

**THE EFFECTS OF LIVESTOCK REARING ON LIVELIHOOD OF THE BORANA
COMMUNITY, FUNAAN QUMBI VILLAGE, MARSABIT COUNTY, KENYA**

BY

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DECLARATION

I declare that this work has not been previously submitted for a degree at Maseno or any other University. The work reported herein was carried out by me and all sources of information have been acknowledged.

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Having said thank you, none of the people acknowledged above bear any responsibility for the views in this report. The final work is entirely mine.

DEDICATION

This research project is dedicated to my late Mother Tume Karayu Wario who passed on abruptly at the time of my enrolment in e-learning class of Maseno University.

ABSTRACT

Globally it is estimated that pastoralism is practiced by between 200 and 500 million people. In Africa they reside in over 21 countries across the continent. They usually inhabit areas which are hard to carry out other livelihood ventures like farming. Today, pastoralism is being threatened by climate change causing frequent droughts. Pastoral communities in Marsabit County have had to combat the effects of droughts on their livelihoods by adopting livelihood diversification. However, through extensive field experience of working in Marsabit County, it has been noted that the Borana community of FunaanQumbi village continues to pursue pure pastoralism. The discovery prompts the need to carry out a study. The main objective of this study was to investigate the effects of livestock rearing on the livelihood of the Borana pastoralist in FunaanQumbi village, Marsabit County. It was imperative to identify the Socio-cultural and economic benefits the community of FunaanQumbi derive from the livestock. In addition the study tried to investigate factors leading to community resilience in midst of challenges. The guiding theory for this study was the general theory of pastoralism and social stratification by Rada Dyson-Hudson (1980). The study took place in FunaanQumbi village of Uran Ward, Marsabit County. Descriptive research design was used to guide the study. Census methods was used to identify the household respondents. Both qualitative and quantitative data collection techniques were employed. Also questionnaires, observation and key informants interview (KII) techniques were used to collect the relevant data for this study. Findings of both qualitative and quantitative questionnaires were compiled at the end of the fieldwork. The study revealed that there are many socio-cultural and economic benefits that the Borana community derives from livestock rearing. The study also established that cattle are important to Borana community as they are in every member of the community's life from birth to death. Cattle give Borana community their identity and act as their inheritance as well as heritage. Apart from getting meat and milk for food, the Borana community uses their livestock for transport, for ploughing, for decoration of their households, for beddings and as source of fame. Livestock defines wealth in Borana community and ones standing in the community. Also the study identified a number of challenges faced by the community. Despite the challenges experienced in livestock rearing, the Borana community of FunaanQumbi has remained resilient. The study is significant not only for the community of FunaanQumbi but also for Borana in general whom they share cultural identity. Government, humanitarian actors and researchers will greatly benefit from the recommendations of this study. They can design appropriate intervention in the community.

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ABBREVIATIONS AND ACRONYMS

ACK	-	Anglican Church of Kenya
ASAL	-	Arid and Semi-arid Lands
CBO	-	Community Based Organization
GDP	-	Gross Domestic Products
FGD	-	Focus Group Discussions
FAO	-	Food and Agriculture Organization of the United Nations
IUCN	-	International Union for Conservation of Nature
IBM	-	International Business Machine
IFAD	-	International Fund for Agricultural Development
ILRI	-	International Livestock Research Institute
KII	-	Key Informants Interview
SEAGA	-	Social Economic and Gender Analysis
SPSS	-	Statistical Package for Social Sciences
NGOs	-	Non-Governmental Organizations
UNDP	-	United Nations Development Program
UNEP	-	United Nation Environmental Program

DEFINITION OF LOCAL TERMS

Angatu. A Borana name to areas that lie North Western part of Diid Galgallu plain. The name is derived from Borana word *angasu* (lightening). The plain has no tree coverage and during the day when the Sun shines over it, it resembles lightning. The area is good for livestock grazing.

Anunaa. A young bull given to mother-in-law by son-in-law on her first invitation to the home of her newly married daughter. The mother-in-law first sips some milk (*anaan*) and is shown her young bull. This ceremony is marked by a slaughter of a *Rakho* (Ram) followed by *anuuna* (sipping the milk). The mother-in-law shall then drive her young bull home in the morning.

Gabbar/ Dubar. The first Heifer given as dowry to the parents of the Bride before marriage to mark the completion of engagement. After the Heifer is given, the bridegroom's parents can ask the parent of the Bride to set the date of wedding ceremony.

FunaanQumbi. Name of the Borana village where this research was carried out.

Mirra. Green leafy khat used as stimulant by users

Qarat. Name of cattle given for dowry. They comprise 2 Heifers and a Bull calf. The bridegroom is not obligated to pay the dowry at once and immediately. Sometimes even the sons can pay their mothers dowry.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Pastoralism is practiced by between 200 and 500 million people worldwide, encompassing nomadic communities, transhumant herders, agro-pastoralists and ranchers (Davies, Ouedraogo, Hagelberg & Niamir-Fuller, 2015). Research has shown that pastoralism is economically rational and viable and is a vital tool for poverty alleviation, and large-scale conservation and ecosystem management (Davies *et al.*, 2015). This is contrary to past perspectives of pastoral livelihoods being portrayed as unproductive and environmentally destructive, leading policy makers and authorities to inadvertently or sometimes deliberately undermine elements of pastoralism that are known to be vital for sustainability and resilience (Davies *et al.*, 2015).

Pastoralists reside in over 21 countries across the African continent. Progress in pastoral areas in Africa generally falls behind that of other communities, creating poverty and vulnerability that undermine the sustainability of the system, Pastoralism in Sub-Saharan Africa is predominantly practiced in arid and semi-arid lands which have low and erratic rainfall. There are limited livelihoods suited to this unpredictable environment due to lack of water. Pastoralism is however particularly appropriate as it enables people to adapt by moving livestock according to availability of water and pasture (Tenaw, 2016). Major pastoralists in East Africa are Turkana, Karimojong, Jie, Borana, Dassanetch, Somali, Rendille and Gabbra peoples. Eastern Cushitic Borana and Dasanetch peoples value cattle more than camels, and conversely, the East Cushitic Somali, Rendille and Gabbra peoples value camels more than cattle. In all the pastoral societies, however, herders make for their own living within the socio-ecological framework of the open land (Shun, 1997). It is evident that today more than ever before in known history the way of life of Borana pastoralists is threatened by persistent drought, encroachment by other pastoralists, historical marginalization, climate change, insecurity and poor infrastructure.

Dry-lands occupy 70% of the Horn of Africa ranging from 95% in Somalia, 80% in Kenya, 60% of Uganda and approximately half of Tanzania (Kirkbride & Grahn, 2008). The Arid and Semi-Arid Lands (ASALs) of Kenya constitutes about 80% of country's landmass and supports 20–25% of the human population (Golicha, Ngutu & Charfi, 2012). Mountain and oasis areas are unique micro-climatic ecosystems within the ASALS which support arable farming at subsistence or small-scale commercial levels (Muya, Obanyi, Ngutu, Sijali, Okoti,

Maingi & Bulle, 2011). They are by far the most important ASAL areas in terms of production and productivity and both for crop and livestock production. These areas are the home of more than 70% of the total population of Kenya ASALs (Muya *et al.*, 2011).

Livestock possession plays multiple social, economic and religious roles in pastoral livelihoods, such as providing a regular source of food in the form of milk, meat and blood for household members, cash income to pay for cereals, education, health care and other services. In pastoral communities, livestock is also essential for payment of dowry, compensation of injured parties during raids, symbol of prosperity and prestige, store of wealth and security against drought, disease and other calamities. Livestock is therefore a fundamental form of pastoral capital, besides functioning as a means of production, storage, transport and transfer of food and wealth (Behnke, 2008). In Kenya, over 75% of the cattle herd is made up of indigenous breeds, which are traditionally kept by pastoralists in the dry lands. Cattle herds in Tanzania and Uganda are also almost entirely made up of indigenous breeds (over 95%), indicating that the bulk of the nations' animal wealth is in dry land areas (Hesse & MacGregor, 2006).

Pastoralism makes a significant contribution to Gross Domestic Product (GDP) in many East African countries. It provides the majority of meat consumed in those countries and provides a livelihood for tens of millions of people who live there. Pastoralists are the custodians of dry land environments, providing services through good rangeland management including biodiversity conservation and wildlife tourism (Mengistu, 2016). An estimated 13 million cattle, 25 million goats, 14.9 million sheep, 1.7 million donkeys and 2.9 million camels are found in Kenya's ASALs (KNBS, 2010). Pastoralism contributes approximately 12% to the country's gross domestic product, with the livestock sector providing an estimated 90% of all employment opportunities and more than 95% of household incomes in ASALs (Kaimba, Njehia & Guliye, 2011).

