# Vernacular Architecture of the Swahili Coast: A Cosmopolitan Enclave in East Africa

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## Abstract

The Swahili coast refers to an area in Southeast Africa, mainly the coasts of Kenya, Tanzania and northern Mozambique, in addition to some islands like Comoros. Swahili coast has a distinct demography and culture and its architecture reveals a lot of cultural, economic and political connections that took place across the Indian Ocean during the pre-modern era. Swahili people started trading with the Arabs, the Persians, the Indians, the Chinese and the Malay, as early as the 8th century. This long-distance trade, which is known as the Indian Ocean trade influenced the Swahili culture heavily to the extent that somehow, it became a melting pot of all nations overlooking the Indian Ocean. Although the ruins of Gedi and attracted the attention of the archeologists, Kilwa Swahili architecture, an important element of Swahili culture, didn't receive appropriate attention from architecture scholars until recently. However, with a relatively recent tourism boom in the region, and with an interest in diversifying the touristic product, the old Swahili settlements are presented in a touristic way, and the island of Zanzibar is a striking example. This paper examines Swahili architecture as a part of the Indian Ocean architecture, a regional architectural language that was shaped by sea trade.

The study employed an observatory comparative analytical method within the a case study approach. A diverse set of qualitative research techniques: observations, literature study and focus group interviews have been employed to generate data.

It concludes that Swahili is a dynamic culture. From its beginning, it has incorporated foreign elements, and has been able to evolve and develop. Their location and the engagement in the Indian Ocean trade has forced the Swahilis to adapt and respond to social, cultural and aesthetic variations. It is evident that craftsmen, and builders with knowledge of a lifetime on how to build a traditional Swahili house can still be found today. However, they may be not be around tomorrow and therefore it is essential to take necessary steps to retain those unique skills and knowledge about how to build culturally relevant Swahili houses.

**Keywords:** Swahili architecture, Vernacular identity, Sea trade, Mass tourism.

# Introduction

The Swahili civilization as one of several mercantile societies located around the rim of the Indian Ocean, mastered long-distance seafaring with the use of the monsoon wind system to conduct trade across the ocean. For over 1,000 years, the Swahili constructed and maintained a literate society, based on Islam, and a commercial empire founded on intercontinental trade and plantation agriculture. "They have been urban-based merchants and the form of their society and its civilization have largely been shaped by this particular specialization in pre-colonial, colonial and post-colonial times" (Horton and Middleton, 2000:16).

The Swahili civilization stands at the periphery of the Muslim and African worlds, resulting in the development of a unique coastal culture based on trade. In fact, its marginal position is linked to the perception of the Indian Ocean, as a separator between Africa, Arabia and Asia. However, the ocean is also a connector between these very different cultures: the Swahilis are thus dynamic players, equal to Arab, Persian and Indian traders.

This area is significant not just because it covers an extensive strip of the continent's coastline, but because it represents an important aspect of Africa's relationship with the world. Linking between Africa and Asia, the Swahili Coast is an interesting example of a thriving African civilization, with sophisticated commercial systems, forming part of the international economy, long before the Europeans arrived. In terms of the wealth of Africa, the Swahili Coast is connected with trade, and with the exploitation of gold resources from the interior. In this way, the Swahili Coast played an important role in making Africa a part of the international economy.

A sense of cosmopolitanism became part of Swahili cultural expression as the Swahili sought to solidify their many modes of engagement with the Indian Ocean world, and to distance themselves from hinterland societies, whose own engagement with the Indian Ocean was brokered, for the most part, through the Swahili themselves (Glassman,1995). This does not mean that hinterland societies were not modern, or as modern as the Swahili, but rather that the Swahili differed explicitly from the people of hinterland in a number of ways that tended to highlight cosmopolitan and Islamic values. The result was a distinct coastal lifestyle, firmly embedded in a local and regional political economy. Indeed, it kept an eye to the Indian Ocean world.

In the early centuries of this phenomenon, much was shared with neighboring mainland people, but this became increasingly less the case, as urbanism and Islam in particular became fundamental to coastal life. In fact, neither did so in the adjacent mainland regions until the nineteenth century (La Violette,2009). By the centuries when a distinct coastal culture began to emerge, ca. A.D. 700, permanent villages had become numerous along the coast, and with this had come a commitment to engaging to a wider world of new contacts on the Indian Ocean rim. Some would call this the beginning of Swahili culture, and some would apply the term when the larger towns emerge around A.D. 1000 (La Violette and Fleisher,2005).

