

Tanzania's Maritime Heritage: A Climate Adaptation Priority

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Tanzania's Marine Cultural Heritage: A Climate Adaptation Priority

Summary for Policymakers



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“An Africa with a strong cultural identity, common heritage, shared values and ethics”

Aspiration No. 5, Agenda 2063

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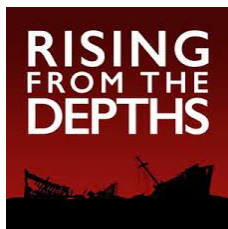
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Executive Summary

Tanzania's wonderful marine cultural heritage (MCH) is at risk from the negative effects of climate change, not only threatening its preservation, but also its loss as a key climate action asset in mitigation and adaptation efforts.

This report advocates for the inclusion of Tanzania's MCH as a specific adaptation priority in the country's National Adaptation Plan (NAP) document. Such an inclusion would not only serve to preserve this important heritage, but could offer additional economic and cultural benefits for Tanzania by creating the potential to attract further support from international funds.

Greater funding can improve local capacity to record and preserve MCH at risk of climate change and identify infrastructural and developmental priorities to safeguard against climate-related loss and damage. It also facilitates the development of MCH as an area of green economic growth for coastal communities through sustainable tourism and other initiatives. This can bolster the resilience of such communities to the negative effects of climate change.

Several recommendations are made in the report, including:

- The inclusion of a cultural heritage expert on the NAP drafting team
- The inclusion of marine cultural heritage as a specific priority in the NAP document
- Consultation and engagement with communities in drafting the NAP document
- The identification of opportunities from MCH assets for green growth for sustainable development

Ufupisho

Urithi wa kitamaduni unaombata Bahari ya Hindi katika nchi ya Tanzaniauko hatarini kutoweka kutokana na athari hasi za mabadiliko ya tabianchi. Mabadiliko hayo sio tu yanatishia uhifadhi wake, lakini pia yataleta hasara kubwa kwa kuondoa thamani ya urithi huu kamana kuufanya usiwe rasilimali muhimu katika juhudi za kukabiliana na kuhimili mabadiliko ya tabianchi.

Ripoti hii inatetea kujumuishwa kwa urithi wa kitamaduni wa unaombata na bahari (MCH) ya Tanzania kama kipaumbele mahususi katika waraka wa Mpango wa Taifa wa Kukabiliana na kuhimili mabadiliko ya tabianchi (NAP). Ushirikishwaji huo hautasaidia tu kuhifadhi urithi huu muhimu, bali ungeweza kutoa manufaa ya ziada ya kiuchumi na kitamaduni kwa Tanzania kwa kujenga uwezekano wa kuvutia msaada zaidi kutoka kwenye mifuko ya fedha za kimataifa.

Ufadhili mkubwa zaidi unaweza kuboresha uwezo wa ndani wa kurekodi na kuhifadhi urithi ulio katika hatari ya mabadiliko tabianchi na kutambua vipaumbele vya miundombinu na maendeleo ili kulinda dhidi ya hasara na uharibifu unaohusiana na mabadiliko ya tabianchi. Pia kuwezesha maendeleo ya Urithi huu kama eneo la ukuaji wa uchumi wa kijani kwa jamii za pwani kupitia utalii endelevu na mipango mingine. Hii inaweza kuimarisha ustahimilivu wa jamii hizo kwa athari mbaya za mabadiliko ya tabia nchi

Mapendekezo kadhaa yaliyotolewa katika ripoti, pamoja na:

- Kujumuishwa kwa mtaalamu wa turathi za kitamaduni kwenye timu ya uandishi wa NAP
- Kujumuishwa kwa urithi wa kitamaduni wa baharini kama kipaumbele maalum katika waraka wa NAP
- Ushauri na ushirikishwaji wa jamii katika kuandaa waraka wa NAP
- Utambulisho wa fursa za ukuaji wa kijani kwa maendeleo endelevu

1. Introduction

This Summary for Policymakers summarises and contextualises the key findings of the AHRC/GCRF-funded project, 'Incorporating Marine Cultural Heritage into Tanzania's National Adaptation Plan'. This project investigated the extent to which marine cultural heritage (MCH) should be represented as a climate adaptation priority in Tanzania's National Adaptation Plan (NAP) document. It was considered that a greater emphasis on MCH could create the potential to attract further support from international funds, such as the UN Framework Convention on Climate Change's Global Environment Facility. This could bolster the resilience of coastal communities to the negative effects of climate change.