Though pastoralism is the main source of survival for pastoralists, farming has become the dominant type of diversification. Livelihood diversification is a response to failure of pastoralist production to withstand the stresses and shocks attributed to recurrent drought. Mengistu (2016) observed that there are challenges of livelihood diversification in pastoral lands of South Omo, Ethiopia. They include communal resource administration system, lack of financial services, lack of access to market and lack of proper extension services.

Muricho, Otieno and Kosura (2017) looking at building pastoralists' resilience through strengthening their participation in markets and local governance institutions in West Pokot, Kenya observed that two major challenges makes pastoralists vulnerable and perpetually trapped in poverty. The first major challenge is frequent droughts that reduce the supply of forage resulting in death of livestock and deteriorating quality of existing herds. The other challenge is population pressure which pushes people to encroach into grazing lands for settlement and commercial farming. Muricho *et al.* (2017) observed a major change in livelihood activities in West Pokot from pure nomadic to a less transhumant pastoral system which was more prevalent in highland regions of Kapenguria, Lelan, Chepareria and Sigorthan the extremely dry areas of Alale and Masol. To adapt, the pastoralists were observed to change herd composition by incorporating improved Sahiwal cattle, Gala goats and Dopper sheep in their herds.

In Turkana, pastoralist communities have had to employ other supportive activities to supplement pastoralism, which has proved to be ineffective in meeting all their economic and social needs. Key areas of activity include sedentary agriculture, particularly along the Turkwel River, where settled farmers and agro-pastoralists grow maize, sorghum, sukuma, oranges, mangoes, bananas and vegetables (Watson & van Binsbergen, 2008). Golicha *et al.* (2012) examining livelihood diversification options for pastoralists in mountain and oasis areas of northern Kenya noted that communities living there have diversified their source of livelihoods to those that are non-livestock based.

Pastoral communities in Marsabit County have had to combat the effects of droughts on their livelihoods. Following the 2011 drought, inhabitants of Moyale, North-Horr and Maikona reduced household food consumption, sold livestock and migrated to towns to cope with the drought. Migrating livestock has also been employed by most pastoralists in Marsabit with some moving as far as Southern Ethiopia in search of water and pasture (VSF, 2011). Some pastoral communities engaged in livelihood diversification activities such as bee keeping among the Samburu of Ngurunit, charcoal trade and fishing among the Turkana of Loiyangalani (ALRMP, 2011). Lekapana (2013) investigated the socioeconomic effects of drought on pastoralists, their coping and adaptation strategies, and the government interventions in Loiyangalani Division. He observed that drought resulted in loss of livestock, human morbidity, conflicts, food insecurity, reduction of livestock prices, and increase in food prices. Pastoralists coped through mobility, herd diversification, herd splitting/merging,

sale of livestock, and livelihood diversification. Lekapana (2013) recommended a policy strategy geared towards diversification of pastoral livelihoods and promotion of their resilience.

A synthesis of past studies show that pastoralists in Kenya have increasingly pursued non-pastoral income strategies to meet consumption needs and to buttress against shocks caused by climatic fluctuation, animal diseases, market failure and insecurity (Muricho *et al.*, 2017; Watson & van Binsbergen, 2008; Golicha *et al.*, 2012; ALRMP, 2011). Unfortunately, despite recommendations for livelihood diversification among the pastoralists by scholars (Lekapana, 2013) and practitioners (VSF, 2011), the Borana community of FunanQumbi has not adapted alternative livelihoods. This situation makes them more vulnerable to vagaries of nature than their neighbors. Although studies have been conducted on importance of livestock rearing (Davies *et al.*, 2015), areas suitable for livelihood diversification (Golicha *et al.*, 2012) and types of livelihood diversification (Muricho *et al.*, 2017) as well as challenges of livelihood diversification among pastoralists (Mengistu, 2016), little information on the same is known among pastoral communities of Borana particularly the FunanQumbi village in Marsabit County. This study is important in order to further the understand community dynamics that are at play to sustain a livelihood approach that is clearly threatened by varied environmental and socio-economic changes. Although different communities may face similar challenges, diversification or lack of it as well as diversification strategies may vary based on geographical location. Particular areas may promote or deter a particular type of livelihood (Golicha *et al.*, 2012). However, much of what is written on pastoralist livelihood diversification is generalized and lacks context. This study aimed at addressing these gaps in knowledge with a focus on Borana pastoralist community of FunanQumbi village in Marsabit County.

1.1 Statement of Problem

Pastoralists inhabit zones where the potential for crop cultivation is limited due to low and highly variable rainfall conditions, poor terrain or extreme temperatures. Within this unpredictable, vulnerable and dynamic environment, pastoralists have developed successful mechanisms of adaptation to maintain an ecological balance between themselves and the natural environment. Pastoralism is therefore an economic and social system well adapted to dry-land conditions and characterized by a complex set of practices and knowledge that has permitted the maintenance of a sustainable equilibrium among pastures, livestock and people. Studies show that pastoralists are slowly diversifying their sources of livelihoods. However,

through extensive field experience of working in Marsabit County, it has been noted that the Borana community of FunaanQumbi village continues to pursue pure pastoralism. The negative effects of global climate change which has made nomadic pastoralism to seem like unsustainable venture has not bothered this community. This observation raised critical questions that this research aimed to answer. Livestock, especially cattle being the communities source of livelihoods, it looked like there is something unique about FunaanQumbi village and their attachment to livestock. The interest to unearth the reasoning behind practicing pure pastoralism for livelihoods, made it necessary to carry out this research project. The pastoralist village of FunaanQumbi exclusively depends on livestock for their livelihoods yet the area is prone to many challenges. The environment they live in is of ASAL nature which is prone to low rainfall and frequent drought.

1.3 Research Questions

The research questions for this study were:

- i. What are the socio-cultural benefits of livestock to Borana Pastoralist of FunaanQumbi?
- ii. What are the economic values of livestock to the Borana people of FunaanQumbi?
- iii. What factors lead to community resilience in midst of challenges faced by the village of FunaanQumbi?

1.4 Objectives of the Study

The main objective of this study was to investigate the effects of livestock rearing on the livelihood of the Borana pastoralist in FunaanQumbi village, Marsabit County.

The specific objectives were to:

1. Identify the Socio-cultural values of livestock to Borana Pastoralists of FunaanQumbi
2. Determine economic value of livestock to the Borana people of FunaanQumbi
3. Determine factors leading to community resilience in midst of challenges faced by the village of FunaanQumbi

1.5 Justification/Rationale of the Study

The research project on the effects of livestock rearing on the livelihood of Borana community is hoped to contribute to better understanding of Borana people and their livelihoods by focusing on a distinct community within the broader Borana Community. The

findings as outlined in this project will go a long way in helping policy makers and academics in designing appropriate interventions and policies for pastoralists in general and Borana in particular.

Having carried out the study, this research project now provides a better understanding of the complexities within the communal livestock systems. It has brought about important suggestions on the improvement needed regarding the livelihood of Borana pastoralist through increased livestock productivity. It has also brought about good knowledge base for the launch of serious development at all levels on livestock and livelihood for the Nomads in general.

The pastoralists' contribution on the socioeconomic development of their community cannot be overemphasized. It is evident that small scale livestock systems are important both for FunaanQumbi and for the rest of the African region. Accordingly, an improved understanding of the economic features of these systems may contribute to better focused development programs in these regions.

1.6 Area and Scope of the Study

This study on effect of Livestock rearing on the livelihood of the Borana community was conducted in FunaanQumbi Village of Sololo District of Marsabit County. Administratively, FunaanQumbi is a Village in Rawana Location, Uran Division of Sololo District Marsabit County. Marsabit County is one of the 47 counties of Kenya. It occupies 16 percent of Kenya's total landmass and arguably, the largest and most expansive county in Kenya at 75,691 square kilometres. The county borders Ethiopia to the North, Turkana County to the West, Samburu County to South, Isiolo and Wajir Counties to the East. Marsabit County has four constituencies namely; Saku, North Horr, Laisamis and Moyale. The County is classified as an arid area with high temperature except in few areas and low rainfall. FunaanQumbi where this study was done is under Uran ward and Moyale Constituency. The Village is 6 Kilometres from Turbi trading centre which lies along the grate North Road 720 Kilometres North of Nairobi which is the Capital City of Kenya. The Village can be accessed by earth road.

