



Lamu Old Town: Balancing Economic Development with Heritage Conservation

Hoseah Wanderi

Directorate of Antiquities, Sites and Monuments, National Museums of Kenya, Museum Hill Road; P.O Box 40658-00100 Nairobi, Kenya; +254 724 371 232, hwanderi@gmail.com

■ Abstract

Lamu Old Town, a typical example of a predominant Swahili settlement that thrived on marine resources, faces an uncertain future. Development projects have added to the effects of climate change and might cause important changes in Lamu's biodiversity and culture. This paper describes the interrelations between cultural and natural values within this World Heritage Site and the potential impacts of development projects and climate change in the larger ecosystem. The paper postulates that the impacts on biodiversity will have adverse consequences on the resilience and livelihoods of the communities occupying this historical coastal town, which has existed for over 700 hundred years, increasing their vulnerability to disasters.

KEY WORDS: Conservation, Heritage, Livelihoods, Mangroves, Local community, Biodiversity, Resilience, Swahili culture

■ 1. Introduction

Lamu Island is part of a chain of islands known as the Lamu Archipelago which also includes Manda, Pate, and Kiwayu. Located on this island, Lamu Old Town is a living town that thrives on the East African Coast and has a history dating back over 700 hundred years [Fig. 1]. The settlement is a conglomeration of historical buildings of *Swahili* architectural character, separated by very narrow alleys [Fig. 2]. Being the oldest and best-preserved Swahili settlement in East Africa that has retained its traditional functions (National Museums of Kenya 2001), Lamu Old Town was inscribed on the World Heritage List in 2001 under criteria (ii) (iv) and (vi) (<https://whc.unesco.org/en/list/1055>).

The island is located about 350 km North of Mombasa and has a population of approximately 11,700 (Ngugi et al. 2013). The Old Town, occupying 16 hectares, is located on the eastern side of the island and rests on a gentle slope which rises from the sea before gradually dropping to sandy farmlands on the western side.

■ 2. Natural and cultural significance of Lamu

The warm waters of the Indian Ocean created within the Lamu Archipelago a natural habitat for marine flora and fauna, where local populations adapted by making use of the available sea resources, such as fish and construction materials, for their livelihood. This reliance on the marine resources characterizes the conspicuous Swahili culture of Lamu, including their food, architecture, and transport systems.

The Lamu Archipelago is intersected by narrow and shallow channels, creating a fragile marine ecology which is protected from strong ocean currents by coral reefs and mangrove forests (Bakker et al. 2015:37). These shield the coastlines from storms and waves, thereby minimizing damage to the settlements in Lamu. The nine species of mangroves found in Lamu also serve as spawning grounds for fish, crustaceans (e.g. prawns and crayfish), and for endangered fauna, such as sea turtles (Government of Kenya 2017: 7). Due to the proliferation of microscopic organisms in the forests, they are also a natural habitat for numerous migratory bird species [Fig. 3] which get their food