A workshop was held on 2nd August 2021 with participation from experts in international law, archaeology and heritage, climate adaptation and sustainable tourism. The workshop aimed to bring these experts together to investigate values and opportunities for MCH in Tanzania in the context of climate change and investigate how MCH should be represented as a climate priority in the NAP. This Report contextualises and summarises the project's findings and makes recommendations for policymakers accordingly.

2. What is Marine Cultural Heritage?

The project, and accordingly this report, adopts a wide definition of MCH as put forward by the Rising from the Depths project:¹

*Marine Cultural Heritage (MCH) is a catch all term for all of the space – coast and sea – that is affected by human maritime action. As a result, we take a broad view of the MCH of East Africa encompassing **tangible remains** such as submerged marine sites, coastal archaeology, maritime ecologies, geology as well as the **intangible components** such as cultural practices, artistic and linguistic expressions, local skills, traditional and historical knowledge.*

Tanzania has an incredibly rich marine cultural heritage, both tangible and intangible, and includes key World Heritage sites such as Kilwa Kisiwani and Songo Mnara, and the Stone Town of Zanzibar. As a coastal state, Tanzania has been at the heart of maritime commercial activity, and historic towns such as Bagamoyo, Pangani and Mikindani stand as testament to this heritage.

MCH possesses diverse values, including:

- **Historical and archaeological value:** MCH may be the primary source of evidence about a culture, people or place.
- **Social and cultural value:** MCH contributes to people's cultural and community identity, providing a shared social experience and creating a sense of pride within a local community. Cultural values facilitate the building of cultural bonds and affiliations.
- **Economic value:** MCH can create significant economic opportunities, for example, through sustainable heritage tourism and associated employment or sustainable adaptive reuse for built heritage.

¹Rising from the Depths Network, Marine Cultural Heritage, available at <<https://risingfromthedepths.com/marine-cultural-heritage/>>.

- **Scientific and environmental value:** MCH can provide valuable knowledge and data about past events that can better inform our understanding of current and future climatic events.

These values are specifically discussed in the context of climate change and adaptation in section 4.

3. Marine Cultural Heritage and Climate Change Impacts

Climate change is projected to have a significant and devastating impact on coastal and marine environments:

- Degradation and destruction of coastal ecosystems and habitats, such as mangroves and coral reefs²
- Increasing sea-level rise resulting in coastal and beach erosion, destruction of mangroves and the abandonment of freshwater spring wells due to seawater intrusion³
- Increasing ocean temperatures and sea surface temperatures, which are conducive to the formation of tropical cyclones⁴
- Increasing the frequency and intensity of floods, landslides, droughts and storm surges⁵
- Increasing vulnerability of coastal communities⁶

Research indicates that several districts in Tanzania are highly exposed to coastal hazards, in particular, Rufiji (Pwani), Pangani (Tanga), Bagamoyo (Pwani), and Magharibi (Zanzibar West). In Rufiji and Pangani, more than 50% of the coastline is already at high levels of exposure and further loss of mangroves and coral reefs can lead to over 80% of these shorelines to be at high levels of exposure.⁷ These places are at increased risk of coastal erosion due to sea level rise.