The area is characterized by plains, stony with short shrubs and thorny bushes. It receives little or no rainfall most of the seasons, the desert plains of "*Dida Galgallu*" stretches across *Turbi* to "*Angatu*" down to FunaanQumbi settlement. FunaanQumbi derived its name from two Borana words *Funaan* (Nose) and *Qumbi*(Myrrh tree). Funaan (Nose) came as result of the village being settled near Eastern edge of one of Turbi hills which looks like Nose.

Qumbi (Myrrh trees) uniquely grow in this area. These trees have very important ritual significance from the time immemorial. Their Resin is used as medicine, chewed as a gum and used in ceremonies as anointing substance. Myrrh trees' wood is used for curving milk-pots and for making charcoal. FunaanQumbi is therefore very important area for Borana community. Borana people consider livestock as their way of life. The study took place between May 2014 and November 2015.

The study aimed at linking the effects of livestock rearing on the livelihood of the Borana community is a case study focusing on a homogenous community. The study was carried out at FunaanQumbi village which is pure pastoralists' village.

1.7 Theoretical Framework

This study was guided by a General Theory of Pastoralism and Social Stratification advanced by (Rada, 1980). Dyson-Hudson argues that Pastoralists, particularly those in East Africa are generally egalitarian. He specifically quotes Dahl (1979) who documents the way in which the requirements of livestock herding among the Borana prevent the emergence of high degree social stratification. Rada suggests that, a man who is wealthy in terms of animals will divide his herd into sub-units, and will strive to enlarge his own family, for example by marrying several wives who will produce children. The theory suggests that Borana society is divided according to social status. Status is gained by owning some wealth. The wealth is determined by the number of livestock owned. Other ways the rich pastoralist expand their spheres of influence is by adopting children and marrying daughters to relatively poor men who can be recruited to live uxorial-locally. He concludes that a man who is wealthy in livestock is also likely to be rich in terms of the number of people in his family, many of who are heirs who therefore aspire to his herd, either at death or before. Rada did not give conclusive evidence that wealthy livestock owners in pastoralists' community always have huge dependents. In fact there are many Borana cattle keepers who are considered wealthy and who do not even support their own needy members. The theory also proposes that the nomadic pastoralists move freely with the livestock as a survival mechanism. The theory explains the reasons behind nomadic pastoralism and how pastoralists are egalitarian. However this study was able to confirm that rich herders support their clan and family members in times of need as a social responsibility towards the underprivileged. To some extent, the study found that the reason behind marrying many wives and raising many children is for the purpose of cheap labour. Rada Dyson-Hudson theory has been criticized for being too abstract and deterministic. Some of the criticisms are that its price integration

and price performance are static and suffer from spatial arbitrariness (Harris-White, 1999). Its market segmentation concepts with respect to margins and transfer costs are faulty (Barrett, J.C., 1992) and it does not explain how competition among livestock traders may affect consumers' welfare. Thus the approach fails to explain the causal links between structure, conduct and performance from structures and vice versa (Harris-White, 1999). This is however not justified by this study due to the scope of this argument which required more research to confirm or deny whether it still holds in Borana community.

Despite these limitations, the General Theory of Pastoralism and Social Stratification advanced by Rada Dyson-Hudson remains the conventional approach for studying pastoralists in developing countries (Scott, 1995). These shortcomings notwithstanding, the approach is flexible and particularly applicable to the study of pastoralism and social stratification in developing countries (Williams, 2006). These arguments by various researchers justify the reason for using the theory in this study. The study was able to confirm that Borana community as an egalitarian one as explained by general theory of pastoralism and social stratification.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is concerned with reviewing the existing literature on pastoralism and livestock keeping and how it relates to livelihoods. The researcher in his endeavor to review the literature related to the study, came across numerous documents that are relevant and used it. He tried to review them in relation to the study objectives. As a matter of fact, the main goal for every developing country like Kenya is to end perennial drought in the country so that the communities affected by hunger can operate within a defined production system. Borana community too faces many challenges in livestock keeping in the rangeland. They live in a very harsh environment which is prone to drought. They lack essential commodities like water for the animals due to ASAL type of environment they live in. This makes it difficult for livestock to thrive despite its importance in socio-cultural and economic value to the community. Many Borana pastoralist villages cope with the challenges brought about by climate variations like frequent droughts by diversifying their activities.

2.1.1 Literature relating to socio-cultural values of livestock to Borana pastoralist

This reason for keeping livestock refers to the use of animals for the purposes of ploughing, harrowing, ridging, carting, logging, pumping, threshing, planting and pulling sledges. In cases where motorized mechanical farm implements are either unavailable or expensive, animal traction is often the alternative to back-breaking human labor (Stroebe, A., et al., 2008). Little et al. (2006) have defined livelihood diversification among pastoralists as ‘the pursuit of any non-pastoral income earning activity, whether in rural or urban areas’. Several reasons have been advanced to suggest why diversification takes place. This thinking seem to be far from FunaanQumbi community. The research and development community faces the challenge of sustaining livestock productivity in order both to improve rural livelihoods and secure environmental sustainability in the developing countries. Poor rural households are continuously involved in a struggle to make ends meet; food security and family livelihood expenses being some of the major priorities. Livestock production could play a vital role in this context. They directly support food provision, for example meat, milk, eggs; and also indirectly by strengthening the household livelihood. Livestock support organic fertilizer and fuel, hides, commercial sales of animals and animal products and also through occasional sales to meet particular community and household needs such as school fees, celebrations, funerals, marriages, etc. The real contribution of many of these livestock products are

however generally not accurately valued by the monetary yardstick. Numerous researchers, including (Vandamme, E., D'haese, M., Speelman, S., & D'haese, L., 2010), (Van Rooyen, 2008), (Pell, A., Stroebel, A., & Kristjanson, P., 2010) support the concept that livestock production fulfils a multipurpose role in developing environments. From a social perspective, livestock builds relationships, addresses gender imbalances and allows the distribution of benefits. Additionally, the natural environment becomes increasingly relevant, as livestock owners are expected to fulfill an important stewardship role in sensible resource utilization. According to a study done by K. Gemtessa, B. Emanu, W. Tiki (2005), it concluded that wealth status in Borana is determined by sources of income and major occupations, which determine the livelihood of the household. Livestock production is the most important source of income. Hence, the number of cattle, camels, goats or sheep is a good indicator of the wealth status in the community.

2.1.2 Literature relating economic value of livestock to the Borana people

Income diversification has been highly recommended as building pastoral resilience by some policy makers (Watete et al, 2016). Livelihood diversification is the process by which households combine diverse portfolios of activities and assets in order to improve their welfare (Ellis 2000; Scoones1998). Current understanding of socioeconomic value that pastoralist attach to livestock is incomplete and, hence, the need to update existing knowledge and to assess the role of livestock farmers in bringing about a significant improvement to their livelihoods. Smith and Rethman (1992) reported that, since the introduction of domestic Livestock, large areas of natural veld in South Africa have undergone radical changes. In addition, these changes have been detrimental as they have resulted in lower grazing capacity, soil erosion and the general degradation of the environment.

The livestock may also become a source of additional income for farmers through the hiring of traction services. FunaanQumbi community does not do any farming or use livestock for other reasons than livelihoods. (Kumwenda, 1999), reported that animal traction is a viable option for small-scale farmers as it is affordable, sustainable, profitable and environmentally friendly. Income from livestock sales is an important component of household income in many parts of Africa, contributing over 25% of the total incomes in all the food security categories (Freeman, H.A., et al, 2008). In addition to higher incomes, increases in human populations contribute to the demand for animal-source food products. The populations in most developing countries are still growing rapidly even though the percentage growth rates

are below their peak in the 1970s. Each year the population in developing countries grows by 72 million, thus increasing the demand for food products (Steinfeld, H., et al, 2006).