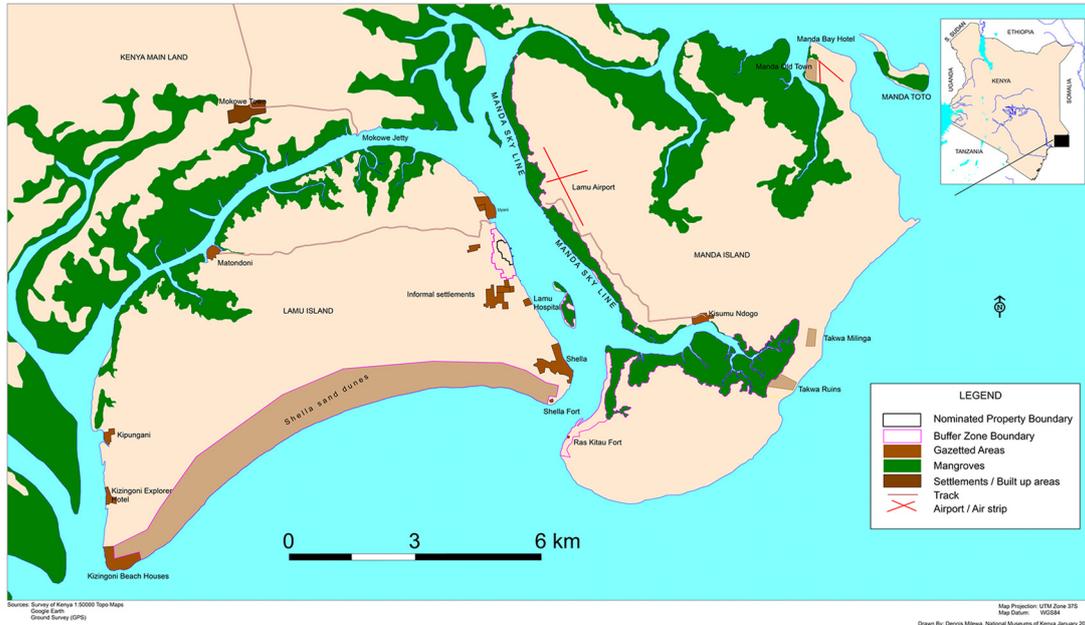


Figure 1: Map of Lamu. Source: National Museums of Kenya



Figure 2: Aerial View of Lamu Old Town. Source: Google Maps

therein (Kairo 2001). Bird species include unique sea birds, such as roseate terns, which sometimes make up a breeding colony of more than 10,000 birds. The habitat also supports over 350 species of fishes and 40 classes of corals, five species of sea turtles, and 35 species of marine mammals, including whales, dolphins, and the endangered dugong. The diverse coral communities support a wide diversity of fish and shellfish communities that are generally more abundant and larger than in other parts of the Kenyan coast (Malleret-King et al. 2003: 15). This ecosystem is the bedrock of the Swahili livelihood. The marine ecology has been utilized by the Swahili culture for millennia to produce the outstanding

cultural landscape, part of which is the Lamu Old Town World Heritage Site.



Figure 3: Migrant waders, mangrove forest in the background. Source: Shema Sidney

Interactions between the Swahili, Arabs, Persians, Indians, and Europeans in the East African region finds its most outstanding expression in Lamu Old Town architecture and planning. Foreign cultural influences were adapted into traditional Swahili techniques, producing a unique heritage. The town is characterized by narrow winding streets and magnificent stone buildings with impressive carved doors, the result of the fusion of different building styles [Fig. 4]. The housing clusters are divided into a number of small wards (*mitaa*), each being a group of buildings where a number of closely related lineages live. The buildings are well preserved and carry a long history that represents the development of Swahili building technology, based on coral, lime, and mangrove poles. The mangroves are a characteristic material for the Swahili architecture and the Lamu mangroves constitute 61% of mangrove cover in the Kenyan coast (Government of Kenya 2017: 8). The coral

stone, coral lime, and mangrove timber construction characterizes the simplicity of the structural forms and enriches such features as inner courtyards, verandas, and elaborately carved wooden doors (NMK 2001).



Figure 4: *Narrow Street in Lamu. Source: Author*

In spite of these significant interrelated cultural and natural values, Lamu faces an uncertain future. The construction of the Lamu Port and development of the Southern Sudan-Ethiopia Transport Corridor (LAPSSET project), in addition to the effects of climate change, might cause important changes in Lamu's biodiversity and culture, reducing the local communities' resilience, and increasing their vulnerability to disasters.

3. Current management arrangements

Heritage management in Lamu Old Town is divided into the conservation of cultural heritage, focused on the town fabric and buildings, and the nature conservation, focused on the larger ecosystem of the island.

