AN ETHNOARCHAEOLOGICAL STUDY OF POTTERY IN EVURORE DIVISION, MBEERE NORTH DISTRICT, EMBU COUNTY, KENYA

BY

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OCTOBER, 2013
DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

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DEDICATION

This thesis is dedicated to my loving husband, Sammy E. Njeru, for his support, patience, and encouragement in the course of study.

This work is also dedicated to my parents, Mr. Festus Kabangi and Mrs. Jedidah Muthoni Kabangi, for their prayers and for having been a great source of inspiration and encouragement.
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OPERATIONAL DEFINITIONS OF TERMS

Definitions of certain terms as used in this study are given as below:

**Archaeological pottery**: Pottery that often appears to be of considerable antiquity.

**Attributes**: Vessel characteristics that include surface finish, vessel shape (form), decoration (style) and function.

**Burnish**: The polishing of the surface with a hard smooth object, such as small and smooth rocks, to produce a fine gloss finish.

**Ceramics**: Highfired potteryware, which are often glazed.

**Clay**: A fine-grained earth material that develops plasticity when mixed with water.

**Consumption**: The act of using products.

**Contemporary cultures**: Cultures of the present time.

**Contemporary Mbeere Pottery**: Pottery of the present time in Mbeere.

**Decoration**: Any intentional, primarily non-functional elaboration of the surface of the vessel wall involving designs either in intaglio or in relief.

**Domestic needs**: Local needs (used in people’s homes).

**Dot impression**: Small rounded impression made with an instrument that has a pointed end.

**Early Iron Age Sites**: Sites with pottery which is distinct from contemporary pottery and which from its context often appears to be of considerable antiquity.

**Earthenware**: Pots made from low firing temperatures which range from $600^0$ centigrade to $800^0$ centigrade.
Ethnoarchaeology: The comparison of ethnographic (present) and archaeological Mbeere pottery in order to understand the operations of this industry in the archaeological past.

Firing: “Baking” clay items to make them attain a certain degree of permanence for example pots.

Form attributes: Form involves pottery shapes, for example, vessel lip, neck, shoulder, or base.

Function attributes: This involves uses to which pottery vessels were/are put.

Grooves: Patterns created by the use of a thin stick which is used to incise or cut thin wavy, zigzag or horizontal lines around the neck of the pot.

Incising: Strokes, cut lines or dots made on the pot neck using a thin sharp stick.

Intaglio: The art of cutting patterns into the surface of the vessel.

Leather-hard: A situation in which the vessel is not completely hardened/dried.

Marketing: The activity of exchanging or selling products.

Modeling: A decorative technique that entails fitting small loop handles which are crescent – like at the pot necks.

Modeling: The activity of making pots.

Plastic clay: Clay that has inclusions such as crushed sherd, quartz and mica that makes it workable and more resistant to firing.

Pottery: Lowfired earthenware.

Punctuation: Impression resulting from a punch with an instrument that has a circular, semi – circular or triangular cross – section.
**Recent Iron Age Sites:** Sites identified with historical traditions or recent ancestors, or which have pottery resembling that currently in use.

**Relief:** A way of decorating clay vessels with a shape or figure that is raised above the surface.

**Slip:** A thin solution of clay applied to the leather-hard vessel to improve its texture.

**Sprigging:** A sprigged pattern is decorated with leaves or flowers on the surface of the vessel.

**Stylistic attributes:** This involves decorative treatments such as paintings, sprigging and incising.

**Technological attributes:** Pottery technology includes the acquisition and preparation of raw materials such as clays, tempers, pigments and wood for firing, the shaping and decoration of the vessels and the firing process.

**Temper:** Substance added to the clay to make it more resistant to firing, for example, crushed sherd, quartz and mica.

**Traditional pottery:** Pottery associated with recent ancestors.
ABSTRACT

The purpose of this study was to examine pottery production, marketing and consumption by the contemporary Mbeere people. Pottery production was one of the earliest technologies adopted by farming communities whereby they used pots as storage facilities for their agricultural produce (Sharer and Ashmore, 1987). This industry has continued to date and thus studies in pottery have been carried out to understand cultural groups, how they adapt and manipulate the environment to meet their needs. The study revolved around selected villages of Evurore Division, Mbeere North District, Embu County, Kenya. An investigation of cultural continuity/discontinuity was carried out using archaeological potsherds. This was achieved by comparing the archaeological Evurore potsherds from the sites and contemporary Mbeere pottery. The study adopted descriptive design. Data was collected through interviews, questionnaires, on-site observation, museum artifacts and library research. The study employed snowball type of purposive sampling because the renowned contemporary potters were few thus mentioning other potential potters. Systems theory and functionalist approach guided the study. Attribute and thin section analysis as well as qualitative and quantitative methods of data analysis were used. Attribute analysis was extended to comparative data analysis in investigating cultural continuity/discontinuity. The study found Evurore contemporary potters to be using a flattened coil in forming their vessels, decorating them through incising, firing them in open fire and using them for domestic purposes. The results from this study showed that pottery industry in Mbeere is a cultural continuum. The researcher recommends the study of the clays in Kogari in order to improve the quality of vessels made in this village. Finally, the findings of the study may be used by the policy makers in addressing issues that have emerged to improve pottery in Evurore Division.
CHAPTER ONE

1.0 INTRODUCTION

This chapter provides background of the study, statement of the problem, research questions, objectives of the study, research hypotheses, justification and significance of the study, in addition to the scope and limitations of the study.

1.1 Background of the Study

Communities all over the world produce material culture for varied reasons. This involves both simple and complex societies. Pottery production was one of the earliest technologies adopted by farming communities. They used pots as storage facilities for their agricultural produce (Sharer and Ashmore, 1987). This industry has continued up to date. Because of this, pottery has been studied to understand cultural groups, how they adapt and manipulate the environment to meet their needs and their relationship with other people. Studies in pottery have been carried out using different approaches, for example, ethnoarchaeological and attribute analysis.

This study focused on pottery production and consumption by the contemporary Mbeere people aimed at investigating cultural continuity/discontinuity. The Mbeere people are very similar to the Embu in Kenya. Mbeere and Embu oral histories indicate that the two groups were originally one Embu group. The Mbeere split from the Embu after an inter-clan war that the Embu clan won. After the victory, the Embu pushed the Mbeere to the drier and less fertile Kiang’ombe hills south of the Embu region (Mwaniki, 1973).
(a) The Administrative Background of the Mbeere:

The split of the Mbeere from the Embu later led to the formation of Mbeere District in 1996. Mbeere District was therefore an administrative district in the Eastern Province of Kenya; its headquarters being Siakago town. It was divided into six divisions namely: Gachoka, Mwea, Evurore, Siakago, Kiritiri and Makima. In the year 2009, the district experienced a split; Mbeere South District whose headquarters is in Kiritiri town and Mbeere North District with headquarters in Siakago town. Currently, Mbeere North District, which is the district of study, is divided into four administrative divisions; Evurore, Kanyuambora, Siakago and Muminje (Table 1.1). Evurore Division has an area of 410.0 km² and consists of Ishiara, Kamarandi, Ndurumori and Iria - Itune locations (Map 1.2). There are approximately 8,628 people in the division according to the Kenya Government 2009 census.

Table 1.1: Mbeere North District Administrative Units by Divisions

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<tr>
<th>Division</th>
<th>Locations</th>
<th>Sub – locations</th>
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<td>Evurore</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Kanyuambora</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Siakago</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Muminje</td>
<td>4</td>
<td>8</td>
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Source: Chiefs Office, Ishiara Location
(b) Geographical Background:

Mbeere borders with the Embu to the North West, Tharaka to the North, Mwingi to the East, Machakos District to the South and South - East and Kirinyaga District to the West. The Mbeere are separated from the Gicugu and Mwea (both in Kirinyaga District) by Ruvingaci River which joins River Thiba (Mbeere District Development Plan 2008-2012).

Mbeere is about 630 square miles in area. Only two hills rise to heights nearing 5,000 feet, these are Kiang’ombe and Kianjiru which rise to peaks of 5,918 feet and 4,904 feet respectively. The land slopes gradually from the north - west from a little over 4,000 feet to just under 2,000 feet to the east and north - east as the land joins the Tana River Valley (Mwaniki, 1973). About one - third of the land lies to the left bank of the Tana between 2,000 and 3,000 feet. The rest is between 3,000 and 4,000 feet (Mwaniki, 1973).

There are several seasonal streams which fill up during rainy periods and dry up either wholly or partly in dry seasons. Such are Thura, Kithagana and tributaries of Ena River. Ena is the only stream which traverses the Mbeere country but only serves a section of the Evurore area, not the whole of Mbeere.

Most of Mbeere soils are sandy, grey or reddish - brown (Mwaniki, 1973). The productive soil is found mainly by riverbeds where it rarely covers the stones. Most rivers and hill landscapes are very rocky and stony.
Unlike Embu, Mbeere is too far away to benefit from Mount Kenya’s precipitation. As a result rainfall is inadequate, unreliable and badly distributed in most periods (Mwaniki, 1973). The climate in Mbeere is not as hospitable as that of Embu.

Most of the Mbeere natural vegetation is still undisturbed by human activity. River valleys and hill slopes like those of Kiang’ombe and Kianjiru are covered with thick bushes. Other areas contain much scrub vegetation where thorny tough trees of rarely over 20 feet high grow over grass. All these trees and most of the grass are drought resisting and are adapted to the conditions by their thorny reduced leaves and fleshy nature. Much of Nthawa, Evurore and Mavuria contain this type of vegetation.

Mbeere has no gazetted forest but has 3,751 hectares of natural forest entrusted to the Mbeere County Council (Mbeere District Development Plan 2008 - 2012). The forest reserves are Kiang’ombe in Evurore Division (2,104 Ha), Kianjiru (1,004 Ha) and Kiambere (643 Ha) both in Gachoka Division. The three main forests have been proposed for gazettement (Mbeere District Development Plan 2008-2012). Kiang’ombe hill forest consists of both exotic plantations and natural forests. The exotic plantations are found both at the foot and top of the hill. The rest of the hill is composed of natural forests with indigenous trees such as *cordial, abyssinica, ficus sycomonous and croton megalocarpus*. The hill is also the source of Kangiri, Marivue and Ngiga streams. Kiambere and Kianjiru hills consist of natural forests composed of rare herbs and shrubs.
(c) **Economic Background:**

Mbeere land is drier and less fertile than the Embu region. The district has a bimodal pattern of rainfall with the long rains falling between April and June while the short rains are experienced from October to December. The rainfall is, however, not reliable and ranges between 640mm to 1,100mm per year with most parts of the district receiving 550mm of rainfall per year. The rainfall received enables the cultivation of cash crops like tobacco and cotton and rearing small herds of domestic livestock. In the wider Mbeere, Evurore Division has the highest number of poor people followed by Siakago and Gachoka. The majority of the poor are found in Ndurumori and Iria - Itune Locations in Evurore Division. Generally the district is an arid and semi-arid area where the majority of the population is poor, with over 50 per cent of its population living below the poverty line (Mbeere District Development Plan 2008 - 2012). The Mbeere, therefore, often depend on their Embu cousins for food supplies especially in times of drought.

Mwaruvie (1991) in his study on the economic history of the Mbeere, reported that production in Siakago Division entailed control, adaptation and manipulation of the environment to meet people’s needs. He further reported that industrialization was important to provide the implements needed by farmers, hunters and warriors. Among these industries is pottery which is also a common practice among most of Kenya’s ethnic groups and cultures. Though Mbeere people do not practice pottery on a larger scale, they produce a few for their domestic purposes, for example, earthenware pots for cooking, storing water and food, aesthetics, and sell the rest for a living.
Agriculture is the main economic activity in Kenya accounting for about 30% of Gross Domestic Product (Economic Survey, 1989) and employing about 70% of the working population. The rapid population growth in Kenya (growth rate 3.3%) demands for higher food production and consequently, there is a tendency of migration from high and medium production areas to new farmlands in marginal production areas. The marginal production areas are characterized by low and erratic rainfall and low soil fertility status (De-jager et al., 2004; Maina et al., 2004). In order for people in these areas to cope with the lower production possibilities, they have adapted new production strategies. A report by Arid Lands Resource Management (2011) on Kenya food security update (November 2010) indicates an estimated 1.2 million people, down from 1.6 million people in August 2010, required food and non-food interventions to mitigate food insecurity.