The efficacy of sailing using annual Southeast/Northwest monsoonal winds made regular trade, travel, and communication possible between these villagers and others were located around the Indian Ocean. The main route, a circuit of about fifteen months' duration, was roughly counterclockwise from the Western shore of India, across Southern Persia, the Gulf region, and Southern Arabia, to the Eastern African coast, and from what is now Mozambique back to India; a second Southern route extended from Java East to Eastern Africa and back to Sumatra (Horton and Middleton, 2000). Indeed, this traffic allowed mutual exposure, interaction, and trade.

The Swahili confined the vast majority of settlements to the coast itself, but participated in an enormous African hinterland/Indian Ocean interaction sphere. This sphere was fundamental to the growing wealth and scale of life on the coast. The pattern of village settlement that dominated the first few centuries eventually changed, as numerous urban centers developed from the ninth and tenth centuries onward. However, this African-origin model freely acknowledges that Indian Ocean immigrants arrived throughout Swahili history, and that an openness to select foreign influences was part of the early Swahili life, and ultimately fundamental to Swahili identity.

In this context, this study examines the vernacular Swahili architecture from a different perspective. Its aim is to reveal the nature of culture and architecture of the Swahili Coast. Its objectives are as follows.

- 1. To identify the unique characteristics of the vernacular Architecture of the Swahili Coast
- 2. To identify the changes and influences of these trade routes on Swahili culture and architecture.

## **Research Methodology**

This study employs a descriptive analytical case study methodology to examine current architecture and culture of the Swahili coast. It approach is to produce a sense of balance between romantic feelings and nostalgic interest when dealing with contemporary challenges and problems with the Swahili vernacular settlements. The study used observations, a literature study and interviews were conducted with local experts as qualitative research tools.

An in-depth literature study was conducted to reveal the important cultural changes within the Swahili societies and the demographic changes along several centuries. Following this were in-depth search for sources dealing with the architecture changes and the influential dynamics in the economy specially trading with what it brings with diverse influence on the architecture styles. Due to lack of resources 5 phone interviews were conducted with local experts in Swahili architecture to get more in-depth insights on the challenging problems from Swahili architecture is now facing.

#### The Case Study: The Swahili Coast

The Swahili coast refers to an area in Southeast Africa; historically their greatest geographic range was, north to south, from Somalia in the Horn of Africa to southern Mozambique, and including the Lamu archipelago, the major offshore islands of Pemba, Zanzibar, and Mafia, the northern tip of Madagascar and the Comoros Islands (Horton and Middleton, 2000). The first Swahili settlements were constructed more than a millennium ago, when Bantu and Cushitic speaking Africans settled along the coast. These Africans are believed to have attained a common cultural tradition and linguistic base, and were collectively known by the neighboring tribes as Swahili. They began as a village-based society, with a few larger settlements appearing mid-millennium (Juma and Ukuu, 2004) and a string of independently governed urban centers appearing throughout the coastal region as early as the late first millennium A.D. The main characteristic of the coastal identity known as Swahili that emerged in the mid to late first millennium was a sense of cosmopolitanism asserted eventually in every aspect of the society (La Violette,2009).

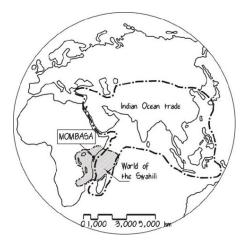


Fig. 1: The location of Swahili architecture Source: Steyn,2015

# **Findings**

According to literature, the region developed largely as a result of trans-oceanic trade with the Arabs, the Persians and the Indians facilitated also by alternating monsoon winds. This led to the establishment of a number of coastal towns whose inhabitants share history, language and cultural traditions of which some scholars claim to date to at least 100A.D (Ghaidan and Lamu, 1975). The lifestyle of the immigrants combined with the impact of their religion, Islam, and much else of their tradition, has had a strong influence on the local inhabitants. According to Oliver (2007), this interaction has eventually resulted in a distinctive cultural mix referred to as the 'Swahili'. Indeed, as a result, a civilization having a distinctive character, of its own, not least in respect of its architecture, has evolved in these coastal cities.

