not only defended the empire's extensive coastline, but also aided in contacting far-off regions. The Mauryan navy was helpful in protecting the vast coastline of the empire and in communication with remote places.

Gupta Empire (4th - 6th Century CE) – The Gupta period is characterized by an increase in international commerce. Indian ships were prominent in Southeast Asia, China and the Middle East. While the Guptas didn't encourage naval battles, they did support commerce, shipping, and the construction of new vessels. Indian cultural influence also reached Indonesia, Cambodia, Vietnam and a few other countries through trade.

Chola Dynasty (9th - 13th Century CE) – The Chola Dynasty with Raja Raja Chola I and Rajendra Chola I at the helm have arguably been one of the most prominent naval powers in Indian modern history, as they ruled the Indian Ocean and Bay of Bengal. The Chola naval expanded aggressively in the Indian Ocean toward Sri Lanka and the Maldives, as well as to the Southeast Asian countries of what are now Indonesia and Malaysia.

Maratha Navy and Chhatrapati Shivaji Maharaj (17th Century) – Chhatrapati Shivaji Maharaj's Maratha Navy was one of the strongest navies during that era. Shivaji realized the intensifying dangers from European colonial powers and the Mughal Empire, and thus underlined the importance of having a robust navy to secure the Konkan coast and maritime trade routes. Shivaji constructed several naval forts along the west coast, including Sindhudurg, Vijaydurg, and Murud-Janjira, to improve maritime defense. Shivaji's navy consisted of various types of ships, including warships like Gurabs, Galivats, and Palis, designed for swift movement and effective combat.

His naval commander, Kanhoji Angre, later expanded Maratha naval power, successfully resisting British, Portuguese, and Dutch fleets in the Arabian Sea. Shivaji's vision of a self-sufficient naval force was revolutionary, as he was one of the first Indian rulers to recognize the importance of naval supremacy in warfare and defense.

The heritage of the Indian navy prior to British occupation represents a history of sea power, commercial supremacy, and naval combat. The achievements of the Indus Valley merchants, Mauryan bureaucrats, Chola invaders, and Maratha warriors established the roots of India's naval legacy, influencing its maritime destiny.

Museum Exhibits and Features –

The Marine Heritage Museum is an experiential museum, with:

- **Historical Artifacts:** Replicas of warships (Gurabs, Galivats, Palis), ancient maps, and navigation aids employed by the Maratha Navy.
- **Naval Fort Models:** Detailed scale models of Sindhudurg, Vijaydurg, and Suvarnadurg, highlighting their strategic significance.
- **Multimedia Presentations:** Interactive digital displays demonstrating naval battles, shipbuilding, and trade routes.
- **Kanhoji Angre's Legacy:** Special galleries on Angre's successes over European naval powers.
- **Cultural and Educational Programs:** Lectures, workshops, and documentary screenings focusing on Maratha maritime traditions.

Significance and Impact -

The Marine Heritage Museum has several functions:
Historical Preservation: It guarantees the documentation and preservation of India's naval heritage.

This attracts students, historians, and tourists alike and makes it easier to understand India's maritime history.

Revival of Traditional Shipbuilding: Exhibiting indigenous Indian shipbuilding methods, the museum promotes research and development in naval architecture.

Methodology

The research adopts a multi-disciplinary approach:
Historical Research: Study of Maratha naval strategies and maritime museums.

Design Strategy: Sustainable materials, adaptive reuse, and immersive tech (AR/VR).
Technology & Conservation: 3D modeling, digital archives, and eco-friendly methods.
Impact Analysis: Evaluating education, tourism, and historical accuracy with expert input.
 This ensures a historically accurate, sustainable, and engaging museum design.

Case Studies

Literature Case Study 1 – Danish Maritime Museum
 Location : Helsingor, Denmark

Original use : (1915 Danish trade and shipping centre)
 Architect : Bjarke Ingels Group Area : 17500 msq Year of construction : 1915 Year of redevelopment : 2013
 The Danish Maritime Museum, located in Helsingor, Denmark, is a globally recognized institution dedicated to showcasing Denmark's rich maritime heritage. Designed by the renowned Bjarke Ingels Group (BIG), the museum is an underground structure built around a former dry dock. Its innovative architectural design and engaging exhibits provide valuable insights into how maritime museums can be both educational and visually captivating.