From this background, it is evident that Mbeere is a geographically and economically difficult habitat. It is against this background that this study attempts to understand the extent to which pottery impacts economically on the people of Evurore Division. Many people in Mbeere are not economically stable due to the fact that Mbeere has low agricultural potential and therefore if pottery is encouraged it will result into improved economic status of the people especially the unemployed in the society.
Map 1.1: Map of Kenya Showing Location of Evurore Division

Map 1.2: Map of Evurore Division

Source: Mbeere District Development Plan (2008 - 2012)
1.2 Statement of the Problem

Mbeere traditional and archaeological pottery industrial process has been studied by scholars that include Ngari (1992), Soper (1979), Kiriama et al. (1996) and Nkirote (2006). The current researcher therefore focused on contemporary Mbeere pottery with an aim of understanding its production, marketing and consumption. It being an ethnoarchaeological study, the researcher used the data obtained from the field (on contemporary Evurore pottery) with that of earlier researchers together with the archaeological Evurore potsherds they gathered to investigate cultural continuity/discontinuity.

1.3 Objectives of the Study

The objectives of the study were to:

(i) Establish the sources of the raw materials used in pottery manufacture and document the process of pottery manufacture in Evurore Division.

(ii) Identify attributes that are similar and/or different between Evurore archaeological and contemporary pottery.

(iii) Establish if the process of manufacture affects the value of pottery in Evurore Division in relation to contemporary industrial ware.

(iv) Assess the extent to which pottery impacts economically on the people of Evurore Division.
1.4 Research Questions

The study was guided by the following research questions:

i. What are the sources of the raw materials and process of pottery manufacture used in Evurore Division, Mbeere North District?

ii. What attributes are similar and/or different between Evurore archaeological and contemporary pottery?

iii. What aspects of the process of manufacture affect the value of pottery in Evurore Division in relation to contemporary industrial ware?

iv. To what extent does pottery impact economically on the people of Evurore Division?

1.5 Research Hypotheses

i. Mbeere people utilize traditional methods in pottery manufacture and the raw materials used are found within the vicinity.

ii. There is a relationship between Evurore archaeological and contemporary pottery.

iii. The process of production affects the value of pottery in Evurore Division.

iv. Pottery industry forms a source of income amongst the people of Evurore Division in the post colonial period.

1.6 Justification and Significance of the Study

Much of Mbeere’s past culture as seen in the literature review is known or has been studied. Several researchers have concentrated on traditional and archaeological Mbeere culture overlooking the contemporary culture of the Mbeere people.
The study outlined the positive impacts of pottery which may encourage people to practice the art which will result to improved economic status of the people especially the unemployed in the society, some of whom are languishing in poverty.

The findings of the study may be used by policy makers in addressing issues that have emerged to improve pottery in Evurore Division.

The study is also important in that it may provide a basis for other researchers who may wish to do research on similar fields.

1.7 Scope and Limitations of the Study

The study covered pottery producers and consumers with particular focus on Mbeere North District of Embu County, Kenya. Bearing in mind that the study was carried out in one division of Mbeere North District, the results may not be generalized to the larger Mbeere, any other part of the country or even the world. A great deal of reasoning employed in archaeology is based on analogy. That is, living cultures are not necessarily past cultures; they are different, living in different circumstances, with different people and histories (Sutton and Yohe 11, 2003). The behaviors and practices of contemporary cultures can therefore be used only to suggest hypotheses about the past, and such hypotheses must be tested.
CHAPTER TWO

2.0 LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter deals with a review of related literature and the theoretical framework. In Literature Review, an attempt was made to move from general to specific; that is pottery from a global perspective to the Kenyan scenario and even more specifically to the Mbeere community. Secondly, theories that were applied to guide the study and interpret findings are explained.

2.2 Review of Related Literature

2.2.1 Pottery Production and Consumption

The reconstruction of the production technology for pottery involves establishing, first, what raw materials were used and how they were prepared and second, how the pottery vessels were formed, surface-treated, and fired (Tite, 1999). These stages constitute the three pottery attributes, that is, form/function, stylistic and the technological attributes.

The production of pottery is one of the most ancient arts, and remains a major industry today. In the Near East, although the Paleolithic use of clay has not been documented archaeologically, after about 10000 BC clays were used for a variety of purposes including architecture, pottery and small modeled clay objects. The earliest vessels in the Near East were hand - built by coiled or segmental building and then scrapped, paddled or rubbed to produce an even finish; they were fired without kilns in open bonfires, using
wood or dung cakes for fuel. These and later vessels come in a range of shapes, including bowls, cups, and trays, and were decorated with paints and incised lines. Their decoration depicts a variety of plant and animal forms and human activities; and the context of recovery - burials, household activity areas and refuse deposits - provides many clues to their diverse functions (Rice, 1987:10)

Rice (1987) also reports that the earliest pottery in China comes from coastal South-East China and adjacent regions and consists of a variety of cord and shell - marked and incised types. This dates to the fifth millennium BC. The best known early Chinese pottery comes from the Yangshao culture in the Yellow River Valley, between 4800 and 4200 BC (Rice, 1987). These potters produced beautiful hand - formed jars and dishes painted with red and black geometric decorations skillfully made. Additionally, Rice (1987) reports that unfired clay vessels were found in tombs in Nubia from AD 300 to 550; in the Near East unfired clay objects come from excavations into structures dating to early Sumerian civilization, and a variety of unfired “mud” dishes and other utensils are made by Bedouins in the same area today; and some Eskimo pottery from AD 1000 – 1600 was unfired.

According to Wandibba et. al. (1989), it is not known for certain where and when the art of potting originated in Africa. To them, the likelihood is that the inhabitants of several parts of the continent invented pottery independently. On the other hand, although the evidence is less satisfying, it seems that the potter’s craft was spread through sub-Saharan Africa during the Early Iron Age via a rather dramatic series of Bantu migrations.
Pots are made all over Africa. Indeed, pots are seen in practically every market in the continent (Wandibba et. al., 1989). Africans cook in pots and use them for storing liquids and grains, as dye pots for fabrics, and as tubs for bathing babies. Huge unglazed pots are used as refrigerators; water keeps cool due to its evaporation from the surface of these pots (Wandibba et. al., 1989).

Among the earliest pottery sites in East Africa, is the early Khartoum excavated by Arkell in 1947. Here, pottery was found in large quantities in a semi - permanent Mesolithic site. The most characteristic feature in the assembly is pottery decorated with multiple horizontal grooved wavy lines (Phillipson, 1977).

Trowell (1960) has compiled a particularly useful catalogue of pottery design in her comprehensive study of African design. Trowell’s accounts of pot - making and description of pots and sherds from every part of the continent suggest an enormous variety of natural and manufactured objects used to impress simple patterns in the clay. Such decoration may cover the entire pot, or may be formally arranged in zones often bounded by incised lines. Impressed patterns include indentations made with the finger nail, the edge of a shell or a piece of wood, or may be as elaborate as rolling a plaited reed or curved wooden roulette round the neck or body of the pot to form bands of patterns. These impressed patterns are particularly common in East Africa.

Equally common is incising a pattern with a pointed stick, knife, shell, piece of gourd, or any other pointed objects. For example, geometric shapes are often incised and filled in with parallel lines. In contrast, a number of ceremonial bowls have been found in West
Africa and in Zaire that have human and animals modeled in high relief on the lid or body of the vessel.

Burnished and colored decorations on pots are also common, especially in Central Africa. Pots are colored with the application of a vegetable matter (palm oil, juices of plants, gums or resins) or the use of mineral substances such as graphite or ochre which can be rubbed into a leather-hard pot (Trowel, 1960).

The largest numbers of ethnographic pottery studies for the African continent deal with West African wares. Leith-Ross (1970) in Gill (1981) has presented a comprehensive photo essay on Nigerian pottery. She offers one of the few detailed descriptions of the decorative techniques and illustrates the tools used to make the designs. Earlier accounts of Nigerian pottery as recorded in Gill (1981) include Thomas’ (1910) report on the craft in Southern Nigeria. He discusses where the women potters purchase the clays, and presents a short description of the coil construction of the vessels.

The manufacturing techniques and the role of the potters among the Sokoto in Northern Nigeria are both discussed. The social status of men and women potters is described and a complete discussion of the preparation of the clay and the addition of sherd as a tempering material provided. The pots are molded with the walls beaten up with a clay pestle and then decorated with plaited grass roulettes and slipped. Pots are fired twice a week in a circular uncovered kiln. Among the Sokoto, earthenware items are used as cooking and storage pots, drain pipes, lamps, hearths, and toys for children (Leith-Ross, 1970).
In East Africa, Dorman (1938) in Gill (1981) presents a study of pottery among the Wangoni and Wandendehule of Southern Tanzania, reporting on a number of the social and economic aspects of pottery production. He describes the role of potters, their recruitment, and how they receive their training. He provides particularly interesting information for comparison with other East African pottery studies on the taboos associated with the potting craft. Pregnant women must not participate in the potting process, and especially during the production of the larger beer vessels, women retire to the bush to pot in complete privacy.

Dorman (1938) also recorded information on the names, functions and prices of the eight types of vessels that are made in the area. He established that there are two different methods of pottery manufacture: modeling and coiling. He reports that pottery is never traded in the markets or far from the source of manufacture. The only exception is for the large beer drinking vessels that may be traded up to 30 miles.

Waane (1981) presents a study of pottery among the Kisi of Tanzania. In his work, Waane reports that most of Ukisi is rich in potting clay and the Kisi make a variety of pots for water, grain storage and cooking. He also reports that almost all the pots are made by the lump and coil method. The body is made with two types of clay, one type for the main body and the other for finishing.

From his study, Waane established that there are two distinct, but probably related traditions of Kisi pottery, Southern and Northern. The Southern tradition pottery has “Iron Age” type of incised, stamped, hatched, and herring bone decorations. In
comparison, Northern Kisi pottery does not have ‘Iron Age types’ of decorations. The results from Waane’s study showed that the shapes of all Iron Age and present day Northern Kisi pottery are similar.

There are several ethnographic and historical accounts containing descriptions of the Bantu-speaking peoples of Kenya pottery technology. Routledge and Routledge (1910) present a detailed account of Kikuyu pottery. Routledge and Routledge (1910) made some attempt to analyze the clay body, and to describe how and where the clays are collected as well as the preparation of the clays and sand tempers. Routledge and Routledge (1910) describe the entire pot building process and also present a photographic essay depicting the various stages in the manufacturing process.

Gill (1981) presented a research that was designed to be a comprehensive study of Kamba pottery. His area of study was Machakos District in Ukambani, Kenya. The purpose of his study was to investigate the social, cultural and economic setting for the production, distribution and consumption of traditional pottery in Ukambani. Gill further reports that the Kamba, one of the largest Highland Bantu groups, still make and sell traditional pottery. He observed the entire process of pottery manufacture from the extraction of the clays to the firing of the pots. He also noted that the Kambas’ method of forming their vessels is referred to as coiling which is a process of building up the vessel wall with superimposed rolls of clay.