The Swahili city-states flourished between the 12th and 18th centuries, when ships from Arabia, India, and even China called at their ports to carry away the goods that made the Swahili rich—gold, ivory, slaves brought from the African interior, and agricultural products grown on slave-labor plantations owned by the wealthy merchants of the towns. Many of the Arabian sailors stayed to marry local women, and the interplay of African and Arabian languages and customs, as well as the mingling of blood and ideas that permeated every aspect of life, created an urban and mercantile culture, unique to this coast. According to Ghaidan and Lamu (1975), even its name, Swahili, is an adaptation of the Arabic word for coasts, 'sawahil'

Portuguese intervention in the late 15th and early 16th centuries interrupted the trade of these city states, and the mass migration and attacks of some tribes from the North and the South in the late 16th and early 17th centuries led to the downfall of many of them. However, the Omanis have played a major role in the history of the East African coast, as they ended Portugal's brutal 200-year occupation of the coast in 1698, and established new trading links that revived some of the settlements again. By the early 19th century, by conquest and treaty, most of the independent city states were united into a single, if fairly loose, political and economic entity for the only time in their history, under the direct rule of the Omanis of Zanzibar. The East African trade was so lucrative that the Sultan of Oman moved his capital from Muscat to Zanzibar in 1832, establishing a dynasty that lasted there until 1964. Omani influence in East Africa declined as the European influence increased, finally resulting in the Treaty of Berlin (1885) that regulated European colonization and trade in Africa (Garlake, 1996).

#### Indian Ocean Trade and Swahili Culture

Arab and Persian merchants have been visiting the region since the first centuries C.E. However it was the international trade in medieval times that led to the growth of the Swahili city states. There was a huge demand in India and China for gold, in addition to tortoise shells and ivory. Accordingly, the ports along the coast have quickly responded to the increased demand and a network of trade routes have grown up from the gold mines and hunting areas of Southeast Africa to the ports. At the ports, goods have been loaded onto the dhows of Arab sailors and ships of Indian and Chinese merchants who sailed South down the East African coast from port to port with the monsoon winds between December and March, and back again (as the winds changed) from April to October (Reader,2001).

These trading cities have become thriving city states, by the 13th century, with a distinctive Muslim Swahili culture of their own. Mogadishu, Mombasa, Zanzibar, Lamu and Kilwa were probably the most prominent and well known. Each of these states was ruled by a king who levied heavy tariffs from visiting merchants and much of his wealth seems to have been spent on palaces, mosques and houses. All contemporary descriptions of these states refer to the fineness, grandness and wealth of the cities and their buildings. According to Garlake (1996), these city states never sustained control over the hinterland; they remained isolated by the coast. Their inhabitants were neither sailors nor manufacturers but mostly middlemen.

## Swahili Towns and Their Architecture

At the height of Swahili civilization more than 30 independent city states have flourished along the East African coast and have been determined by the trading range the sailing vessels were allowed by the monsoon winds. These ancient settlements were rarely found more than a few kilometers from the Indian ocean since they heavily relied upon marine resources. It is noteworthy that Swahilis have the only East African culture that has traditionally been urban-oriented (Steyn,2002)

The Swahili urban centers were well-known in the Indian Ocean world and beyond. The settlements are known today as stone towns, due to the presence of elaborate stone-built houses, mosques, and tombs, standing among earth-and-thatch buildings. In the stone towns, merchant activities with the African interior and with Indian Ocean traders took place; Islamic scholarship and arts flourished, craft production was carried out, domestic spaces were tailored to changing notions of gender and privacy, and a variety of foreign goods was made available (Kusimba, 1999).

Whatever their individual size or degree of wealth, stone towns were extravagant relative to the coastal villages, with their large central districts of stone houses. Some were surrounded by town walls, and were perceived as stages for the acting out of urban tastes and practices, many of which were informed by Islamic ideology and cosmopolitanism. The stone towns were home to the large congregational mosques and smaller neighborhood ones, flanking stone tombs, and sometimes other stone public buildings. Indeed, the Swahili cities have had cultural capital, through the relative concentration of wealth, access to imported goods, and concentrations of specialized knowledge. These have come in many forms at various settlements, from literate religious elites, to traders, and craftspeople (La Violette, 2009).

