

**THE IMPACT OF DEVELOPMENT PROJECTS ON ARCHAEOLOGICAL  
HERITAGE: A CASE STUDY OF SELECTED COASTAL SITES AND  
MONUMENTS IN KENYA**

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**A THESIS SUBMITTED IN PARTIAL FULFILMENT FOR THE DEGREE  
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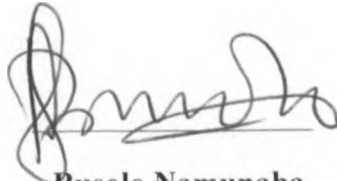
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## DECLARATION

I certify that this thesis is my original work and has not been presented for a degree in any other University.



**Busolo Namunaba**

This thesis has been submitted for examination with our approval as University Supervisors.



**Prof. Henry W. Mutoro**



**Mr. Gilbert K. Wafula**

## **DEDICATION**

This work is dedicated to my father Henry W. Namunaba and mother Perita Nasambu for their care and concern in my upbringing.

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## **ABSTRACT**

Major development projects have taken place along the coast of Kenya since independence. Hotels, seaside resorts, roads and other public amenities including housing schemes serving the coast region have expanded considerably. Archaeological heritage and other cultural resources have been lost in the wake of these developments and expanding human settlements. These resources have been destroyed and/or exposed to vandalism.

This study aims at finding an interface between development projects and archaeological heritage management. This could ensure harmonious coexistence and possibly better management of the archaeological and cultural heritage.

Using simple random sampling method and personal judgment of the researcher, four sites were selected along the coast of Kenya for this study. The research findings were that development projects as well as the local community contribute significantly to the destruction and loss of archaeological materials and historical sites. The sites which still survive face a high risk of destruction.

## CHAPTER ONE: INTRODUCTION

### 1.1 Introduction

Kenya is generally blessed with abundant natural and cultural resources (non-material and material attributes acquired by a society and transmitted through generations upon which the economy thrives. Among the regions with high potential in Kenya is the coastal stretch of about 450 km long and about 65 km wide. Some of the earliest permanent settlements in Kenya sprung along the coastal fringe. Maritime trade and ease of communication were among the factors that facilitated the growth of coastal settlements, which flourished around natural ports and sheltered waters of the Kenya coast (Map 1). Houses, pillars and tombs built of stones, lime and mortar, characterized the settlements (Mutoro 1979: 10).

On this coast, Mombasa City, together with its suburbs, has seen the expansion of a housing sector, hospitals, hotels and a provision of public infrastructure like roads, railway lines and suburban tracks. Other coastal towns like Malindi, Lamu and Kwale have also seen numerous development projects taking place as investors struggle to exploit natural resources (Kusimba 1996: 201). Archaeological research along the coast has taken place for a long time now (Kirkman 1954; 1964, Garlake 1966, Chittick 1967, Wilson 1978; Mutoro 1987, Abungu 1986, Mutoro and Abungu 1993, Kusimba 1996) giving the country some cultural and historical identity. Academic research on coastal archaeological heritage (partial material remains and traces of human past) has brought to light the potential of the coast region in understanding the history and archaeology of Kenya. However, minimal achievements have been realized in the government's efforts to protect these sites from destruction and other human encroachment.

The role played by the private sector and government agencies in the destruction of sites needs urgent attention. These agencies continue to initiate development projects along the coast region without impact assessment statements and the end result has been loss of archaeological materials. An impact assessment statement is a document prepared to weigh the positive and negative effect of a particular development project on the overall quality of local environment, community and archaeological resources (Doswell 1997: 198).

As Addyman (1989) and Pwiti and Mvenge (1996) would agree, preparation of impact assessment statements by development agencies should form a basis for proper management of archaeological and historical resources. The increasing population density along the coast and the growth of the tourism industry has led to uncontrolled expansion of infrastructure and superstructure (hotels, shops, schools and entertainment facilities) at the expense of preservation of archaeological resources (Kusimba 1996). These have created imbalances to the environment as well as posed a threat to archaeological sites, let alone the adverse social effects to the host communities.

This study examines the impact of development projects on the archaeological heritage. It specifically assesses the effect of urbanization and the accompanying infrastructure and superstructure on archaeological heritage. The role of the local community, and the environmental factors in the conservation of archaeological and historic sites is also investigated

## 1.2 Research Problem

Human activity on land, particularly development projects are known to cause degradation not only to the natural environment but also to archaeological resources, which include archaeological sites and historical monuments. For many years, especially beginning in the early 1960s several development projects have cropped up on the Kenya coast. The increase in the number of development projects in the region is due to the efforts to achieve higher productivity of basic necessities such as food, shelter and transport. The ever rising numbers in human population mean that there is increased pressure on land. This leaves archaeological resources vulnerable to destruction.

The problem is that in spite of the overabundance of development projects on the landscape of the Kenyan coast, little information, if any, is known concerning the nature or degree of impact that these developments have had on the archaeological heritage. It is unclear if development projects have destroyed archaeological resources or not. Should the development projects have destroyed the sites, it is still unclear the extent of such destruction. Other than development projects, it has not been vividly ascertained as to what other factors may have impacted on the archaeological heritage; factors such as activities performed by members of the local community and effects of the natural environment.

Therefore, in order to solve the above stated problem, this study poses the following questions: 1) To what extent is the construction of roads, houses and related infrastructure responsible for the destruction of archaeological resources?

2) Do activities and behaviour of members of the local community contribute in destroying archaeological resources?

3) How far does the natural environment damage archaeological resources?

### **1.3 Goals and Objectives**

The ultimate goal of this study is to assess the impact of development projects on archaeological resources on the Kenya coast. Such an evaluation will help in identifying ways in which such destruction can be avoided. This will enable the study to propose recommendations whose enactment will ensure that archaeological resources are not damaged and lost.

In order to achieve the above main goal, the specific objectives of this research are:

1. To assess the negative effects of infrastructure and superstructure on archaeological sites.
2. To investigate the role of the local community in the destruction of archaeological sites.
3. To determine whether environmental factors are responsible for the loss of archaeological resources.

### **1.4 Research Hypotheses**

1. Human activity on land causes degradation to archaeological resources. It is therefore expected that construction of roads, houses, hotels and other public infrastructure and amenities destroy archaeological and historic resources.
2. The local population is partly responsible for the destruction of archaeological resources either knowingly or ignorantly. Uncontrolled settlements and farming activities by the resulting from higher population density tend to disturb archaeological materials and destroy sites.
3. Environmental factors such as rainfall, high temperatures and general decay contribute to the loss of archaeological resources.

## 1.5 Theoretical Framework

There is general acceptance that an eagerness to realize the advantages of modern technologies has often led to destruction of valuable attributes of society and its material culture that have survived through centuries and which, once lost, cannot be restored (Kiamba 1997: 11-12, Gottman 1962).

The potential of land system and the resulting built environments (the joint product of land, buildings and other infrastructure) has put a lot of pressure on the existing archaeological sites. This pressure varies according to the density of population and distribution in relation to the greatly valued natural and cultural resources (Gottman op.cit, Foster 1985, Kiamba op.cit.)

The adverse impact of modern technologies and the resulting development projects lead to loss of natural habitats, disturbance of flora and fauna and, the landscapes that contain archaeological resources. In discussing the built environment, Kiamba argues that once land is joined to the buildings and other infrastructure through modern development, it is 'trapped' in terms of its use. It is completely subservient to the use of the structure itself and its cartilage (the land surrounding which is used with the structure). He argues that such land becomes free from the trap only at the end of the cycle when the structure is cleared for redevelopment. Here, archaeological materials whether known to exist or not, may be destroyed by the agents of development.

Population increases have necessitated higher production of human basic needs such as food, shelter and clothes (Morgan and Leong 1982). This is evidenced by the magnitude of industrialization and urbanization that is taking place both in developed and developing countries. Modern technology has been applied in irrigation schemes, correction of streams and expansion of industries. The infrastructure as well as the superstructure associated with urbanization has been constructed. These, together with the expanding human settlements,



have reduced the carrying capacity (the ability to sustain, without adverse effects, the development projects) of land (Gottman op.cit.).

Morgan and Leong (Op cit.) agree that some areas of land are vulnerable to adverse effects of uncontrolled development. Such areas are those of fertile soils, flat or undulating terrain, existence of mineral resources and a good climate suitable for agriculture. It is further argued that accessible tropical regions have been cleared of forests and are devoted to agriculture. Coastal areas are also preferred for settlement due to easy accessibility as well as good climate for tourism and harbour development.

Smoke and chemical effluent from industries produces air and water pollution. These contribute to degradation of the environment and the natural balance of the ecosystem (Foster, op.cit.) Too rapid developments cause land prices to raise hence encouraging speculation on land and properties. Holloway (1988: 255-261) agrees that uncontrolled developments exert excessive demand on construction and other industries that supply consumer goods and services. Development projects are often capital - intensive investments and are not easily reversible. It is in this light that the research is hinged to investigate the effects of these developments on archaeological and historical resources distributed on the land surface upon which the former takes place.

## **1.6 Conclusion**

In this chapter the statement of the problem has been outlined. The main objectives as well as the research hypotheses have been articulated. The theoretical framework upon which this study is hinged has been discussed.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter offers a comparative study of what takes place in other countries as far as destruction and management of archaeological heritage. It also explores cases of rampant destruction and negligence in Kenya.

Also covered is an overview of the history and current researches that have taken place in the study area.

### **2.2 Comparative Literature on Archaeological Heritage Destruction and Management**

Man is the greatest threat to the preservation of his own archaeological heritage.

Whether at individual or institutional level man has been responsible for the destruction of a significant amount of archaeological resources (Mturi 1996: 183). Development programmes by government agencies and private sector with intentions to provide services have destroyed archaeological sites (Kusimba 1996: 201).

Flood control projects, irrigation schemes, hydroelectric power and navigation have been recorded as being responsible for the loss of archaeological resources in the U.S.A. (Roberts 1948). An example is the Medicine Creek project on Republican River in Nebraska and the Aswan Dam Project on the Nile River in Egypt and Sudan. In the above cases, time and manpower were so limited that archaeologists risked using heavy machinery in removing the overlying materials on buried villages. The result was a great loss of data and what was recorded could tell very little, as the context in which they were found could not always be interpreted accurately.

In Tanzania the Antiquities Legislation does not require developers to conduct heritage impact assessment surveys and mitigation measures prior to any construction work (Karoma 1996). The result has been loss of a staggering amount of archaeological resources.

The disparity between official policy and actual management of resources in Tanzania has also been partly responsible for the deterioration and destruction of archaeological sites (ibid: 191, 195, 200). This is the case for the three famous sites of Kilwa Kisiwani, Songo Mnara and Kilwa Kivinje. At Songo Mnara, the ruins have been reduced to white ash of lime through burning to give way to modern construction. At Kilwa Kivinje and Kilwa Kisiwani, locals have destroyed the ruins for stones, which are normally sold to developers. Mturi (Op.cit.) acknowledges that human activities and natural agencies contribute to the decay and deterioration of archaeological resources.

According to Mturi's (ibid.) analysis of the state of archaeological sites in Tanzania, human damage to rock art archaeological sites can be ranked as one of the most serious since the sites cannot be reconstructed. He notes that in 1980, a family inhabited one rock shelter and a blacksmith occasionally used another shelter as a workshop. There is also evidence that in the recent past, rock shelters were used for religious ceremonies and the results have been the destruction of the paintings by smoke and soot from fires.

Modern paintings have been found superimposed on ancient paintings. According to Mturi (ibid ), tourists to the site are known to use water to make the paintings more visible as well as inscribing their marks and/or name(s) (*graffiti*) on the ancient paintings. Illegal excavations of the archaeological resources found in the deposits of the rock shelters have been reported in Kondoa and Iramba Districts in Tanzania.

Nigeria has equally been hit by the menace of archaeological heritage destruction. The problem of poor management of archaeological and cultural resources has been of a major concern in Nigeria (Folorunso 1996: 796).

The Nigerian Antiquities Services established in 1943 was to manage the collections and make surveys for other potential data (ibid ) The first law to protect antiquities was enacted in 1953 in the name of Antiquities Ordinance Act, and through this the National Department of

Antiquities was created to control exportation of archaeological heritage. In 1974 the Prohibited Transfer Act was enacted but was so flawed that it did not prohibit exportation of antiquities.

Despite this legislative development, by 1996 there had been no reported rescue work or protection of archaeological sites in the wake of large numbers of public and private constructions in Nigeria (ibid). Eluyemi (1982) claimed that despite the knowledge of the National Commission for Museum and Monuments about eminent destruction of sites no action was taken. Site excavation is purely for academic purpose rather than the threat posed by development projects. According to Andah (1979), most ventures by the government and private companies in Nigeria are destructive of archaeological resources particularly where the projects involve digging in the bid to construct new structures.

In Botswana, private contractors have on occasion damaged archaeological sites. Subcontractors are reported not to care or are not just informed about archaeological resource protection. For example, a subcontractor laying a water pipe ploughed through two historical sites near Fort Matlapatla (Waarden 1996: 833). A major Early Stone Age handaxe site of Boteti River near Maun was destroyed by local villagers who quarried the site for stones which they sold to contractors (ibid.)

Archaeological heritage in South Africa does not also receive adequate protection (Deacon 1996). This is because archaeological resources are viewed as having less value compared to other structures of the colonial era. Worse still, conservation of cultural heritage is inadequately developed (ibid: 839). Engineering, mining and agriculture, including forestry, have been responsible for the loss of many archaeological sites in South Africa.

According to Schalkwyk (1996: 850) on land use analysis in South Africa, agriculture and forestry cover a total of 122 million hectares out of which approximately 110 million ha is farmland and accounts for approximately 85%. Of this only 16.6 million ha is arable farmland

and about 13.5 million ha has been cultivated for crops. Mining activities cover about 1% of the country's total land surface.

Engineering works involving roads, railways, dams, power lines and shopping centres cover not more than 3% of the total land surface. Most of the activities mentioned above take place without impact assessment statements to establish what archaeological resources are endangered (ibid ).

The pressure for land in Kenya has contributed to vandalism of archaeological sites (Kusimba, op.cit: 201). Coral rocks and ruined structures on the Kenya coast present a significant temptation to those who need building materials. It is evident that sites are robbed of their stones.

The expansion of the Coast General Hospital exposed the site of old Mombasa town (Wilson and Omari 1996: 227). Despite efforts by the contractor to halt the work to allow salvage work by archaeologists, a lot of archaeological materials were lost. Most of old Mombasa town now lies buried beneath the streets and buildings of the present city along the northern sweep of Mombasa harbour. A private company, Zimmerlin, knocked off a section of the northern wall of Galu historical site in Kwale District during their surveys (Kusimba,op.cit.: 212). It is noted that charcoal burners who supply tourist hotels with charcoal have destroyed the forest in the coral enclosure of the Galu site. Real estate development in Mtwapa region has also contributed to vandalism of many sites most along the coast of Kenya (ibid.214). For most of the sites destroyed, there is little known about their archaeological status.

According to Wilson and Omari (Op.cit.: 229) a multinational corporation, Zimerlin and Company, which was carrying out an oil exploration ploughed a road through the western environs of Takwa historic site destroying approximately 15% of the site down to the foundations of the buildings. Takwa historic site is located on the northern coast of Kenya

and consists of 150 structures of coral rag, a single central congregational mosque, pillar tombs and a town wall. Another site, Mwana, located near the mouth of the Tana River was damaged when Zimerlin and Company constructed a road through it.

Another example of archaeological site destruction in Kenya was Luziwa (Uziwa) at Mpeketoni. This site was inhabited by the late 16<sup>th</sup> Century when the Portuguese Captain of Malindi took refuge there briefly (Kirkman 1964: 156-7, Wilson and Omari, op.cit.: 239). This is also associated with larger communities on the Island of Lamu (Wilson 1982). In the 1970's, the government of Kenya with the assistance of foreign aid developed an agricultural settlement project at Luziwa near Mpeketoni on the mainland opposite Lamu Island (Wilson and Omari, op.cit: 232-36). The government built roads, dug wells, and allocated plots to farmers who have since tilled much of the land including the immediate environs of ruined mosques.