Langenkamp (1999) researched on Meru pottery. The Meru people belong to Kenya’s Highland Bantus who have inhabited the central highland east of Mt. Kenya since the 18th
century (Wandibba and Barbour, 1989). According to Langenkamp (1999), pots in Meru were being made by some specialized women generally known as asumbi (pl.) and mumbi (sing.). Strong traditional beliefs and spiritual powers were attributed to the pots. It was, for example, believed that if a woman carrying a new pot on her back was to cross through a herd of livestock, the animals would become disease stricken or even die (Langenkamp, 1999). Langenkamp found that these strong beliefs were heavily opposed by Christianity and have caused the decline of the craft among Meru people.

Pottery was traditionally practiced at a hidden place away from any human habitation that was off limits for men and children and any non-potters. Langenkamp reports that the potters of Gitie Sublocation nowadays use these sites away from home out of convenience rather than customs as they find all raw materials and tools needed for the production of pots readily available on site: clay, sand, water, leaves to cover the unfinished pots and flat stones for wedging the clay. Langenkamp established that pot-making in Meru was a seasonal activity, alternating with the agricultural peak seasons.

In the book, Kenyan Pots and Potters, Brown gave her contribution by discussing contemporary pottery by the central Bantus. From her research, Brown found that the Central Bantu group of peoples, comprising the Aembu, Ameru, Agikuyu and Akamba produce a similar type of round-bottomed pottery, simple in shape, rough in fabric and texture, poorly fired and with little or no decoration.

Brown further observed that the same method of constructing a pot in two halves is used throughout the area. The top half drawn up from a thick collar of clay is made first,
allowed to stiffen and then turned on to its rim to have another thick collar of clay added. This is drawn upwards and inwards to form the round-bottomed base. The thick coils of clay are rolled not between the hands, as in most parts of Kenya, but on the ground on the material on which the pot is made. The potter walks around this material and does not turn either the material or the pot - a technique of potting which is characteristic of the craft amongst the Highland Bantus.

Where decoration exists it consists of simple grooves, dots or zigzag lines impressed with a stick or bone. Occasionally simple twisted cord impressions occur but rouletting is rare and found mostly in the Western part of the Gikuyu land where potters claim to be of Dorobo ancestry (Wandibba et. al., 1989). Characteristics of the group is the widespread use of individual potter’s marks often found on otherwise undecorated pottery.

Ndiiri (1992) carried out an ethnoarchaeological study of contemporary local pottery on the Kenyan Coast. In his work he discusses the production, consumption and discard of contemporary local pottery on the Kenyan coast. The study revolved around a number of sites around Jomvu Kuu, Hola, Kaloleni, Lamu and Pate areas.

To achieve his objectives Ndiiri used various methods including both physical and chemical analyses. The physical methods included attribute analysis while chemical methods included x-ray fluorescence.

In the ethnoarchaeological study of pottery in Evurore Division, Mbeere North District, the researcher found the physical method used by Ndiiri (1992) applicable and therefore
relied on attribute analysis. In attribute analysis, some of the attributes Ndiiri studied were: the clay texture, method of manufacture, vessel forms, decorative techniques and motifs, rim profiles and basal shapes.

For comparative purposes aimed at supporting cultural continuity or discontinuity, Ndiiri made an archaeological analysis of the 14th - 16th century sherds from his sites. The results from his study showed that the pottery industry on the Kenyan Coast is a cultural continuum.

Nkirote (2006) has recorded a summary of the previous archaeological work on pottery done in Mt. Kenya region. As recorded by Nkirote (2006), Taylor (1966) did the pioneering archaeological work around the Mount Kenya region. He studied the Gumba pits in Fort Hall currently Murang’a District. During his work, he collected from the surface one potsherd akin to Kwale ware and others, which he could not tell whether they were Kikuyu or Gumba pottery.

Siiriainen (1971) excavated a Gumba pit in Gatung’ang’a, Nyeri. He recovered 230 sherds of two types of pottery tradition, and he defined 17 of them as being related to Kwale ware, and the other 213 as a distinct type of late Iron Age, which he named Gatung’ang’a ware after the type - site. He found Kwale and Gatung’ang’a pottery to be occurring together and using radiocarbon dating method, he dated them to between 11th and 14th century A.D. Siiriainen (1971) also observed that neither the pits nor Gatung’ang’a ware were attributable to the culture of current Bantu speaking people in the region. However, since Kwale ware is associated with Bantu speakers, Siiriainen
speculated that an earlier group of Bantu speakers unrelated to the current inhabitants lived here (Siiriainen 1971). Since both types of wares occurred together, Siiriainen concluded that two groups of people, the pre-Bantu and the Gumba co-existed.

Soper (1976) conducted surveys and excavations of archaeological sites in the Chyulu hills and he found pottery similar to Gatung’ang’a ware and features of clay mounds. The mounds produced iron artifacts, bones and beads as well as human skeletons.

Similarly, Soper (1979) found Gatung’ang’a ware in the Mbeere region and its surrounding areas. During the surveys, he observed pottery with fluted and bevelled rims similar to Kwale tradition occurring together with Gatung’ang’a ware. Based on Siiriainen’s earlier speculation, Soper assigned these to earlier group of Bantu speakers.

Ngari (1992) focused on some aspects of the Mbeere indigenous industries in Siakago and Gachoka Divisions (1850 - 1963). The main industries that he studied included iron working, pottery manufacture, basketry, leather work, clothing and woodwork. To investigate the industrial process in these industries, he focused on: identification and exploitation of raw materials, their transportation to the areas of manufacture; manufacturing process itself as well as the marketing and organization of these processes. During his study, Evurore Division was part of Siakago Division in the wider Mbeere District.
Kiriama et al. (1996) conducted further surveys and recorded 69 Iron Age sites within the Mbeere region. They did not do any excavations, but they reported the presence of both Kwale and Tana ware pottery.

From the literature reviewed, it is clear that Ngari (1992) conducted a generalized study of the Mbeere indigenous industries whereas this present study was designed to be a comprehensive study of Mbeere pottery, the area of study being Evurore Division in Mbeere North District, Embu County, Kenya. Also, the purpose of Ngari’s study was to investigate Mbeere indigenous industries in the pre-colonial and colonial period whereas this study dealt with contemporary Mbeere pottery, that is, pottery in the post colonial period. In Investigating continuity and change of the Mbeere in the colonial days (1910 – 1963) Ngari (1992) looked at factors leading to the survival of traditional technology and factors leading to decline of indigenous industries respectfully. In this study the researcher investigated continuity and change of Evurore pottery by comparing Evurore pottery of the pre-colonial and post colonial days to identify similarities and/or differences between Evurore archaeological and contemporary pottery.

On the other hand, Soper (1979) and Kiriama et al. (1996) conducted surveys on Iron Age pottery while in this study, the researcher concentrated on contemporary pottery.

2.2.2 Marketing of Pottery Ware in Kenya

Langenkamp (1999) records that pottery trade along the coastline has traditionally been influenced by the Arabian culture and by traders who imported highfired glazed ceramic
items from Mesopotamia, Iran, southern Arabia, the Indian subcontinent, Thailand and China from the ninth century to the present day. Despite this presence of foreign pottery, Langenkamp reports that the merchandise did not influence the pottery industry of Kenya’s indigenous people as it was not traded inland.

Langenkamp (1999) further documents that in most pre-colonial African societies pottery production was largely determined by the domestic demand of the potter herself, her extended family or clan community. While surplus production and barter trade evolved in response to tribal specialization which provoked the rise of intertribal trade, Langenkamp established that some ethnic groups would explore, discover and develop the trade value of their pots, for example, the Luo and Luyia of western Kenya whereas others like the Okiek of Kenya never engaged in regular monetary trade with regard to pottery.

Langenkamp (1999) reports that the distribution of pots made by potters in the rural area often starts at home where the potter makes and sells pots to members of the family or community or to individual customers or traders who collect on previous orders. While most female potters, socially tied to their rural homes, produce and sell their products mainly within the proximity of their home areas, other women have abandoned the craft and turned to trading pots and other commodities.

Due to the absence and/or inaccessibility of advanced transport means, most rural potters carry their products to nearby localities such as weekly markets, workshops with collective sales outlets, shops and market stalls in rural and urban centers. An informal
distribution network evolves from those places where potters and traders meet on a regular basis to exchange pots and money. Inter-market traders, well established roadside merchants in Kisumu and Nairobi, retailers like Spinner’s Web or those who have established permanent market stalls within Nairobi’s City market, flower shops and nurseries like the Rosslyn River Garden Centre at Nairobi, Pepper’s at Nakuru or Pabari Nurseries at Kisumu, galleries like African Heritage, hotels and restaurants and the large number of commercial and alternative trade organizations which export handicrafts from Kenya, form the framework of the marketing and distribution of traditional pottery today.

A case study, published in September 2009, reflects on recent findings that Kenyan potters must learn to think like entrepreneurs, developing new products and marketing them far and wide. A recent study of small-scale earthenware manufacturers in Kenya conducted by Matanda (2007) with support from Trust Africa suggested a close correlation between entrepreneurial orientation - one’s capacity for taking risks and being proactive, innovative, autonomous, and competitive and the ability to identify, enter, and exploit new markets. Matanda found Kenya’s potters to have the mindset in terms of being productive, aggressive, and innovative but lacking the information needed to tap into new markets. She states they need training to understand the market better. In relation to this, the nature of the pottery ware produced by the central Bantu people, comprising of Meru, Embu, Kikuyu and Kamba, has contributed to the crafts poor economic performance among most central Bantu communities. All of them produce a similar type of purely utilitarian round-bottomed pottery, simple in shape, rough in fabric and texture, poorly fired and with little to no decoration (Wandibba et. al., 1989)
which never attracted popular market recognition beyond its cultural boundaries. This is 
even true for Kamba pottery. Despite the fact that the craft is flourishing among some 
Kamba communities in Eastern Province, Kamba pottery is hardly ever to be seen at 
urban market displays in Nairobi or other cities outside the Kamba territory.

A major determinant of the value of a pottery vessel is its strength. Arnold (1985) reports 
that friable vessels with an excess or the wrong kind of non-plastic material have lesser 
strengths. On the other hand, Shepard (1956) gives her contribution on how impurities of 
the clay affect the strength of the pottery vessels.

In filling the gap, the researcher investigated the contemporary distribution of pottery 
ware in Evurore to establish whether there could be factors challenging its economic 
performance.

2.3 Theoretical Framework

The researcher adopted systems theory and the functionalist approach to guide the study. 
Systems theory is supported by processual archaeology which seeks to reconstruct past 
human behavior by analyzing the functions of material culture in a cultural system - 
hence the use of ethnoarchaeology. Systems theory sees each society operating through 
the interrelationships of its individual components say, the natural environments, 
population density or available technology and that a change in one lead to a change in 
others (Binford, 1972). To infer how the Mbeere manufactured and used pottery in the 
past, ethnoarchaeology was used to explain this past cultural behavior.
As noted by anthropologist Radcliffe (1952) and a Marxist functionalist called Childe (1980), different cultures were determined by economic life these cultures led. Clark an ecological functionalist looks at environments and how it shaped different people. Malinowski’s conceptual perspective in functionalism states or implies that theory is built around the dogmatic assertion that cultural items exist to fulfill basic human and cultural needs (Malinowski, 1989). The functionalist view of culture insists upon the principal that every type of civilization, every custom, material object, idea and belief fulfils some vital function, has a task to accomplish and represents an indispensable part within a working whole.

Garbarino (1977) gives two implications which are associated with the functionalist approach. One is the purposive or teleological aspect of functionalism: that everything has some purpose; for example, the purpose of a knife is to cut; an aspect that is very easy to see in material culture. Another implication of functionalism is integrative: that the elements are interacting within an integrated whole. As a corollary of this point, there is the additional implication that the whole is affected as parts change or disappear. The functionalists were therefore interested in understanding the functions of artifacts and this study fulfils by providing the cultural and economic functions of ceramic products among the Mbeere.