The Old Town is co-managed by the National Museums of Kenya (NMK), under the National Museums and Heritage Act of 2006, and the County Government of Lamu. NMK manages the conservation of the cultural fabric of the town while the County Government manages business controls, such as building and maintaining the town's infrastructure. The Heritage Act mandates

NMK to conserve and manage heritage for the benefit of Kenya. Other acts supplementing this mandate include the National Environmental and Management and Coordination Act of 1999 and the Physical Planning Act of 2012. In addition, a new Lamu World Heritage Site management plan is proposed to explore new factors and emerging issues in Old Town.

Lamu archipelago's mangrove forests are managed by the Kenya Forest Service, in collaboration with the Community Forest Associations, under the Forest Conservation and Management Act of 2016 [Fig. 5]. The Kenya Wildlife Service, on the other hand, manages conservation of terrestrial and marine wildlife in line with its mandate instituted by the Wildlife Conservation and Management Act of 2013. Both acts recognize the community's role in the conservation of nature.

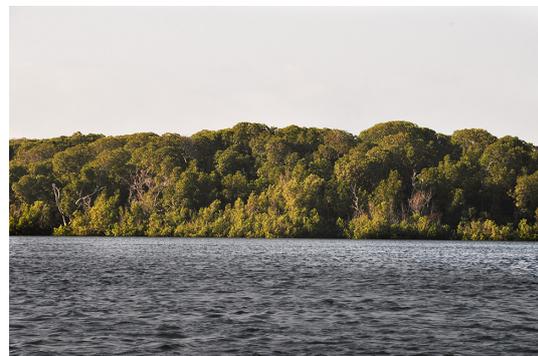


Figure 5: *Mangrove Forest at Kiwayu Channel, Lamu. Source: National Museums of Kenya*

The Ministry of Interior and Coordination of National Government of Kenya established a national disaster management unit in 2013. The unit borrows heavily from the Sendai Framework for Disaster Risk Reduction 2015-2030. There is also a draft for a National Policy for Disaster Management in Kenya that aspires to develop an effective disaster management system to create a safe, resilient, and sustainable society (Government of Kenya 2009: 15). However, previous disasters have been responded to in an unstructured manner, resulting in lapses in response time, coordination in the response, and in the application of early warning systems.

4. Challenges to Conservation

4.1 Development projects

The major threat to the conservation of Lamu Old Town is the development of the Lamu Port and Southern Sudan-Ethiopia Transport Corridor (LAPSSET project). The project has six major components which have implications on increasing the vulnerability of Lamu, namely: the Lamu Port,

a resort city, oil refinery, airport, crude oil pipeline, and a dam (<http://www.lapsset.go.ke>).

In 2014, a Heritage Impact Assessment (HIA) was carried out to understand the project's potential impacts on the Outstanding Universal Value (OUV) of the World Heritage Site. The study focused on how this project may affect the cultural and natural values of the Swahili heritage. It concluded that, while the Lamu Old Town World Heritage property is physically removed from the direct LAPSSET project footprint, there are many direct and indirect potential impacts on the setting of the World Heritage property and on its cultural and natural heritage (Bakker et al. 2015: iv). For instance, the proposed oil refinery was found to bear a potential risk in the event of oil leaks that would kill marine life, among other environmental degradation.

Moreover, the initial impacts on the fragile ecosystem have already started to be observed. The first three berths of the Lamu Port entailed the clearing of large swathes of mangrove forests, including reclamation of land with fish landing sites or fish spawning grounds [Fig. 6]. Mangroves are fragile species whose germination and rooting success can be threatened by prolonged disturbance. Furthermore, the Lamu Port development entailed deepening the channels through dredging. Deeper channels pose grave danger by increasing threats of violent sea waves that might disturb marine life and their breeding patterns, thereby denying the local community a crucial food source. Dredging of the channels, reclaiming land for berths, and clearing of mangrove forests that absorb the force of tidal waves all pose threats to the age-old established balance between culture and nature.