These impacts are also affecting MCH sites. UNESCO has recently declared that coastal hazard resulting from climate changes have become the biggest threat to the conservation of the marine heritage sites on the World Heritage List.⁸ The Great Barrier Reef in Australia, a natural world heritage site, is on the verge of becoming the first to be placed on the List of World Heritage in Danger due to climate change and ocean acidification.⁹

The impact of climate change on Tanzania's MCH has already been significant and research shows that climate change will continue to impact these sites. For example, damage due to climate change can already be seen at the Kilwa site, where coastal erosion and exposure to salt air and wind is deteriorating the buildings. Work is being done to try and slow erosion at the site, including the planting of mangrove trees, building of sea walls, and digitally recording the site in 3D for future generations.¹⁰ Nevertheless, erosion and damage are happening at an alarming rate. There is also evidence that

² Q He and BR Silliman, 'Climate Change, Human Impacts, and Coastal Ecosystems in the Anthropocene' (2019) 29(19) *Current Biology* R1021.

³ JG Lyimo, JO Ngana, E Liwenga and F Maganga, 'Climate Change, impacts and adaptations in the coastal communities in Bagamoyo District, Tanzania' (2013) 4(1) *Environmental Economics* 63.

⁴ Y Sun et al, 'Impact of Ocean Warming on Tropical Cyclone Size and Its Destructiveness' (2017) 7 *Nature Scientific Reports* 8154.

⁵ Irish Aid, 'Tanzania Climate Action Report for 2016' (November 2017), available at <<https://www.irishaid.ie/media/irishaid/allwebsitemedia/30whatwedo/climatechange/Tanzania-Country-Climate-Action-Report-2016.pdf>>.

⁶ Lyimo et al (n 5); C Ballesteros and LS Esteves, 'Integrated Assessment of Coastal Exposure and Social Vulnerability to Coastal Hazards in East Africa' (2021) 22 *Estuaries and Coasts* 2056.

⁷ L Esteves and C Ballesteros, 'Building an Index of Exposure to Coastal Change in Eastern Africa with Applications to Conservation of Cultural Heritage' (2019) *Coastal Sediments* 1063.

⁸ See <<https://whc.unesco.org/en/climate-change-marine/>>.

⁹ UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage, World Heritage Committee, Extended 44th Session 16-31 July 2021, WHC/21/44.COM/7B.Add, 83-7.

¹⁰ For further information, see the Zamani Project, available at <<https://www.zamaniproject.org/site-tanzania-kilwa-kisiwani.html#header5-bd>>.

heritage sites in Zanzibar are being affected by climate change. For example, the low-lying Stone Town is one of the sites predicted to be most severely impacted by shoreline retreat.¹¹

4. Realising the Value of Marine Cultural Heritage in Climate Adaptation

MCH has several broad values. It should be recognised that these values are key in adapting to the negative effects of climate change and increasing resilience. Cultural heritage can be used to stress urgency about immediate and future impacts of climate change, emphasising the importance of action at local, national and international levels.¹² This section details some of the values of MCH in the context of climate adaptation.

4.1 Historical and Archaeological Value

It is generally clear that MCH has broad historical and archaeological value, but how this relates to climate adaptation has perhaps been less clear. However, an “archaeology of climate change” can provide a “solid foundation for assessing the implications of climate change across cultures” and help design sustainable development strategies.¹³ In this respect, MCH can provide data for and methods of addressing climate-related challenges.¹⁴

Archaeology is valuable to the modern global climate response not only through the information it provides about the human environmental past, but also as a guide to expanding the capacity of modern global climate response to address complexity in the current human social environment.

An example of this data can be seen in section 4.4.