Bearing in mind that the researcher aimed at analyzing the functions of pottery, Malinowski’s conceptual perspective in functionalism was employed in the study. This helped in identifying the uses to which Evurore pottery vessels were put. On the other
hand, ecological functionalism was applied which helped us understand how the rich potting clay in Evurore resulted to pottery industry in the area.

![Figure 2.1: Relationship between Pre-colonial and Contemporary Pottery.](image)

Source: The researcher

**Key information presented in Figure 2.1**

The study aimed at examining pottery production and consumption by the contemporary Mbeere people and linking it with the past. In comparing the pre–colonial and contemporary pottery, the researcher looked at the pottery attributes. This involved observing pottery shapes, decorative treatments, technology and how these enhanced functions of pottery vessels.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides a description of the research methodology which was used in the ethnoarchaeological study of pottery in Evurore Division. The chapter includes: research design, location of the study, population of study, sampling technique and sample size, data collection and data analysis plan.

3.2 Research Design

The study adopted descriptive design. This is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (Orodho, 2003). Descriptive design was applicable because the study aimed at collecting information from respondents on Evurore contemporary pottery attributes through interviews and direct observation. On the other hand, questionnaires were administered to aluminum and plastic ware traders in Ishiara market.

3.3 Location of the Study

The study was carried out in Evurore Division of Mbeere North District, Embu County, Kenya. Through site visits and discussions with community leaders such as area chiefs, the researcher found Ishiara and Kamarandi Locations suitable for the study because they were locations where pottery making is practiced most in the division. From these two locations, four villages were purposively selected as the localities of study. These were
Ishiara and Kagandari from Ishiara Location and Kiburu and Kogari from Kamarandi Location. This is because these are villages where pottery making has been practiced both traditionally and at the present and would therefore provide adequate data in relation to the problem.

3.4 Population of Study

The sample for the study was drawn from the selected four villages (that is Ishiara, Kagandari, kiburu and Kogari) and were mainly contemporary potters and consumers.

3.5 Sampling Technique and Sample Size

The researcher employed purposive sampling technique whereby renowned contemporary potters were the beginning point for investigation. Subsequently from these renowned contemporary potters the researcher snow balled to other potential sources of information. A total of sixty contemporary respondents from all the four villages were interviewed out of the possible one hundred in the area. That is, 17, 17, 10 and 16 from Ishiara, Kagandari, Kiburu and Kogari respectively.

3.6 Data Collection

This study utilized both primary and secondary data.

(a) Primary Data: It was gathered using observation, questionnaires and interviews. An observation sheet (Appendix 5) was used to enter data which revolved around form, stylistic, technological and functional attributes. The interviews had open ended questions. These questions probed on general information around pottery
manufacture and sale in Mbeere (Appendices 1 and 2). Interview schedules were considered appropriate for the study due to the literacy levels of the respondents. The researcher expected that most of the respondents would not be able to fill the information required in the questionnaires. Questionnaires were issued by the researcher to three traders dealing with plastics and aluminum ware in Ishiara market who gave information on their sales. The researcher gave the traders two weeks, that is, four markets days to fill the questionnaires after which she did the averaging.

(b) **Secondary Data:** These included published and unpublished materials. These sources were got from Kenyatta University library, National Museums of Kenya library in Nairobi, National Archives in Nairobi, British Institute in Eastern Africa and Jomo Kenyatta Memorial Library in the University of Nairobi. The researcher also used potsherds that have been excavated from Mbeere and its environs which included sherds from Kiburu and Kamwimbi sites in Evurore which were used to provide information on Mbeere archaeological and traditional pottery. These were obtained from the National Museums of Kenya. Both types of data were collected with permission from the Ministry of Education and other relevant institutions.

### 3.7 Pilot Study

Both observation and interview schedules were pre-tested. For this exercise, six contemporary potters were involved. The six respondents involved in piloting did not take part in the actual study. In the case of observation, a pre-defined observation list was prepared by the researcher before the exercise and the results were filled in the observation sheet for analysis.
This pre-testing was carried out to help in the following ways:

i. Modify the interview and the observation schedule in terms of clarity and phrasing the questions and also the sufficiency in space to write the response.

ii. Reveal if the analytical techniques were appropriate.

iii. Test the validity and reliability of the research instruments.

3.7.1 Reliability of Research Instruments

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda and Mugenda, 2003).

A reliable instrument is one that has a small error or standard deviation. In addition, a reliable instrument does not fluctuate randomly from one moment to the next.

The researcher used the split-half reliability test to ascertain the internal consistency of the instruments. The following procedure was used:

i. The researcher selected six potters to whom the test was administered once.

ii. The researcher then divided the test into two halves. Two sets of score were ranked into even and odd numbered items.

iii. The researcher computed each individual score of the two halves. The results of the two halves were correlated using Spearman Brown Prophesy formula for internal consistency.
Table 3.1: Reliability of Research Instruments

<table>
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<tr>
<th>Odd numbers</th>
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</table>

\[ r = \frac{1 - 6(\sum d)^2}{n(n^2-1)} \]

\[ r = \frac{1 - 6(\sum d)}{9(9^2-1)} \]

\[ r = \frac{1 - 24}{9 \times 80} \]

Where

- \( r \) = reliability coefficient
- \( n \) = number of questions
- \( d \) = deviations

\( n = 9 \)

\( \sum d = 2 \)
The results of the test established a reliability coefficient of 0.9666 meaning that the research instruments were highly reliable.

### 3.7.2 Validity of the Instruments

According to Mugenda and Mugenda (2003), validity is the degree to which results obtained from the analysis of the data represent the phenomenon under study. Borg and Gall (1989) add that validity is the degree to which a test measures what it purports to measure. In this study, cross checking, inspection and analysis of the information was carefully done to ensure validity of the arguments and presentation of the findings.

### 3.8 Data Analysis

In most cases, data analysis was in line with data collection. It involved observable attributes such as form, shape, style and function. Specifically, attribute analysis was the hallmark of analysis in this work and it involved analyzing the form, stylistic, technological and functional attributes.

Archaeological materials were analyzed physically in terms of their properties. This involved investigating the physical properties of pottery such as color, texture, shape and tempering materials which often indicated methods used in production such as forming, finishing, decorating and firing. In identifying tempering materials and color, the researcher used thin section analysis. This is whereby sherds were observed under a microscope. Also, the results of the analysis by earlier researchers on pottery in the area of study were used.
Attribute analysis was extended to comparative data analysis where similarities and/or differences between archaeological and contemporary pottery making and use in Evurore were examined.
CHAPTER FOUR

4.0 PRESENTATION AND DATA ANALYSIS

4.1 Pottery Production in Contemporary Mbeere

Among the Mbeere of Evurore Division, potting is culturally considered a female domain. However, in the course of the field visits, it was noted that sometimes men helped their wives in transporting the large clay bags to the potting site. Daughters, especially those that are not school going, learn the art from their mothers and grandmothers as they grow up. Potting in the division is done on a small scale where suitable clay is available thus not restricted to any particular clan. Potting is generally part-time and seasonal. That is, most potting takes place during the dry season after harvesting, when the potters have free time. This is because the main economic activity of the people in Evurore is farming and are therefore engaged during the rainy season. Generally, the industry caters for local needs.

Potting takes place under a shady tree within or just outside the homestead. The pottery vessels made and used in Mbeere homes include pots, hearths, jiko linings and flower vases.

The manufacture of pottery goes through the following processes: procurement of raw materials, preparation of the clay, forming the vessels, surface treatment, decoration, drying and firing.
4.1.1 Raw Materials: Sources and Procurement.

The essential raw materials of a pottery product are clay and water. On the other hand, fuel is needed to bake the vessel.

(a) Clay

The small particle size and the plate-like characteristics of the clay minerals derived from the weathering of rocks give clays the physical and chemical properties which allow them to be worked into shape and baked, to create pottery vessels. In Evurore, alluvial clay (yumba) occurs naturally. Some clays are derived directly from weathered rocks which are in situ while others are collected along the river beds and streams where they are deposited during rains. These are usually referred to as primary and secondary (sedimentary) respectively. An example is Cianthugi source in Ishiara and Muthuari, about one kilometer north of the Ishiara Bridge. This clay is red-brown in color with naturally occurring temper of small quartz grains and mica flecks and occasional inclusions of semi-decomposed lava. The clay is quarried by the use of a special hard wood tool (muro). This is done by the potter or her helpers in the morning and in the evening when the temperatures are low. Quarried clay is carried in sisal baskets or sacks back to the potting site.

(b) Water

The mixture of clay and water results in a plastic workable medium suitable for forming and firing (Orton, 1993). In Evurore Division, water for potting is drawn from River
Thuchi. Jerry - cans are used to transport the water from the river to the potting site. The jerry-cans are carried on people’s backs using straps.

(c) Fuel

Fuel is required for the firing process. In Evurore, wood is widely used as a fuel. For it to light, grass must accompany it. Firewood is fetched from the bushes. People either use pangas to cut down the firewood or even collect those that are lying on the ground. Grass is also obtained from the bushes. People use a knife or a small panga to cut grass. Contemporary potters recognize that fuels produce heat of a different character and may be more suitable for some part of the firing procedure than another, or may affect the product in other ways (Orton, 1993). According to Shepard (1956), the contemporary ceramicist compares fuels with respect to their heat value and the length of time they burn. In relation to this, contemporary Evurore potters prefer firewood from ‘Mukuu’ tree because it burns slowly and produces heat with high temperatures. It is also preferred because it does not burn with a smoky flame. Similarly, barks of acacia trees are preferred for the same reason.

4.1.2 Preparation of Clay

Clay must be prepared before use. Clay is delivered at the potting site with many organic and inorganic impurities thus the need to purify it first. Once at the potting site, clay is placed on an old sack where insects, worms, grass, twigs, sticks, bones, stones or other impurities are removed by picking with hands. The clay lumps are then crushed using a grinding stone or a wooden pestle (muthi). This is done since if not removed, such
impurities would crack the pot while drying. Clay obtained from the source in Evurore is highly plastic and does not therefore require more temper. The finely ground clay is then put in plastic containers, mixed with water adequate to make a paste and left to soak for a night or for about 30 minutes if the potter is in hurry to do the work. After soaking, it is sometimes worked by treading with bare feet before kneading especially if it is a lot of clay. This is done to improve plasticity, its working quality and to remove air bubbles. Some potters afterwards practice wedging (cutting slabs of the plastic clay and clamping them together) and kneading to secure a homogenous mass.

4.1.3 Forming

The Mbeere people of Evurore Division employ the hand forming method in the manufacture/forming of pottery items. Orton (1993) defines hand forming as the building or forming of a pot by any means without the use of centrifugal force. Evurore contemporary potters use flattened coils. This coil is made out of the kneaded clay and then it is pressed using the palm of the hand to make a flat sheet sufficient to make half a pot. This is placed on fresh banana leaves or a nylon paper to avoid contact with the dusty ground. The two edges of the sheet are joined together by squeezing or pinching them together to form a circular structure. The rounded sheet is then pulled upwards in anticlockwise direction by the use of the hands to form the shoulder, the neck and the lip. When the top is complete, it is left to dry in the shade for some hours or until the following morning when it is leather-hard. When drying is taking place, the bottom part is normally covered with a nylon paper to ensure it is not completely hardened because
modeling of the base begins from the bottom (Plate 4.1). After drying, it is then turned upside down and a thick roll of coiled clay is added at the bottom part to form the belly of the pot (Plate 4.1). This is drawn upwards and inwards to form the rounded bottom of the pot (Plate 4.2 and Fig. 4.5). When the potter’s last finger is extracted from inside the bottom of the pot, the small hole left by the finger is filled in and smoothed over. This is confirmed by Soper (1979) who reports that the Recent Iron Age pots were built by the same technique that the Kamba use- that is, the top half is shaped first and allowed to dry partially, after which the lower half is built on, finishing with the closure of the small hole left in the base. It is important to note that pots meant for frying meat, soaking flour and preserving porridge, are made with flattened bases almost like those ones of the aluminum pots instead of the round bottomed ones (Plate 4.3 and Fig. 4.5). There are never any lugs or handles on these pots.