Living conditions in the rural areas are, to a considerable extent, reflected in the socio-economic factors pertaining to the livestock while, these, in turn, influence economic behavior (Makhura, 2001). Despite the fact that considerable amounts of money are being invested in livestock in an attempt to boost value and to alleviate hunger in the world; these efforts are unlikely to succeed unless they focus on the livestock keeper who hold the key to ending the perennial hunger in the world (ILRI, 2010). Small-scale farming in developing countries is carried out mainly by small, autonomous family units, commonly known as “households”, and which operate within a defined production system.(Randolph, T.F., et al., 2007), highlight the fact that the livestock systems of the poor reflect the resource constraints which they face – financial access to information and services and landlessness – as well as their diverse reasons for keeping livestock. These reasons include, inter alia, producing food, generating income, providing manure, producing power, serving as financial instruments and enhancing social status. In Africa in particular, but also in Asia and some countries in Latin America, livestock also makes a major contribution to food production, albeit indirectly, through increasing crop yields (Pell, A., Stroebel, A., & Kristjanson, P., 2010). The actual increase in crop yield in response to the application of manure is highly variable, and is dependent on several other factors such as the basic nutritional status of the soil, the type of soil, and the way in which the manure is collected and applied (Gill, 1999). Dung is used for maintaining soil fertility, thereby contributing to increased crop production for food and income. In certain areas, dung is also used as a fuel. The utilization of fertilizer and building materials made from dung is considered an important motivation for keeping animals in the developing countries (Steinfeld, H., et al, 2006). From an economic perspective, livestock contributes to food supply, cash income, traction and fertilizer. Furthermore, livestock constitutes a valuable asset portfolio and investment opportunity.

It would appear that livestock makes a greater contribution to the income of lower income farmers as compared to higher income farmers (Gill, 1999). Large animals are also used as a form of equipment, providing traction power for transportation and crop production. In addition, they may also be hired out (Randolph, T.F., et al., 2007). The rural people of Eastern Africa live mainly on diverse agricultural activities including livestock keeping, which plays a major role in the economy of a region, as it accounts for an average of more

than 11% of the gross domestic product (GDP) of the countries of the region (Kenya, Uganda and Tanzania). But livestock productivity is generally low due to low budgetary inputs from the government and other actors. This study was tried to identify existing livestock systems, their constraints and potentials, in order to better target innovations for increased productivity.

History tells us that, as the economic level of a given population improves, the consumption of foods from animal source also increases. Growing populations and incomes, together with food preferences, are resulting in a rapid increase in the demand for livestock products, while globalization is boosting trade in livestock inputs and products. The global production of meat is projected to more than double from 229 million tons in 1990/2001 to 465 million tons in 2050, and that of milk to grow from 580 to 1043 million tons (Steinfeld H., 1995). Worldwide, the demand for livestock products is soaring because of changing food preferences and, as already mentioned, income and population growth—income and population growth will be discussed below. This trend, which is being facilitated by the global trade in livestock inputs and livestock products, has resulted in livestock production becoming the fastest growing subsector of agriculture in many of the developing and transition countries (FAO., 2009b). (Freeman, H.A., Kaitibie, H.A., Moyo, S., Perry, P.D., 2008), report that livestock is kept mainly as a safety net, and sold during times of hardships only. In addition, livestock plays an important role in managing risks (McDermott et al., 2010). Many households reported that they often sold livestock to meet emergency cash needs, such as purchasing food or meeting health expenses, or when shocks occur. The income from livestock sales is an important component of household income. The research done by P.N Leeuw and B. Rey states that the share of livestock production was 8% of total GDP and 25% of the total Africa agricultural domestic product. If the value of manure and draught power were added, livestock contribution would increase to 35% of the agricultural GDP (Winrock International, 1992) of Africa. In most African countries Kenya included livestock is extensive .This applies to pastoral and agro pastoral in the arid and semi-arid zones, where rainfall patterns preclude reliable cropping and limits the support capacity of land for people and livestock thus the need for the government to support in livestock keeping. This is very helpful for understanding the effects of livestock rearing on the livelihoods of the Borana community who depend entirely on livestock for their livelihoods. It is estimated that, by 2015 approximately 45% of the world's total population of 1.1 billion will be living in the cities and large towns of the developing countries. This growing

urbanization will further amplify the growth in demand for livestock products, as urban populations generally have higher incomes than rural people. Total livestock production in sub-Saharan Africa will have to grow at an average rate of 4.2% per year in order to meet this growing demand for animal protein in the developing countries will provide an opportunity for the poor to improve their livelihoods. Within this context, sustainable increases in livestock production would, therefore, be desirable if the demands of the human population are to be met and, hence, the important role of livestock in smallholder farming systems (Swanepoel and Stroebel, A. , 2009).

Livestock offers an alternative for either savings or accumulated capital in the form of a “living savings account”. Although not without risk, this “living savings account” provides a reasonably robust hedge against inflation and, in most instances; livestock may be sold and transferred into cash, as needed (Swanepoel, F.J.C, AND Moyo, S., 2010). Accordingly, livestock keeping is considered as an alternative form of insurance, providing the family with assets insurance by providing the family with assets that may be sold in times of crinite increased demand for livestock products means that there will be increased pressure on the natural resources supporting livestock production. In addition, population pressure and both human and livestock needs will bring about increased competition for land use, thus resulting in pollution, erosion, degradation and the loss of plant and animal biodiversity. In the more extensive systems of grazing and mixed livestock, the competition for resources affects the crop-livestock land use choices of smallholders and increases the pressure to convert forested lands to pasture and crops (ILRI, 2000).

2.1.3 Literature Relating to Pastoralist Community Resilience

A study carried out in Turkana region of North-western Kenya revealed that extreme drought events were increasingly frequent. It also observed that drought have impacted negatively on pastoral livelihoods. As a result pastoralists are forced to adapt or to cope with the climatic variability. In this regard, it was observed that households are using a multiplicity of strategies. It was said that in addition to the traditional short-term coping mechanisms, the long-term adaptation strategies used include but not limited to diversification of livelihood sources. One such practice is livestock mobility to track forage and water resources. Pastoralists also do diversification of herd composition to benefit from the varied drought and disease tolerance, as well as productiveness of assorted livestock types. Households cope with biting drought by sending children to school for formal education as a long term

investment expected to pay back through income from employment. (Francis Opiyo et al; 2015)

Livestock production is undergoing rapid change, and this change is manifesting itself in the growing contribution that livestock is making to satisfying the increasing global demands for high-value food products, or high protein sources, and in the continuous adjustments at the level of resource-use intensity, size of operations, product orientation and marketing channels (Steinfeld, H., et al, 2006). The availability of better information to livestock farmers would reduce uncertainty, thus enabling farmers to make more informed production decisions (Gura, 2008). Timely and relevant information may, fundamentally, alter people's decision making capacity and is critical to increasing agricultural productivity. Information on animal management practices, pests and diseases, transport availability, new marketing opportunities and the market prices of farm inputs and outputs is fundamental to an efficient and productive agricultural economy. Nevertheless, poor information is still common in the rural areas in Africa with the distances to information sources, poor transport and communications infrastructure making access to information even more difficult. In addition, the information is often in written form, limiting its access to the majority of poor livestock farmers who are illiterate. Equally important is the fact that indigenous knowledge is seldom documented and stored and, thus, this information is ultimately lost (Kachoro, 2007)

The ability of the poor to explore diverse marketing opportunities is limited because they do not possess the know-how, business contacts, and capital or credit facilities. Nevertheless, participation in livestock-related markets does offer the poor, especially women, a possible route to better livelihoods by, inter alia, presenting them with an opportunity to benefit from the increase in the demand for meat and other livestock products. Improved market access may secure better incomes and promote the welfare of smallholder livestock producers. By creating demand, markets promote economic growth and also help the beneficiaries to accumulate material assets. However, there are usually far more livestock producers and consumers of the products as compared to the fewer few traders or market intermediaries with this situation arising from the small-scale and scattered distribution of producers, and inadequate transport and communications. The existence of economies of scale in marketing activities, including transport, processing and retailing, means that large scale operations are most likely to be cost-effective. Consequently, markets are likely to be dominated by a few large-scale traders as a result of the lack of market competition and the inequality of bargaining power in respect of the few large traders who control the market and the many

small producers. In addition, the producers lack experience and the necessary skills for negotiating contracts which would ensure that the terms were fair and equitable. Producers may also be forced to sell as a result of an emergency, such as drought, or to clear a debt. Accordingly, small-scale livestock are forced to accept whatever terms are offered because of their inability to negotiate a good offer (Small Stock in Development., 2012).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

The main objective for this study was to investigate the effects of livestock rearing on the livelihoods of the Borana pastoralist in FunaanQumbi village, Marsabit County. The researcher used descriptive research design for the study. Also the researcher interacted with the community through conducting household interviews, observation and key informants interviews. Both qualitative and quantitative methods of data collection were applied. Questionnaires and interview guides were administered to households and Key informants interviews.

