

# Coastal Heritage in Climate Change

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ICOMOS Denmark & ICOMOS Germany

## Group: Documentation of Coastal Heritage

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## 1. Theory

- Importance of Coastal Heritage Documentation
- Methods and Approaches for Documentation
- Conservation and Management of Coastal Heritage

## 2. Case studies

- China
- Mexico
- Iran



## Preserving Cultural Heritage

- Coastal communities have a rich history and traditions that reflect their cultural practices and societal norms.
- Documenting this heritage provides insights into their ways of life, customs, and contributions to the broader cultural landscape.
- Safeguarding cultural practices ensures their continuity, connects future generations with their roots, and fosters cultural pride and preservation.
- Coastal heritage shapes local identities, representing collective memory, values, and beliefs, promoting social cohesion. ([UNESCO, n.d.](#))



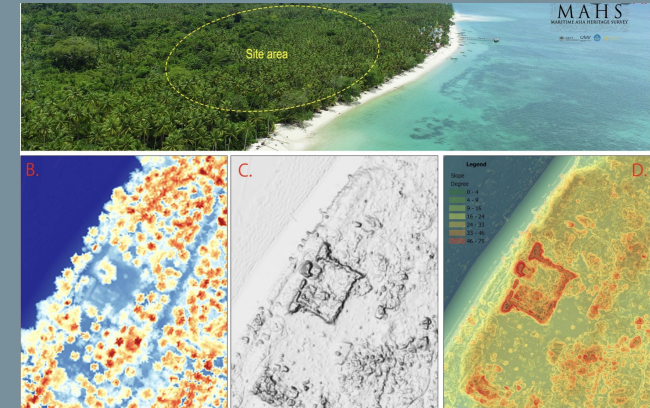
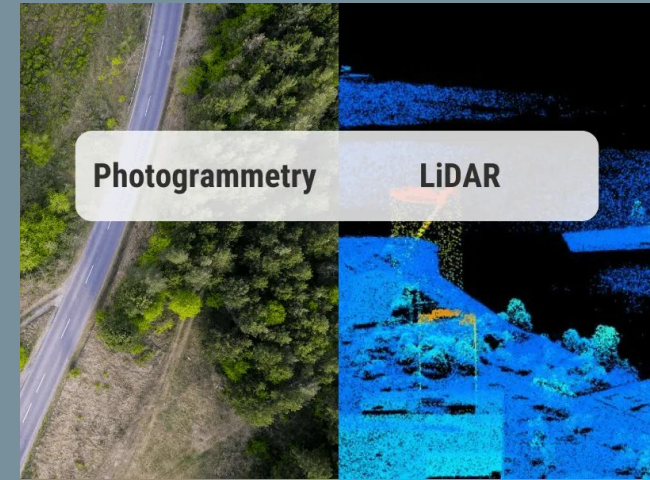
## Protecting Natural Ecosystems

- Coastal areas are dynamic ecosystems with ecological importance, serving as nurseries for marine species and supporting diverse habitats.
- Documenting coastal ecosystems helps to understand species interactions, nutrient cycles, and the impact of human activities. ([NOAA Fisheries, n.d.](#))
- Unique coastal ecosystems, including biodiversity hotspots, are globally significant for conservation.
- Documenting and protecting these areas preserves biodiversity, addresses environmental threats, and promotes conservation efforts through strategies like habitat restoration and sustainable practices. ([United Nations Environment Programme. \(2021\)](#))



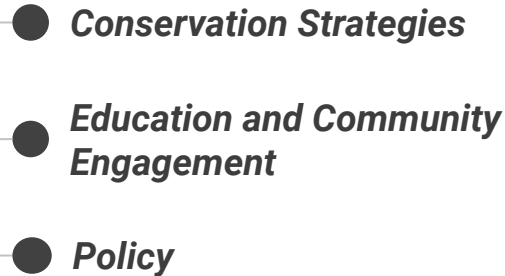
- Photography
- Photogrammetry - 3D models
- Aerial and terrestrial LiDAR - 3D models of objects and environments
- GPS
- CAD drawings - architectural drawings