In Evurore, the flower vases are made by pinching a hollow in the center of a lump of clay and forming the shape of the vessel between the thumb and fingers. This technique is generally used only for the production of the simplest of small round - bodied vessels.
Plate 4.1: Pots during forming

Source: The researcher, 5\textsuperscript{th} Sep, 2011
Plate 4.2: The rounded bottom of a pot

Source: The researcher, 5\textsuperscript{th} Sep, 2011
Plate 4.3: Pot with flat base

Source: The researcher, 10th Jan, 2012
4.1.4 Surface Treatment/ Finishing

The method of surface finishing and the stage during which it is accomplished depend on the purpose of the vessel and whether or not it is to be decorated (Shepard, 1956). The finishing may be completed in one process immediately after shaping and while the clay is still plastic or it may not be completed until the vessel has become leather-hard or dry. Finishing serves first to remove irregularities left in forming and shaping the vessel such as finger depressions made during shaping, marks left at the edge of the support, or weld – marks of joined sections (Shepard, 1956).

Evurore potters use a scraping method which serves to smoothen out the irregularities left during construction and join the different parts to alter the appearance of the vessel. As soon as the vessel is formed and while the clay is still plastic, its surface is usually smoothened by means of a calabash scraper or a piece of plastic with some water to create a uniform slick surface ready for decoration. There are two different pieces of calabash, one curved inwardly for smoothening the inner part of the pot and the other outwardly to smoothen the outer part. The vessel is then left to dry under a shade away from direct sunlight to avoid cracking. It should become leather-hard otherwise it will be difficult to decorate if it completely dries. After all this, a thin solution of slip is scooped by hand and applied to the entire pot surface when leather-dry before decoration.
4.1.5 Decoration

The decoration on the contemporary Mbeere pots is quite simple. Some pots are without decorations (Plates 4.8 and 4.9c). These are said to be plain vessels. Those that are decorated are usually incised using a piece of stick or a broken piece of calabash. Decorations consist of simple horizontal rows of dots, grooved horizontal, zigzag or wavy line decoration confined to or just below the neck.

**Grooves:** Grooves are created by the use of a thin stick which is used to incise or cut thin wavy, zigzag or horizontal lines around the neck of the pot (Plates 4.4 and 4.5). Sometimes the grooves are made together with the dot impression (Plate 4.4).

**Dot impression:** These are horizontal rows of dots made using a sharp stick.

**Zigzag line decoration:** This is a grooved design. The potter uses a thin stick to make a continuous zigzag line around the neck of the pot. Sometimes, this zigzag line is made on top of the grooved line (Plate 4.5).

**Wavy line decoration:** In this technique, the potter uses a sharp, thin object to groove a continuous wave-like line. Sometimes the lines could be double, running parallel to each other (Plate 4.6).
Table 4.1: Decorative Motifs Observed in the Field

<table>
<thead>
<tr>
<th>Decorative Motif</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Plain</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>(b) Grooves</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Horizontal line</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>(ii) Zigzag Line</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>(iii) Wavy Line</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>(c) Dot impression</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Plate 4.4: Use of grooves and dots

Source: The researcher, 10th Jan, 2012
Plate 4.5: Zigzag line decoration

Source: The researcher, 13th Jan, 2012
4.1.6 Drying

Drying eliminates the water mechanically combined to the clay particles. After decoration and prior to firing, the finished vessel must be dried. This is done by keeping the vessels under a shade away from direct sunlight for about five days to dry. This is because rapid drying resulting from high temperatures can cause the vessel to crack. After this initial drying, these vessels are dried directly in the sun without the risk of cracking. This is done to ensure even drying of the vessel and also to ensure that no
trapped moisture expands and explodes the vessel during firing. The drying period depends on the size of the pot and relative humidity. During hot periods, four to six days are necessary. In colder seasons, more days will be required. When dry, the pots are baked hard by firing.

4.1.7 Firing

Firing is the inevitable and relentless test to which the potter must subject the product of her skill and patience (Sheperd, 1956).

Pots made by the Mbeere in Evurore Division are fired in open fire. Open firings, also referred to as clamp firings or bonfires, are where the pots and the fuel are in immediate contact and are arranged in a stack on the ground or in a shallow depression. This is done near the homestead but away from buildings. In Evurore, firing is done in shallow pits which are lined with firewood. The pots are placed on top and more firewood from ‘Mukuu’ tree or barks of acacia tree are placed on top and around them. The pyre is then covered with some green grass. Some dry grass, pushed in on the windward side, is set alight to start the fire. ‘Mukuu’ tree and barks of acacia are preferred because they burn slowly and produce heat with high temperatures. They are also preferred because they do not burn with a smoky flame. Firing is usually done late in the evening when the wind is not blowing to ensure even and/or controlled firing. After firing, the potters allow their ware to cool before pulling them out from the pyre using tongs thus preventing cracking through rapid heat loss. Afterwards, pots are transported to the market by the use of vehicles, ox - carts or even in sacks to be sold.
4.2 Attribute Analysis

This section is a discussion of the various attributes of pottery manufactured in Evurore Division. A study of archaeological Evurore potsherds and contemporary Evurore pottery has been done in an attempt to identify attributes that are similar and/or different between Evurore archaeological and contemporary pottery. The attributes surveyed include form, stylistic, technological and functional attributes.

(a) Form Attribute

This involved observing pottery shapes and sizes. These included:

(i) Wide-mouthed pots

These are vessels whose maximum diameter is at the mouth. They may also have equal diameter on the mouth and belly or the mouth could be about 0.5 to 1cm lesser than the belly. They exist in various forms thus they could be small, medium or large. Plates 4.7 and 4.8 are a representation of open mouthed pots. Open mouthed bowls (Figure 4.1c) occur in archaeological excavations from upper Tana sites (Ngari, 2004). Similarly, Soper (1979) discovered them at the Early Iron Age sites in Mbeere and its environs (Figure 4.3k).
Plate 4.7: Wide-mouthed pot

Source: The researcher, 11 Jan, 2012
(ii) **Narrow-mouthed pots**

Examples of these were discovered by Ngari (2004) and Soper (1979) in the Recent Iron Age sites in Mbeere. Most of these are the large pots which are narrow mouthed with short vertical or slightly out-turned rims used for storing water and grain for example, beans (Plate 4.9c).

(iii) **Basal Shapes**

Major basal shapes for both archaeological and contemporary vessels in Evurore include the rounded or cylindrical base shapes. In contemporary Evurore, some vessel shapes are flat. The base of these shapes lies parallel to the ground. Some of the beaker shaped vessels have flat bases. This is evident in Plates 4.3, 4.5 and 4.8. These include the flower vases and pots meant for frying (e.g. meat), soaking flour and preserving gruel. These have not been identified from the sherds.

The most common of all the shapes is the rounded or cylindrical base shapes. At least four out of five vessels have such base shapes. These are shapes whose bases tend to take a circular form (Plates 4.2 and 4.6).

Nkirote (2006) observed some potsherds which were very distinctive and clearly showed that the vessels had round bases. She observed that most of them were necked and were of small and medium sizes measuring 14 and 17cm high.
Rim profiles and lip shapes

Rim shapes show the following profiles: Out - turned, in - turned and up - right rims. When the direction of the lip profile deviates outwards, the lip profile is averted and is said to be out - turned. Some vessels have their lip profiles deviating inwards. They are reverted, thus said to be in - turned. Some pots have their lip profiles standing or pointed slightly. These are said to have up - right rims. Most of the contemporary vessels from Evurore display out - turned rim shapes. These are basically meant for cooking (Plates 4.2, 4.4, 4.5 and 4.6). Some of the pots manufactured in Evurore, especially those used as flower pots have their lip profile in - turned (Plate 4.8) and up - right (Figure 4.5c). The table below shows the distribution of these rim profiles.

Table 4.2: Rim profiles

<table>
<thead>
<tr>
<th>Rim Profile</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Out – turned</td>
<td>45</td>
<td>90</td>
</tr>
<tr>
<td>In - turned</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Up - right</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Similar results occur at archaeological excavations at Kiburu site by Nkirote (2006) and Ngari (2004) and in the Early Iron Age sites in Mbeere by Soper (1979). Nkirote found
the majority of the rim shapes to have had out-turn ed rims, followed by up-right rims and in-turned having the lowest (Figure 4.2a-e) for out-turned rims and (Figure 4.2i, k and l) for up-right rim vessels. Similarly, Ngari (2004) identified the three rim profiles as shown on Figure 4.1. That is (a and b) for in-turned vessels, (e and f) for out-turned vessels and (g and h) for up-right vessels. In his work, Soper (1979) confirms that the majority of the vessels were necked pots with out-turned rims as seen in Figure 4.3g-i. Less common were neckless vessels with inward and up-turned rims as seen in Figure 4.3k and l (Soper, 1979).
Plate 4.8: In - turned rimmed pot

Source: The researcher, 2\textsuperscript{nd} Feb, 2012
(v) **Necked vessels**

Material from Mbeere and its environs collected by Soper (1979) have exhibited necked pottery forms. According to Soper, the majority of vessels must have been necked pots with out-turned rims, either slightly everted from the neck (Fig 4.3f) or flared outwards in an even curve from a rounded neck (Fig 4.3g-i). Similarly, the rims at Kiburu site collected by Nkirote (2006) and Ngari (2004) exhibited the same pottery forms. In contemporary Evurore, all the out-turned rimmed pots are with necks (Plates 4.1, 4.2, 4.4, 4.5 and 4.6).

(vi) **Neckless vessels**

According to Soper (1979), neckless vessels were less common. These were either constricted with inwards sloping rims or more usually bowls with the maximum diameter at the rim. These are divided into vertical rims (hemispherical bowls), out-sloping rims (open bowls, Fig. 4.3k) and up-turned rims in which the rim has a sharp upwards curvature from an outwards sloping side (Fig. 4.3l). Similarly, all the in-turned and up-right vessels discovered by Ngari (2004) and Nkirote (2006) were without necks. In contemporary Evurore, neckless vessels are less common. Plate 4.8 and Figure 4.5c are examples of these.

(b) **Stylistic Attribute**

The decoration on the Evurore pottery vessels for all uses is quite simple. All the decoration is made around the neck of the pot. Earlier studies show that the main
decorative techniques in the pre-colonial Mbeere entailed plastic technology which include incising, modeling and stamping (Ngari, 1992).

According to Ngari (1992), stamping roulettes were easily imprinted on the pot neck by simply ‘walking’ a maize cob over a pot surface. When rolled over the plastic clay they left the design. Soper (1979) realized horizontal and oblique comb-stamping motif with the Early Iron Age pottery. Horizontal comb-stamping comprised straight lines of impressions made with a multiple toothed instrument. These were often combined with fluting (Fig. 4.3s and u). On the other hand, oblique comb-stamping comprised oblique impressions of a multiple toothed instrument, usually coarser than horizontal comb-stamping (Fig. 4.3q, t). Excavated materials from Kiburu Hill by Nkirote (2006) and Ngari (2004) have indicated punctated pottery (Fig 4.2 j, m, n, o and s). This kind of decorative technique is called stamping/punctation and has not been found to be used by the Evurore contemporary potters.