Inadequately controlled developments have destroyed a prehistoric mosque at Kilindini and the site of Kitoka along the Kenya coast. Kilindini was settled from the south mainland in the early 17<sup>th</sup> Century and after about 200 years it was abandoned (ibid.). The ruined mosque of Kilindini was the only landmark of the area until its demolition in 1974 to give way for a modern construction.

The Kitoka site on the other hand is located on the north bank of Takaungu Creek near Mnarani, Kilifi and Kioni on Kilifi Creek. When Garlake (1966) visited the site in mid 1960's the site covered about 2.5 hectares and comprised two ruined mosques and a number of houses.

In the 1970's and early 1980's teams from the National Museums of Kenya visited Kitoka but one of the mosques had been demolished. According to Wilson and Omari (Op.cit.) the owner of the land on which Kitoka is located threatened the site by clearing and cultivating the area and was hostile to the concept of preservation of any kind on his land.

Pate, another important site on the Kenya coast covers approximately 20 hectares within the town wall. Today there are two contemporary villages at Pate, Kitokwa to the west and Mitaayu to the east. Some of the ruins include six collapsed mosques, two mosques that the people of Pate have restored, and a number of tombs and cemeteries (ibid: 232-33).

The people of Pate regard Pate as their right and believe that they are free to obtain building stones from the ruins for new constructions. These people have also cultivated tobacco in the area as a cash crop thereby stirring up archaeological deposits and weakening the remaining ruined buildings.

Kariandusi prehistoric site is probably the first Acheulian site to have been found *in situ* in East Africa as described by L.S.B Leakey in 1931. This site lies on the eastern side of the Rift Valley about 120 km north west of Nairobi and about 2 km to the north eastern side of Lake Elmenteita. Near the site are large deposits of diatomite, which are quarried for industrial use (Cole 1963: 157).

The stripping of the overburden from the diatomite deposits is threatening the Lower Site of Kariandusi which downslopes towards the diatomite quarry and the Kariandusi River. Gowlett and Crompton (1994: 7) note that the quarrying and the digging of the drainage ditch have disturbed artifacts. The Upper Site of Kariandusi is being encroached by farming activities. There is a large farm to the east of the Museum at the site.

Hyrax Hill site, one of the earliest Neolithic sites (Cole, op.cit: 282-83) consist of a narrow rocky spur of lava measuring 1 km from north to south 3 km south of Nakuru. The main Nairobi - Nakuru road, skirts the southern end of Hyrax Hill site. Since Mary Leakey worked there, Nakuru town has expanded and now almost engulfs the hill. The grassy plains that surrounded the site are no more because of the fires set by local residents (Sutton 1987). There is also evidence that the local residents graze their cattle on the site. There are many

upcoming projects within 600 metres of the site including a hotel to the east and cultivation of the land to the western side of the site.

Lanet archaeological site of earthworks, enclosures and habitation hollows is situated about a quarter a kilometre from the main old Nairobi - Nakuru road. European settlers popularly knew the site as 'Old Nakuru'. An aerial photograph dating 1939-45 revealed two earthworks consisting of banks of earth dug from an interior ditch on either side of the main Nairobi - Nakuru road. According to Posnansky (1967: 189), the earthwork to the north of the road has since been built over by a housing development scheme.

Countries need to formulate policies within which development activities take place so that archaeological resources are not destroyed by the former. Further development can be achieved by integrating archaeological heritage in various sectors of the economy. There are good examples of such developments. First, is the example of the rock art site of Domboshava in Zimbabwe. The infrastructures around the site are well maintained for accessibility by tourists and scholars, to promote the site for scientific research (Pwiti and Mvenge 1996: 818-19). Also at the site is a small interpretive centre, which was constructed and manned by local custodians. The aim of the centre is to provide visiting parties with scientific information about the site.

The second example is the Stonehenge Prehistoric site in the United Kingdom. Stonehenge Prehistoric site is already a major tourist destination with easy access especially for tour buses and private vehicles. According to Addyman (1989), Stonehenge has the potential to produce huge returns on investment. The Heritage Projects Ltd. has recommended the construction of the Stonehenge Prehistoric Centre. This is a cultural, recreational and educational asset, which would minimize disturbance to the site and its environs. It would also maximize the number of visitors and meet their needs as well as produce higher income for Historic Buildings



and Monuments Commission (ibid: 266).

Development projects must be preceded by an environmental impact study. There should be a provision for funds and land for relocation should the study establish the need to preserve the environment and archaeological resources. In the United States of America for example, the National Environmental Policy Act of 1969, requires Federal Agencies to consider environmental, historic and cultural values wherever federally owned land is modified or federal funds used on private land (Fagan 1988). This Act requires preparation of environmental impact statements for any Federal work and archaeologists are able to finalize research in good time where cultural materials are endangered. The Archaeological and Historic Preservation Act of 1974 authorized federal agencies to provide funds for the preservation and recovery of archaeological and historical resources that are threatened.

In the United Kingdom, the English Heritage advises the relevant government on the sites worth protecting whether these are on public or private land. When their value is seen to be of national importance they are placed on a schedule of Ancient Monuments. Private owners of a listed site must seek consent from the Scheduled Monuments to develop it.

Botswana presents a good case in Africa for comprehensive organizational and legal framework through which archaeological resources are managed. The Monuments and Relics Act of 1970 makes it an offense for any one to disturb, remove or damage any archaeological remains without first having received consent from the Ministry of Labour and Home Affairs (Phaladi 1998). The National Museum and Monuments and Art Gallery also have responsibility for management of archaeological resources. The archaeological division of the former has the following as its main functions. First, is developments control, which is largely achieved through the use of archaeological impact assessment and rescue excavations to mitigate the effects of constructions. When a major construction project is prepared the developer must first

commission a consultant archaeologist to establish if any archaeological site will be damaged. Secondly, is making inventories of cultural resources. This is normally carried out during field research and the details of the cultural resources are registered in the National Site Index. Thirdly, concerns management of archaeological sites and monuments where the National Museum is required to maintain all the gazetted National Monuments in order to ensure their long term preservation. Finally, there is collection management where the National Museum is the sole repository for archaeological materials recovered from archaeological sites in the course of surveys and excavations.

Phaladi (ibid.) also notes that regional museums take an active role in research and development control. Inter-agency co-operation is quite encouraged in Botswana in the efforts to check the effects of developments on archaeological sites. The Department of Water Affairs, and the Botswana Power Corporation, and the Roads and Mining Departments all require an archaeological impact assessment statement as part of their project feasibility study (Waarden, op.cit.).

The situation is not the same for Kenya's archaeological and historical sites. Although there are national and regional museums acting as custodians of archaeological heritage, most sites are prone to destruction. Kusimba (Op.cit.) notes that the National Museums of Kenya has allowed some tourist businesses to conduct tours to some sites along the coast. Clandios Restaurant has been authorized by the curator's office at Fort Jesus Museum to conduct visits to Mtwapa historic site. The public is allowed to pass through Lanet site in the Rift Valley and at the Mtwapa historic site people trespass through the site to gain access to the seashore. The implication of this scenario is twofold. First, those authorized to conduct tours have no scientific capacity to give reliable information about the sites and by doing this National Museums of Kenya is relegating its role as an authoritative body in the archaeology of Kenya. Second,

most archaeological sites have neither been protected from unauthorized people nor developed for visitation. As a result, local people graze cattle in some sites. Examples can be found in Lanet, Kariandusi and Mtwapa sites. Galu historic site has had the natural forest around it cleared for firewood, charcoal and boat construction (Kusimba, op.cit.). The above activities have exposed archaeological materials to vandalism. Neglect has also rendered these sites vulnerable to natural deterioration. Due to lack of inter -agency co-operation a number of sites have been destroyed by government agencies and private developers (ibid.)

### 2.3 Early Research Work done

Research work at the coastal monuments and sites can be traced to as far back as 1946 (Rodwell 1946). In his book entitled, *Gede: The Lost City*, Rodwell described Gede as "... a city was built inside a stout wall, and so it flourished, ruled from the sultanate, the Moslem inhabitants worshipping at the mosques... the mosques of a city mystery, hidden from highways and byways." (pp. 11).

He also described Mtwapa and Kitoka which was part the old Kilifi State as "... ruins still hidden in the forest that were unexplored... when the Portuguese arrived the two were just but villages" (pp.31). Rodwell's work was a significant step towards the start of archaeological investigations of the coastal sites.

The subject of whether or not the builders of coastal ruins were foreign to the region has occupied the minds of most researchers. Among early researches on the coastal ruins of Gede, Kitoka and Jumba La Mtwana are those by Kirkman 1954; 1964. Kirkman's initial archaeological research at Gede was done in 1954. Garlake (Op.cit.) and Wilson (1978; Op.cit.) did extensive study of the architecture of the ruins. Others included Chittick (1967) whose discoveries on the Lamu Archipelago have helped to understand the coastal ruins. Other studies at the site have aimed at dating cultural material remains. Numerous local potsherds,

some bones, charcoal and foreign materials which included sgraffiato, blue and white celadon as well as porcelain are among common outcomes of excavations from these sites that have been valuable in answering academic questions after analysis and interpretation.

#### **2.4 Current Research**

Kusimba (Op.cit.) has done later archaeological research on the ruins at Mtwapa and Kizingitini along Mtwapa Creek. His aim was to establish the social practices (burials, reuse of tombs and cemeteries) of the dwellers of the ruins. Some excavation work has also been done at Jumba La Mtwana to date some foreign porcelain and establish the validity of maritime trade.

#### **2.5 Conclusion**

The foregoing chapter has generally focused on the specific countries where significant destruction has taken place, as well as providing good examples of better legal and organizational framework within which archaeological heritage management is done. Special attention has been paid to Kenya as far as general site destruction is concerned.

7

## **CHAPTER THREE: METHODOLOGY**

### **3.1 Introduction**

The purpose of this chapter is to explain the methods used to collect and analyze data. The relevance of the methods adopted for this study is explained as much as possible. The tools used in the field are also listed and explained. Coloured photographs 9 by 13 cm of structures, which are neglected and/ or lying on private land, were taken. Photographs were used here to capture the evidence of negligence as well as cases of site encroachment by developers. Completed as well as continuing human activities taking place within the monuments were captured in photographs (Pages 64-66). The procedure followed in the collection of data is as elaborated below.

### **3.2 Archaeological Survey**

Archaeological Survey is an approach of data recovery that involves the examination of a specified tract of land to observe, record and collect from the surface the visible remains of the past human activity. For this study the definition is modified to include observation, recording and collecting visible data about current human activity that is likely to or have destroyed archaeological and historical heritage. This method has been used by the Ohio Archaeological Council to maintain a master catalog of archaeological sites and monuments (Dancey 1981: 83-126). The survey was carried out as follows:

#### **3.2.1 Phase one: General Survey**

In this phase, general visits to the monuments were made within the study area. It involved observing and recording the common type and general distribution of current human activities taking place within five kilometres of the monuments and sites.

The elements of weather, the landscape, vegetation, site location and features of archaeological as well as of historical importance that are threatened by human activity were also observed. The following tables give a key to the Preservation State of the monuments and the description of Vegetation covers.

State of Preservation	1	2	3	4
Description	More than half the number of original structures still standing	About half the number of original structures still standing	Less than half the number of original structures still standing	No structure standing

*Table 1a: Description of state of preservation of the site*

Vegetation Cover	1	2	3
Description	Thick bushes of tall trees and undergrowth	Fairly bushy with light undergrowth	Scattered tall trees with short and heavy grass cover

*Table 1b: Description of the vegetation cover in the Sites*

### 3.2.2 Phase two: Intensive Survey

This phase involved intensive observation of individual wall enclosures, houses, mosques, courtyards, wells and pillars within Mtwapa, Jumba La Mtwana, Gede and Kitoka sites. Observation of the structures, which have collapsed was made to establish whether this was caused by people, animals or by trees growing within the sites.

### 3.2.3 Phase three: Intensive surface observation

This phase involved more comprehensive observations to spot archaeological scatter along modern roads as well as paths. In some sites where fencing has not been done, roads and /or paths form the outer boundaries of those sites. The objective here was to obtain a detailed picture of the boundaries and surface distribution of archaeological scatter occurring outside the present demarcation of the monuments.

### 3.3 Subsurface Testing

Limited subsurface testing was done by removing cores of dirt on the roads, paths and on randomly selected units on private land (where permission was granted) especially in areas where no surface scatter was observed. Since real excavation was beyond the scope of this study, only shallow test pits of one by one Metre Square were dug. The main aim for subsurface testing was to test for archaeological materials present in areas lying outside the actual perimeters of the monuments

#### 3.4.1 Measurements

In examining the wear and tear of the structures, measurements were taken as follows; (a) wall height (WH), is the distance to which a wall rises above the ground surface; (b) wall thickness (WT).. This was done using 3-metre tape. Also measured was wall inclination (WI), which is the angle at which a wall leans in reference to the horizontal (ground level). It is assumed that walls are built perpendicular at right angles to the ground. Therefore, the lower the WI of the wall structure the higher the chances that the structure will fall. The objective for taking these measurements was to establish the current heights of the walls and to determine the nature of wear and tear. Wall surface scratches by modern man otherwise known as *graffiti*, or those by domestic animals were keenly looked for. The approximate sizes of selected portions of land with historical structures located on private land and where such structures were just neglected were measured using a 50-metre tape.

### 3.5 Sampling Strategy

Financial constraints, limited personnel and time could not allow a full-scale study of archaeological and historical sites on the Kenyan coast. The sites under study were chosen because of the following important factors. First, a high density of historical and archaeological sites located in areas with high human population density was considered. This is important for this study since the need for agricultural land and related infrastructure increases with increase in population density. Second, the potential of the coastal fringe for tourism development made the sites valid for this study. For easy accessibility, the north coast sites of Mtwapa, Jumba La Mtwana, Gede and Kitoka were chosen for the study. These sites are located in areas of high tourist activity, settlements and farming. Some roads that mark the borders of the sites as well as paths traversing the sites were self-presented units for observation. Simple random sampling was used to select subsurface testing units on the roads and paths traversing the sites under study.

The Interview method of data collection was also used to supplement other methods in collecting data. Interviews were done in three categories (See Appendix 1 and 2 for interview guides and coding respectively). In category one, a simple random sample of 120 local elders was interviewed with the aim of establishing the local perception on the management of their archaeological heritage. To start with, Mtwapa Location (an administrative unit) was chosen because Mtwapa and Jumba La Mtwana sites are located here. A sampling frame of 200 elders was prepared by visiting households within the location and enlisting elders who were 45 years of age and above. For one to be included in the sampling frame, he must have been a resident of the location for a minimum of 4 years and occupied a position in the social hierarchy of the society. This was to ensure that whoever was selected could give reliable information about the local community's cultural heritage. Here, a sample of 60 elders (30% of the sampling frame) was drawn for interview. Using the above criteria another list of 200 elders was prepared



from Takaungu and Gede Locations. Kitoka and Gede sites are located here respectively. Again, 60 elders or 30% were sampled for interview.

A sample of 30 visitors to the regional museums and the monuments formed the second category to be interviewed. The sample was determined by considering all the visitors who happened to be at the sites during the fieldwork. Final secondary school certificate was the lowest educational level required for any visitor to be interviewed. It was expected that any one with this qualification was likely to understand the questions and therefore, the reliability of the responses. The objective for interviewing the visitors was to establish their views on what contributes to the loss or destruction of the heritage that actually attracts them. Since the visitors are some of the beneficiaries of the sites, it was important to know what they thought could be done to protect and improve the sites for visitation.

Finally, museum curators and other employees involved in the recovery as well as in the protection of sites and monuments formed the third category to be interviewed. This was a carefully selected sample that included all curators and other museum officials who in the judgment of the researcher were significant in responding to the questionnaire. Respondents in this category were drawn from Fort Jesus Museum, Jumba La Mtwana and Gede Regional Museums. A sample of 25 respondents was selected. It was important to know whether curators did their work effectively, as well as to know the official view on site management.