Another problematic project in Lamu is a coal power plant that is planned to supply electric power for industrial activities in Lamu. Possible adverse impacts on the local terrestrial and marine ecosystem could be experienced, increasing the vulnerability of the people.

4.2 Climate change

A report by the Intergovernmental Panel on Climate Change (IPCC 2007) states that the impact of climate change on coasts is worsen by increasing human-induced pressures and that developing countries already experience the most severe impacts from present coastal hazards with the most vulnerable areas being concentrated in exposed or sensitive



Figure 6: Lamu Old Jetty. Source: National Museums of Kenya

settings such as small islands which it refers to as 'hotpots' (IPCC 2007: 40). In that sense, climate change currently threatens the long-established ecological equilibrium in the Lamu Archipelago. Coupled with intense economic activities, climate change could also adversely affect Swahili heritage.

According to the Kenya Institute for Public Policy Research and Analysis KIPPRA, noted changes in the Indian Ocean include acidification, sea surface temperature changes and increased intensity of storms (KIPPRA 2018 para 11). Another report by Kenya Marine and Fisheries Institute KMFRI noted that *Kusi* (South-East Monsoon) currents have become increasingly cold which forces the poorly equipped fishermen to stay in the sea for less hours and thus catching less fish (KMFRI 2011: 24). The report also indicated that sea level in Lamu has been rising over the past decade. Many respondents in this study recalled the Tsunami of 2004 which caused destruction of homes and fishing boats (ibid).

4.3 Potential impacts of infrastructure development and climate change on Swahili people's livelihoods

Although no culture is static, the Swahili culture, as is known today, will drastically change with the possible disruption of the economic activities around the seascapes [Fig. 6].

The most serious threats resulting from development is the loss of traditional routes and fishing grounds, the potential loss of heritage places, and exposure to unfamiliar tide conditions that could be life threatening. Abungu and Abungu state that, through centuries of seafaring experience, Swahili culture has a deep respect and understanding of cosmology and how it affects the sea, to the extent that the sailors can predict tides for months in advance (Abungu, G. and Abungu, L. 2009: 23). Destruction of the mangrove habitat that shelters the Lamu Archipelago from tidal waves could cause a rise in accidents in the sea due to the disruption of the over 1000 years of accumulated indigenous knowledge of the sea. Loss of fishing grounds would result in depleted fish catches, exposing the local population to perennial hunger.

Another likely impact on the livelihood is the possibility of oil leakage and oily wastes, which if disposed of in the bay/ocean, may cause direct damage to fishery resources, aquatic biota, and the coastal habitat, seriously damaging the marine and coastal ecology (Bakker et al. 2015: 136).



Figure 7: Land reclamation for Lamu Port. Source: LAPSET Authority

5. Ongoing mitigation initiatives

The HIA in Lamu and the Environmental and Social Impact Assessment (ESIA) of the Lamu Coal Plant, made evident the possible impacts of these development projects on the area. Activism by community-based organizations has further pressurized for sensibility in the implementation of some of these projects.

For instance, a local community pressure group lodged a legal suit in the Kenyan High Court, challenging the failure of full disclosure of the LAPSET project by the proponent, the non-involvement of the local community in the project design phase, and the possible negative impacts on the local culture and on the Outstanding Universal Value of Lamu World Heritage site. In May 2018, the High Court upheld the petition, acknowledging the potential dangers of the project to both the cultural and natural heritages, which are inextricably linked. Moreover, the High Court acknowledged the insufficiency of the local community's involvement in the project and thus ruled that the Strategic Environmental Assessment Study (SEA), that had been commissioned by the LAPSET Authority on the proposed LAPSET project, be redone with an emphasis on community's views. Both the High Court's ruling and the HIA study emphasize the need to reduce the possible disaster risks and both call for building the resilience of the people, their heritage, and their livelihoods. The initial SEA report had failed to incorporate the HIA recommendations in its findings.