4.2 Social and Cultural Value

There is evidence to suggest that preserving tangible and intangible cultural heritage can increase community resilience by empowering communities. Not only this, but damage to cultural heritage can actually sever a community's attachment to a place hinders long-term recovery and resilience.¹⁵ Even where traditional buildings are significantly impacted by the negative effects of climate change, intangible heritage can be used as a tool for social cohesion.¹⁶ For example, promoting and preserving traditional fishing practices of fishing communities can foster cultural identity and a sense of place.¹⁷ Research shows that heritage is a “stimulus for social cohesion and integrity and a sense of place through a connection between social life and the built and natural environment, particularly relevant in the time of climate crisis.”¹⁸

¹¹ J Clarke et al, 'These African World Heritage Sites are under threat from climate change' (The Conversation, 13 August 2020), available at <<https://theconversation.com/these-african-world-heritage-sites-are-under-threat-from-climate-change-144140>>.

¹² ICOMOS Climate Change and Heritage Working Group, 'The Future of Our Pasts: Engaging Cultural Heritage in Climate Action' (1 July 2019) 11.

¹³ A Burke et al, 'The archaeology of climate change: The case for cultural diversity' (2021) 118(30) PNAS, available at <<https://www.pnas.org/content/118/30/e2108537118>>.

¹⁴ Rockman and Hritz (n 12) 8296.

¹⁵ V Herrmann, 'Climate Change Poses a Threat to Cultural Heritage' (Scientific American, 16 May 2019), available at <<https://blogs.scientificamerican.com/observations/climate-change-poses-a-threat-to-cultural-heritage/>>.

¹⁶ M Wiggins, 'Eroding Paradigms: Heritage in an Age of Climate Gentrification' (2018) 8(1) Change Over Time 122, 123.

¹⁷ S Khakzad and D Griffith, 'The role of fishing material culture in communities' sense of place as an added-value in management of coastal areas' (2016) 5(2) Journal of Marine and Island Cultures 95.

¹⁸ S Fatorić and L Egberts, 'Realising the potential of cultural heritage to achieve climate change actions in the Netherlands' (2020) 274 Journal of Environmental Management 111107, 5.

The African Union's Agenda 2063 clearly recognises this, aspiring to be an "Africa with a strong cultural identity, common heritage, shared values and ethics."¹⁹ Similarly, Tanzania's 2010 National Strategy for Growth and Reduction of Poverty note that national culture and identity are at the heart of development policy. That is, an investment in heritage results in enhanced social cohesion, belonging and national identity; an improved attitude towards self-confidence, self-esteem, creativity, innovation and moral integrity; Tanzania's culture and heritage preserved and promoted; and enhanced principles of cultural diversity and improved inter-cultural dialogue.²⁰

4.3 Economic Values

Cultural heritage has been recognised as a key driver for the tourism sector. The 2021 World Bank Tanzania Economic Update²¹ states that the tourism sector "could play a pivotal role in achieving inclusive and resilient growth in Tanzania",²² and acknowledges that Tanzania's "rich cultural resources are a considerable economic opportunity" in this respect.²³ Moreover, the Report suggests that the Tanzanian Government should consider, as a priority:²⁴

The additional revenue derived from global climate programs could ease the government's fiscal constraints while also supporting the livelihoods of local communities.

In Tanzania (including Zanzibar), there are an estimated 910,000 jobs directly or indirectly linked to the tourism sector.²⁵ Even so, the World Economic Forum ranks Tanzania at 32nd in Africa and 112th in the world for its cultural resources,²⁶ suggesting that only a small percentage of its cultural resources have been economically utilised through tourism development and that the sector has "untapped potential" to drive sustainable development and economic transformation.²⁷

The Tanzanian Government has identified clear priorities connected with tourism.²⁸ For example, raising the number of tourists from 1.5m to 5m by 2025, raising income from \$2.43b to \$6.1b (18.3% GDP), and raising jobs by 12%. There is a key opportunity for sustainable tourism of MCH sites to contribute to the achievement of these goals. The local government could generate fiscal revenue through taxes, licences and entry fees, direct and indirect employment and stimulate development of infrastructure and other sectors. However, MCH must be appropriately preserved to attract tourism in the first instance.