The questions administered were carefully designed to arrive at particular issues sought in the study. The relevance of every question asked is explained below starting with those administered to the local elders. A total of nine questions which were designed and used to interview local elders were as follows; Do you know what archaeological sites are? This question sought to know whether the respondents knew places that had traces of human past within their residence; Of what value are archaeological sites to you and/ or to the community as a

whole? This was to know whether the local community attached some importance to the archaeological sites; Are the sites adequately protected by the National Museums of Kenya? It was important to know from an informal viewpoint whether the sites were conserved effectively, or some are left without care; Are the local people involved in the maintenance of sites? This was to find out if members of the local community are employed to conserve their own archaeological sites. What in your opinion destroys archaeological sites on your land or within your community? Since the members interviewed live in the study area and were able to identify their archaeological sites, it was expected that they could tell what destroys the sites within this area. Are the local people consulted by the National Museums of Kenya on the management of the sites? This question sought to find out how much say the local community has over the conservation of their heritage. How has change of land ownership affected the conservation of archaeological resources? As population density increases it is expected that new immigrants buy land and settle in this region. Therefore, it was necessary to find out whether this kind of change of ownership of land affects the conservation of archaeological sites. What recommendations do you have for better management of archaeological sites and other cultural heritage sites? Local communities have been known to effectively conserve their heritage that survives from one generation to another. Since the heritage under study is their own (though not always) it was expected that they would highlight some of traditional ways of conserving the sites and these may be helpful in addressing the problem under study.

The second category of questions was designed for a sample of visitors as follows: Which part of Kenya do you come from? This question aimed at determining the proportion of the visitors who were members of the local community. Why do you visit archaeological and cultural sites? Here the aim was to establish some of the reasons for visiting the sites. What in your opinion destroys archaeological and cultural heritage?

Since the visitors to the sites happen to be beneficiaries of the archaeological heritage, it was important to know from them what they thought destroys these sites and materials. Finally, What do you think should be done to improve the protection and management of archaeological sites and monuments? Here the visitors were to offer recommendations on what they thought could improve the protection and conservation of the very sites they come to see.

The final category of questions was designed and administered to a sample of museum curators and other officials deemed to offer a formal view of the National Museums of Kenya. The relevance of each question is explained below: Are archaeological sites and monuments adequately protected? Here the question sought to know whether the methods and efforts of site protection and conservation were effective. If your answer is no, why do you think that sites are not adequately protected? The respondent was expected to point out areas of weakness since they are directly involved in the conservation and protection exercise. Is there any cooperation between the National Museums of Kenya and development agents? The purpose of the question was to establish whether agents of development correspond with the National Museums of Kenya on their intention to develop a given piece of land. If yes, what is the type of cooperation? This was to find out if any pre-requisite to develop or carry out a construction includes submission of an archaeological impact assessment report that would eventually protect the site from being destroyed. Are you aware of any archaeological site that has been destroyed by public or private developers? Since the curators are directly involved with conservation and protection of sites on the ground, here the question sought to know whether they could attest to the fact that site destruction continues. What actions do the National Museums of Kenya take in cases where sites and monuments are destroyed? This was to find out whether there is a legal framework through

which cases of site destruction are addressed and if so, how successful they have been. Does the National Museums of Kenya have Title Deeds for all her property? Here there was need to determine how much of the National Museums of Kenya's land has or has no title deeds. This would help in establishing the risk faced by sites located on land without deeds.

### **3.6 Data Presentation and Analysis**

Tabulation has been used to present the results. This was regarded as one of the best methods through which observations could be recorded. It offers the opportunity for cross-tabulation to enable establishment of relationships of phenomena. Diagrams, figures, bar graphs, pie charts and photographs of structures are used here to present and analyze the data.

### **3.7 Tools**

Tools used in this fieldwork varied with the place to be investigated. On the overall the kind of tools used included notebooks, pens and pencils for taking notes and recording data. A 50-metre and 3-metre tape together with a 20-metre sisal string was used for setting up grids where intensive surface observation was done. A mason's tuck-pointing trowel was used in test pitting. Two collecting pails and a sieve were used to check for archaeological materials from the surface scrap as well as from the test pits. One camera was used in photographing the development projects and other human activities within the monuments as well as test pits and materials observed during the survey. A mason's gauge and a plump point were used to determine the verticality of the walls. A simple geometrical protractor was helpful in measuring the angles of inclinations otherwise defined as wall inclinations.

An open-ended questionnaire was used to probe the issues under study (Appendix 1). Computerized scientific package for social sciences (SPSS) was used in the presentation as well as analysis of data. More specifically this programme was used in cross-tabulation of

results and determining frequencies and distribution of the interview responses. Computer equipment was necessary for the typesetting of the entire work.

### **3.8 Conclusion**

The chapter outlines the steps followed during fieldwork and eventual data collection and analysis. The methods that were used in the collection and analysis of data have been explained as well as the tools and their relevancy for their use.

## CHAPTER FOUR: SITE DESCRIPTION

### 4.1 Introduction

This chapter discusses the sites under study in terms of location, climate, vegetation and geology. The Museum's SASEs numbers are also given for reference purposes.

### 4.2 The Study Area

The entire coastline of Kenya, which stretches for about 450 kilometres in length, has well over 80 archaeological sites and monuments identified (Kusimba, op. cit). The sites represented range from the Stone Age period through the Iron age and early Swahili settlements dating between 9<sup>th</sup> and 14<sup>th</sup> Century AD to the *makaya* settlements (fortified settlements of the Miji kenda). There are also sites giving evidence of the early Indo-Chinese trade with the coastal people, as well as the later Oman-Arab and Portuguese influence on the coast of Kenya (Abungu 1986, Wilson and Omari 1997:31, 49, 62, 64).

#### 4.2.1 Mtwapa Historic Site (HhJx4)

The Site of Mtwapa (3° 55'S, 39° 45'E) is located about 15 kilometres north east of Mombasa on the north bank of Mtwapa Creek (Map 1). Mtwapa area is in the heart of tourist activity with development installations ranging from residential housing and hotels, through modern mosques and schools, to farming activities, roads, and electricity and communication lines. The historic site covers approximately 20 acres of land most of which have been allocated to private individuals. The site is mentioned with *Tuaca* ( Kilindini) by the Portuguese as an *entrepot* for ivory, tobacco and opium, and Kirkman suggests it would have served as an outlet for the produce of the Chonyi people. The Chonyi are thought to have sent supplies to Fort Jesus during the great siege (Kirkman 1964: 95-98). Mtwapa is also mentioned as the home of Khamisi bin Kombo, the Sheikh of the Nine Tribes of Mombasa, who in 1895 took a prominent

part in the last Mazrui rebellion and as a result was locked up in Fort Jesus (Kirkman op.cit).

Mtwapa has remains of a large Friday Mosque, tombs and the remains of over sixty houses including a storied building. Archaeological materials include sherds of the 14<sup>th</sup> and 15<sup>th</sup> Centuries while others dated to at least 13<sup>th</sup> Century (Kirkman op.cit, Garlake op.cit: 97).

#### **4.2.2 Jumba La Mtwana (HhJx3)**

Jumba La Mtwana (3° 54'S, 39° 46'E) is located less than five kilometers north east of Mtwapa site (Map 1). Like the Mtwapa Historic site, Jumba la Mtwana is located in an economically potential area with Mtwapa Tourist hotel to the south, and two private homes in the neighbourhood, one to the west and the other to the south. It is a national monument with four mosques, numerous houses and some tombs as well as the home of the 'Slave Master', which borders the sea on the southeast. Archaeological materials include sherds of Islamic glazed wares and Chinese porcelain and earthenware most of which date between the 14<sup>th</sup> and 15<sup>th</sup> Centuries (Kirkman 1964: 97).

#### **4.2.3 Gede Historic site (HfKa1)**

Gede Site (3° 19'S, 40° 2'E) lies about 16 kilometres south west of Malindi and about 4.8 kilometres from the Indian Ocean, and about 3.2 kilometres from Mida Creek (Map 2). It is located in partially dense coastal vegetation characterized by stands of tall trees and light undergrowth. According to Kirkman (1954:12), Gede was founded in the twelfth Century but was rebuilt with new town walls in the 15<sup>th</sup> and 16<sup>th</sup> Centuries. Using the dated tomb with inscription of the Hejira year 802, Kirkman translated this date to 1399 AD. Gede exhibits remains of a stout wall within which the city was built. It included a great mosque, six minor mosques, a palace, well laid and planned streets, numerous large houses, pillar tombs, stone tombs (Abungu,op.cit.). Other significant features are inscribed semi- round slab, arched doors,

octagonal and hexagonal and fluted pillars, six wells and engraved dhow on one of the walls.

Archaeological materials found included sherds of both local earthenware and imported porcelain and galzed ware, sherds of bowls with a ribbed ornament and sherds of thick burnished ware with trellis pattern. Remains of Islamic and European glazed ware are also represented (Kirkman 1954: 70-75, 94-96).

#### **4.2.4 Kitoka Historic Site (HgJx4)**

Kitoka ( 3° 40'S, 39° 50'E) is located on the north bank of Takaungu Creek near Mnarani in Kilifi (Map 2). The site covers about 2.5 hectares of land (Garlake, op.cit.). Kitoka, together with Kilifi and Kilepwa made up the old State of Kilifi, which was acquired with Mombasa by the Sheikh of Malindi after the victorious campaigns of his Segeju allies in 1589 (Kirkman 1964: 97). Kitoka comprised two ruined mosques and a number of houses (ibid.). Some archaeological materials found were dated to the late 14<sup>th</sup> century and early 15<sup>th</sup> century (Garlake 1966).

### **4.3 Physical Characteristics of the Sites**

The Kenya coast runs in a southwesterly direction from the Somalia border in the north, at 1°41'S to 4°40'S at the border with Tanzania. The coast of Kenya is drained by a number of estuarine systems whose shores are flanked by mangrove swamps (Mutoro 1979).

Coral reefs occur along the whole length of the coast and behind them is usually a level of foreshore that remains dry at low tides. The basement rock is principally quaternary coralline deposits that support a low thorn bush and scrub vegetation (ibid: 8-10).

#### **4.3.1 Climate**

The Monsoon winds of the Indian Ocean influence the climate of the entire coastal region. From November/ December to early March, the coastal weather is dominated by the Northeast Monsoon, which is relatively dry. During March and April the wind blows in an east-to-southeasterly direction with strong incursions of maritime air from the Indian



Ocean causing heavy rains. During the months of May, June, July and August, the southeasterly Monsoon influence gradually sets in and the weather becomes more stable with the Northeast Monsoon gradually re-establishing itself and by December the northern influence is dominant once again (Map 3, Chami 1994: 36, Ojany and Ogendo 1988: 66-67). Total annual rainfall averages 900mm with a maximum of 1200mm around the Kenya – Tanzania border (Mutoro op.cit: 9).

#### 4.3.2 Vegetation

The coastal forests exist mainly as isolated blocks, which show high levels of species and comprise a total of about 83,800ha in a narrow belt, which extends inland for some 30km. The forest is characterized by dense or moderately dense stands of tall trees, species of the genera *Sterculia*, *Chlorophora* and *Mimocylon*. The drier woodlands include stands of *Cynometra*, *Manilkara* and *Azalia* (Ojany and Ogendo op. cit: 77-79)

Centuries of human occupation have reduced the forest element, which was originally extensive. Mangrove swamps occur in tidal estuaries and lagoons while coconut palms are common above high tide (Mutoro op.cit: 9-10). A complex of many bush types occurs in the high bush area. Scattered baobab trees present a striking appearance while the prevalence of mango trees underlines long human occupation of the more productive areas (ibid.)

#### 4.3.3 Geology

The Kenyan coastal sites are set in a passive continental margin, the evolution of which was initiated by the break-up of the mega continent Gondwanaland in the Lower Mesozoic period. During the Mesozoic, the coastal region was exposed to marine incursions. By the Jurassic, marine conditions are thought to have existed (Ojany and Ogendo op. cit: 42).

Throughout the Tertiary, the coastal areas experienced faulting and extensive continental erosion. The present coastal configuration, however, evolved during the Pleistocene to the recent past. This period was marked by fluctuations in the sea level. The Coastal Plain rises from sea level to 140m and is dominated by a series of raised old sea level terraces

The principal rocks observed along the Kenya coastal margin are of sedimentary origin. The Mariakani and the Mazeras sandstone represent the Duruma Sandstone series, the oldest formation. Marine limestone and shale are also found. Cenozoic to recent rocks comprises mostly of marls and limestone, and are represented by the sandstone, clays, conglomerates and gravel such as the Marafa beds. Magarini sands, limestone, cemented sands and coral sands of the Quaternary period are present (ibid.).

The coastal region of Kenya is generally low lying and characterized by the extensive fossil reef, which lies a few meters above the present sea level (ibid.). It is within this region that most if not all the early Swahili Settlements lay (Mutoro, op. cit: 7).

Soils of the coastal region show considerable variety. The porous parent rocks are of sedimentary origin, which give rise to soils of low fertility. The principal soil types in the region include a narrow strip of coastal sands towards the north where it is permeated by narrow bands of grumosolis brown clay soils (Chami, op. cit: 37-38). The areas covering Gede and Kitoka in Kilifi have bi-alternate bands of loams beyond which the grumosolis are permeated by thick bands of ash and pumice soils (Ojany and Ogendero op. cit: 79).

#### **4.4 Conclusion**

A brief description of the study area has been given. The geographical grids and SASEs numbers of the sites under study are shown. Some archaeological materials as well as the ruined structures found in the sites are also described here. The physical characteristics in terms of climate, natural vegetation and geology have been detailed in the foregoing chapter.

## **CHAPTER FIVE: DATA PRESENTATION AND ANALYSIS**

### **5.1 Introduction**

In this chapter data presentation and analysis from the four sites has been done in the following order; Mtwapa Historic Site, Jumba La Mtwana Historic Site, Gede Historic Site and finally, Kitoka Historic Site. The results of the archaeological survey, surface observation and subsurface testing, measurements and interviews are presented and systematically analyzed. A comparative study of the sites has been adopted where necessary.

### **5.2 Results of the Archaeological Survey**

#### **5.2.1 Mtwapa Historic Site**

Among the four sites, Mtwapa Historic Site was the first to be investigated. This monument lies in an area with many settlement activities. A significant portion of it lies on private land. Most structures, which happen to be on a Mr. Colpoy's compound, have been flattened. Three large rubbles of leveled structures could be spotted at the gates leading to a private home (Plate 1). Some of the stones are used as building materials. Only four structures remain standing on the entire site.

Mtwapa Historic Site is bordered by two private settlements to the south and one major access road of approximately 100 metres long skirting the north side. To the western side, a church project has sprung up with a fence curving off a portion of the land that contains historic structures (Plate 2). One spot along the same fence but within the perimeter of the site has been turned into a dumping site by the church project above (3).

The walled enclosure on the northern side was observed to have hoof marks probably of domestic goats and cattle. Electric poles were observed as well as freshly fallen historic walls due to the 'planting' of the poles. Plate 6 shows electric installations put up by the Kenya Power

and Lighting Company within Mtwapa site. Several trees on the site were being cut down to give space for the power lines. And when asked whether permission had been granted by the museums to work on the site, the person in charge did not even know there were any structures which needed protection. Also observed to cause damage to the structures were buttress roots of trees that are characteristic of the bushes within the ruined structures (Plate 4). As these roots grow and enlarge in size, they penetrate and expand the cracks on the walls, which eventually crumble.

It was evident that more open structures tend to have longer life than those located in thicker forested covers. At Mtwapa Historic site the structures are in thick forest and appear to be in a poor state of preservation

### **5.2.2 Jumba La Mtwana Historic Site**

Jumba la Mtwana is generally rich in terms of wall structures that are still standing. The site was observed to have four modern settlements around it. All the four settlements were built on land containing historic ruins (Plate 5). The outline of the historic wall enclosure was traced across the compounds of the private homes.