3.2 Study Population and Sampling

This study focused on 110 households 'heads (source area chief) from the village of FunaanQumbi in Marsabit County. In addition there were 8 informants selected based on their knowledge of the area and relevance to the study objectives. They are; area chief, vicar in charge of ACK Sololo parish, the village head of FunaanQumbi, 2 NGO official, 2 CBO officials, 1 Department of social services totaling to 8. This resulted into a target population of 118. The household heads were targeted because they are the decision makers of the family. When it comes to matters livestock rearing, they are responsible for the management of their individual households. Heads of the households are also in charge of the general welfare of their family. Similarly, Area chief, Vicar of ACK, 2NGO officials, 2CBO officials, the village head and the official from the department of social services were chosen because they have been servicing the community in one way or the other and some for a very long time. The head of FunaanQumbi village is the overall traditional community leader of the village and as such is a very key with the information on his village.

The study used census methods to collect the data. According to Kothari (2004), surveys may either be census or sample surveys. This study adopted the whole population, given that the main focus was on one homogenous community that would be studied effectively using the available resources. A census refers to a type of survey where data that is collected from every member of the population in this case every household. It is also known as complete enumeration. All the 110 households are targeted by this study and household questionnaire was administered. However, to triangulate the data obtained from the household surveys, 8

key informants were interviewed. This brought the total number of persons interviewed to 118 which is the household targeted by census plus key informants.

3.3 Data Collection Techniques

The researcher used both qualitative and quantitative data collection techniques which involved; questionnaires, observation and key informants interview (KII) to collect the relevant data for this study. The information that was reported in this study was gathered through interactions with residents and livestock farmers through individual household heads. Structured questionnaires were administered to a total of 110 households of pure livestock herders sharing grazing area and 8 key informants. The questionnaires were first field tested for reliability before it was subjected to the respondents. Having carried out the initial testing, the tool proofed that it can adequately collect the required data for this study. It was then subjected to households and key informants for full data collection.

Household questionnaires were used in the household to capture quantitative data. The head of the household were the respondents in the study. In case of a house where mothers are present, the women were interviewed as the household head. The survey was then conducted for the entire 110 households. Key informants interview

Key leaders like the head of the village, area chief, vicar in charge of ACK Sololo parish, NGO official, CBO officials, Department of social service. The questionnaire used was the same for all the different categories. Some who could write were given a questionnaire to fill. The data collected was then analyzed together with data from other household data.

The researcher took time to observe key undertaking relevant to this study on FunaanQumbi village and recorded their activities. Outcome of this observation is narrated towards the end of this report. Some pictures that depict the relationship between Borana and livestock are also taken to add value to the report.

3.4 Data Analysis

The findings of both qualitative and quantitative questionnaires were compiled at the end of the fieldwork. The quantitative data collected were analyzed by use of Statistical Package for Social Sciences (SPSS version 19) and the help of Microsoft excel. In the IBM SPSS version 19, the data were keyed in using cases and the variable. Then the results were generated by the Microsoft ware and inferences made. Each qualitative and quantitative response from the respondents were carefully coded and analyzed. The software used automatically generated data in form graphs, charts, tables and percentages. The responsibility of interpreting the data

was the jurisdiction of the researcher. Qualitative data obtained from Household questionnaire and KII were recorded and transcribed. NGO staff was recorded as N1-N2; CBO officials were coded as C1-C2; Village head was coded as H1; ACK vicar coded as V1, Social service officer code as S1 and area chief as A1.

3.5 Ethical Considerations

As a matter of necessity, the researcher begun by requesting the approval of the Chief Rawana location and the local Headman of FunaanQumbi village to conduct the survey. Both leaders graciously gave their no objection to the study. In fact, they went out of their way to inform the villagers in a community about our intention to carry out a study. Prior to actual data collection, several meetings were held with the residents of FunaanQumbi in order to brief them about the study and its aims so as to be assured of their full support throughout the study. The questionnaires were administered with the informed consent of the respondents. The respondents' privacy and confidentiality was observed throughout the study. The respondents are clearly informed of their right to refuse to respond if they are not willing. Further all the questionnaires had this introduction in order to make ethical issue very key in the research to protect the respondents. "For this project you will be asked to complete a short questionnaire. The questionnaire aims to examine impact of livestock rearing on the livelihood of the Borana community. The information you give is very important to the study and your answers therefore will not be revealed to anyone and will remain anonymous. Your identity will also not be necessary because there is no use of names and participation is voluntary. You have a right to refuse to participate. Thank you for your time".

CHAPTER FOUR
DATA ANALYSIS, PRESENTATION AND DISCUSSIONS

4.1 Background Information

The respondents were asked to provide information concerning gender, age, their status in the community, their villages and their relationship to the household head. They also provided information on marital status, level of education, family size and their main source of income. The results show that the majority of respondents were female 61.02% as compared to 38.98% who were male. These results are shown in table 1:

Table 1: Respondents Distribution by Gender

Gender	Frequency	Percent
Male	46	38.98%
Female	72	61.02%
Total	118	100.00%

The respondents were asked to indicate their age brackets. The results show that 32% of the respondents were aged 30-39 years while 28% were aged 20-29 years. Only 5% of the respondents were aged below 20 years while 22% were aged 40-49 years. Respondents who indicated that they were aged 50 years and above were 17%. Table 2 shows these results.

Table 2: Respondents Distribution by Age

Age	Frequency	Percent
Below 20 years	6	5%
20-29	28	24%
30-39	38	32%
40-49	26	22%
50 years and above	20	17%
Total	118	100%

In order to understand the background of respondents, they were asked to indicate their status in the community. The results show that the majority of respondents were household heads as represented by 93.22% while a paltry 0.84% each indicated as village elder, Church Clergy, area chief and social officer. 1.70% of the respondents indicated that they were NGO and CBO workers. These results are summarized in table 3.

Table 3: Respondents Distribution by Status in the Community

Status in the community	Frequency	Percent
Head of the village	1	0.84%
Church clergy	1	0.84%
Household heads	110	93.22%
NGO staff	2	1.70%
CBO staff	2	1.70%
Chief	1	0.84%
Social service officer	1	0.84%
Total	118	100.00%

Respondents were asked to indicate their role in the community in order to understand the composition of the respondents. The results show that the majority of respondents resided in FunaanQumbi (95%) as compared to 5% who indicated that they reside outside the area. These are mainly NGO & CBO and government officer who reside at the division headquarter.

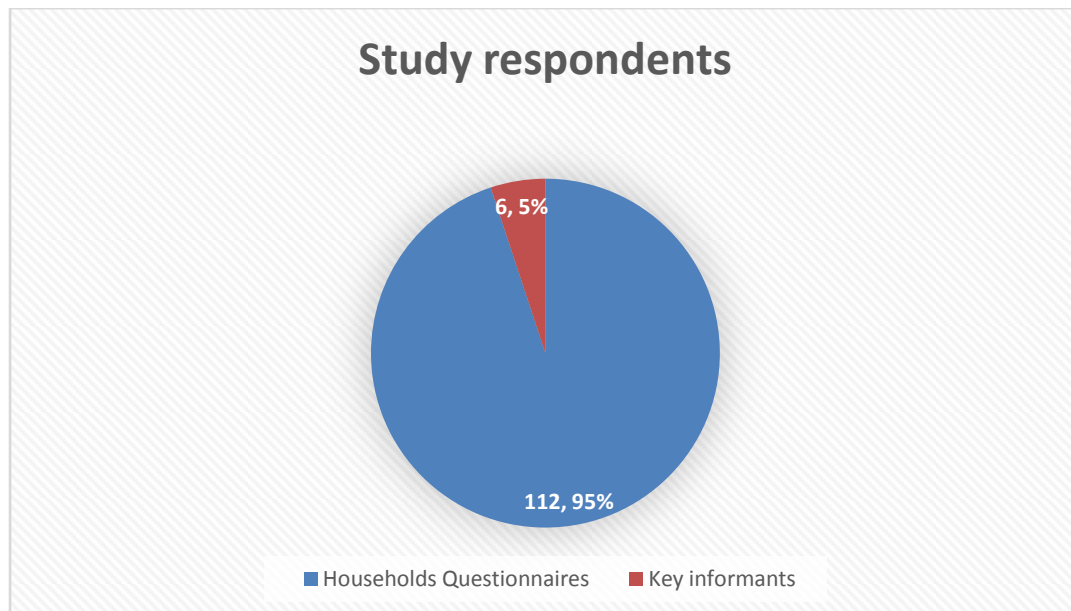


Figure 1. Respondents by type

According to key informants, the first group of people settled in the area in late 1980s. The village elder in particular stated that people chose FunaanQumbi because it is an area with a good pasture and supports livestock production. The area is also considered as having historic ceremonial significance and it is very conducive for pastoralists who move with their cattle

from one place to another. H1 particularly indicated that the last people to settle in the area were the internally displaced persons from neighboring Turbi as a result of the infamous Turbi Massacre in 2005. Seven (7) Borana households who used to reside in Turbi moved to FunaanQumbi to settle among their keens. A key informant, also indicated that there was no any other tribe among the Borana in FunaanQumbi. *“I can confirm that the last group who came are from Turbi as a result of tribal animosity” (H1)*

The respondents were asked to indicate their relationship with the household heads. The results show that the majority of respondents 58.48% indicated their relationship with the household head as wife. The results also show that 34.74% of the respondents indicated that they were the husbands while 6.78% are the key informants. These results are shown in table 4.