## **Building Materials & Technologies**

Traditional Swahili architecture was mainly affected by the climate and the available building materials. The cities were characterized by dense urban fabric, where the narrow lanes and small open spaces, were shaded by the adjacent buildings. The major characteristic of the Swahili settlements was using stone, in contrast to the mud and thatch buildings that were built in the hinterland and the small villages. Such a building technology was imported from the Red Sea shore (Allen, 1993).

This style comprised building with rough blocks of limestone, called coral rag, quarried from the surface and near-surface deposits along the coastal plain, carved under water and finished on the surface. It remains easily workable for a few hours, during which it can be sawn to give a smooth surface or chiseled into elaborate designs. These carved fine-grained coral elements were used in the corners, doorways, lintels and prayer niches. The walls were built of coral rag (fist-sized coral rubble), bonded with burnt and slaked lime mortar and sometimes mud (Steyn,2002). Lime plaster, typically stark white but sometimes dyed to shades of pink and red, coated the interior rooms and certain external surfaces. Talib (1984) claims that building with coral stones with mud or gypsum as a bonding material, is a traditional technique in parts of Arabia, not the Red Sea coast, but specifically the Persian Gulf, because of the contributions of the Persian settlers as well as those of artisans from the Indian sub-continent (Talib, 1984). It is noteworthy that this is precisely the region with which the Swahilis have had most and enduring contacts (Steyn,2002)

The multi-storied stone houses which became characteristic of many of the larger Swahili stone towns after about A.D. 900. Stone became the characteristic of the most elite dwellings and public and religious buildings. These multistoried elaborate buildings did not only express the wealth of the settlements, but were critical to emphasize relationships of certain Swahili lineages with foreign traders. The elite Swahili used their buildings which were unique in eastern Africa and the Muslim world, as an expression of taste and accomplishment that marked them as cosmopolitan. Even Swahili villages which contained no stone houses usually boasted a small stone mosque, or a few above-ground stone tombs (Wilson,1982).

Indeed, the stone buildings created an atmosphere in the coastal towns different from that of hinterland non-Swahili settlements where less permanent materials were used for architecture.

## The Housing Typology

The Swahili house has been evolving throughout the centuries, due to the continuous foreign cultural influences. The change from an earth and thatch hut into a stone building was not the only development, as a number of typologies started to emerge. Gerald Steyn divided the East African coast houses, which he considered them to be Arab and Afro-Arab building types into three groups: a) the Lamu type, b) the Swahili house c) the Omani house.

The plan of the "Lamu type house", which prevailed along the Swahili coast, was extremely compact, consisting of a series of interconnecting rooms without corridors, and a forecourt. It is interesting that Steyn stated that the Lamu type house had Arab roots, while Horton believed that it reflects Indian influence (Horton and Middleton,2000 & Steyn,2002). Although the origins of the "Swahili house", remains mysterious, it is considered a derivative of the "Lamu type house", as a central corridor was cut through the oblong rooms while the courtyard was moved to the rear (Sheriff and Jafferji, 1998). The "Omani house", which appeared by the eighteenth century, could be described as a roughly square courtyard house of two or three storeys, in a cuboid, solid form with a flat roof, and sometimes with a crenellated parapet.

It is noteworthy that the term "Omani house", (which is sometimes referred to as the "Arabic house") is generic and inaccurate, as it describes the Swahili house of the 18th and 19th centuries, in which a number of architectural and decorative elements from across the Indian ocean were combined creating an architectural language peculiar to the Swahili coast. The developments that happened within the "Omani House" could be summarized in two main aspects:

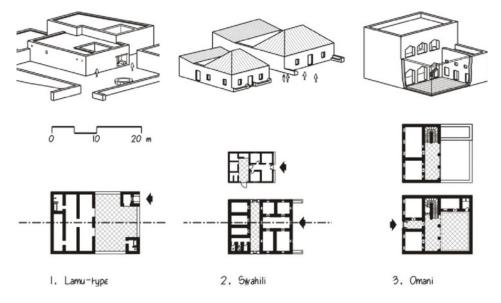


Fig. 2: Different Swahili house Types Source: Steyn,2015.