The ruins at Jumba la Mtwana are located in a fairly open bush of tall trees interspersed with heavy undergrowth of grass and creepers. This site is generally in a fairly well preserved state (Table 2). However, people pass through the site to access the beach front. Plate 7 shows a foot path through eastern part of the ruins.

By counting the visible structures on the site it was established that approximately 7 structures stand in the open with only light vegetation cover. The central part of the monuments especially near structures labeled 5 and 11 on Map 4 is characterized by heaps of stones from collapsed walls. To the south of the walled structure marked 11, a ruined wall extends into a private compound located just 5 metres away.

Survey on this part of the site showed that only part of the structures is well maintained. This is particularly true for the section just after the office through to points marked 16, 14, 13, 1, 2, 3, 10 and 8 in that order. The remaining portion accommodating about 40 ruined structures is neglected as evidenced by the thick vegetation that covers it. It was noticed that as museum workers attempted to clear the vegetation they actually destroyed the very structures they are to preserve. This was observed at points 11 and 7 (Map 4).

Structures marked 14 and 13 face a threat of physical wear and tear caused by plant roots. Trees have overgrown on the walls and their roots consequently break the structures.

### **5.2.3 Gede Historic Site**

Gede Historic Site has been known to fascinate scholars about its magnificently preserved structures referred to as the 'Lost City'. This site is located in an area that is densely populated as demonstrated by the number of settlements in the surroundings. Cassava, sugarcane, pineapples and coconuts are among the crops grown in this region. Map 5 shows ecological and agricultural zones covering the coastal fringe north east of Mombasa. The area around Gede is also well serviced by access roads and paths some of which lead to Gede historic Site as well as to other neighbouring settlements. Vegetation cover is that characteristic of the entire coastal region. However, about 30% of the vegetation is due to afforestation and this is largely visible except for the thick undergrowth of grass and creepers in some places.

Within the site, the vegetation cover varies in density. The southern part is covered in thick bushes and most of the wall structures have collapsed owing to the effect of rainfall and high temperatures. The roots of vegetation also contribute to the weakening of the walls through biological weathering. In the northern and northwestern parts of the site, most structures remain standing and are in stable condition. Here, the vegetation cover is generally light with most structures largely.

#### 5.2.4 Kitoka Historic Site

Kitoka historic site has been largely destroyed and there is no trace of ruined structures except for heaps of rubble. In its early stages of acquiring sites, the National Museums of Kenya failed to secure this site from its owner.

During the research it was established that the site now lies under the compound of a private home. In Table 2 below, it was not possible to classify the vegetation cover and state of preservation according to the scale provided on page 18.

This site represents just one case of complete site destruction that has occurred due to conflicting land interests.

Name of Site	Vegetation Cover (VC)	State of Preservation (SP)
Mtwapa	1	3
Jumba La Mtwana	2	2
Gede	3	1
Kitoka	-	4

Table 2: State of Preservation of Monuments viz. Vegetation Covers

### 5.3 Surface Scatter

#### 5.3.1 Mtwapa Historic Site

Two access footpaths were observed to skirt the eastern and western parts of the site, both providing access to the sea. The surface materials observed were recorded as indicated in the table below.

Location	Materials
Road 1	2 beads 1 potsherd
Path 1	1 porcelain sherd 1 pottery rim sherd
Path 2	*Several stone rubbles, Several potsherds
Private land	Walled structures and stone rubbles, 1 bead and a number of potsherds

*Table 3: Surface scatter at Mtwapa Historic Site*

\*More than one structure may have been demolished and stones heaped at this spot.

### 5.3.2 Jumba La Mtwana Historic Site

Numerous surface materials were observed along the south east of the site. Most of these were outside the demarcation of the current ruined structures that are fenced by the National Museums of Kenya.

Location as per Map 4	Materials
a	Shells
b	potsherds
c	-
d	Wall structure
Beachfront	shells

*Table 4: Surface scatter at Jumba Mtwana Historic Site*

Unauthorized people from the neighbourhood do access the beachfront through the monument.

This exposes archaeological materials to destruction.

### 5.3.3 Gede Historic Site

A lot of research work has been undertaken at Gede Historic site. Since James Kirkman excavated here in 1954, most of surface scatter has been collected and kept in the Gede Museum. Therefore, not much was observed on the surface except for two pieces of Islamic monochrome sherds that were spotted in the southern part of the site near the Great Mosque.

## 5.4 Subsurface testing

### 5.4.1 Mtwapa Historic Site

Subsurface testing was adopted in areas where no surface scatter was found. Two shallow pits were dug, each measuring one by two metres and the depth was no more than one level of ten centimetres. The depth was necessarily shallow because the objective of this was merely to establish the potential of the site.

Testing begun by collecting and sieving surface scrap for any archaeological materials. A piece of metal ring was recovered from this. Using a shovel and a brush, the pits were tested systematically. They yielded the results in the tables below.

Materials	Number
Beads	1
Celadon	1
Pottery	1 (body sherd)
Stoneware	1
Porcelain	0
metal	0
<b>Total</b>	<b>4</b>

Materials	Number
Beads	0
Celadon	0
Pottery	1 (lip sherd)
Stoneware	0
Porcelain	2
Metal ring	0
<b>Total</b>	<b>3</b>

a) Test Pit 1

b) Test Pit 2

Table 5: Archaeological materials found in the test pits at Mtwapa Historic Site

### 5.4.2 Jumba La Mtwana Historic Site

Two test pits were dug at Jumba La Mtwana. Each of which measured one by one metre square and the depth was no more than one level of 5cms. The depth could not be deeper than 5cm due to a thin layer, which covered a living floor probably belonging to an early Swahili settlement. This was enough evidence to show that ruined structures extended beyond the present boundaries. Other materials found are as indicated in the tables below.



Materials	Number
Beads	0
Celadon	0
pottery	2 (body sherds)
stoneware	0
Porcelain	0
Metal ring	0
<b>Total</b>	<b>2</b>

Materials	Number
Beads	1
Celadon	0
Pottery	0
Stoneware	2
Porcelain	0
metal	0
<b>Total</b>	<b>3</b>

a) Test Pit 1

b) Test Pit 2

Table 6: Archaeological materials found in the test pits at Jumba La Mtwana Historic Site

### 5.4.3 Gede Historic Site

It was clear that the structures at Gede are well protected from outside encroachment. It was, therefore, not necessary for subsurface testing to determine the potential of the area that lay outside the current demarcation.

### 5.4.4 Kitoka Historic Site

A test pit at Kitoka historic site yielded the finds in the table below.

Materials	Number
Beads	0
Celadon	1
Pottery	1 (body sherd)
Stoneware	5
Porcelain	0
Metal	0
<b>Total</b>	<b>7</b>

Table 7: Materials found in the test pit at Kitoka Historic Site

## **5.5 Measurement of the Walls**

### **5.5.1 Mtwapa Historic Site**

The first step was to examine the distribution of the wall structures. It was realized that about 9 of the wall structures remain standing, with 7 of these still covered in bushy vegetation. Starting with the walled enclosure, only a stretch of about 20 metres of the wall (parallel to the road passing in the northern side of the site) is exposed with neither vegetation cover nor a fence, and rises to barely 0.16 metres high. The exposure has rendered the structures to destruction by domestic goats and cattle. This section of the wall enclosure is the only one visible above the ground.

Since more than half of the ruins lie on the ground as rubble, it was not practical to know what caused the felling. However, by looking at the mounds of rubble at a private gate leading to one of the homes, it appears people have intentionally felled the walls. Most of the stones from the ruins have been used in the construction of new structures.

Environmental factors were difficult to observe. But growth of fungi and other plants of the lower bryophyte class weakened the walls paving way for further disintegration and eventual collapse. Moderately high rainfall coupled with high temperatures has record effect in the physical weathering of the walled structures.

### **5.5.2 Jumba La Mtwana Historic Monument**

The land on which neglected structures lie was measured and the following data obtained. South of walled structures 14, 13, 11, and 8, (Map 4) the portion of land with potential surface structures and subsurface materials measured 87m (width) by 175m (length). North east of structure 7, the total land whose monuments are neglected measured 115m by 45m, and 70m by 118m.

### 5.5.3 Gede Historic Site

Those entrusted with responsibility to protect and maintain the monuments did not maintain the monuments in a balanced way. A section of the site located to the southern part constituting about 25% of the ruins is thickly covered with vegetation, while about 75% of the site is well maintained.

The wall enclosure has substantially collapsed and now stands at an average height of 0.20m. The table below shows the height of the wall enclosure taken at different spots.

Location	Wall Height (WH) in metres (m) above sea level otherwise defined as the horizontal surface
1	0.22m
2	0.17m
3	0.10m
4	0.19m
5	0.20m
6	0.09m
7	0.00m*
8	0.00m*
9	0.00m*

\*Located in thick vegetative cover

Table 8: Showing the height in metres (m) of the wall enclosure.

It appears from the results that most structures located in thick vegetative cover crumble fast.

Upright structures were identified as being vulnerable to the effects of mass movement especially where there is no rehabilitation.

Buttress roots of the trees normally force structures to bend or crumble them. A number of upright structures were seen to be leaning at an angle relative to the horizontal. There was need to determine how much this was a cause to falling of the ruins.

The table below shows the wall inclinations of standing structures taken at specified locations.

<b>Structure</b>	<b>WI in degrees (x°)</b>
1	70°
2	85°
3	84°
4	79°
5	82°

*Table 9a: Wall Inclinations (WI) (in degrees) of selected wall structures at Gede Historic Site*

#### **5.5.4 Kitoka Historic Site**

Kitoka Historic Site is located on a private beachfront owned by an Asian lawyer. The results of the study showed that between 1980 and 1999 more than 90% of the structures at Kitoka have been demolished and many others have fallen due to neglect.

The site is generally in bad shape because there is nothing noticeable as far as protection and conservation are concerned

#### **5.6 Analysis of data from Survey, Surface Scatter and Sub surfacing Testing**

In all the sites under study modern housing constructions, roads and perimeter fences are seen to dominate among the projects taking place. The modern constructions are either private homesteads or tourist installations such as hotels and recreational grounds. At Mtwapa

Historical Site a total of three homesteads, one perimeter fence and three access roads were observed to surround the site. Four homesteads were seen to surround Jumba La Mtwana historical monument. The area around Gede Historical site appeared to be densely populated due to the agricultural potential of the region. A total of ten homesteads each with between tree and five houses were counted. In all cases, except for Gede Historical Site, the houses are built on grounds containing archaeological materials and structures. It is also shown that roads and paths have been created to access the same homesteads. The data presented indicate that quite a significant proportion of materials and structures have been lost in the construction of these roads and houses. Erection of electricity poles as well as telephone lines was seen to be the major factor in the collapse of the wall in Mtwapa Historical Site. Though this was not observed in other sites, it could be a potential problem especially with the increasing settlements, housing and construction of related infrastructure such as roads.

For the sites that are not exposed to destructive human activity, natural factors, together with human negligence, were seen to play a role in the deterioration of the condition of sites and materials found in them.

Natural factors such as vegetation covers, high temperatures, rainfall and wind have tended to speed up the process of structural decay of monuments. Such structures are left in thick bushes without care, hence, negligence as a factor in the destruction of sites and monuments.

The materials and structures observed on roads and private land respectively indicate that there was no archaeological work done in such areas to recover the materials prior to the constructions. There was no inter agency cooperation between the national museums of Kenya and whichever agency constructed the roads and houses. It also means that the Lands Commission does not consult the National Museums of Kenya before allocating land with archaeological materials to individuals and or corporate developers.

Results of subsurface testing showed that the areas located outside the present perimeter of the monuments still have potential for more archaeological and historical materials. Any unauthorized cultivation or otherwise excavation of land by constructors would lead to further destruction of archaeological materials that would help in answering future academic questions.

Generally, the structures located in thick vegetation cover seem to disintegrate fast compared with those exposed to the sun and with little or light undergrowth. Thick vegetation cover enhances the decay process especially in this region of high temperature and moderate rainfall. Biological weathering has equally contributed to the collapse of historical structures as buttress roots of trees penetrate the walls and expand the cracks.



Plate 1: Rubbles of felled historic structure whose stones have been vandalized.

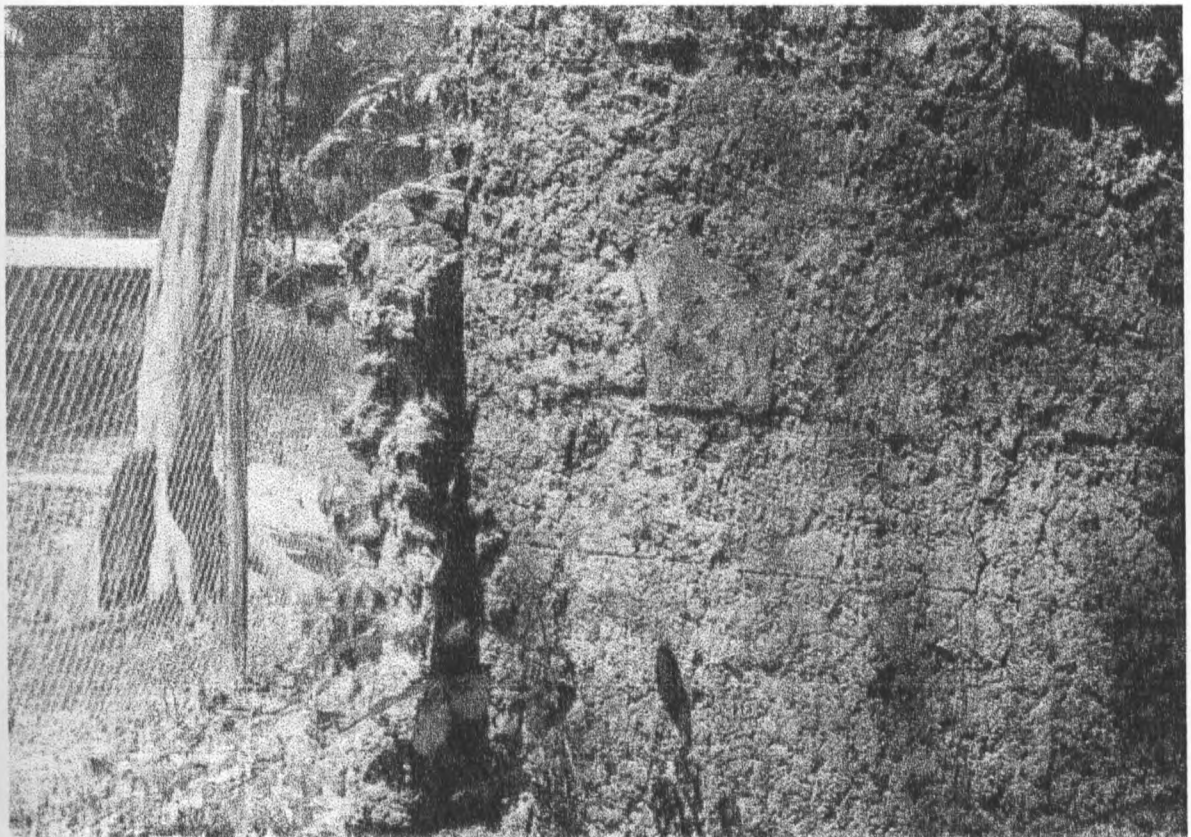


Plate 2: A Private fence skirting through historic walls at Mtwapa  
(See the left middle ground of the photograph).