Table 4: Relationship with the Household Heads

Relationship	Frequency	Percent
Husband	41	34.74%
Wife	69	58.48%
Other	8	6.78%
Total	118	100.00%

The respondents were asked to indicate their highest level of education. The results show that the majority of respondents (83.90%) have never been to school. Only 6.78% of the respondents indicated their level of education as primary while 5.08% and 4.24% indicated their highest level of education as secondary and college respectively. The reason for this is to understand the literacy level of the community. These findings are shown in table 5

Table 5: Level of Education

Level of education	Frequency	Percent
Never been to school	99	83.90%
Primary	8	6.78%
Secondary	6	5.08%
College	5	4.24%
Total	118	100.00%

The family size ranged from 2 to 16 household members. The average family size is therefore 9 household members. All the respondents also indicated that their main source of income is livestock.

The researcher asked respondents whether they keep livestock. All of the respondents (100%) indicated yes and none of the respondents indicated no. The respondents were asked to give the specific number of livestock that they keep. The results show that the majority of the respondents (70.9%) reared cows while 22.7% reared cows/goats/sheep/donkeys. Respondents who reared cows/camel/donkey/sheep/goats/chicken were 5.5% while those that reared cows/camel/donkey/mule. Table 6 shows these results.

Table 6: Livestock reared

Livestock reared	Frequency	Percent
Cows	81	70.9%
Cows/goats/sheep/donkeys	29	22.7%
Cows/Camel/donkey/sheep/goats/chicken	6	5.5%
Cows/camel/Donkey/Mule	2	0.9%
Total	118	100.0%

4.2 Socio-cultural Benefits from Livestock

To find out the direct socio-cultural benefits that the farmers got from their livestock, the respondents were asked to indicate the extent they agree or disagree with five statements. The results show that all the respondents (100%) indicated that they strongly agree with the statements that livestock is important in weddings for paying dowry, is used during initiation ceremonies, provides food during burials and is used during naming of new born as well as for offerings and libation. These results are shown in table 7

Table 7: Direct Socio-cultural Benefits from Livestock

Statement	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	F	%	F	%	F	%	F	%	F	%
Livestock is important in weddings (paying dowry)	118	100%	0	0%	0	0%	0	0%	0	0%
Livestock is used during initiation ceremonies	118	100%	0	0%	0	0%	0	0%	0	0%
Livestock provides food during burials	118	100%	0	0%	0	0%	0	0%	0	0%
Livestock is used during naming of new born	118	100%	0	0%	0	0%	0	0%	0	0%
Livestock is used for offerings and libation	118	100%	0	0%	0	0%	0	0%	0	0%

The findings correspond with what key informants confirmed as socio-cultural importance of livestock in Borana community. Majority observed that cattle are the most important property of any Borana person. *“Immediately after a Borana child is born, the umbilical cord is separated from the child and put on a cow. This signifies that cattle and Borana child will never separate. When child reaches the age of naming about one year to four years, naming ceremony is organized where cattle are slaughtered for the ceremony. On this day, children are given their first cattle to own. When the child reaches the age of marriage, cattle is used for dowry to pay the parents of the girl to be married and the girl’s parent in turn give their daughter cattle as a gift. A cow must be slaughtered when a person in Borana community dies. Cattle are therefore with a Borana person from birth to death. There is no ceremony in Borana land that is completed without cattle being involved”*.S1 also confirmed these observations by indicating that all the numerous ceremonies conducted by Borana are centered on livestock. Livestock provide for the community with identity, like the famous Borana Cattle. *“I have attended many Borana functions and cattle is part of it”* (S1). To some extent the literature on socio-cultural values of livestock is confirmed.

Also H1 narrated the following in order to stress on the importance of livestock and in particular cattle; *“There are four major ceremonies in the life cycle of Borana. First is birth*

of a child. If the newborn is a boy the father of the child wears ceremonial turban known as 'Rufa'. Women sing songs to welcome the newborn for three days. An animal is slaughtered in honor for the new born child. The villagers who came to congratulate the newborn child and mother are given tobacco. If the newborn is a girl, there is no ceremony but tobacco is given to those who come and salute the mother and the child. The next ceremony is naming ceremony. The first born boys usually get grand ceremony which goes on for two to three days. A new house is constructed and animals are slaughtered for feast. For the second born, girls and subsequent children, the ceremony is just one night. An animal is just slaughtered for meal and the ceremony is performed in the family's old house. Initiation ceremony is the next ceremony. Here animals are slaughtered. Children of the same age group perform this rite together. It is then followed by Marriage ceremony. During marriage, there are a number of animals involved for slaughtering. Finally, the life cycle is completed by death. Person to be said has got a decent burial; an animal must be slaughtered to feed people who come for the burial. In most cases a cattle is slaughtered. If the dead person has no cows of his own, a relative will provide". The above narrative agrees with findings from household questionnaire and key informants interview mainly on socio-cultural values of livestock. The researcher was able to observe some events as he was interacting with the community.

4.2.2: Households' Overall Perception on Livestock

The researcher wanted to establish the households' overall perception on livestock. The respondents were asked to use a scale of 1 to 4 to indicate importance of livestock where 1 is 'Not important', 2 is 'Somewhat important', 3 is 'Important' and 4 is 'Very important'. The results show that the majority of respondents (89.0%) regard livestock as very important while 11.0% regard livestock as important. None of the respondents regards livestock as somewhat important or as not important. These findings are shown in table 8.

Table 8: Households' Overall Perception on Livestock

Importance	Frequency	Percent
Very important	105	89.0%
Important	13	11.0%
Somewhat important	0	0.0%
Not important	0	0.0%
Total	118	100.0%

The respondents were asked to indicate the number of wives that the male household heads have. *Note that even the female respondents in a household was to respond to this on behalf of their absent husbands. This question was only administered to households' not key informants.* The results showed that the majority of male household heads had one wife (93.22%) while 5.93% had two wives. Only 0.85% of the respondents indicated that male household heads had more than two wives. These results are shown in table 9.

Table 9: Number of Wives

Number of wives	Frequency	Percent
One wife	102	92.%
Two wives	7	6.4%
More than two wives	1	0.9%
Total	110	100.0%

The researcher sought to establish the ratio of the number of children to that of livestock for the richest man. The study established that the richest man had 24 children and 350 heads of cattle. The ratio of heads of cattle to number of children was therefore 1:14.6. This means that for every child that the richest man has, there are 14 heads of cattle. According to a key informant, in Borana community, the wealth of a household head affects the number of wives and children (dependents), power or influence they have. This confirms that Borana people are egalitarian in nature according to general theory of pastoralism and social stratification. The wealthy men in Borana usually possess larger family the main reason being to get labour for the livestock. This confirms the general theory of pastoralism and social stratification that explains how egalitarian communities work especially the Borana. *“Wealth goes with fame and standing in the community. The vulnerable members who do not have livestock may settle in a village of a wealthy man in order to meet the basic needs of his or her family. Wealthy Borana men usually give livestock as loan to the needy who live among them. Sometimes they also give livestock to responsible herdsmen to keep for good”* (H1). These further demonstrate that Borana community is an egalitarian one as explained by general theory of pastoralism and social stratification.

4.3: Economic Benefits from Livestock

To find out the direct economic benefits that the farmers got from their livestock, the respondents were asked to indicate the extent they agree or disagree with four statements. The results show that all the respondents (100%) indicated that they strongly agree with the statements that livestock is a major source of food, income and provides transport services in the village as well as livestock products being used for clothing and as beddings especially hides and skins. These findings are shown in table 10.