Modeling entailed fitting the small loop handles which were crescent-like to the vessel. These were modeled at the pot necks. This is also confirmed by Soper (1979) who discovered raised notched ridges made of strips of clay applied to the surface of the pot and notched along the crest (Fig. 4.3a, b). According to Ngari (1992), this technique was not commonly practiced by the pre-colonial potters. From the fieldwork done, no single item was found to be modeled. This has lost popularity because the potters have realized that these loop handles are of no functional importance.
Incising involved using a piece of stick or a broken piece of calabash to make dots or cut lines on the roughly finished surface. This technique is still very common among the contemporary potters in Evurore (Plates 4.4, 4.5 and 4.6). These plates show incised contemporary pots, which is, use of dots and grooves. Archaeological evidence of grooves is available in Figures 4.2 (f-h) and 4.3 (m, n). Soper (1979) observed rocked zigzag motif in the Early Iron Age pottery. This was a band formed by a compressed zigzag line, executed with a chisel-like edge by rocking from the corner to the other alternately while advancing across the surface (Fig. 4.3v, 4.4b and 4.4f). Soper (1979) discovered an incised meander consisting of a wavy line or band around the pot made by dragging a sharp point or a toothed implement to produce one or more shallow parallel lines (Fig. 4.4c, d, e). Wavy line decoration is also confirmed by Ngari (2004) as seen in Figure 4.1(d).

In his excavation at Kiburu hill, Ngari (2004) discovered a piece of pottery with a different technique of incising, that is, the cross-hatching motif. This is an incised band of criss-crossed lines, with or without horizontal delimiting lines. Since this piece of pottery was very small, the criss-crossing was not clear and thus did not have a drawing of the exact motif. Cross-hatching is confirmed by Soper (1979) as seen in Figure 4.3(c) and (d). On the other hand, Soper (1979) observed the use of potters’ marks as a decorative motif at Recent Iron Age sites in northern Mbeere (Fig. 4.4a). These marks also served as identification marks since firing was done communally and through them the potter would identify her individual ware. It is suggested that these probably represent
Kamba influence on the Ishiara potting industry (Soper, 1979). These have not been observed in the field by the researcher.

(c) Technological Attribute

In both pre-colonial and post colonial times, clay for use in pottery-making in Evurore Division is gathered as a raw material from weathered rocks which are in situ or the mainland and also along river beds and streams. After collection, in both cases, the clay is prepared before the actual modeling. This is done by removing the organic and inorganic impurities such as insects, worms, twigs, sticks, bones, pebbles and other hard substances. These are picked with hands after which the clay lumps are then crushed using a grinding stone or a wooden pestle to have fine powdered clay.

Traditional potters just like the contemporary potters in Evurore fired their vessels in an open fire in low pit away from buildings. They were particular on the type of grass and wood used in firing pots. This was because the required fuel had to burn slowly and to produce heat with high temperatures. They used dry and green fleshy grass to ensure slow and gradual burning thus leaving the pots well-fired. Firing was done late in the evening when the wind was not blowing to ensure even firing. After firing was completed, the vessels were removed from the fire with the help of long sticks which acted as tongs. The vessels were then allowed to cool in open air (Ngari, 1992). From there the pots could be sold and put into use.
It is understandable that the task of firing was approached with misgiving and anxiety and it is no wonder that superstations grew about it (Shepard, 1956). Traditionally when a load of pottery vessels cracked during firing, the potters in Mbeere associated that with supernatural powers. They believed that such an incidence could have been caused by somebody having looked at the vessels with an evil eye.

According to Ngari (1992), plastic clay (yumba) collection in pre-colonial Mbeere was preceded by a prayer and offering to ancestral spirits invoking them to give the makers good clay. Foods like fermented porridge, peas, eleusine and sorghum were offered. A respondent explained that these were conducted by a senior woman potter who had attained menopause because menstruation was regarded as uncleanliness amongst the Mbeere. In contrast to such beliefs is the apparent absence of any superstitious practice among the present-day Evurore potters.

(d) Function Attribute

Vessels fashioned wholly or in part from clay have served a wide variety of human needs both in the past and the present. The functions of pottery containers can be divided into three broad categories: storage, processing (which includes various cooking methods) and transfer (including serving and eating) (Rice, 1987).

The broadest and most fundamental use of clay in Evurore Division both in pre-colonial and post-colonial period has been in pots. These earthenware containers are used for various domestic purposes which include storing liquids and dry substances, preparing
food and processing porridge and beer. Each use places different demands on the vessel and so its suitability for a particular task depends on its form. Therefore, pottery attributes of shape and technology are closely related to their suitability for a particular activity. For example, the Mbeere of Evurore make pots which are cylindrical in shape with a neck and out-turned rims. These are small, medium and large pots (Plate 4.9). The small and medium sized pots are mainly used for cooking while the large pots which can accommodate quite a good amount of liquid substances are used for storing water and grains. Sometimes the large pots are used for cooking during ceremonies. In support of these, Sharer and Ashmore (1987) claim that vessels with necks are assumed to have been used for storing and dispensing liquids as they are today in most areas of the world without running water; the restrictive neck helps to control spillage and reduce waste.

Evurore is an area which is characterized by high temperatures and therefore people in the area prefer pots for water storage because they keep the water cool. Thus, water fetched in jerry-cans is stored in water pots. These pots are also used for fermenting and preserving gruel (ucuru wa ngio) and beer which is shared during occasions such as marriage negotiations and in weddings. Traditionally, these vessels were made and put to the same functions. Material from Mbeere and its environs collected by Soper (1979) and the rims collected at Kiburu site by Nkirote (2006) have exhibited necked pottery forms (Fig. 4.2a-e). Nkirote discovered necked pots as well as bowls. According to her, these pots were used for water storage among other liquids or food preparation. From her research, bowls which comprised a very small proportion of the pottery forms indicated
that they might have been used for storing grains. These forms (bowls) are no longer manufactured by the contemporary Evurore potters.

Various sizes of globular wide - mouthed cooking pots were traditionally made. Those that were used to cook for the family members were usually made small in size or medium sized depending on the size of the family. Different kinds of food ranging from porridge to ugali were cooked in these pots (Ngari, 1992). Similarly, Nkirote (2006) identified some potsherds with black substances on the outside which indicated cooking as a method of food preparation. They were also used to soak flour to ferment which was used to make porridge. The large sizes were exclusively used for cooking large quantities at ceremonies and for storing grain. It is therefore important to note that some vessels had multiple uses. These historical functions still hold today.

Wide - mouthed pots with flattened bases are presently used for cooking meat, soaking flour and preserving porridge. These vary in size depending on the amounts of food to be fried, the flour to be soaked and the porridge to be preserved. These days, those with in - turned and up - right rims are perforated at the bottom to serve as flower vases. These shapes have not been archaeologically discovered.

Other pottery vessels made and used in Evurore Division at the present day include hearths, jiko linings and flower vases. Hearths made out of clay are made around the fire place. These are used as cooking stoves because they form a surface where cooking pots or sufurias are placed.
Plate 4.9 a, b, c: Small (kaungu), medium (nyungu) and large (kithiri) pots

Source: The researcher, 3rd Feb, 2012
Figure 4.1: Archaeological vessel shapes and decorations from Upper Tana ceramic collections: in - turned vessels (a and b), wide mouthed bowl (c), wavy line decoration (d), out - turned vessels (e and f), up - right vessels (g and h) (After Ngari, 2004)
Figure 4.2: Archaeological vessel shapes and decorations from Kiburu site: out-turned vessels (a-e), grooved sherds of out-turned vessels (f and h), punctates (j, m, n, o and s), and up-right rim vessels (i, k, and l) (After Nkirote, 2006)
Figure 4.3: Archaeological pottery from Mbeere and its environs: raised notched rims (a, b), cross hatching motif (c, d), necked pots with out-turned rims (f, g, h, i), wide-mouthed pots (k), neckless vessels (k, l), up-turned rims (l), grooved sherds (m, n), oblique comp-stamping (q, t), horizontal comp-stamping (s, u), rocked zigzag (v) (After Soper, 1979)
Figure 4.4: Early and recent Iron Age pottery from Kamwimbi: potters’ marks (a), rocked zigzag decoration (b, f), wavy line decoration (c, d, e) (After Soper, 1979)
Figure 4.5: Contemporary vessel shapes and decorations from Evurore Division (Mbeere North District): necked pots with out - turned rims (a, b, e and f), slightly out - turned vessel (g), up - right vessel (c), in - turned vessel (d), neckless pots (c and d), wide - mouthed pots (c and d), narrow - mouthed pot (g), dot impression (a and e), zigzag decoration (b), wavy line decoration (e and f), plain vessels (c, d and g), flat bottomed pots (b, c, and d), small, medium and large pots (e, f and g).

Source: The researcher
Table 4.3 and 4.4 below represents the results of the analysis of form and stylistic attributes.

**Table 4.3: Relationship between form of archaeological and contemporary pottery in Evurore.**

<table>
<thead>
<tr>
<th>Shape</th>
<th>Archaeological</th>
<th>Frequency in percentage</th>
<th>Contemporary</th>
<th>Frequency in percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wide - mouthed pots</td>
<td>Present</td>
<td>50</td>
<td>Present</td>
<td>50</td>
</tr>
<tr>
<td>Narrow - mouthed pots</td>
<td>Present</td>
<td>50</td>
<td>Present</td>
<td>50</td>
</tr>
<tr>
<td>Pots with cylindrical bases</td>
<td>Present</td>
<td>100</td>
<td>Present</td>
<td>80</td>
</tr>
<tr>
<td>Pots with flat bases</td>
<td>Absent</td>
<td>0</td>
<td>Present</td>
<td>20</td>
</tr>
<tr>
<td>Pots with out - turned rims</td>
<td>Present</td>
<td>70</td>
<td>Present</td>
<td>90</td>
</tr>
<tr>
<td>Pots with in - turned rims</td>
<td>Present</td>
<td>10</td>
<td>Present</td>
<td>6</td>
</tr>
<tr>
<td>Pots with up - right rims</td>
<td>Present</td>
<td>20</td>
<td>Present</td>
<td>4</td>
</tr>
<tr>
<td>Necked vessels</td>
<td>Present</td>
<td>70</td>
<td>Present</td>
<td>90</td>
</tr>
<tr>
<td>Neck less vessels</td>
<td>Present</td>
<td>30</td>
<td>Present</td>
<td>10</td>
</tr>
</tbody>
</table>

**Key information presented in table 4.3**

50 potsherds, that is, 35 from Kiburu site and 15 from Kamwimbi were analyzed whereas 50 pots, that is, 10 from Kagandari, 15 from Ishiara, 15 from Kiburu and 10 from Kogari were considered for contemporary pottery.
(a) **Mouth shapes**

50% of both the archaeological and contemporary pottery was/is wide-mouthed whereas the other 50% was/is narrow-mouthed.

(b) **Basal shapes**

All archaeological pots had cylindrical bases. On the other hand, 80% of the contemporary pots have cylindrical bases whereas 20% have flat bases.

(c) **Rim profiles**

70% of the archaeological pottery had out-turned rims, 10% in-turned rims and 20% up-right rims. On the other hand, 90% of the contemporary pots are out-turned whereas 6% are in-turned and 4% with up-right rims.

(c) **Neck**

70% of the archaeological pots had necks whereas 30% did not have. 90% of the contemporary pots have necks while the remaining 10% is neckless.
Figure 4.6: Relationship between form of archaeological and contemporary pottery in Evurore.
Table 4.4: Relationship between decorated pottery in archaeological and contemporary period

<table>
<thead>
<tr>
<th>Decorative Motif</th>
<th>Archaeological Number of Potsherds</th>
<th>Frequency in Percentage</th>
<th>Contemporary</th>
<th>Number of Pots</th>
<th>Frequency in Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Plain</td>
<td>Absent</td>
<td>0</td>
<td>Present</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>(b) Stamping</td>
<td>Present</td>
<td>154</td>
<td>Absent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(c) Modeling</td>
<td>Present</td>
<td>77</td>
<td>Absent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(d) Incising</td>
<td>Present</td>
<td>192</td>
<td>Present</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>(i) Horizontal line</td>
<td>Present</td>
<td>154</td>
<td>Present</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>(ii) Wavy line</td>
<td>Present</td>
<td>116</td>
<td>Present</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>(iii) Zigzag line</td>
<td>Present</td>
<td>77</td>
<td>Absent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(iv) Cross-hatching</td>
<td>Present</td>
<td>192</td>
<td>Present</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>(v) Dot impression</td>
<td>Present</td>
<td>38</td>
<td>Absent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>(e) Potters’ marks</td>
<td>Present</td>
<td>1,000</td>
<td>100</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

TOTAL
Figure 4.7: Relationship between decorated pottery in archaeological and contemporary period.
4.3 Aspects of Manufacture that Affect the Value of Pottery in Evurore Division

Fragility, bulkiness, production of similar kinds of pottery and urbanization are factors that have been found to affect the demand and sale of Evurore pottery.