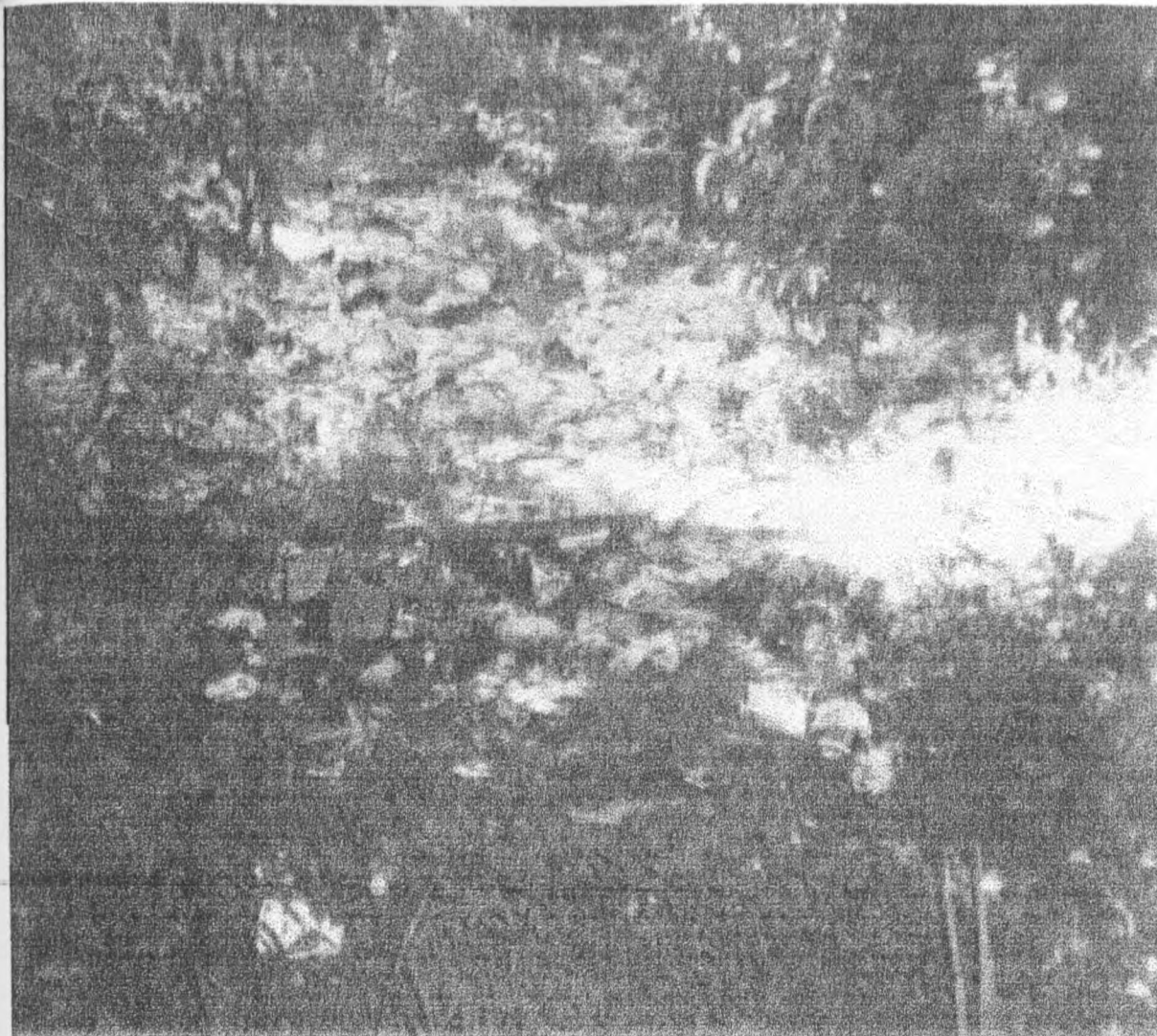


Plate 3: Dumping site within Mtwapa site.  
At the centre of the Photograph there are waste papers, tins and plastic materials.



Plate 4: Buttress roots of trees.  
The right middle ground shows trees growing within Mtwapa site. The foundations of structures have crumbled.





Plate 5: A private housing scheme near Jumba La Mtwana.

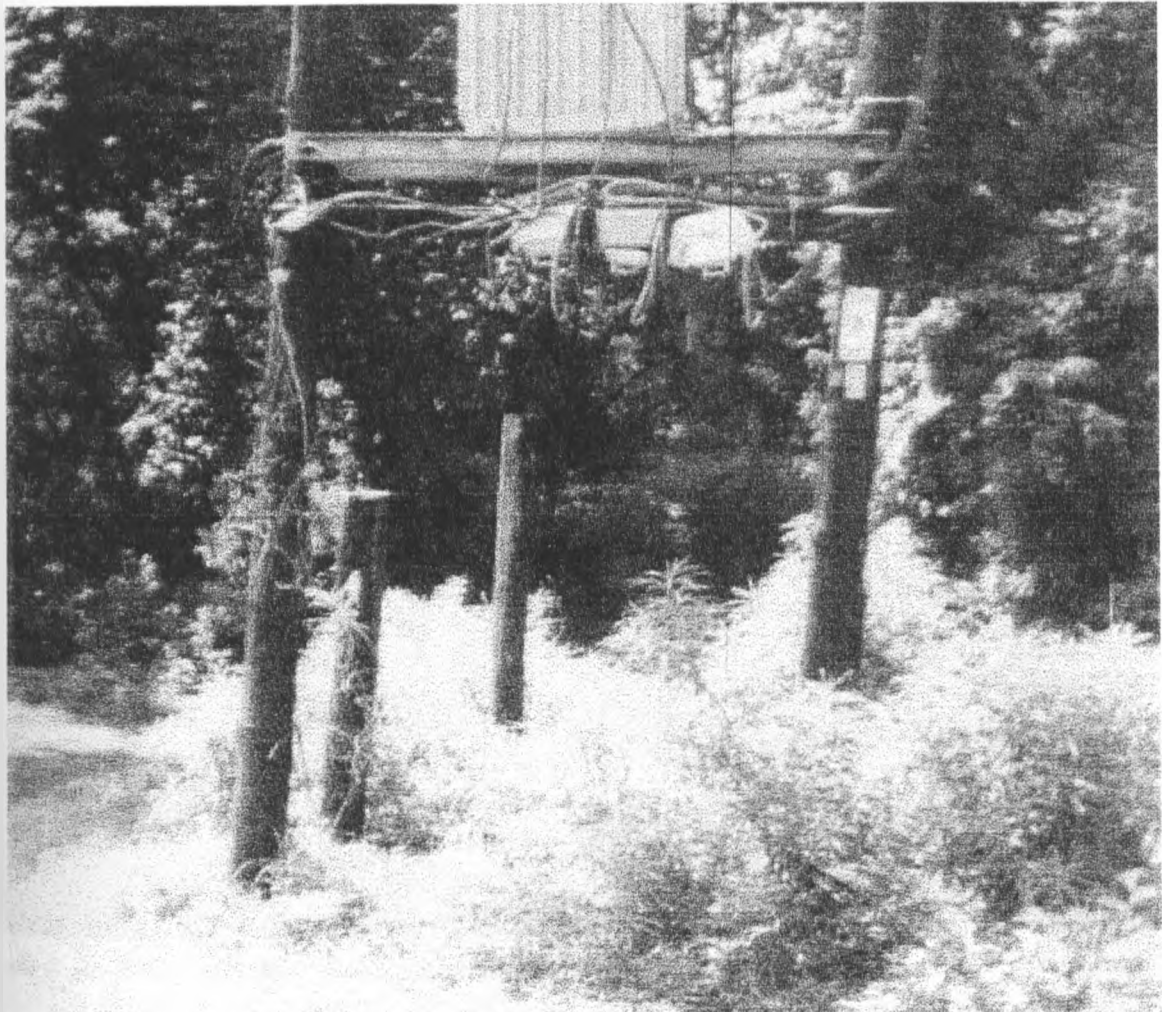


Plate 6: Electric installation within Mtwapa historic site. A path on the left foreground traverses the site.

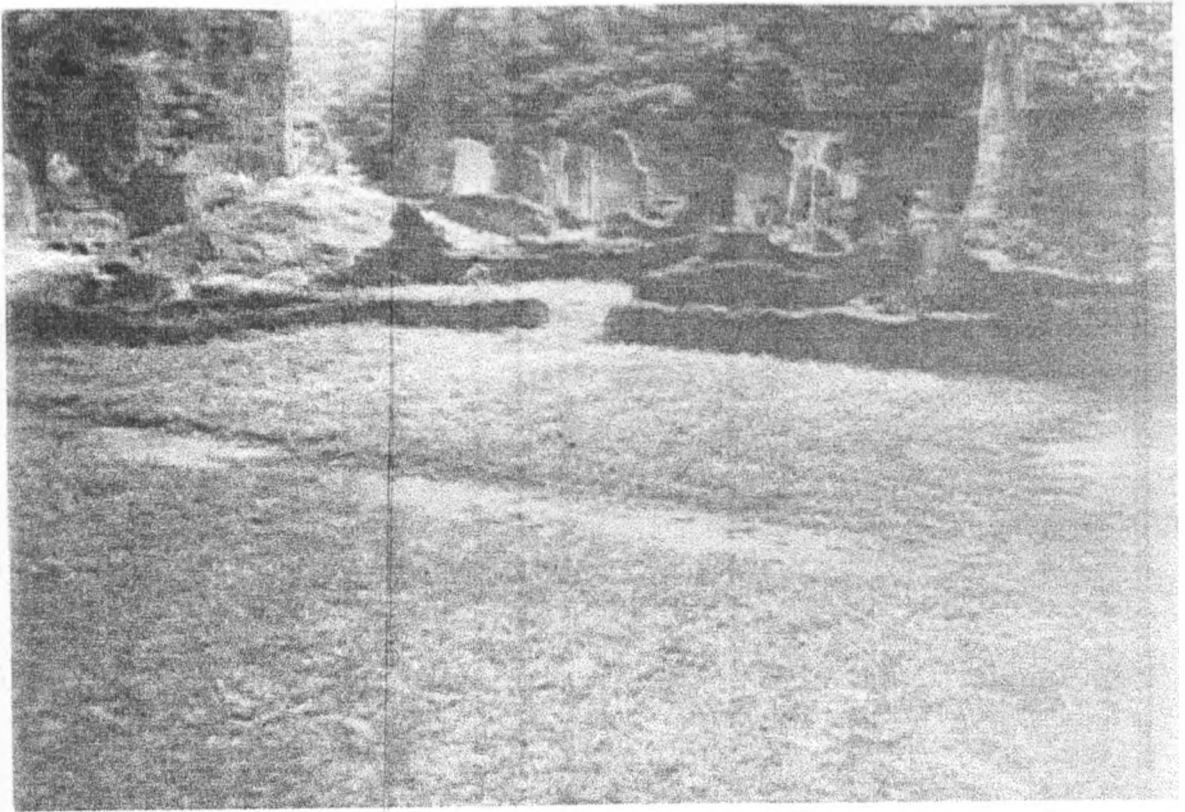


Plate 7. A Path through Jumba La Mtwana



Plate 8: An unidentified plant growing on one of the ruined structures

## 5.7 Presentation of Interview data

### 5.7.1 Mtwapa and Jumba La Mtwana

The data gathered from the respondents were recorded in tables as shown in Appendix 3. These were used to generate pie charts or bar charts depending on which was appropriate to present the information. Local elders at Mtwapa and Jumba La Mtwana were asked whether or not they knew what archaeological sites are. Their responses were recorded in table 9b

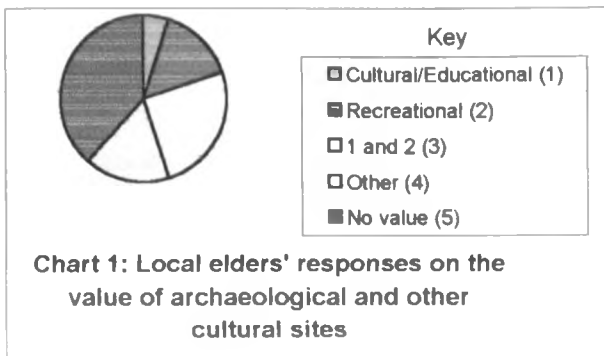
Value Label	Frequency	%
Yes	22	36.7
No	38	63.3
Total	60	100

*Table 9b: Local elders' knowledge of archaeological and other cultural sites*

Local elders were also asked to state whether archaeological sites and their contents were of any value to them. The results obtained were recorded in table 9c. The percentages in table 9c were used to run chart 1 to show the distribution of responses.

Value Label	Frequency	Percent (%)	Cumulative %
Cultural/Educational (1)	3	5.0	5.0
Recreational (2)	9	15.0	20.0
1 and 2 (3)	15	25.0	50.0
Other (4)	10	16.7	66.7
No value (5)	23	38.3	100
Total	60	100	

*Table 9c: Local elders' responses on the value of archaeological and other cultural sites*



The results show that 33.3% of the interviewee do not attribute any value to archaeological sites.

On the question of whether or not archaeological sites are adequately protected, the elders' responses were as recorded in Table 9d.

Value label	Frequency	Percent (%)	Cumulative %
Yes	24	40.0	40.0
No	6	10.0	50.0
No idea	30	50.0	100
Total	60	100	

*Table 9d: Whether or not sites are adequately protected*

About one half of the interviewees (50%) have no idea whether sites are adequately protected. Table 9e below shows the elders responses on whether they are involved in the maintenance of the archaeological heritage located within or near their residence. This was to establish whether the local people are engaged as caretakers of the sites, and whether some of them are employed to work at the sites.

Value Label	Frequency	Percent (%)
Yes	25	41.7
No	5	7.4
No idea	30	40.9
Total	60	100

*Table 9e: Involvement of the local people in the maintenance of archaeological sites*

About half (50%) of the respondents here do not have an idea whether locals are involved in the maintenance of sites.

Local elders were also asked to state what they thought destroys archaeological sites and the materials found in them. The distribution of their responses was as shown in Table 9f. Chart 2 below was produced using the percentages in Table 9f.

Value labels	Frequency	Percent (%)	Cumulative %
Change of land ownership (10)	2	3.3	3.3
Farming activities (2)	2	3.3	6.6
Domestic animals (3)	1	1.7	8.3
Theft of materials (4)	17	28.3	36.6
1,2 &3 (5)	25	40.7	78.3
No idea (6)	13	22.7	100
Total	60	100	

Table 9f: Locals' view of what destroys archaeological sites



Most of the interviewees (78.3%) know at least one agent responsible of site destruction.

It was important to ask the elders at Mtwapa and Jumba La Mtwana site whether or not they are consulted on matters relating to the management of cultural sites. Table 9g shows their responses.

Value labels	Frequency	%
Yes	23	38.3
No	37	61.7
Totals	60	100

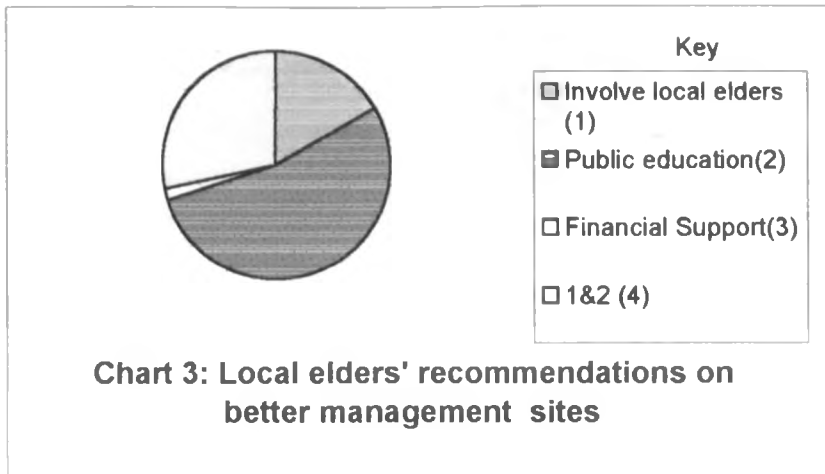
*Table 9g: Whether or not local elders are consulted on matters relating to site maintenance*

More than half of the elders (61.7%) here are not consulted on matters of site maintenance.

Respondents were asked to suggest of any recommendation that would ensure better management of their heritage. The responses were recorded in table 9h and the percentages used to produce the chart 3.

Value labels	Frequency	Percent (%)
Involve local elders (1)	10	16.7
Public education(2)	32	53.3
Financial Support(3)	1	1.7
1&2 (4)	17	28.3
Total	60	100

*Table 9h: Recommendations of the local elders on better management of sites*



Most respondents (53.3%) here recommend public education as a key to better management of sites.