The museum features an architectural design that is built underground, utilizing an abandoned dry dock while preserving its historical essence. It incorporates interactive exhibits through multimedia installations, holographic displays, and digital storytelling to engage visitors. Historical artifacts such as ship models, navigation tools, and historical documents from Denmark's naval history are prominently displayed. The museum also offers educational programs, including lectures, workshops, and guided tours to educate visitors about Denmark's maritime contributions. With a strong sustainability focus, the design ensures minimal environmental impact while maintaining historical integrity.



Fig. 1. Danish maritime museum.

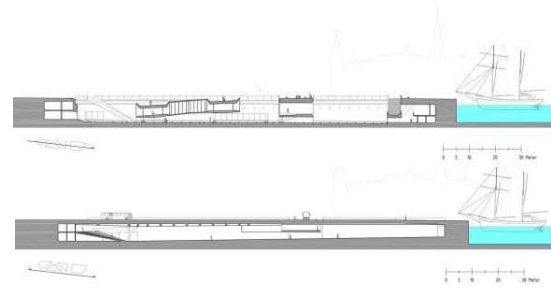


Fig. 2. Section of danish maritime museum

The concept for the architectural design aimed to preserve the existing site as much as possible. Instead of covering the dry dock, the architects preserved its shape and depth, creating an underwater museum. The space is bounded by a combination of slopes and bridges that encapsulates the sunken structure. This allows the users to experience the museum in a more active and richer way. The flow of movement is circular in one direction and in one direction, there is an exhibition space in all directions together with the visual space of the dry dock.

The use of materials serves the construction purpose with concrete, steel and glass juxtaposing the modern and industrial style, remaining within the theme of the museum. The glass bridges allow visibility, as do the ceilings lights which illuminate the space under the ground, decreasing the need for lighting. The glass construction above also allows for passive heating whilst using less energy due to designing the building underground.

One of the main challenges of the project was constructing a fully functional museum below ground level while ensuring structural stability. Reinforced retaining walls and waterproofing techniques were implemented to protect the museum from water infiltration. Another challenge was maintaining visibility of Kronborg Castle, which was addressed by keeping the museum underground and using bridges as the only visible architectural elements above ground.

The Danish Maritime Museum has received numerous awards for its architectural excellence, including the 2014 Architizer A+ Award and the 2014 RIBA EU Award. It stands as a remarkable example of contemporary museum design, demonstrating how architecture can honor history while embracing modern innovation. The project highlights the potential of adaptive reuse in preserving historical sites while creating meaningful and engaging spaces for the future.

Literature Case Study 2 – NMHC, LOTHAL

Project: national maritime heritage complex (nmhc)
Site location :lothal, bhal region, gujarat
Site area: 315 acres



Fig. 3. NMHC Lothal museum.

The National Maritime Heritage Complex (NMHC) is an ambitious project under development in Lothal, Gujarat, aimed at showcasing India's extensive maritime history and heritage. Lothal, an ancient port city of the Indus Valley Civilization, is renowned for having one of the world's earliest known docks, connecting it to an ancient course of the Sabarmati River.

Project Overview – Initiated under the Sagarmala Scheme by the Ministry of Ports, Shipping, and Waterways, the NMHC is being constructed in phases. The foundation stone was laid by Prime Minister Narendra Modi on March 4, 2019. The complex is set to span approximately 400 acres, with 375 acres dedicated to the main complex and 25 acres for staff residential facilities.

Phases of Development –

- Phase 1A: This phase includes the construction of the National Maritime Heritage Museum, featuring five galleries and a naval gallery, covering an area of 35 acres. The estimated cost for this phase is ₹1,200 crore, with completion expected by August 2025.
- Phase 1B: Plans for this phase encompass additional museum galleries, a Lighthouse Museum, a 5D dome theater, gardens, and other infrastructural elements.



Fig. 4. Plan of NMHC lothal museum.



Fig. 5. Ariel view of NMHC lothal museum.

Architectural and Design Aspects – The architectural design is led by the firm Hafeez Contractor, serving as the principal management consultant. The Indian Port Rail and Ropeway Corporation Limited (IPRCL) has been entrusted with the implementation work, with Tata Projects undertaking the construction of Phase 1A.

International Collaborations – The NMHC project has garnered international interest, leading to collaborations with countries such as Portugal, the United Arab Emirates, and Vietnam. These partnerships aim to enrich the complex with global maritime perspectives and exhibits.