The first factor is the rate at which people break their pottery. This involves the strength of the vessel. As earlier mentioned in Chapter 4.1.2 on Preparation of Clay, clay is delivered to the pottery site with many organic and inorganic impurities which are removed by picking with hands. As earlier explained, if impurities are not removed, they will crack the pot when drying. Five informants from Kogari reported that most of their vessels broke during firing. The researcher noted that these respondents were from the same locality and claimed to have had a common source of clay from a weathered rock. To avert this, they tried under firing their vessels. Vessels fired at a lower temperature are weaker and break more often (Arnold, 1985). They further reported that even after this trial, their pottery vessels lost demand until they realized the seriousness of the matter after which they decided to reject the clay from this source. In connection to this, Shepard (1956) reports that ‘primitive’ potters did not discriminate or have high standards, and were often restricted in their choice of clay. Consequently, they utilized many impure, low-grade types of clay that would have no commercial value.

Due to the fact that pottery is fragile and bulky, it is not likely to be as highly priced as aluminum vessels. Evurore pottery is thus very cheap compared to the aluminum ware with similar functions. 80% of the potters raised concern for the cost of their material and
what they earn from their pots. That is, Evurore pottery suffers from technical inferiority (See Table 4.5 for this comparison).

Table 4.5: Comparison of cost of pottery vessels with that of aluminum ware

<table>
<thead>
<tr>
<th>Size of Vessel</th>
<th>Height (cm)</th>
<th>Average Rim Diameter (cm)</th>
<th>Cost of Pottery Vessel in Kshs.</th>
<th>Cost of Aluminum Ware in Kshs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>≥ 23 &lt; 27.4</td>
<td>17</td>
<td>50</td>
<td>120</td>
</tr>
<tr>
<td>Medium</td>
<td>≥ 27.5 &lt; 40.4</td>
<td>19.5</td>
<td>100</td>
<td>250</td>
</tr>
<tr>
<td>Large</td>
<td>≥ 40.4</td>
<td>24</td>
<td>150</td>
<td>500</td>
</tr>
</tbody>
</table>

Figure 4.8: Comparison of cost of pottery vessels with that of aluminum ware
Evurore pottery is also facing stiff competition from imported plastic vessels. Despite the fact that plastics are of cheap quality, they are light compared to the pottery vessels thus being in high demand. (Table 4.6 represents the average number of vessels sold by three traders in Ishiara on a market day).

**Table 4.6: Comparison of average number of pots sold in Ishiara market with that of plastics**

<table>
<thead>
<tr>
<th>Seller</th>
<th>Number of Pots</th>
<th>Number of Plastics e.g. Jugs, Jerry-cans and Buckets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>29</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
<td>32</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>57</strong></td>
<td><strong>101</strong></td>
</tr>
</tbody>
</table>
Another factor which affects the demand and sale of Evurore pottery involves the frequency with which people use particular vessels. 50% of the potters reported that Evurore pottery lacks popularity since they produce similar kinds of purely utilitarian round - bottomed pottery which are simple in shape and with little or no decoration thus not meeting the regional differences in standards and preferences. On the other hand, urbanization has led to more use of gas and electric cookers as compared to pots which are used on jikos and hearth stones. Evurore pottery may therefore not be meeting special demands of the different communities in Kenya and elsewhere. This reduces the demand for Evurore pottery.

Figure 4.9: Comparison of average number of pots sold in Ishiara market with that of plastics.
4.4 Economic Impact of Pottery in Evurore Division

Trade in pottery has long been a subject of major interest to archaeologists and pre-historians (Rice, 1984). The manufacture of pottery in Evurore has been a specialized economic pursuit carried out by a small number of skilled practitioners to earn a living.

After manufacture, potters transport them on their backs in sacks or use ox-carts to Ishiara market where professional traders buy them to distribute them further (Plate 4.10).

50% of the potters reported that they sometimes hire lorries and pickups that deliver market goods like vegetables and cereals on market days to transport their vessels to other markets. These include Nyeri, Mururi, Kerugoya, Murang’a and Meru. They reported that pottery vessels sell better in such distant markets because people in these areas are more affluent compared to the Mbeere people and that in areas such as Nyeri and Kerugoya pottery manufacture does not take place. They gave average cost of pots in different markets as seen in Figure 4.10.
Plate 4.10: Pots for sale in Ishiara market

Source: The researcher, 28th Feb, 2012
In a few instances, buyers journey to the pottery - making centers to acquire them. In talking with a trader, the price for which a vessel is sold depends partly on the distance it has to be carried. It can be taken far to avoid competition with pottery from neighboring villages, thus sell better.

On the other hand, 25% of the potters reported that pots are bartered for other commodities, for example, grain and chicken in the homes though not in common practice.

In Evurore, pottery has formed a complementary source of income that has been used in various ways. Statistics show that 98% of the potters have been able to purchase food through the sale of pottery. As earlier noted in the economic background, Mbeere land is dry and not fertile. The district is classified as arid and semi - arid where the majority of
the population is poor and often depend on their Embu cousins for food supplies especially in times of drought (Mbeere District Development Plan 2008-2012). This truth has resulted in the people of Evurore adopting the pottery craft which has enabled them mitigate against food shortage in their families.

25% of the respondents reported that the little income they obtain from the sale of their vessels has helped them in financing their children’s education. For example, an informant, Ruth Ngera, reported that through the sale of pottery she was able to educate her two children in the local day secondary schools. Also, Alice Ciogaa reported that the income from the sale of pottery together with what she got from farming was able to take her son to one of the best district schools.

![Figure 4.11: Percentage of uses of income from pottery in Evurore](image)

**Figure 4.11: Percentage of uses of income from pottery in Evurore**
60% of the respondents reported to have bought clothing with the income from pottery.

Phides Utuku gladly reported that through the savings she made after selling pottery, she was able to buy a mattress and was no longer sleeping on sacks.

25% of the respondents reported to have been able to raise money for women group contributions and harambees through the sale of pottery.

Most of the respondents showed contentment with the pottery industry and were grateful to God for providing some good clay in their locality to practice this craft.
CHAPTER FIVE

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the Summary, Conclusions, Recommendations and Suggestions for further research.

5.2 Summary

This study was about examining pottery production, marketing and consumption by the contemporary Mbeere people and its link with the past.

The research was done in Evurore Division of Mbeere North District in Embu County, Kenya. The researcher selected Ishiara, Kagandari, Kogari and Kiburu as the areas of study. The study adopted the descriptive design. The study employed the snow ball type of purposive sampling whereby renowned contemporary potters mentioned other potential potters to the researcher. The study relied on primary and secondary data. Primary data was collected through interviews, questionnaires and on-site observation. On the other hand, secondary data was obtained from published and unpublished materials from Kenyatta University library, National Museums of Kenya library in Nairobi, National Archives in Nairobi, British Institute in Eastern Africa and Jomo Kenyatta Memorial Library in the University of Nairobi. Excavated potsherds from archaeological sites in Mbeere were also examined from the National Museums of

83
Kenya. The researcher adopted systems theory and functionalist approach to guide the study.

To achieve the objectives of the study, attribute and thin section analyses as well as qualitative and quantitative methods of data analysis were used. The attributes recorded included form, style, technology and function. Technological attribute was used in describing how raw materials for potting are prepared, how a potter prepares for the firing process and how firing of the vessels is done. On the other hand, formal attribute was used in describing how contemporary potters in Evurore build their pots whereas stylistic attribute described the decorative treatments applied by Evurore potters. Attribute analysis was also extended to comparative data analysis where similarities and/or differences between archaeological and contemporary pottery making and use in Evurore were examined. In this comparison, all the four attributes, that is, form, style, technology and function were used. In investigating how the process of manufacture affects the value of pottery, form, technological and functional attributes were used. The data collected provided a better understanding of the pottery technology and economic impacts of pottery on Mbeere people. The results from this study showed that pottery industry in Mbeere is a cultural continuum.

The raw materials used in the manufacture of pots in Evurore are clay, water and fuel. Potting clay in Evurore occurs naturally as weathered rocks in situ and along the river beds and streams where they are deposited during rains. In Evurore, water for potting is drawn from River Thuchi using jerry - cans. Wood and grass used for the firing process
are collected in the surrounding bushes. The study found that Evurore potters employ the hand forming technique which involves the use of a flattened coil and scraping to smooth the irregularities left during construction. Contemporary potters decorate their vessels by use of dots and grooving horizontal, zigzag and wavy lines around the pot necks. Finally the vessels are dried and fired in open fire.

A survey of both contemporary and archaeological pottery attributes show that the attributes have not changed except in a few examples. Most of the vessel sizes manufactured still owe their origins to a cultural past. These include small, medium and large-sized pots (Plate 4.9 and Fig. 4.5). It is common practice among both traditional and contemporary potters of Evurore to make their pots by the use of hand. In both cases, no use of wheels has been observed. Similar vessel shapes occur in both archaeological and contemporary pottery. These include the wide and narrow-mouthed pots, cylindrical based pots; the out-turned, in-turned and up-right rimmed vessels and the necked and neckless vessels.

In decorating their vessels, the traditional method of incising has been retained to date. Both the traditional and the contemporary potters of Evurore Division practice open firing. The most important function of pottery both now and in the past has been found to be its use as containers particularly for the storage and preparation of food.

There are notable differences between the contemporary and archaeological pottery. For instance, Ngari (1992) found the method employed by the Mbeere people in the manufacture of pottery items in the pre-colonial and colonial period to be the coil
technique. In contemporary times, a flattened coil has been observed to be used in forming the pot. The vessel shape that appears different includes the flat based pots present in contemporary Evurore but absent in the archaeological period. Concerning style, the decorative techniques like stamping, modeling, and potters’ marks that were found by Ngari (1992), Nkirote (2006) and Soper (1979) to be traditionally used are no longer in use. Traditionally, superstitions surrounded pottery manufacture. Presently, nothing indicating superstitious practice has been noted. From this summary it is evident that pottery industry in Mbeere is a cultural continuum.

The poor quality and low pricing of pottery vessels in Evurore is attributed to their fragility, bulkiness, production of similar kind of vessels and urbanization. The fact that Evurore pottery is bulky and fragile makes it suffer technical inferiority when compared to aluminum and plastic ware with similar functions and are thus low priced compared to them. Similarly, urbanization has contributed to the low demand of pottery because many people in towns have resorted to the use of gas and electric cookers as compared to the pots which are commonly used on jikos and hearth stones.

Although pots have been noted as being fragile and hence their inability to filter into distant markets, the researcher has observed that pots made in Evurore move from primary to secondary points and beyond. For instance, one manufactures pots at Kiburu and transports them to Ishiara market and from here a trader buys the same pots and then moves with them to Kerugoya where he sells them, thus spreading pots further. Though very cheap compared to the aluminum ware with similar functions (Table 4.5), pots have
assisted in improving the living standard of the potters. In very few cases, in the homes, the pots are bartered with commodities and grain.