Cross-tabulation of the results of tables 9c and 9f were run to determine if there was any relationship between the local elders' views on the value of the sites and monuments and what in their view destroys the archaeological sites and other cultural heritage. The results obtained showed that about 50.0% of those interviewed agreed that change of land ownership, farming activities, domestic animals and theft of artefacts were responsible for the destruction of their cultural heritage. 23 respondents (38.3%) who said that sites had no value also listed the following as the factors leading to destruction of cultural heritage; change of land ownership, farming activities, domestic animals and theft of artefacts. Only 9 had no idea (Table 91).

Destruction					
	Farming activities (1)	Domestic animals (2)	Theft (3)	1, 2 &3	No idea
<b>Value</b>					
Cultural/Educational (1)	1	1	-	1	-
Recreational (2)	-	-	3	5	1
Other (3)	1	-	3	3	3
1&2	-		4	9	2
No value	-	-	7	7	2
<b>Total</b>	<b>2</b>	<b>1</b>	<b>17</b>	<b>25</b>	<b>15</b>

*Table 9i: Cross-tabulation of value by destruction of the sites*

### 5.7.2 Gede and Kitoka Historic area

Another sample of 60 local elders was selected from around Gede and Kitoka historic sites. Tables 10a through to 10g (Appendix 3) are used to present the distribution of responses of local elders at Gede and Kitoka Historic Sites. Most local elders (66.7%) here do not know what archaeological sites are (Table 10a).

About 20% of the elders here do not attribute any value to archaeological sites (Table 10b). Most of the interviewees (71.7%) here do not know whether sites are adequately protected or not (Table 10c).

Only a few (28.3%) of the elders say that the locals are involved in site maintenance (Table 10d). Most of the elders (76.7%) here know at least one agent responsible of sites destruction (Table 10e).

Over half (66.7%) are not consulted on matters relating to site maintenance (Table 10f). Most elders (55.0%) recommended public education as the key to better site maintenance (Table 10g). This information compares well with data from Mtwapa and Jumba La Mtwana area presented in the previous section.

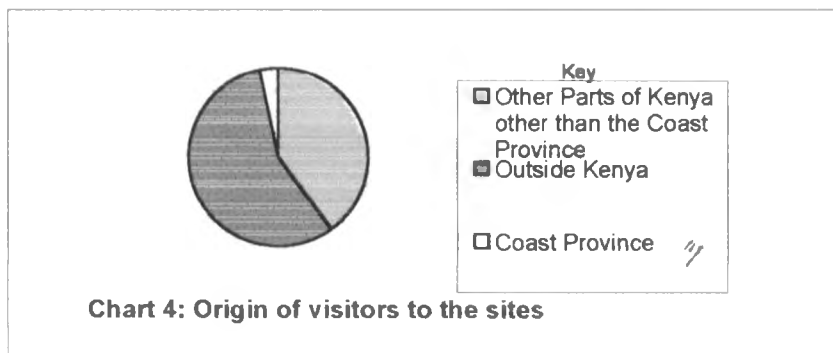


### 5.7.3 Visitors to the sites under study

Tables 11a through to 11e were used to record the distribution of responses of visitors to all the sites under study. The questions sought to address issues affecting the quality of the sites and monuments that attract visitors. To start with visitors were asked to state their origin. Table 11a shows the results after running frequencies and percentages. See chart 4 below.

Value Label	Freq.	%	Cumulative %
Other Parts of Kenya other than the Coast Province	12	40.0	40.0
Outside Kenya	17	56.7	96.7
Coast Province	1	3.3	100
Total	30	100.0	

Table 11a: Origin of the visitors to the sites

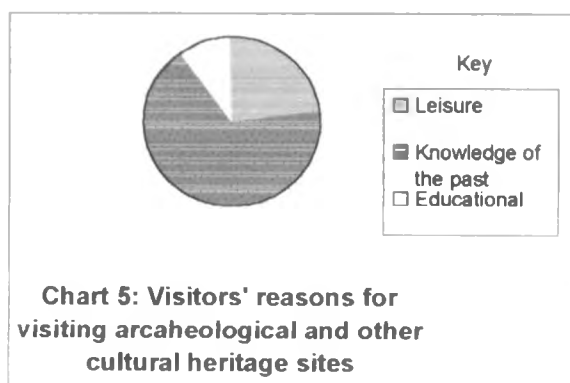


Most visitors (56.7%) come from outside Kenya, only 40% come from other parts of Kenya whereas 3.3% come from Coast Province (Table 11a).

It was also necessary to know the main reasons for visiting archaeological and other cultural sites. Table 11b shows the results whose percentages are used to generate chart 5 below.

Value Label	Freq.	%	Cumulative %
Leisure	7	23.3	23.3
Knowledge of the past	20	66.7	90.0
Educational	3	10.0	100
Total	30	100	

*Table 11b: Visitors' reasons for visiting sites*

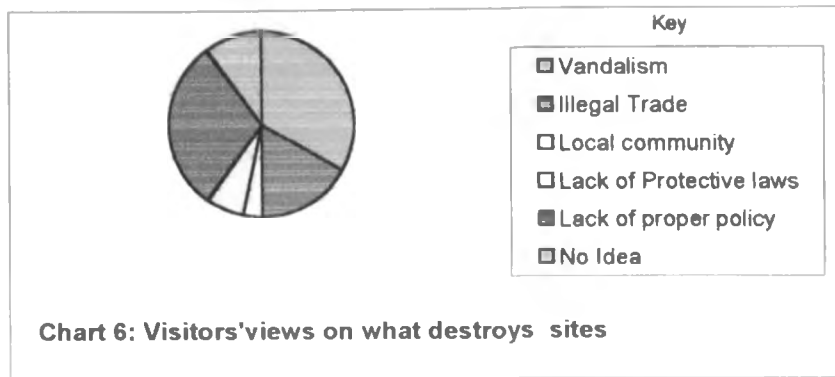


Most visitors (66.7%) visit sites because they want to know the past, 23% visit for leisure and the rest (10%) visit for educational purposes.

The visitors were also asked to comment on what they thought destroyed heritage sites and the materials found in them. The results were recorded in table 10c. See also chart 6 below.

Value Label	Frequency	%
Vandalism	10	33.3
Illegal Trade	5	16.7
Local community	1	3.3
Lack of Protective laws	2	6.7
Lack of proper policy	9	30.0
No Idea	3	10.0
Total	30	100.0

*Table 11c: Visitors' responses on what destroys sites*



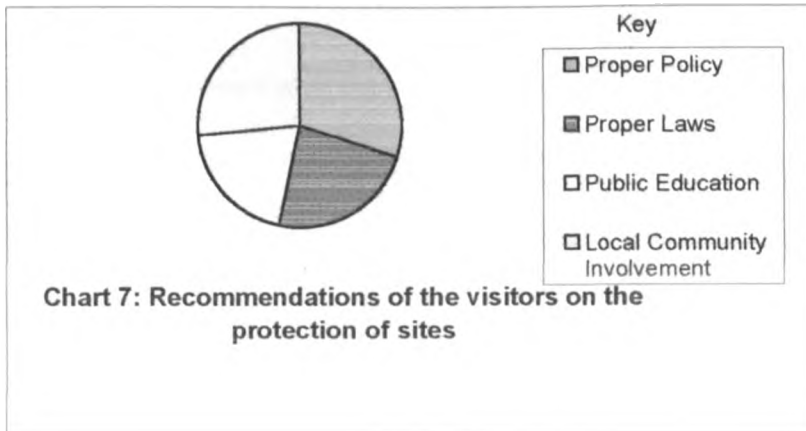
Most visitors (33.3%) mentioned vandalism as the main cause of sites, destruction, whereas others (30%) mentioned lack of proper policy.

Since visitors happen to be beneficiaries of the sites it was necessary to get their views on what they thought could prevent destruction of the sites. Their responses are shown in Table 11d.

Percentages were used to generate chart 7 below.

Value Label	Frequency	%	Cumulative %
Proper Policy	9	30.0	30.0
Proper Laws	7	23.3	53.3
Public Education	6	20.0	73.3
Local Community Involvement	8	26.7	100.0
Total	30	100.0	

*Table 11d: Recommendations of visitors on better site management*



Most visitors (30.0%) recommended proper policy whereas 26.7% recommended involvement of the local community in the maintenance of their archaeological heritage.

Visitors' responses in tables 11b and 11d were cross-tabulated to establish if there exists any relationship between the value of archaeological sites and what they recommended for better management of archaeological sites and other cultural heritage. Five of the respondents who attributed leisure as one of the values of the sites and monuments, recommended improvement of the government policy and the laws while the remaining 2 recommended involvement of the local community in the management of their cultural heritage (Table 11e). It is also noted that 20 or 66.7% who attributed knowledge of the past as one of the values, recommended proper policy, proper laws, public education and local community involvement as key to better management of archaeological sites and other cultural heritage.

Value	Recommendations				Total	%
	Proper policy	Proper laws	Public education	Local community		
Leisure	3	2		2	7	23.3
Know of the past	6	2	6	6	20	66.7
Educational	-	-	-	-	3	10.0
Total	9	7	6	8	30	
%	30.0	23.3	20.0	26.7		100

*Table 11e: Cross-Tabulation of Value by Recommendations of visitors*

The results of tables 11c and 11d were cross tabulated to establish if there was any relationship between what the visitors saw as the causes of sites' destruction and what they thought could help in managing the very heritage they come to see (Table 11f).

Destruction	Recommendations				Total	%
	Proper policy	Proper laws	Public education	Local Community		
Illegal trade	2	6	2		10	33.3
Local Community	3	1	-	1	5	10.7
Lack of Proper laws	1	-	-		1	3.3
Lack of proper policies	2	-	2	5	9	30.3
Development projects	1	-	2	-	3	10.0
Total	9	7	6	8		100
%	30	23.3	20			

*Table 11f: Cross-Tabulation of Destruction by Recommendations of visitor*

It was seen that 33.3% of those who said that vandalism was the main cause of destruction also recommended improvement of the government policy, the laws and public education while 16.7% who saw illegal trade as the factor leading to destruction of sites, included local community involvement in the management of sites. Failure to involve the local community was seen as a factor to destruction by barely 3.3%. 3 respondents representing about 10.0% mentioned development projects as leading to destruction of archaeological sites. They recommended improvement of government policy as well as increasing public awareness through public education.

In summarizing the cross-tabulated results, 30.0% of the visitors recommended that government policy be improved, 26.75% want local community involvement enhanced, 23.3% recommended enactment of better laws while 20.0% recommended public awareness through public education.

#### 5.7.4 Museum Curators and Other Employees.

Their interview was important because they are involved in the management of the historical and archaeological heritage. Respondents in this category were drawn from Fort Jesus, Jumba La Mtwana and Gede Regional Museums.

A total of 25 curators and other officials of the regional Museums were interviewed to get their view on whether the sites and monuments in their area of jurisdiction were adequately protected or not (Table 12a).

Value Label	Freq	%	Cumulative %
Yes	7	28.0	28.0
No	18	72.0	100.0
Total	25	100.0	

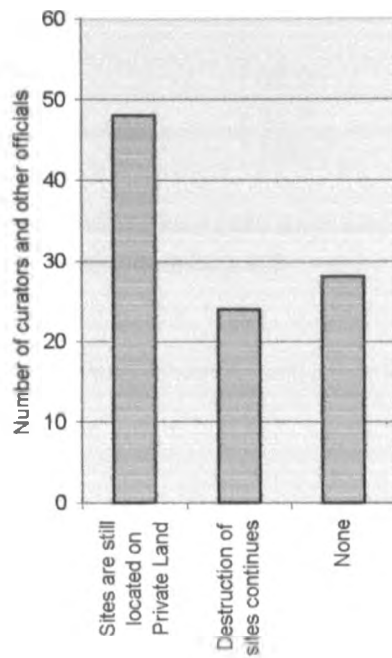
*Table 12 a: Whether or not sites are adequately protected*

Most curators (72.0%) here know that sites are not adequately protected. Only 28% say that sites are adequately protected.

It was also important to establish why the respondents thought sites and monuments were not adequately protected. Table 12b shows the results while the percentages used to generate chart 8 below.

Value Label	Freq.	%
Sites are still located on Private Land	12	48.0
Destruction of sites continues	6	24.0
None	7	28.0
Total	25	100.0

*Table 12b: Why curators and other officials think sites are not adequately protected*



**Chart 9: Why curators think that sites are not adequately protected**

From the results, most curators (48.0%) know that sites are still located on private land whereas 24.0% know that destruction of sites continues.

Curators were also asked to state whether any cooperation exists between the National Museums of Kenya and development agents before some development projects take place on land suspected to have archaeological or cultural features. Table 12c shows that more than half (52.2%) of the curators are aware that there is no cooperation between the National Museums of Kenya and development agents.

Value Label	Freq.	%	Cumulative %
Yes	12	48.0	48.0
No	13	52.0	100
Total	25	100.0	

*Table 12c: Whether there exists any cooperation between the National Museums of Kenya and development agents*

Asked to state the nature of cooperation, more than half (60.0%) of the curators stated none (Table 12d).

Value Label	Freq.	%
Financing of excavation	1	4.0
Setting up a museum	9	36.0
None	15	60.0
Total	25	100.0

*Table 12d: Nature of cooperation between the National Museums of Kenya and development agents.*

It was important to know from the curators whether they knew that destruction of monuments and sites goes on. Their responses recorded in table 12e.

Value Label	Freq.	%
Yes	17	68.0
No	8	32.0
Total	25	100.0

*Table 12e: Curators responses on whether they have knowledge of destruction of sites*

More than half (68.0%) of the curators here are aware of the continuous destruction of sites whereas 32.0% are not aware.

The laws of Kenya protect archaeological and cultural heritage (Antiquities and Monuments Act of 1983). It is expected that any one found destroying features of archaeological or cultural value is prosecuted accordingly.



Curators, being aware of the destruction of the sites and monuments were asked whether legal action is normally taken in the event that sites are destroyed (table 12f) Official records from the National Museums of Kenya showed that a number of sites have disputes still pending in court (Table 12g). It is not known when these disputes will be solved.

Name of site	Area in hectares(ha)	Status
Hyrax hill	11 0ha	Disputed
Fort St. Joseph	13.76ha	Disputed
K. W. S. Building	-	Disputed
Nyahuru site	7.48ha	Disputed

*Table 12g: Sites with legal disputes over ownership still pending in court*

Asked whether the National Museums of Kenya had Title Deeds for all her property, curators' responses were recorded in Table 12h. This information was verified by official records from the National Museums of Kenya, which showed that more than 24 sites have no Title Deeds (Table 12i).

7

Name	Area in hectares (ha)
Vasco Da Gammar Pillar	0.2
Ancient Grave Yard Shella	0.05
Bwana Bakari Mosque	0.14
Kuba La Nanashe	0.10
Mabore Ancient Ruins	22.1
Manda Old Town	6.7
Mvindi	14.0
Nuru Mosque	0.15
Old Gate Pate	0.10
Omwe	5.5
Shatir Tomb	0.07
Shee Jafari	56.0
Meru Museum	0.175
Njuri Njeke	8.298755
D.C.'s I House Mombasa	0.2852
D.O.'s Office Malindi	-
Kraph Memorial Tomb	-
Mbaraki Pillar	-
Mbaraki Mosque	-
Old Post Office Mombasa	-
Kanjera	-
Kariandusi	-
Ologosaille	-
Koobi Fora	-

*Table 12i: Sites without Title Deed*

At least 24 sites have been surveyed and letters of allotment issued (Table 12j).

Name	Area in hectares
Kitale Museum	33.4
Siaya	4.1493
Thimlich Ohinga	21.57676
Kabamet Museum	3.3429
Kenyatta House(Maralal)	8.19
Hyrax Hill	13.768
Eldoret	2.6
Kapenguria Museum	1.183
Kenyatta House( Lodwar)	1.066
Gede	43.5
Old Law Courts Mombasa	0.38
Square in front of Fort Jesus	0.14
Government Square	0.15
Mnarani Ruins	6.4
Shaka Ruins Kipini	20.33
Wana Wali Saba Kipini	49.5
Ungwana Ruins Kipini	62.77
Takwa Milinga	13.0
Old Fort Manda	4.0
Manda Site	0.064
K.P.A. Bldg Lamu	-
Shella Sand Dunes	958.21
Meru Museum	-
Old P.C.'s I House Nairobi	0.25

*Table 12j: Sites that have been surveyed and letters of allotment issued*

Barely 16 sites are legally owned by the National Museums of Kenya (Table 12k).