# **Climatic Considerations**

The "Omani house" with its numerous openings, and loggia overlooking the courtyard allowed cross ventilation, as the courtyard acted as a funnel, with the rising warm air actually causing the airflow, without the need for a natural breeze. This effect was missing in the Swahili house, whose rooms were parallel to the courtyard, had no external windows and therefore no cross ventilation, and such an arrangement is uncomfortable in a hot. Accordingly, the relation of the rooms to the courtyard of the Omani house could be

considered an evolution to that of the Lamu-type house (Steyn,2002). Moreover, external screened balconies were introduced, and shuttered windows were used to promote thermal regulation by channeling breezes and sun shading while meeting requirements for acoustic and visual privacy (Kiamba et al. 2014).

# **Decorative Elements**

The prosperity of the Swahili cities during the 18th and 19th centuries attracted many merchants, financiers and professionals, including building craftsmen, from far away regions along the Indian Ocean shores, and there was a large community from Gujarat on the Indian subcontinent (Siravo,1996). The Indian artisans had a great effect on the detailing of the Swahili architecture, with ornate facades and verandas. This is apparent in the use of intricately carved doors defining the main entrances, highly decorated balconies, covered with intricately carved wooden filigree screens, shielding the occupants from public view and decorative frieze motifs. Also the use of ornate architectural elements for aesthetic purposes and to enrich the interior spaces was evident as the ceiling beams were usually cut properly and painted in red, black and white, and the decoration was complimented with delicate decorative friezes on the plasterwork, and intricately carved wall niches for display of items. These niches were organized in a symmetrical fashion, with a balancing of space, and the origin of this form of niche comes from Gujurat, India (Horton and Middleton,2000).

# Variations

Another housing building type appeared in the busy ports of the Swahili coast during the 19th century, which was the "shop-front house". It was a mixed-use building typology derived from India, which was a two to three storeys building with flat roofs, where the shop occupies the ground floor, and the living spaces in the upper floors. The façade of these shopfront houses overlooking the street, was composed of four-leaf, bifold doors, also known as Gujarati doors, which open the shopfront completely for contact with customers (Siravo,1996).

# **Later Modifications**

Towards the end of the 19th century, the houses with flat roofs were generally roofed over with angled ones, first made of thatch and palm leaf fronds and then by corrugated iron sheeting as protection against the tropical rain and to reduce direct exposure to the sun. Siravo(1996) points out that such replacements affected many of the roof adornments.

## Discussion

The Swahili houses have evolved through the centuries from traditional earth-built dwellings to large houses in stone. In this regard Swahili architecture is a good example of how climatic conditions, cultural and technological influences form a specific type of architecture. Although, the lightweight, elevated structure is the most appropriate building typology in the warm-humid climate, as it enhances cross ventilation and cools down rapidly after sunset and benefits of breezes to offer relief to occupants (Koenigsberger, 1974). However, the predominant building type in the Swahili cities was characterized by heavyweight structures made of thick coral stone walls, timber framed doors and windows, timber balconies and flat coral stone or pitched palm leaf frond roofs.

Accordingly, the Swahili house presents how a complex interaction of various factors could be responsible for this deviation from the expected lightweight typology, as the sociocultural interaction of the Arabs, Persians and Indians through trade and intermarriage helped in shaping Swahili architecture in such a way. Ghaidan (1975) points out that Swahili architecture borrowed heavily from that of the hot-dry architecture of the Arab world as a direct result of cultural integration, and that the effect of Islam could be seen in the Swahili concept of space, aspects of privacy are significant and evident in use of screens and the 'inward' organization of space.

However, owing to the strict requirements for visual and acoustic privacy it seems highly unlikely that the prescribed lightweight solution would have been deemed socially acceptable (Ghaidan,1975). Also, this might explain the prominence of architectural elements such as screened balconies/windows and courtyards which not only enhance privacy through provision of semi-private outdoor spaces but also promote shading and cross ventilation.

The fact that a person was held in higher esteem if they owned a 'stone' coral house (Ghaidan,1975), proves how socio -cultural aspects influenced the Swahili architecture even more than the climatic aspects. However the Swahili house throughout its evolution was able to respond to the warm-humid climate through a number of design strategies such as the use of heavyweight building fabric and the mutual shading of adjacent buildings to reduce the impact of solar gain. In addition to the use of screened balconies and shuttered windows to channel air breezes (Kiamba et al. 2014).