Even so, tourism should not be seen as the only economic value of cultural heritage, particularly in the context of climate change. Care must be taken to balance tourism development with sustainability. Increased tourism may put pressure on the historic environment and surrounding community. Construction may be necessary (e.g., hotels, roads, car parks) and this may detract from historic sites.

¹⁹ Agenda 2063: The Africa We Want (April 2015), Aspiration No 5, available at <https://au.int/Agenda2063/popular_version>.

²⁰ United Republic of Tanzania Ministry of Finance and Economic Affairs, 'National Strategy for Growth and Reduction of Poverty II' (July 2010) 81, available at <<https://www.international.gc.ca/development-developpement/assets/pdfs/countries-pays/NATIONAL-STRATEGY-FOR-GROWTH-AND-REDUCTION-OF-POVERTY-TANZANIA.PDF>>.

²¹ World Bank, 'Transforming Tourism: Toward a Sustainable, Resilient, and Inclusive Sector', Tanzania Economic Update (July 2021), available at <<https://documents1.worldbank.org/curated/en/794611627497650414/pdf/Transforming-Tourism-Toward-a-Sustainable-Resilient-and-Inclusive-Sector.pdf>>.

²²Ibid 14.

²³Ibid 15.

²⁴Ibid 16.

²⁵Ibid 12.

²⁶ World Economic Forum, Travel and Tourism Competitiveness Report (2019) 83, available at <https://www3.weforum.org/docs/WEF_TTCR_2019.pdf>.

²⁷World Bank Report (n 21) 53.

²⁸ National Five Year Development Plan II 2016/17 – 2020/21, 'Nurturing Industrialization for Economic Transformation and Human Development', Ministry of Finance and Planning (30 March 2016).

Decisions on urban development in response to tourism development should be made carefully and in conjunction with site management and local communities, and should also reflect the socio-economic concerns of such communities.

Built heritage could also be utilised in adaptive reuse strategies, where extending the lifespan of its use has multiple benefits and contribute to economic and social development.²⁹ This supports the conservation of historic buildings and offers opportunities for sustainable community development.

4.4 Scientific and Environmental Value

Tangible and intangible MCH has clear scientific value. The 2004 Indian Ocean tsunami struck locations in Kenya, Somalia and Tanzania, leading to efforts to quantify the recurrence time of teletsunamis (a tsunami that travels more than 1000km from its origin) in those areas. In doing so, researchers studied 1000-year-old sand layer in Pangani Bay containing the archaeological remains of an ancient Swahili maritime community.³⁰ The cause for the deposition of the sand layer was considered to be tsunami activity. As a result of that research, it was concluded that the tsunami deposit and loss of life indicated that teletsunamis from the Sumatra-Andaman subduction zone may represent a real threat to life and property on the eastern coast of Africa.³¹ Previous to this, tsunami risk was considered to be low in coastal East African countries³² so this knowledge could have a significant impact on future responses to geological threats. Unfortunately, current economic conditions in Pangani “severely limit” the contributions that the community can make to preserving the town’s heritage.³³

During the same tsunami, the Onge tribe on the Andaman Islands, an Indian archipelago, were able to escape to higher ground before the tsunami hit, due to folklore and oral traditions that told of early warning signs.³⁴ Similarly, in Iran, researchers found that poems, folktales and oral traditions in Iran had great potential to warn communities about past seismic events that could facilitate the building of an “earthquake culture” in Iran.³⁵ This makes intangible MCH a necessity to adaptation planning, and there is also a clear interrelationship with the social and cultural values of MCH in building resilient communities.

This means that MCH can provide knowledge and information about past events that may have a considerable impact as to how we respond to future events. Given that climate-linked geological changes can increase the threat of tsunamis, through rising sea levels, collapsing ice shelves and triggering of earthquakes, realising the value of MCH in this context is crucial.³⁶ MCH also has substantial scientific and environmental value as an essential indicator in monitoring change dynamics in natural habits and the cumulative impacts of climate change, the knowledge of which will largely be localised in communities or regions. This means that there are also significant benefits to community involvement in adaptation planning.