Table 10: Direct Economic benefits from Livestock

Statement	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	F	%	F	%	F	%	F	%	F	%
Livestock as major source of food	118	100%	0	0%	0	0%	0	0%	0	0%
Livestock as major source of income	118	100%	0	0%	0	0%	0	0%	0	0%
Livestock provides transport services in the village	118	100%	0	0%	0	0%	0	0%	0	0%
Livestock products are used for clothing and as bedding (hides and skin)	118	100%	0	0%	0	0%	0	0%	0	0%

The key informants indicated that they sell livestock so that they use the cash to buy food, clothes and educate their children. Apart from milk and meat, there are other uses of cattle products. This was illustrated by one of the focus group participants who said, *“cattle are very important source of livelihoods for us; we use their skin as our mattresses, decoration in the house, as satraps for our milk containers and even use their horns as a cup to feed our infants when they are young. Our livestock is our inheritance and our identity”* (H1). Another key informants also agrees and further states, *“The Borana community gets many benefits from rearing livestock. They get milk, meat, hide, skin and cash from sale of livestock”* (A1).

Key informants brought out economic importance of livestock rearing. *“Livestock provides employment for herders who have no other skill to work elsewhere”* (V1). Though no research has been so far carried out to ascertain the gross amount of cash for wage the cattle

herders get from this important sector, it is a fact that the sector provides employment for many herders. *“Today the pastoralists with who are wealthy use the services of other people who come to seek for employment”* (N2). This also agrees with what other key informants have said. *“The more the livestock, the more workers a herder would have”* (N2&C1). *Herders are sometimes employees of the herdsman or adopted children who benefit from the wealthy relatives in terms of food and clothing* (N1). This more or less confirms the theory of Pastoralism and social stratification where a man who is wealthy in terms of animals strive to enlarge his family by adopting other children or giving labor to people who would want to work for him. *“Modern education too has contributed to this since the children of the wealthier family all go to school while the children of a poor relative looks after the animals of a wealthy relative”* (A1).



Figure 2. Herder oozing blood out of a Cow



Figure 3. Herder drinking blood meal from a Cow

From field observation, it is worth noting that livestock is a major source of income for Borana village of FunaanQumbi. *“Livestock are sold and the proceeds used for buying food, clothes and even paying for school fees for school children. Since the area of FunaanQumbi is not good for farming, livestock are kept to provide owners with basic need”* (C1).

According to key informants, to the Borana, cattle for example are central to everything that they do. *“Wealth is measured by the number of cattle one owns and sometimes people owning large herd of cattle are regarded as men of wisdom. The cattle signify wealth and confer status and the more one has, the more they attain higher social status. It is also a commodity of precious value and no important cultural ceremony is complete without the use of cattle. For example, no man can be allowed to marry unless he has managed to bring substantial numbers to the girl’s parent as a dowry. They serve as a medium of exchange for other commodities, fines for punishments to those who have committed crimes and symbolize social relationships. In fact to the Borana, if one loses even one head of cattle, then they lose their identity as Borana. For that reason, cattle are quite sacred to the Borana Community. Because of this high esteem that is attached to the ownership of cattle, control and management over livestock is stratified”* (H1). *“Livestock keeping involves a set of vested interest involving individuals and groups both outside and within the immediate families utilizing products for their own benefits”*(V1).

Generally, all the key informants are in agreement that livestock such as cattle, goats and sheep are the primary source of income for the Borana community in FunaanQumbi. They noted that livestock serves as a social utility and plays an important role in the Borana

economy. Livestock are traded for other livestock, cash or livestock products such as milk and siege. Individual, families, and clans established close ties through giving or exchange of cattle. "*Waqi oriif ijole nu khenin*"- so goes a Borana prayer. The English translation of this prayer is: "May Creator give us cattle and children. Cattle and children are the most important aspect of the Borana people living in the village called FunaanQumbi (H1).



Figure 4. Livestock market on a market day at Turbi

All key informants concurred that livestock provide transport services for the Borana people. My general observations also revealed that Donkeys are the major transport animal as their prices are relatively cheap compared to larger animal such as camel and Mule. The camel is mainly used by Borana as transport animal in smaller scale. Livestock products are used clothing, beddings and decoration as shown by next pictures. Key informants (H1 & A1), narrated how in the olden days, leather from livestock was used for dress by women and young girls. These days however, the traditional leather dresses are only used for ceremonial occasions. The dress is a product of rectangular pieces of goatskin stitched with laces from Lambskin. It was stated that if a woman does not have this dress she can borrow it from another who have and returns after the ceremony is over.



Figure 5. Animal skin used as house decoration



Figure 6. Animal leather used as milk holding satraps

4.3.1: Communal Involvement with Livestock

The respondents were asked to indicate their agreement with the statement that most of the daily activities handled by men, women, children and the elderly are livestock rearing. The results show that the majority of respondents (97.3%) indicated that they strongly agree with the statement while 2.7% indicated that they agree with the statement.

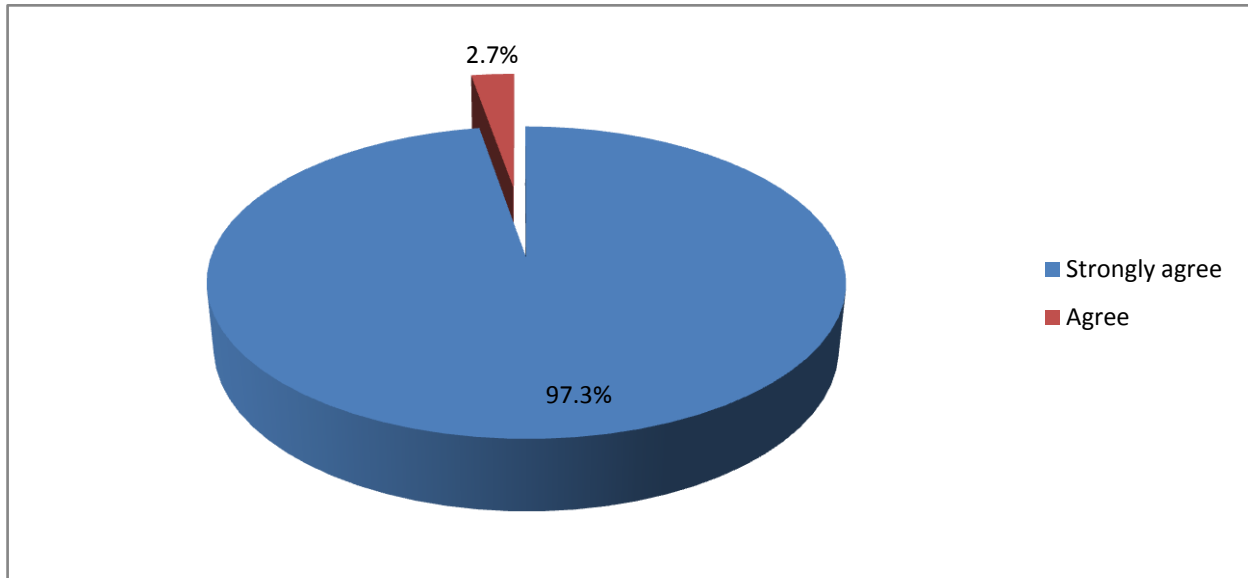


Figure 7. Daily livestock activities

The researcher sought to know whether there are communal laws on livestock. All the respondents (100%) indicated that there are communal laws on livestock protection. The focus group discussion participants confirmed that Borana community attaches a lot of value to their livestock. This is demonstrated in the fact that most of their songs are in praise of livestock. There are daily rituals performed on livestock from dawn when they go out of the Khaar to dusk when they get back home from grazing.

The respondents were asked to suggest ways in which the community can increase livestock numbers. Some of the respondents cited the need to have enough pasture and water resource. Some of the respondents also emphasized the need to have manpower to look after animals and having animals treated when they catch diseases. Peace and security with the neighbors of the community was cited as important by a section of respondents. Some respondents indicated the need to access proper services from government to support commercial pastoralism. Respondents also noted the need for government and development partners to respect culture of the pastoralists and contribute finances and information that embrace their way of life. Some respondents also observed the importance of having a vibrant livestock market that can buy their livestock at a fair price.