Significance and Impact – Upon completion, the NMHC is poised to become a major international tourist destination, offering immersive experiences that highlight India's maritime legacy. It is anticipated to generate approximately 22,000 direct jobs and attract an estimated 25,000 visitors daily.

Comparative Analysis

Both the Danish nautical Museum in Helsingor and the National Maritime Heritage Complex (NMHC) in Lothal honor nautical history, although they do it in different ways, both conceptually and architecturally. India's maritime history from the Indus Valley Civilization to the present is on display in the expansive cultural complex known as NMHC, which is situated in Gujarat. Its imposing layout, which was influenced by Harappan city planning, includes several museums, theme parks, and restored ancient ports.

The Danish Maritime Museum, on the other hand, was created by the Bjarke Ingels Group (BIG) and is a simple, environmentally friendly building centered on a former dry dock. The historical site is preserved by its contemporary, underground architecture, which also integrates state-of-the-art digital storytelling methods.

The Danish Maritime Museum takes a more curated, specialized approach, concentrating on Denmark's naval history through immersive digital exhibitions, whereas NMHC is intended to be an interactive, multimedia-driven experience that incorporates 5D theaters and augmented reality for a broad audience.

An original contribution would be made by the Shivaji Maharaj Naval Museum, which would exclusively recognize India's indigenous naval tactics, especially those developed by Chhatrapati Shivaji Maharaj.

India's maritime power was formed by his shipbuilding methods, fortresses, and naval advances. Like NMHC and the Danish Maritime Museum do for their respective regions, the establishment of such a museum would serve as a center for research and education as well as increase tourism and national pride. Through the integration of sustainable construction, historical preservation, and interactive storytelling, the museum would guarantee that Shivaji Maharaj's naval.

CONCLUSION

The establishment of a Shivaji Maharaj Naval Museum is not just a tribute to his visionary maritime strategies but also a vital step in preserving India's rich naval heritage. particular, highlight humanity's deep connection with the seas, The research adopts a multi-disciplinary approach:

The museum would inform future generations about India's nautical prowess even before colonial influences by exhibiting his contributions to naval combat, coastal defense, and shipbuilding. It would also function as an interactive learning environment that promotes historical understanding, stimulates research, and stimulates creativity in contemporary naval design. The museum is a vital institution for conserving and honoring India's marine heritage because it would enhance tourism, cultural identity, and national pride in addition to history.

References

National Maritime Heritage Complex (NMHC), Lothal – Ministry of Ports, Shipping, and Waterways, Government of India. Available at: <https://nmhc.in>

Danish Maritime Museum, Helsingør – Bjarke Ingels

Group (BIG), Architectural Case Study. Available at: <https://www.mfs.dk>

Indus Valley Civilization and Lothal's Maritime Significance – Archaeological Survey of India (ASI). Available at: <https://asi.nic.in>

Maratha Navy and Chhatrapati Shivaji Maharaj's Naval Contributions – Maharashtra State Gazetteers, Government of Maharashtra.

Adaptive Reuse in Museum Architecture: The Case of the Danish Maritime Museum – ArchDaily. Available at: <https://www.archdaily.com>

The Role of Museums in Heritage Conservation – International Council of Museums (ICOM). Available at: <https://icom.museum>

Sagarmala Scheme and India's Maritime Infrastructure Development – Ministry of Shipping, Government of India. Available at: <https://sagarmala.gov.in>

Kanhoji Angre and the Maratha Naval Power – Indian Navy Official History. Available at: <https://www.indiannavy.nic.in> Indus Valley Civilization and Lothal's Maritime Significance – Archaeological Survey of India (ASI). Available at: <https://asi.nic.in>

Maratha Navy and Chhatrapati Shivaji Maharaj's Naval Contributions – Maharashtra State Gazetteers, Government of Maharashtra.

Adaptive Reuse in Museum Architecture: The Case of the Danish Maritime Museum – ArchDaily. Available at: <https://www.archdaily.com>

The Role of Museums in Heritage Conservation – International Council of Museums (ICOM). Available at: <https://icom.museum>

Sagarmala Scheme and India's Maritime Infrastructure Development – Ministry of Shipping, Government of India. Available at: <https://sagarmala.gov.in>

Kanhoji Angre and the Maratha Naval Power – Indian Navy Official History. Available at: <https://www.indiannavy.nic.in>