²⁹ G Foster, ‘Circular economy strategies for adaptive reuse of cultural heritage buildings to reduce environmental impacts’ (2020) 152 Resources, Conservation and Recycling 104507.

³⁰ E Mjema, ‘Catastrophes and deaths along Tanzania’s western Indian Ocean coast during the Early Swahili period, AD 900-1100’ (2008) 53(2) Azania 135.

³¹ V Maselli et al, ‘A 1000-yr-old tsunami in the Indian Ocean points to greater risk for East Africa’ (2020) 48 Geology 808, 812.

³² *ibid.*

³³ See Pangani Historic Town, World Monuments Fund, available at < <https://www.wmf.org/project/pangani-historic-town>>.

³⁴ S Bhaumik, ‘Tsunami folklore ‘saved islanders’’ (BBC News, 20 January 2005), available at < http://news.bbc.co.uk/1/hi/world/south_asia/4181855.stm>.

³⁵ F Parsizadeh et al, ‘Bam 2003 earthquake disaster: On the earthquake risk perception, resilience and earthquake culture – Cultural beliefs and cultural landscape of Qanats, gardens of Khorma trees and Argh-e Bam’ (2015) 14 International Journal of Disaster Risk Reduction 457, 467.

³⁶ J Cunneen, ‘5 ways climate change increases the threat of tsunamis, from collapsing ice shelves to sea level rise’ (The Conversation, 23 January 2022), available at < <https://theconversation.com/5-ways-climate-change-increases-the-threat-of-tsunamis-from-collapsing-ice-shelves-to-sea-level-rise-175247>>.

5. Challenges

Despite the clear value of including MCH in climate adaptation efforts, our research identified several challenges to realising these values. A significant challenge is policymaker and community awareness of such values. Generally, archaeology and cultural heritage have had little role in the global climate response³⁷ and climate change policymakers and stakeholders globally tend to have a lack of awareness of the values and benefits it can bring.³⁸ In adaptation planning, cultural heritage is generally subsumed into tourism or marine resources, however, this means it is overshadowed by the main sector and neglects to consider the specific challenges of heritage and what else heritage has to offer beyond economic value.

In Tanzania's National Adaptation Plan of Action (NAPA) 2007, coastal and marine resources were ranked 9th out of 11 identified priority sectors, with no specific inclusion for the historic environment. MCH is currently not being prioritised in climate adaptation policy in Tanzania, meaning that not only is MCH at continued significant risk from the negative impacts of climate change, but its extensive values are also not being realised in adaptation efforts. This under-utilisation is a missed opportunity. Workshop participants noted the lack of available information regarding the current development of the NAP document and process, and also the lack of consultation and integration of efforts with other governmental departments and heritage stakeholders.

Concerns were also raised about the lack of awareness in some coastal communities of the full values of MCH and environmental issues, and participants discussed the damage to some heritage sites due to local development needs and limited socio-economic benefits.³⁹ Participants noted the necessity of increasing the social capital and community awareness of MCH, particularly respect of its value in relation to environmental and economic/development agendas. Increasing awareness would also better facilitate community participation in climate adaptation planning, enabling the transfer of key local knowledge on built and intangible heritage.

In the same vein, greater awareness of the socio-economic concerns of local residents must be had by site management and policymakers to ensure success and an equitable distribution of benefits.⁴⁰ It will be difficult to acknowledge the values of MCH where the community sees little socio-economic benefit.

Another challenge identified was the lack of information and research on marine and underwater heritage generally, particularly in respect of how such heritage is affected by climate change and how it can benefit adaptation efforts. Tanzania has several notable experts working on maritime and terrestrial archaeology in the country, including with local communities, however further capacity is needed to expand the exceptional work already being done. Workshop participants suggested that more joint research is needed from cultural heritage and climate change experts, and capacity could be raised by developing education and training initiatives through universities in Tanzania and jointly with international institutions.