- Adequate metadata
- Controlled vocabulary
- Fair and Care Principles





Conservation and  
Management of  
Coastal Heritage



- o **Assessing** the condition and vulnerability of coastal heritage sites
- o **Implementing** conservation measures for structures, artifacts, and ecosystems
- o **Promoting** sustainable tourism and responsible visitor management
- o **Involving** local communities in the documentation and conservation process
- o **Empowering** communities through education and awareness programs
- o **Partnerships** with stakeholders for long-term heritage management
- o The **legal frameworks** for coastal heritage protection
- o **Collaborating** with governmental and non-governmental organizations to ensure heritage conservation

*CURRENT CHALLENGES: Deficiency of raw materials ; coastal and marine construction project*

## HERITAGE

### Tangible



Religious Venue  
(Taoism)



Traditional Residence  
(seaweed house)



Inscription

### Intangible



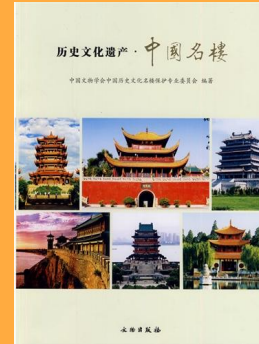
Dance



Handicrafts  
(kites)

## DOCUMENTATION

- Publications:
- Documentary
- Digital Project



## References

Lin, Z. (2019) 'Issues in underwater cultural heritage impact assessments in China', *Coastal Management*, 47(6), pp. 548–569. doi:10.1080/08920753.2019.1669100.

Jianbo, J. & Xiuhui W. (2016) 'Study on the conservation and development of characteristic residential architecture in the coastal area of Jiaodong--a case study of sea grass houses in Jieming Island, Rongcheng, Weihai, Shandong Province'. *Fujian Architecture*, (2), pp.16-20.



Location and main ikoot settlements



Map of the region in the "Relación de Teguantepec" (1580)

*"For the Ikoots women, these are times of crisis due to constant modifications of the natural environment that resulted in the instability of the lagoons, short production seasons, and long dry seasons."* (Chavelas, 2020)

## CHALLENGES

- Indigenous language at risk of disappearance.
- High seismic area.
- Regulation of the use of new fishing technologies in the area.

## OPPORTUNITIES

- A current community project to restore the lagoon system (mangrove)
- Community resilience
- Built heritage' records by applying new technologies.

## HERITAGE

### Tangible



Architecture



Textiles

### Intangible



Fishing tradition



Language



Dance and music

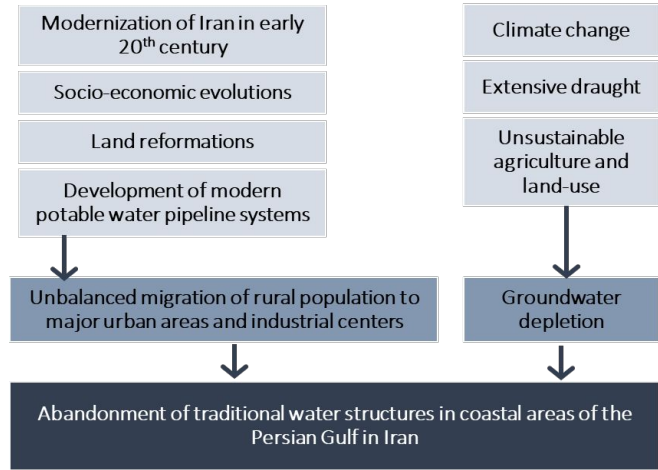
### References

<https://arqueologiamexicana.mx/lenguas-indigenas/huaves>  
<https://ichan.ciesas.edu.mx/nombrar-la-tierra-es-defender-los-territorios/>  
<https://www.educaoxaca.org/semana-santa-las-mujeres-ikoots-y-los-dias-de-guardar/>  
<https://prizmanoticias.com/2019/01/24/herencia-y-creatividad-la-pesca-con-papalote-en-san-mateo-del-mar/>



# Case Study 3: Iran

## Historic Water Structures in the Coastal Areas of the Persian Gulf



North



South



**Iran** is an extensive country in the Middle East with an area of approx. 1.65 million square kilometers. More than 60% of the country has hot and arid climate, one third of which is covered by arid deserts. The coastal areas of Iran are divided into two main zones: the moderate humid forests near the Caspian Sea in the north, with their wooden architecture, and the Southern coastal line of approx. 2000 km along the Persian Gulf and the Oman Sea, with hot and humid climate.