5.3 Conclusions

Based on this study a number of general conclusions on Evurore pottery have been made:

Objective 1: Sources of the raw materials and process of pottery manufacture in Evurore Division

The raw materials used in the manufacture of pots in Evurore, that is, clay, water, and fuels are derived locally. The manufacture of pots in Evurore Division, both now and in the past, has solely been the work of women. It is apparent that the art of pottery making in Evurore is hereditary. That is, daughters learn the art from their mothers and grandmothers as they grow up. The researcher found the contemporary potters in Evurore to be using a flattened coil in the forming of their pots. In connection to this, Soper (1979) reports that the Recent Iron Age pots in Mbeere and its environs were built by first shaping the top half and allowing it to dry partially then proceeding with the lower half. The researcher therefore concludes that the traditional potters in Evurore used flattened coils.

The results of the study are thus in support of the researcher’s hypothesis that the raw materials used are found within the vicinity and that Mbeere people utilize traditional methods in pottery manufacture.
Objective 2: Relationship between Evurore archaeological and contemporary pottery

The study found out that the pottery industry in Mbeere is a cultural continuum. This is because several attributes were found to be similar after comparing the archaeological and contemporary Evurore pottery. For example, no single pottery kiln has been found in any of the sites. This implies that open firing which is still practiced by the contemporary potters in Evurore was practiced in the past. Some of the pottery shapes and styles observed in the field correspond to the Kwale and Gatung’ang’a ware excavated by Ngari (2004), Soper (1979) and Siriainen (1971) in the Early Iron Age sites. These include: the flat or concave bases, rocked zigzag decoration, incised decoration and notching of the rim. The researcher hypothesizes that the pottery material of Kwale and Gatung’ang’a ware discovered in Mbeere by Ngari (2004), Soper (1979) and Kirima et al (1996) was as a result of migrations of the Bantu speakers. According to Nkioite (2006), Kwale ware is dated much earlier (latest dates in 6th to 7th centuries AD) than Kwale pottery of Mt Kenya region, which is dated to between 11th and 14th centuries A.D., and thus it is at least 500 years older than Gatung’ang’a Kwale ware. In connection to this, Siriainen (1971) found it difficult to assign Gatung’ang’a pottery to the current Bantu speakers of Mt. Kenya and attributed it to an earlier group of Bantu speakers whom he assumed had lived in the region earlier.

These findings are in support of the researcher’s hypothesis that a relationship exists between Evurore archaeological and contemporary pottery.
Objective 3: Effect of the process of manufacture on pottery value in relation to contemporary industrial ware

The researcher concludes that potters at Kogari utilize many impure, low – grade types of clay which resort to pots breaking during drying and firing.

General considerations suggest that pottery, due to the fact that it is bulky and fragile would not be traded extensively among people with a simple system of transport (Shepard, 1956). Lack of good transport system for the Evurore potters has hindered them from trading their pottery widely and extensively. 50% of the potters are not able to take their vessels far and wide thus not able to benefit much from their labor. The pottery craft has deteriorated in quality and demand has decreased as pots have come in competition with cheap contemporary industrial ware. Water carrying pots have been largely superseded by plastic or metal containers which are less susceptible to breakage, and aluminum sufurias are being increasingly adopted for some types of cooking.

Findings have established that potters in Evurore have not taken initiatives to develop new products or to seek out new buyers in Nairobi and beyond. 50% of the potters in Evurore have not made any initiatives to take their wares further than Ishiara market. These small scale and micro - enterprises will not survive if the potters just keep making products for the local market.
The fact that fragility and bulkiness affect the quality, demand and pricing of pottery is in support of the researcher’s hypothesis that the process of manufacture affects the value of pottery in Evurore Division.

**Objective 4: Economic impact of pottery to the people of Evurore Division**

Based on the findings of the study, it is apparent that pottery manufacture in Evurore is a specialized economic pursuit carried out by a small number of practitioners to earn a living. Due to this fact, the few potters supplying the market are able to realize an income that allows them to send their children to school and cater for the family needs. This is in support of the researcher’s hypothesis that pottery industry forms a source of income amongst the people of Evurore Division.

**5.4 Recommendations**

In the light of the above findings, the researcher makes the following recommendations:

**5.4.1 Recommendation regarding improvement of quality and value of Evurore pottery vessels**

**5.4.1.1** The study recommends a study of the clays in Kogari in order to improve the quality of pots. This way, the impure and low – grade types of clay that resort to pots breaking during drying and firing will be detected.

**5.4.1.2** The study recommends production of other ceramic works with a range of forms, decorative elaborations and functions, for example, dinner sets, mugs, figurines and
decorative items. This way, Evurore pottery will be better placed in terms of meeting the regional differences in standards and preferences.

5.4.2 Recommendation regarding income generation from pottery

5.4.2.1 Given financial support in the form of capital or transport facility, Evurore potters can manage not only to sell their pots locally but also to sell them elsewhere where they can get a better price for their work. The researcher therefore recommends that the government should support potters through the community based organizations and also non-governmental organizations, for example, maendeleo ya wanawake.

5.4.2.2 Men should be encouraged to join in pottery production to boost the work done by women.

5.4.2.3 With the help of researchers, samples of Evurore Pottery with a range of forms, finish and decorative elaborations should be widely distributed all over the country to come up with the kinds of pottery that are preferred by the different communities. This will enable the potters to make vessels that pass the test of both standard and preference. This will increase the demand (create more markets) thus leading to the economic advancement of the potters.

5.5 Suggestions for Further Research

- It would be impossible to say conclusively that the traditional method of forming pottery vessels in Mbeere was coiling. Thus, detailed research on forming is recommended.
• Further research should be carried out to establish whether it is possible that an earlier group of Bantu speakers was responsible for the Gatung’ang’a and Kwale ware in Mbeere.

• Bearing in mind that the study was carried out in one division of Mbeere North District, the results may not be generalized to the larger Mbeere or any other part of the country. Researchers are therefore encouraged to do research on similar fields in different divisions to avoid generalizations.
CITED REFERENCES:

(a) Published Sources


Matanda, M. (2007). “*Entrepreneurial orientation and access to new markets by small-scale earthenware manufacturers in Kenya*”. Kenyatta University, Centre for Entrepreneurship and Enterprise Development.


Tite, M. S. (1999). *Pottery production, distribution, and consumption - the contribution of the physical sciences*. U.S.A. Springer Publisher Ltd.


(b) Unpublished Sources


APPENDICES

Appendix 1: Interview Schedule for Evurore Contemporary Potters

1. Name ..........................................................................................................................

2. Age ............................................................................................................................

3. Village ....................................................................................................................... 

4. Gender ....................................................................................................................... 

5. For how long have you been practicing pottery?

6. What raw materials are used to manufacture pottery vessels?

7. What are the sources of these raw materials and how do you acquire them?

8. How is clay and other raw materials prepared before the actual modeling?

9. Which shapes do Evurore contemporary pottery vessels assume?

10. What are the methods of finishing pottery?

11. What forms of decoration are practiced?

12. How is pottery dried and baked?

13. Where do you sell your products?

14. What are the pottery vessels found in Mbeere homes?

15. What are the uses/functions of the contemporary Evurore pottery vessels?

16. How does pottery assist you economically?

17. In your own opinion, how would you describe the trends on pottery manufacture?

18. In your own opinion, how would you describe the trends on pottery sales?
Appendix 2: Interview Schedule for Pottery Traders in Ishiara Market

1. Name………………………………………………………………………..

2. Gender……………………………………………………………………...

3. Village…………………………………………………………………….

4. Do you manufacture pottery? If yes, how do you transport your pots to the market?

5. (a) How many small sized pots do you sell on a market day?

   (b) At how much is a small sized pot sold?

6. (a) How many medium sized pots do you sell on a market day?

   (b) At how much is a medium sized pot sold?

7. (a) How many large pots do you sell on a market day?

   (b) At how much do you sell a large pot?
Appendix 3: Questionnaire for Aluminum and Plastic Ware Traders in Ishiara Market

1. Name…………………………………………………………………………………..
2. Gender…………………………………………………………………………………
3. For how long have you been selling aluminum ware in Ishiara market?
4. For how long have you been selling plastic ware in Ishiara market?
5. How many plastic jugs do you sell on a market day?
6. How many jerry-cans do you sell on a market day?
7. How many buckets do you sell on a market day?
8. How much is a small sized aluminum sufuria sold?
9. How much is a medium sized aluminum sufuria sold?
10. How much is a large aluminum sufuria sold?
Appendix 4: Observation List

A. Form Attributes

This involved observing pottery shapes, for example, vessel lip, neck, bellies, shoulder or base. This was done at the potting sites for contemporary pottery and at the National Museum for archaeological pottery.

B. Stylistic Attributes

Decorative treatments such as painting, sprigging and incising were observed from pottery vessels and shards.

C. Technological Attributes

The following were observed:

- Preparation of raw materials
- Preparation for firing
- The firing process

The researcher observed all the sixty contemporary potters during the preparation of the raw materials but only managed to participate in six firing schedules.

D. Function Attributes

The researcher observed the functions of the contemporary pottery vessel which include storage and processing.
## Appendix 5: Observation Sheet

<table>
<thead>
<tr>
<th>LOCALITY</th>
<th>FORM ATTRIBUTE</th>
<th>STYLISTIC ATTRIBUTE</th>
<th>TECHNOLOGICAL ATTRIBUTE</th>
<th>FUNCTION ATTRIBUTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISHIARA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KAGANDARI</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>KIBURU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KOGARI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 6: List of Informants

<table>
<thead>
<tr>
<th>NAME</th>
<th>AGE</th>
<th>SITE</th>
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</thead>
<tbody>
<tr>
<td>ESTHER CIAMBOGO</td>
<td>53</td>
<td>ISHIARA</td>
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<tr>
<td>MARY MBUYA</td>
<td>40</td>
<td>&quot;</td>
</tr>
<tr>
<td>AURALIA MAGU</td>
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<td>&quot;</td>
</tr>
<tr>
<td>DEBORA CIANTHIA</td>
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<td>&quot;</td>
</tr>
<tr>
<td>JACINTA CIARUNJI</td>
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<td>&quot;</td>
</tr>
<tr>
<td>AGATA WANJI</td>
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<td>&quot;</td>
</tr>
<tr>
<td>SHUNEM WANAMU</td>
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</tr>
<tr>
<td>ALICE CIOGAA</td>
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<td>JACKLINE WAMAITHA</td>
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<tr>
<td>BEATRICE WAWIRA</td>
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<td>ESTHER NJOKA</td>
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<td>ROSALINE CIANYAGA</td>
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<tr>
<td>VIOLET KERE</td>
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<td>JERUSA KATHENGI</td>
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<td>SASCINDA MBAKA</td>
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<td>KAGANDARI</td>
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<td>JEDIDA CIAMBURI</td>
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</tr>
<tr>
<td>RUTH NGERA</td>
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<td>&quot;</td>
</tr>
<tr>
<td>Name</td>
<td>Age</td>
<td></td>
</tr>
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<td>-----------------------</td>
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<tr>
<td>CATHERINE WANGARI</td>
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<td>MARIAM GAKII</td>
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<td>AGUSTA CAMU</td>
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<td>ANN NGUGI</td>
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<td>LUCY MITAMBO</td>
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<td>NICETA CIANTHUKU</td>
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<td>SHUNEM WAKARIGICA</td>
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<td>EVANGELINE WAMBIR0</td>
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</tr>
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<td>ANN CIAKARU</td>
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Appendix 7: Letter of Appreciation

Kabangi Rosemary,
Kenyatta University,
P.O. Box 43844,
NAIROBI.

The Divisional Officer,
Evurore Division,
P.O. Box 29,
ISHIARA.

Dear Sir,

**RE: APPRECIATION**

Following the research I conducted in your division, I would like to pass my appreciation for your unreserved support. The same goes to the area chiefs, Ishiara and Kamarandi locations, for allowing me to conduct research in their locations.

Also, to all the respondents in your division who got involved in giving answers to the interview schedules I had prepared and also for their hospitality.

Thank you very much.

Yours faithfully,

Rosemary W. Kabangi.