6. Recommendations

By making MCH a climate adaptation priority, there is an opportunity to attract international funds for capacity building to resolve many of the challenges identified above. This includes the recording and documentation of sites, objects and intangible heritage to ensure that the knowledge derived from them is preserved and can be utilised in climate adaptation efforts. Capacity could also be increased to

³⁷ M Rockman and C Hritz, 'Expanding use of archaeology in climate response by changing its social environment' (2020) 117(15) PNAS 8295.

³⁸ S Fatorić and R Biesbroek, 'Adapting cultural heritage to climate change impacts in The Netherlands: barriers, interdependencies, and strategies for overcoming them' (2020) 162 Climate Change 301.

³⁹ See, for example, N Lwoga, 'Dilemma of local socio-economic perspectives in management of historic ruins in Kilwa Kisiwani World Heritage Site, Tanzania' (2018) 24(10) International Journal of Heritage Studies 1019.

⁴⁰ Ibid 1024.

support awareness activities. In turn, the preservation of heritage sites can offer opportunities in sustainable heritage tourism or adaptive reuse, supporting coastal communities to become even more resilient to the negative effects of climate change.

Our findings demonstrate that, given its broad value in adapting to a changing climate, **MCH should be prioritised in climate adaptation plans**. In order to realise its full potential, our recommendations are to:

1. Include a cultural heritage expert on the multidisciplinary NAP drafting team. This will support the full identification of the values and benefits of Tanzania's MCH in supporting adaptation to the negative effects of climate change;
2. Include marine cultural heritage as a specific adaptation priority in Tanzania's NAP document. Its inclusion could attract significant funding and support from international funds, removing economic limitations on capacity building to preserve heritage and provide further opportunities for green growth. An example inclusion is provided below in 6.1;
3. Identify opportunities for green growth through sustainable heritage tourism in medium- and long-term priorities identified for MCH, ensuring that any environmental impact is considered and that other opportunities to sustainably and economically benefit from MCH, such as adaptive reuse, are also considered;
4. Consult and meaningfully engage with community groups on MCH when drafting the NAP. This will ensure that MCH-related traditional knowledge systems are integrated into adaptation planning at the national level, enabling a more holistic and accurate assessment of risks and responses. Increasing community awareness and understanding of the broad values of MCH in the context of climate change will encourage the incorporation of measures to protect it into local and regional environmental frameworks;
5. Publicise the progress of the NAP;
6. Identify cross-cutting priorities in the context of MCH. For example, research shows that mangroves are significant in reducing wave action to protect heritage sites;
7. Facilitate capacity building in heritage preservation through the development of programmes and partnerships in academic institutions;
8. Commission a comprehensive study along the coast to study the nexus between climate change and MCH.

6.1 Example NAP Inclusion

MARINE CULTURAL HERITAGE	
Action	Enhance the resilience of marine cultural heritage.
Summary	Marine cultural heritage is at risk from the negative effects of climate change yet is a key climate action asset in mitigation and adaptation efforts.
Gaps	Understanding of marine cultural heritage's values, awareness raising, capacity-building.
Short-term Priorities	<ul style="list-style-type: none"> • Commission a climate risk and vulnerability assessment of the marine cultural heritage. • Raise awareness of the impact of climate change on marine cultural heritage and the value of such heritage, particularly in coastal communities. • Create a governmental post with expertise in climate change and the historic environment to guide the development of policy across sectors.
Medium-term Priorities	<ul style="list-style-type: none"> • Develop a climate resilient and sustainable heritage tourism plan. • Strengthen regional cooperation for knowledge exchange and development of best practice. • Create a MCH database through the surveying of sites, facilitating the development of sustainable site management plans for tangible heritage. • Identify built heritage suitable for adaptive reuse projects. • Record intangible heritage. • Build local and national capacity by working with universities to develop undergraduate and postgraduate programmes