As a result, the LAPSET Authority initiated actions to mainstream communities into its plans in order to address current and future concerns. In

collaboration with the local Beach Management Units, which are fisher folk cooperative groups, they are rolling out training for artisanal fishermen and equipping them with modern fishing gear as a way of adopting new technologies.

In the case of the Lamu Coal Plant project, a local pressure group has staged a spirited campaign against the plant with a slogan "coal is poison." Their pressure saw the relocation of the plant site from the Pate Island to the mainland and more opposition is being raised for dropping the project altogether.

The HIA called for a territorial perspective for heritage protection by recommending the establishment of a special conservation area in the framework of the UNESCO 2011 Recommendation on the Historic Urban Landscape (HUL). Besides, in the effort to build the Swahili people's resilience, comprehensive documentation of their intangible cultural heritage (ICH) has been initiated with the assistance of UNESCO. The ICH exercise focuses on the recording of the indigenous knowledge that is currently threatened by modernity. Integrating traditional and contemporary knowledge is critical in developing resilience strategies. Traditional knowledge includes the collective memory of a people living in a specific cultural and geographical setting. That memory is handy in post-disaster period, owing to past experiences. Documenting the ICH will facilitate the blending of contemporary ideas with the traditional in order to formulate sustainable strategies for building resilience. This people-centered approach offers prospects for better and more comprehensive understanding of risks, for community support on corrective actions, and for developing coping mechanisms in post disasters periods.

Abungu and Abungu (2009) stated that the walls of the traditional Swahili stone houses were constructed of coral rag and coral stone, joined together with lime mortar, and then plastered. They explained that for many centuries, lime was made by burning coral stones on a pile of mangrove wood; the lime would then be left to mature for years in the rain, which would wash away the salts and other impurities (Abungu and Abungu 2009: 53). The resultant lime afforded constructions that were structurally sound for centuries, unlike the modern cement and reinforced steel that becomes powdery and corrodes, respectively, over a short time in the humid tropical coast, thereby increasing the risk of houses collapsing. Contemporary technology has sometimes aggravated the vulnerability of historical buildings. Such indigenous building techniques

are being documented in detail for the purpose of revitalization before the bearers die with the knowledge.

Furthermore, as a response to the destruction of the fragile mangrove forests on the Kenyan Coast, the Kenya Forest Service initiated what has been referred to as the National Mangrove Ecosystem Management Plan for a period running from 2017 to 2027. Large areas deprived of the mangroves have been identified for replanting.

■ 6. Recommendations

To address the imminent risks on the sustainability of the Swahili livelihoods and the conservation of Lamu Old Town, there is need for more innovative and proactive methods of dealing with the uncertainties and the anticipated technological and environmental related risks. Adoption of new technologies is needed for monitoring climate change and to constantly evaluate other impacts in order to recognize early warnings about threats that could be irreversible once they occur. Planners and developers need to create safeguards to not disrupt the resilience mechanisms and the cultural and natural heritage of Swahili people, especially where developments are coupled with threats of climate change.

Mangrove forests and the larger marine ecosystem of the Lamu Archipelago are facing imminent risk from the LAPSET project. This project is increasing the vulnerability of the island to climate change and natural hazards. The potential impacts on the ecosystem will strongly affect the cultural heritage and livelihoods of Lamu's local communities.

With the increasing vulnerability of Lamu and its communities, adopting legislation specifically addressing disaster countermeasures is critical in ensuring that the communities' resilience can be enhanced, especially for post-disaster recovery in the aftermath of eventual disasters. For instance, the culture's traditional methods of conservation of the mangrove forests includes the selective harvesting of only straight trees and shifting harvest areas to allow for regrowth (Maina et al. 2011: 4). This is a nature-based solution for disaster risk reduction that could be integrated into a comprehensive heritage and disaster risk management plan.