Name	Plot No:	Status	Date Issued
Ndemi Flats	L.R. 2/36/18	Title	26/9/1997
Madaraka	L.R. 209/618-620	Title (on lease)	
Nairobi Museum	L.R. 209/6334	Title	30/5/2000
Uhuru Gardens	L.R. 209/9939	Title	6/8/1998
Leven Steps	L.R. M/Block xxx111/33	Title	1/8/1997
Hyrax Hill Museum	L.R. 4729/50	Title	4/4/1962
Lanet Site Nakuru	L.R.12208	Title	12/9/1999
I P R	L.R. 23268	Title	4/5/1998
Karen Blixen	L.R. 1160/13	Title	16/9/1998
Fort Jesus Museum	L.R. M/Block xxv/168	Title	11/8/1992
Kanam	West Karachuonyo/ Kanam B/275	Title	17/10/1997
Kisumu Museum	KSM/Block/X104	Title	18/12/2000
Songhor	Nandi/Songor/845	Title	-
Fort Ternan	L.R. 11889	Title	4/11/2000
Narok	L.R.354	Title	18/5/2001
Kengeleni Bell Tower	MN/11137	Title	18/5/2001

*Table 12k: Sites with Title Deeds*

It was very surprising to note that most well known sites including the Nairobi Museum which houses the National Museums of Kenya acquired deeds after 1990-more than seven years after the Antiquities and Monuments Act had been put in force.

### **5.8 Analysis of interview data**

About half of the local people from the areas of this study do not know what archaeological sites and cultural heritage are (Tables 9b and 10a). This is a very significant proportion of the local community especially if it is expected that they are to contribute towards protection and management of their own heritage.

As much as it may be encouraging to note that approximately 66.7 % of the local population from Mtwapa and Jumba La Mtwana sites attributed at least one or more values to archaeological sites. About 33.3 % did not attribute any value to archaeological sites (Table 9c). Data from Gede and Kitoka regions showed slightly higher percentage of those who attributed one or more values to archaeological sites (Table 10b). This implies that a significant proportion of the local population actually lacks awareness on what these sites and monuments are, and why they must be preserved. It is also noted that more than 96.7 % (table 11a) of the visitors to the sites are not local to the sites. This explains further the fact that the local population is not aware of its own heritage and its value.

More than half of the locals are both aware that sites and monuments are not adequately protected or have no idea of whether these are protected or not (Tables 9d and 10c). This shows ignorance on the part of the local people concerning the status of their own heritage. Protection efforts suffer a blow because sites and monuments have been destroyed due to ignorance on their value. This is true from the fact that only a few are involved in the protection and management of sites. Where the majority of the population is not involved in the exercise of protecting and managing the sites and monuments, it is likely that a negative attitude emerges from them. The local community develops a "do it yourself" attitude especially where the agents of protection do not involve them.

An average of 77.5 % of the population is able to identify at least one or more causes of destruction of archaeological and other cultural sites (Tables 9f and 10e). If the local population can identify the causes then it is important to involve them in preventing destruction. Most of the causes of destruction mentioned are domestically generated. Given opportunity, the local community could help stop further destruction. Closely related to this is lack of consultation with the local community on how their heritage could be managed. Local communities have been known to preserve their own cultural sites.

More than half the population is aware that the National Museums of Kenya does not consult them on the protection and management of their heritage (Tables 9g and 10f). Using the data from local population, “public education” ranked high among the recommendations on better management of the sites (Tables 9h and 10g). This was followed by “involvement of local elders”, and finally, “financial support”. Comparing these with visitors’ recommendations (table 11d), it is evident that the former two factors are important in reaching proper protection and management of sites. However, public policy and legislation are vital in getting the efforts of protection supported by the government through protective laws (Tables 11c and 11d). Government machinery is needed to propagate public awareness through formal education as well as through the responsible ministry or department. Proper public policy and legislation followed with proper implementation would help to stop vandalism and illegal trade.

Curators and other museum officials play a role in location, preservation and curation of archaeological sites, monuments and archaeological materials respectively. It is interesting to note that more than 70% of them answered that most sites are not adequately protected (Chart 12). About the same proportion mentioned that most sites and monuments are still located on private land and/or argued that destruction of sites and monuments is a continuous process (tables 12 b, 12d).

The majority of curators said there is no cooperation between the National Museums of Kenya and development agents (Table 12c and 12d).

Most of the curators and other officials of the museums are much aware that destruction of sites and monuments in their areas of jurisdiction goes on yet they cannot prevent it. The legal provisions are insufficient to protect such sites and monuments. Conflicting allocation of land bearing archaeological sites and monuments to individuals without consultation with the National Museums of Kenya is a contributing factor.

More often, legal action is not taken on cases involving destruction of sites and monuments (Table 12f). Not all the sites are on land that is formally owned by the National Museums of Kenya (tables 12i and 12j). This has made the work of protecting and managing of the sites difficult. It is however encouraging to note that the landowners on whose land archaeological and historical structures occur are appointed as caretakers. Sometimes salvage excavation is carried out where development projects take precedence over sites. The problem remains that of insufficient time and money to enable the recovery exercise take place. Inter-agency cooperation is lacking- implying that more archaeological sites and materials have been destroyed especially when impact assessment statements are not required before development projects commence.

#### **5.9.1 Conclusion**

In this chapter data has been described with the use of tables, charts and photographs. The results of the archaeological survey, surface collection and subsurface testing have been shown. Wall measurements as well as interview data collected from all the areas respectively have been presented. Data analysis has been done after every set of data collected.

## **CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS**

### **6.1 Introduction**

This chapter focuses on the actual findings of the research and redresses the research problem and objectives. The aim here is to establish whether the objectives of the research have been realized. This thesis concludes by making recommendations accruing from the study findings.

### **6.2 Overview of the research problem and conclusion of the findings**

This study concerned itself with the role of development projects on the conservation of archaeological sites. The aim here was to determine the extent to which development projects destroy archaeological sites and materials. This has been achieved through detailed observations of development projects in the study area, which showed that roads, suburban tracks, housing and hotel constructions destroy archaeological sites and materials in the absence of impact assessment reports. Construction works above have been responsible for the destruction of sites and materials in all the four sites under study. All the rubbles of historical buildings were attributed to leveling due to modern constructions. Archaeological materials littered private land, on which modern buildings stand. Weighing the hypothesis against the evidence it is true that development projects are responsible for the destruction of archaeological sites and materials.

The role played by the local community in the destruction of archaeological sites and materials has also been assessed through a set of questionnaire. Among the issues this study found out was that a significant part of the local community does not attach any value to archaeological sites and are not aware why these should be preserved. The value for land seems to supercede that of archaeological sites. Local people would rather cultivate crops on their land than preserve archaeological sites and structures on them.

Another aim of the study was to assess environmental factors and their role in the destruction of archaeological sites and materials. High temperatures, rainfall, and vegetation cover and to some extent wind were found to have their share in the destruction of sites. While it is necessary to preserve natural vegetation within the sites but this should not be at the expenses of archaeological sites and materials. From the study, significant proportions of the sites have not been maintained properly. This has rendered archaeological sites and structures vulnerable to natural decay and deterioration.

### **6.3 Recommendations**

The Antiquities and Monuments Act of 1983 (cap 215) of Kenya allows the National Museums of Kenya to register sites, antiquities and monuments. This law forms the basis upon which archaeological heritage is managed in Kenya. However, there is no provision in the Act for submission of impact assessment statements by developers before starting their projects. This means that archaeological and cultural resources that are located in areas where development projects take place are vulnerable to destruction. One major recommendation made here is that the Act should be reviewed so that developers are required to submit archaeological impact assessment statements before commencing their projects.

There is no provision for cooperation between government departments to ensure the preservation of archaeological sites and monuments. This study also recommends that the Ministry of Lands and Settlement should verify with the “authority” (= National Museums of Kenya as defined in section 2 of the Act, cap 215) before allocating any piece of land to developers, which is not the case as the research found out.

In Kenya, land is administered under three categories i.e., Government land, trust land, and private land. The respective land acts namely, the Government Land Act (Cap.280), the Trust Land Act (Cap.288) and the Registered Land Act (Cap.300) should include provisions



so that 'protected areas' (as defined in section 2 of the Act) are not allocated until the National Museums of Kenya declares them as less important. This calls for cooperation between all government departments (whose operations involve land such as settlements, agriculture, natural resources and environment, and public works) and the former.

The National Museums of Kenya may compel the owner of a site through the legal provisions to sell the land in question to the government. Even in cases where there is real threat of being destroyed, the archaeological site or monument will not be acquired if local people use such a site or monument for religious observances (Section 20(a) of the Act). If the local people regard a site or monument as their right and continue to use it for religious purposes, the act should provide for community based maintenance. This will ensure the site or monument is maintained by the people themselves to avoid a potential conflict just in case the government decides through legal action, to take over such a site.

Acquisition of any piece of land requires that the owner be compensated (Section 13 of the Act). The National Museums of Kenya has a limited budget and due to increasing land costs, it has not always been easy to purchase all the sites that are gazetted.

The Antiquities and Monuments Act should make a provision for sources of fund, which may be used to purchase land and compensate owners. Otherwise, as it is currently, the National Museums of Kenya depends on donations from foreign organizations. This dependence delays research projects as well as land purchases aimed at rescuing sites and monuments from destruction. In many cases, archaeology belongs to the local community unless otherwise. The academic significance of archaeological materials and architectural monuments has taken precedence over the significance of these materials to the local people. This attitude has contributed negatively towards creating awareness among local people about the need to preserve their heritage.

To get the local communities support the course of protection and conservation of the cultural resources, there should be a clear indication of their benefit. The National Museums of Kenya and other researching bodies or individuals should not only involve the local community because of their academic papers but also help them appreciate and see tangible values of their own heritage. The local community whose heritage we may be looking for to preserve has economic and social needs and obligations as well. It will be difficult to expect their support when their immediate needs are not addressed (Paul Lane pers. com ). This strategy will ensure the local community earns a specified percentage of the benefits of the site. The National Museums of Kenya should engage in activities that positively affect the society directly.

### **6.3 Conclusion**

In this chapter an overview of the research problem and objectives has been done. Conclusions on the findings of the study have been made. The study also concludes by making recommendations if effected, are likely to curb destruction of archaeological sites in Kenya.

7

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## **Appendix 1: Interview Guides**

### **Interview guide for the local elders**

1. Do you know what archaeological sites are?
2. Of what value are archaeological sites to you and/ or to the community as a whole?
3. Are the sites adequately protected by the National Museums of Kenya?
4. Are the local people involved in the maintenance of sites?
5. If yes, what is the nature of their involvement?
6. What in your opinion destroys archaeological sites on your land or within your community?
7. Are the local people consulted by the National Museums of Kenya on the management issues?
8. How has change of land ownership affected the conservation of archaeological resources?
9. What recommendations do you have for better management of archaeological sites and other cultural heritage sites?

### **Interview guide for the visitors**

1. Which part of Kenya do you come from?
2. Why do you visit archaeological and cultural sites?
3. What in your opinion destroys archaeological and cultural heritage?
4. What do you think should be done to improve the protection and management of archaeological sites and monuments?

### **Interview guide for the Curators and other museum officials**

1. Are archaeological sites and monuments adequately protected?
2. If your answer is no, why do you think that sites are not adequately protected?
3. Is there any cooperation between the National Museums of Kenya and development agents?
4. If yes, what is the type of cooperation?
5. Are you aware of any archaeological site that has been destroyed by public or private developers?
6. What actions do the National Museums of Kenya take in cases where sites and monuments are destroyed?
7. Does the National Museums of Kenya have Title Deeds for all her property?

## Appendix 2: Coding of interview responses

### Interview guide for local elders

#### Variable 1(V1): Knowledge of Archaeological sites

Yes 1

No 2

#### V2 Value of archaeological Sites and Monuments

Cultural/Educational 1

Recreational 2

1 & 2 3

No Value 4

#### V3 Adequate protection

Yes 1

No 2

#### V4 Local people involvement

Yes 1

No 2

#### V5 Nature of Involvement

Employment of local people by National Museums of Kenya 1

Encouraged to appreciate their local building materials 2

People are asked to respect their sacred places 3

None 4

Other 5

1, 2 & 3 6

**V6 Cause of Destruction**

Change of land ownership	1
Farming Activities	2
Construction works e.g. Roads, hotels etc.	3
Domestic Animals	4
Theft of Materials	5
1, 2, 3 & 4	6
No idea	7

**V7 Consultation**

Yes	1
N	2

**V8 Change of land ownership**

Site are destroyed during private estate development	1
Artifacts are sold and/ or stolen	2
No idea	3
Other	4

**V9 Recommendations**

Involve local people in the management efforts	1
Create awareness through public education	2
Financial support from the government or other	3
1 & 2 above	4
Others	5

**Coding of responses from a sample of Visitors to the sites**

**V1 Origin**

Other parts of Kenya	1
Outside Kenya	2
Coast Province of Kenya	3

**V2 Value/Reason for visit**

Remember the past	1
For leisure	2
To know the past technology and its people	3
For educational purposes	4

**V3 Destruction**

Vandalism	1
Illegal Trade	2
Local Communities	3
Visitor traffic	4
Lack of protective law	5
Lack of proper law	6
Other	7

**V4 Recommendations**

Proper policy	1
Law	2
Public Education	3
Local involvement	4

## **Coding of responses from the museum curators and other officials**

### **V1 Adequate Protection**

Yes 1

No 2 go to V2

### **V2 Not Adequately Protected**

Sites still lie on private land 1

Destruction of sites goes on 2

Artifacts are lost/ stolen 3

Other 4

### **V3 Cooperation**

Yes 1 go to v4

No 2

### **V4 Type of Cooperation**

Financing excavation 1

Setting up a museum 2

None 3

### **V5 Knowledge of destruction**

Yes 1

No 2

### **V6 Action taken**

Legal action 1

No action 2

### **V7 Title Deeds for sites**

Title Deeds 1

No Title Deeds 2

### Appendix 3: Tables

Value Label	Frequency	%
Yes	20	33.3
No	40	66.7
Total	60	100

*Table 10a: Local elders' knowledge of archaeological sites*

Value label	Freq.	%	Cumulative %
Cultural/Educational (1)	15	25.0	25.0
Recreational (2)	8	13.3	38.3
1 & 2(3)	17	28.3	63.3
Other (4)	8	13.3	79.9
No value (5)	12	20.0	100.0
Total	60	100.0	

*Table 10b: Whether or not archaeological sites have any value to the community*

Value label	Frequency	Percent (%)	Cumulative %
Yes	16	26.7	26.7
No	27	45.0	71.7
No idea	17	28.3	100.0
Total	60	100	

*Table 10c: Whether or not sites are adequately protected*

Value Label	Freq.	%
Yes	17	28.3
No	22	36.7
No Idea	21	35.0
Total	60	100

*Table 10d: Whether or not local elders are involved in site maintenance*

Value labels	Frequency	%	Cumulative %
Change of land ownership (1)	1	1.7	1.7
Farming activities (2)	2	3.3	5.0
Domestic animals (3)	2	3.3	8.3
Theft of materials (4)	15	25.0	33.3
1,2 &3 (4)	26	43.3	76.7
No idea (5)	14	23.3	100.0
Total	60	100	

*Table 10e: Locals' view of what destroys archaeological sites*

Value labels	Frequency	%
Yes	20	33.3
No	40	66.7
Totals	60	100

*Table 10f: Whether or not local elders are consulted on matters relating to site maintenance*

Value labels	Frequency	%
Involve local elders (1)	11	18.3
Public education (2)	33	55.0
Financial Support (3)	1	1.7
1&2 (4)	15	25.0
Total	60	100