Today, almost 300,000 and half a million people inhabit the settlements along the East African coast, and the region continues to thrive as a trade and transport hub. In addition to a flourishing tourism industry. As in many parts of the world, the old towns of the Swahili coast face numerous threats, such as the population growth, pollution, dilapidation of the infrastructure, the change of the traditional urban fabric and the decay and even demolishing of significant buildings. Mombasa, for example, which was once one of the most powerful Swahili city-states, is now Kenya's main seaport, and its old town has been swallowed up by urban sprawl, and very little of its original Swahili character can be found (Caputo, 2001).

On one hand, mass tourism is affecting the Swahili coast at a very fast pace, as the creation of numerous resorts along much of the coast, pushing out the original functions of community-based trade and commerce. Also the introduction of new architectural forms, construction techniques and building materials from outside its cultural sphere, seriously distorting age-old references to place and people (Sakr,2008). The impact of mass tourism in addition to the urban and economic challenges that face the East African countries, might change the functional, organizational and traditional patterns that characterized the Swahili coast and turn it into an "unrecognizable" place, as seen in many parts of the world. Not only this, mass tourism has drastic socio- cultural implications on any traditional settlement. On the other hand, tourists visit such communities to see how they live, which is usually in a very conservative way; however the tourists' intervention changes the life style of these communities, and especially among the younger generations. Also the tourism industry attracts many outsiders to live and work along the coast, thus changing its culture and demography and is an indirect threat when because of gradual and slow gentrification (Sakr,2010). One example is Malindi, which has been a very popular tourist destination since the 1970s in Kenya, has been dramatically changed into a stretch of tourist resorts, and lost its authenticity both socially and on an architectural level (Caputo, 2001). Nowadays Zanzibar and Lamu are two Swahili cities, whose old towns have received considerable attention from architects, urbanists and archeologists. The restoration works of the Aga Khan Trust for Culture in the stone town of Zanzibar helped in saving a number of its prominent buildings, raised the awareness of Swahili architecture, and consequently presented the stone town of Zanzibar as a touristic attraction, which is now attracting great numbers of tourists.

It is important not to present the aspects of the Swahili culture, both tangible and intangible, in a commercial way for the tourists, as this will gradually result in degrading the Swahili culture, including arts and architecture into mere pastiche forms and shape. Encourage appropriate economic uses of buildings; rehabilitation and adaptive re-use of buildings with sensitive solution for essential amenities and facilities should be regarded as prime concern to preserve the Swahili building tradition (Dabaieh,2010 & 2015).

It is evident that there is still a lack of detailed and precise documentation for all Swahili distinctive valuable buildings together with detailed documentation and recording of intangible social habits. It is both important for preserving the identity and for future rehabilitation and retrofitting projects. It is also not only documentation related to vernacular building traditions that is lacking, documentation of life style, daily activities and local crafts still needs more in-depth and through investigation and recording.

## Conclusion

From this analytical study, it is deduced that Swahili is a dynamic culture. From its beginning, it has incorporated foreign elements, and was able to evolve and develop. Their location and the engagement in the Indian Ocean trade forced the Swahilis to adapt and respond to social, cultural and aesthetic variations. However, this study set out to determine the threat from the continued forces of globalization and that the fast rate of socio-economic and cultural change might change the Swahili coast and its culture in an unprecedented way. The study pointed out that countering human needs in the face of modernization and globalized is basically a consumption based demands for a new life style. The study also highlighted the effect of uncontrolled demolition of Swahili vernacular dwellings by some locals and the replacement of traditional houses with new houses using modern industrial materials. This tendency will gradually lead to the deterioration of an important part of Swahili rooted vernacular history.

Moreover, this study uncovered some reasons as to why inhabitants found it easier to adopt ready-made modern solutions rather than improve their vernacular and traditional dwellings. It is evident that craftsmen, builders with lifetime knowledge on how to build a traditional Swahili house can still be found today, but may be not be around tomorrow. It is difficult to force people to return to their old towns and villages if they no longer satisfy their needs. One should not underestimate the awareness of people thinking that they live in traditional and vernacular societies. They know what is happening around them in the rest of the world as media plays a vital role in raising the ceiling of ambitions. There is a fine thread between vernacular heritage to be preserved because of its numerous values and the rights of people to develop their lives within their old vernacular dwellings. Increasing sense of belonging and if locals feel more attached to their place can be one way that gentrification, demolition and abandonment be solved .

Further research is still needed to lay hands on further wicked problems facing Swahili vernacular architecture and propose tangible solutions that are urgently needed.

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