As clarified in this paper, natural and cultural heritage need to be viewed as interlinked and inseparable entities. Moreover, the interrelations

between the natural and cultural values of the heritage site need to be understood and integrated under territorial approaches, such as the HUL approach, and take into consideration that the local communities are the stakeholders who have a more comprehensive and collective memory of their environment. In disaster risk prevention and post-disaster recovery, local communities' knowledge, intangible cultural heritage, and values ought to be considered in any heritage and disaster risk management plan as well as in the post-disaster recovery plan. In post-disaster recovery, conservation and restoration projects should bear the memory of the past to rebuild the future. Environmental restoration should sensitively address the social-cultural needs of the local community. Therefore, local solutions are paramount for real resilience.

■ Literature cited

Abungu, G. and Abungu, L. 2009. Lamu: Kenya's Enchanted Island. Rizzoli, New York.

Bakker, K.A., Odiava, I. and Abungu, G. 2015. Heritage Impact Assessment for the proposed Lamu Port-South Sudan-Ethiopia Transport (LAPSSET) and the new Lamu Port and Metropolis Development Project as well as related development projects in the Lamu Archipelago, Kenya.

Fitzpatrick, T. 2014. Climate change and poverty: A new agenda for developed Nations. Policy press, Bristol.

Government of Kenya. 2017. National Mangrove Management Plan 2017-2027. Kenya Forest Service, Nairobi. [http://www.kenyaforestservice.org/documents/National-Mangrove Ecosystem Management-Plan-Final-170628.pdf](http://www.kenyaforestservice.org/documents/National-Mangrove-Ecosystem-Management-Plan-Final-170628.pdf). [Accessed 20 July 2018]

Government of Kenya. 2009. Draft National Policy For Disaster Management in Kenya. <http://www.disastermanagement.go.ke> [Accessed 9 May 2019]

Intergovernmental Panel on Climate Change. 2007. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, UK, 976 pp.

Kairo, J. G. 2001. Ecology and Restoration of Mangrove Systems in Kenya. Brussels: Virje Universitet. PhD Dissertation.

Kenya Institute for Public Policy Research and Analysis. 2018. Kenya's Agenda in Developing the Blue Economy. <http://www.kippra.or.ke/kenyas-agenda-in-developing-the-blue-economy> [Accessed 20 July 2018]

Kenya Marine and Fisheries Research Institute. 2011. 2010/11 Scientific Annual Report. <http://www.kmfri.co.ke/images/pdf/Annualreport201to2011.pdf> [Accessed 20 July 2018]

Maina, G.W., Osuka, K., Samoilys, M. 2011. Review and assessment of biodiversity values and conservation priorities along the Tana Delta-Pate Island coast of northern Kenya. <https://www.researchgate.net/publication/273002834> [Accessed 20 July 2018]

Malleret-King, D, King, A., Mangubhai, S. Tunje, J., Muturi, J., Mueni E. and On'ganda H. 2003. Annex 1.2. Understanding Fisheries Livelihoods and Constraints to their Development, Kenya & Tanzania. Review of Marine Fisheries Resources for Kenya.

National Museums of Kenya. 2001. Lamu Old Town. <http://www.museums.or.ke/lamu-old-town> [Accessed 20 July 2018]

Ngugi, E., Kipruto, S. and Samoei, P. 2013. Exploring Kenya's Inequality: Pulling Apart or Pooling Together? Kenya National Bureau of Statistics, Nairobi

Oliver-Smith, A. 2009. Climate Change and Population Displacement: Disasters and Diasporas in the Twenty First Century. In Crate, S. and Nutall, M. (eds.): Anthropology and Climate Change: From Encounters to Actions. Left Coast Press, California.

UNESCO Lamu Old Town World Heritage Site. <https://whc.unesco.org/en/list/1055>. [Accessed 1 May 2019]

UNESCO, 2011. UNESCO Recommendation on the Historic Urban Landscape. <https://whc.unesco.org/en/hul> [Accessed 20 July 2018]