*Table 10g: Recommendations of the local elders on better management of heritage sites*



Value Label	Freq.	%
Legal action	12	48.0
No action	13	62.0
Total	25	100

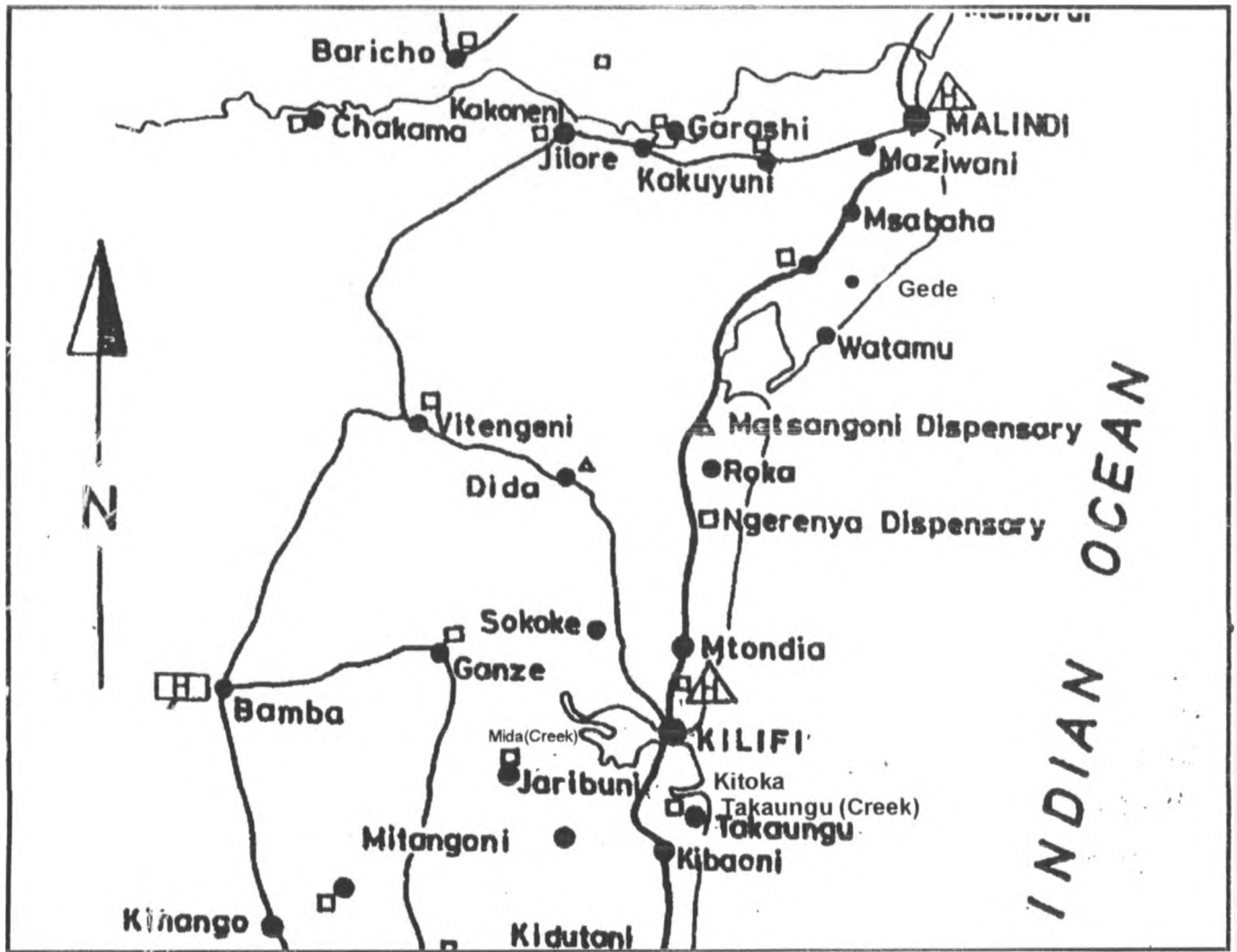
*Table 12f: Curators responses on whether or not legal action is normally taken when sites are destroyed*

Value label	Freq	%
Title Deed	8	32.0
No Title Deed	17	68.0
Total	25	

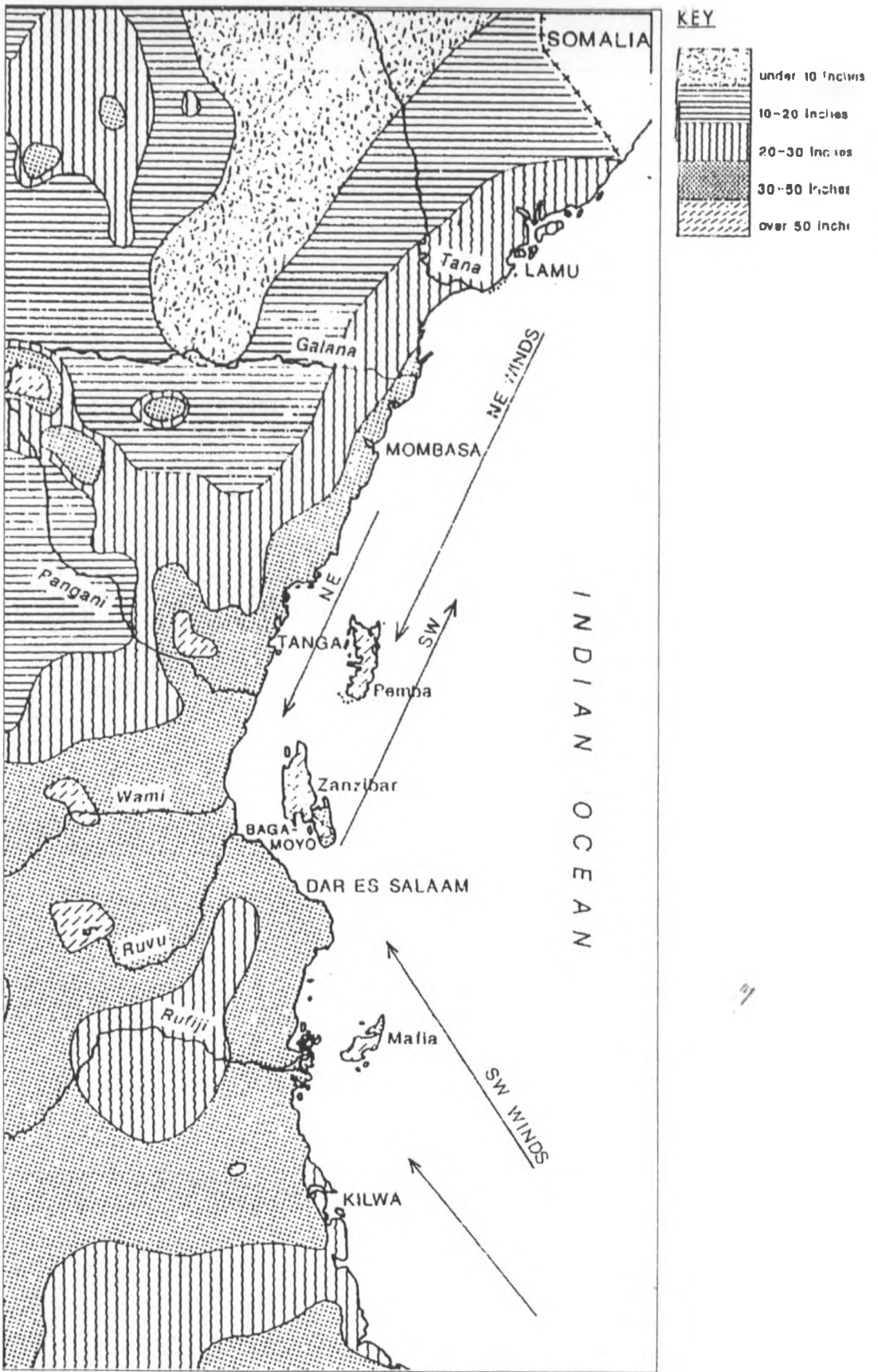
*Table 12h: Whether or not the National Museums of Kenya had Title Deeds for*



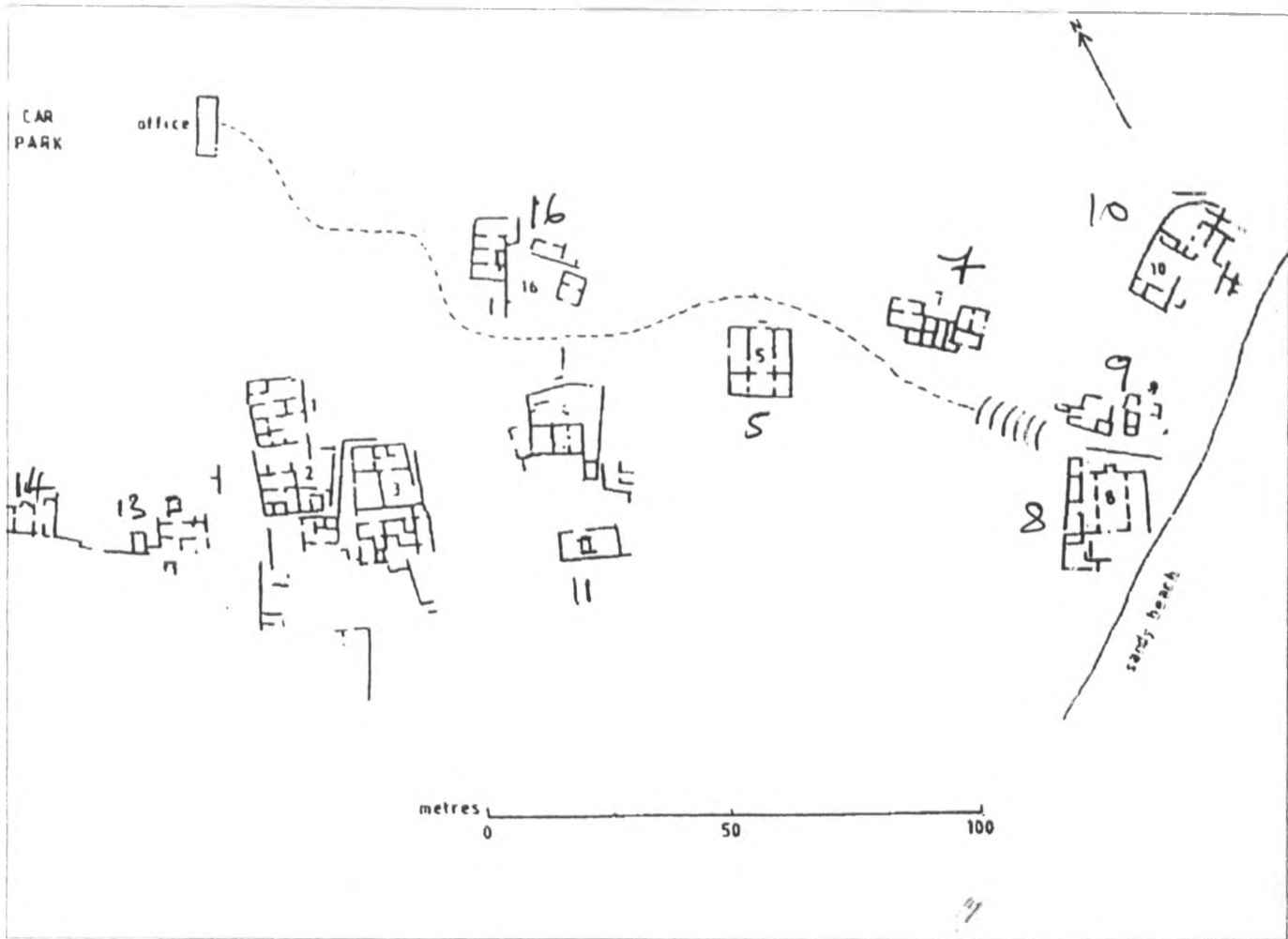
Map 1  
 Showing Museums and sites including Mtwapa and Jumba la Mtwana historic sites.



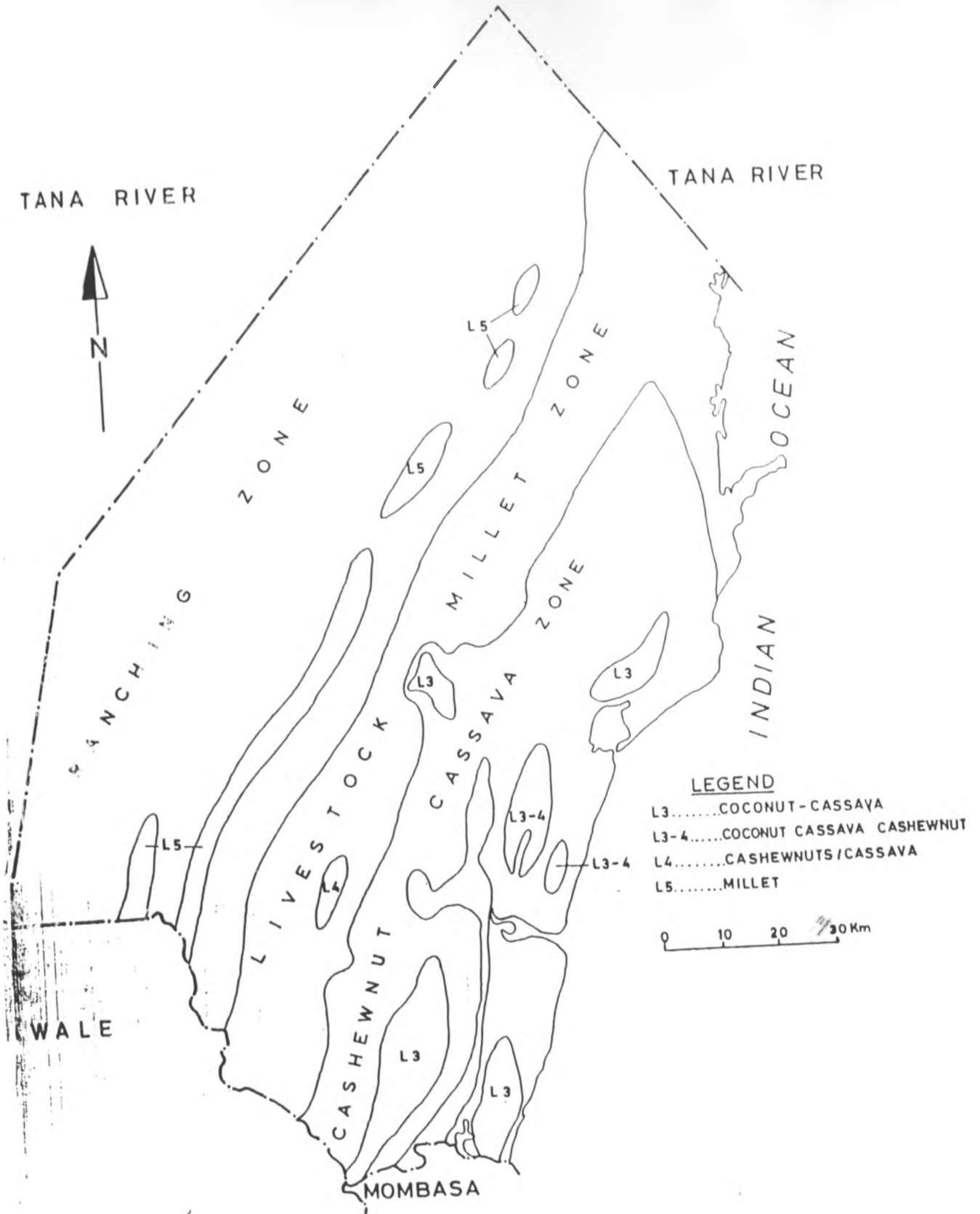
Map 2. Gede and Kitoka Historic Sites



Map 3: East African coastal climate (Rainfall and wind), modified from Cham: 1994



Map 4: Jumba La Mtwana, showing areas of neglect.



Map 5: Ecological and agricultural zones of Kilifi District.