Providing fresh potable water for the residents of the Southern coastal areas has been a challenge throughout history. This has resulted in formation and evolution of efficient traditional water structures with passive and sustainable solutions to provide fresh water, which have been abandoned in recent century.



Stone Dam



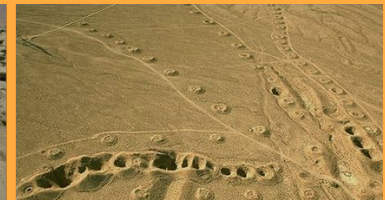
Water mills



Wells



Cistern



Qanats

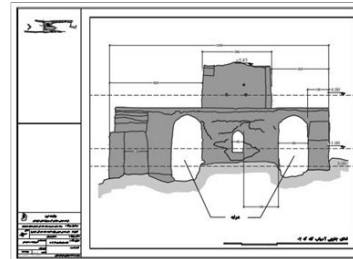
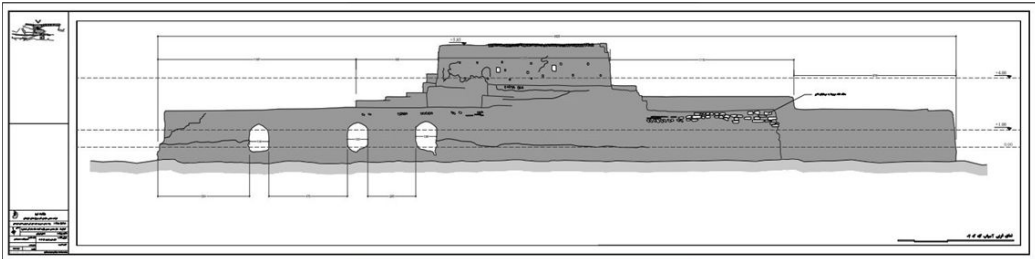
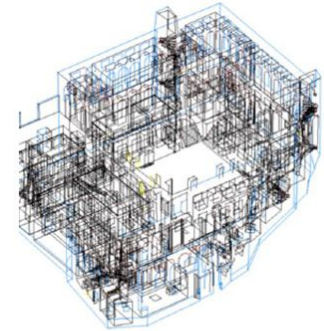
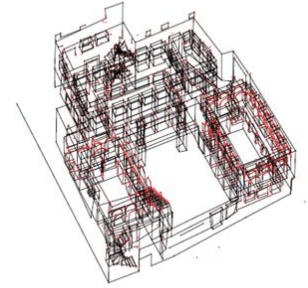
**Challenge** the effects of climate change in Iran, and serious problems such as draught or seasonal floods.

**Q1** Can these abandoned traditional water structures be restored and reused again?

**Q2** Can they cover part of the water requirements for daily use, local agriculture or livestock?

**Aim** to avoid unbalanced migrations and unsustainable developments in coastal urban and rural areas.

**Documentation** is the first step for understanding these water structures and finding possible solutions for reuse of these existing structures



- Why is the **documentation** of coastal heritage a necessity in reference to climate change?
- How does **documentation** contribute in sustainable conservation of the coastal heritage?
- How can **documentation** of coastal heritage assist the local communities to combat challenges regarding climate change?
- What are the best tools and state-of-the-art methods for **documentation** of the coastal heritage?
- What are the challenges of **documentation** of the decayed underground coastal heritage?
- How can **documentation** of coastal heritage develop an international network for professionals' co-operation to document the least developed countries coastal heritage as well?
- ...