4.4: Community resilience

Like other rural forks in Kenya, Borana are also net buyers of food. *“This is typical character for all the rural Kenyans in general and pastoralist in particular. This practice negatively impacted by the food price spikes resulting by the food availability decline caused by the drought. One clear consequence of the recurrent droughts is the escalation of poverty and food insecurity among dry-land communities. Year after year, there are constant droughts which affect the livestock herding”* (S1). *“The livestock herders always complain the loss of their herds due to droughts. Despite their efforts of trying to survive in the midst of this challenge, no solution is found yet. They are trying very hard to cope with the situation”* (N2). Another key informants added, *“apart from providing basic livelihood needs, live animals are loaned to the needy members in the community as a social welfare while bulls are used for ploughing by the farming agro-pastoralists”* (H1). Also, *“cattle act as a savings for family which is used in times of needs and the animals fertilize the land by their droppings, urine and trampling on the land and contribute to a sustainable ecosystem”* (N1). The Borana community has demonstrated resilience despite many livestock rearing challenges. A key informant observed that, *“the community of FunaanQumbi is able to meet their daily needs with or without the support of any actor. They are able to withstand numerous droughts and other challenges like insecurity”* (C”). The study also established that there are programs and policies to effectively address the needs, risks and vulnerabilities of pastoralist communities in FunaanQumbi area. A key informant indicated that, *“there is Turbi livestock market, which is very close to FunaanQumbi. This is where the community sells their livestock when there is need. The office of the area chief is instrumental in maintaining peace with the neighboring community while the government and NGO services like livestock vaccinations, deworming and provision of famine relief food are helping the community to cope with risks and vulnerabilities. Some NGOs have also done dams, which hold water for sometimes after the rain. The improvement of our roads is also helping us to connect to other communities”* (N1).

4.4.1: Challenges Faced in Livestock Rearing

The respondents were asked to indicate their agreement or disagreement with statements regarding causes of insecurity. They were asked to use a scale of 1 to 5 where 1 is strongly disagree and 5 is strongly agree. The results show that all respondents indicated that tribal clashes (100%) cause insecurity. The results also show that 89.1% of the respondents strongly agree that drought is a cause of insecurity while 10.9% indicated that they agree with

the statement. The findings show that 89.1% of the respondents strongly agreed with the statement that there are no ready markets for livestock products while 10.9% indicated that they agree with the statement. The majority of respondents (59.1%) indicated that they agree with the statement that soil erosion has made land untenable. The results show that 40.9% of the respondents indicated that they strongly agree with the statement. All of the respondents (100%) indicated that they strongly agree with the statement that animal diseases are a major concern. These findings are summarized in table 11.

Table 11: Challenges Faced in Livestock Rearing

Causes of insecurity	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	F	%	F	%	F	%	F	%	F	%
Tribal clashes	11					0.0		0.0		0.0
	8	100%	0	0.0%	0	%	0	%	0	%
Drought		83.0	2	17.0		0.0		0.0		0.0
	98	%	0	%	0	%	0	%	0	%
There are no ready markets for livestock product	10	89.0	1	11.0		0.0		0.0		0.0
	5	%	3	%	0	%	0	%	0	%
Soil erosion has made land untenable		38.1	7	61.9		0.0		0.0		0.0
	45	%	3	%	0	%	0	%	0	%
Animal diseases are a major concern	11					0.0		0.0		0.0
	8	100%	0	0.0%	0	%	0	%	0	%

The respondents were asked to outline what should be done to help curb the livestock rearing challenges. The respondents cited a number of things that should be done. Among them, some respondents cited the need to give the community enough security while others emphasized on the need to find market for their livestock. Some respondents also indicated the importance of frequently vaccinating livestock while others indicated that there is a need to drill boreholes. Other needs cited were the need to organize livestock markets, provision of extension services and bringing peace projects. The respondents also saw the need to educate people and need to expand grazing area.

The majority of respondents indicated that the government and NGOs give them some support with livestock deworming, vaccination and give them training to build their capacity. A key informant confirmed this support by indicating that the government occasionally vaccinates their livestock and gives them advice during drought. In addition, some NGOs in partnership with the government conduct slaughter destocking.

Another key informant lamented that competition among livestock traders negatively affects consumers' welfare as traders are after profit and they usually take advantage of pastoralists by maximizing profit. Also indicated that there are ways that have been used to mitigate livestock rearing challenges in Borana community. These mitigation ways include constant migration in search of water and pasture for livestock. During the time of drought when milk from livestock is rare, the breeding herd is sent away to where there is water and grass, which is usually far away. Food consumption is drastically reduced in search instances where women and children are given the first priority. The key informant also noted that community has a way of asking the villagers to slaughter their livestock and meat is shared. This slaughtering happens in turns. The residents of FunaanQumbi usually send their grazing herds away to areas with pasture when pasture in the area is depleted. During severe droughts, the community depended on relief food from government and humanitarian actors. The above statements are common response from all the 8 key informants.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings and conclusions made from these findings. The chapter also presents the recommendations of this study.

5.2 Summary of the Findings

This study sought to investigate the effects of livestock rearing on the livelihoods of the Borana pastoralist in FunaanQumbi village, Marsabit County. To achieve this goal, the study aimed at meeting three research objectives. They include to identify the socio-cultural values of livestock to Borana Pastoralists of FunaanQumbi; to determine economic value of livestock to the Borana people of FunaanQumbi; and to determine factors leading to community resilience in midst of challenges faced by the village of FunaanQumbi.

The study revealed that there are many socio-cultural benefits that the Borana community derives from livestock rearing. FunaanQumbi village see livestock as part of their day to day life. The study also established that the most important type of livestock to the Borana community is a cattle as it is in every member of the community's life from birth to death. It starts from birth where a child's umbilical cord is placed on a cattle to ensure that the child is never separated from cattle. In the naming ceremonies, marriage and in death, cattle are involved making them an important part of life for any Borana. The cattle gives Borana community their identity and act as their inheritance as well as heritage.

The study revealed that there are numerous economic benefits that the Borana community derives from livestock rearing. Apart from getting meat and milk for food, the Borana community uses their livestock for transport, for ploughing, for decoration of their households, for beddings and as source of fame. Livestock defines wealth in Borana community and ones standing in the community. It also determines the number of dependants one has because wealthy people tend to increase their households by becoming polygamous. Livestock in the Borana community are also used as savings for households. The welfare of the poor in the community is taken care by loaning them some livestock from where they can get their livelihood. A tradition form of social protection for the needy in the community is very evident. It is incumbent upon the privileged member of this society to take care of the needy among them. This confirms the theory guiding this study where the community is an

egalitarian one. Borana community has derived many benefits from livestock rearing. Livestock especially cattle are a central part of Borana community's life. It gives them a sense of identity and custom. Borana community has derived many economic benefits from livestock rearing. The government and other development partners such as NGOs should understand the Borana community's way of life to work with them in bettering their livelihood.

This study established that there are many challenges facing livestock rearing. Among these challenges are drought, soil erosion, diseases, lack of enough pasture, insecurity and lack of better markets for livestock. Despite the challenges experienced in livestock rearing, the Borana community has remained resilient. By responding to the challenges through protection of their herds against droughts, the community has managed to remain resilient. Their coping mechanisms include constant migration in search of water and pasture for livestock, reducing food consumption in times of drought, destocking and food sharing among households. Dependence on relief food from government and humanitarian actors is another coping mechanism and drought mitigation measures.

5.3 Conclusions

This study concluded that the Borana community derived many socio-cultural benefits from livestock rearing. Livestock especially cattle are a central part of Borana community's life. It gives them a sense of identity and heritage. Livestock is therefore their major source of their livelihood for the community. Livestock especially cattle are always part of their ceremonies. Ceremonies are not complete without slaughter animals and feasting together. The livestock occupy a very major part of their lives. The number of cattle, camels, goats or sheep is a good indicator of the social status in the community. A person who has more is highly respected in the community and is kept high in social standing.

The study also concluded that livestock keeping present numerous economic benefits to the Borana community. Benefits such as food and other livelihood needs are mainly from livestock. Livestock also provide transport and for ploughing. Pastoralists, especially Borana seems to view livestock more than just livelihoods source. Wealth status in Borana is determined by sources of income and major occupations, which determine the livelihood of the household. Livestock production is the most important source of income.

This study concluded that insecurity, drought, diseases and poor market for livestock have posed challenges in livestock rearing. Borana have strong traditional institutions that play a significant role in periods of stress. Specifically, they regulate natural resource use and conservation, manage risks, protect resources and promote collective actions safety. This is also true for the village of FunaanQumbi. The Borana community has also shown resilience especially to drought through constant migration in search of water and pasture, reducing food consumption during drought, encouraging food sharing among households, sending breeding herds far away from areas with drought and destocking. It looks from the study that a lot more can be learnt in relations to livestock and the pastoralists way of relating to them.

5.4 Recommendations

This study recommends that the government and other development partners such as NGOs should understand the Borana community's way of life so as to work with them in bettering their lives. Actors keen to help the Borana community need to understand the critical part that livestock play in their lives socially, culturally and economically.

This research report strongly recommends governments involvement in introducing the modern ways of livestock production. Kenya government should ensure proper security in the area to stop tribal wars that affects the production. In addition to that, the government should also try to control animal diseases by recruiting more mobile veterinary officers into ASAL areas and markets. Disease free animals will attract buyers in the market and can fetch good price for the herders. Kenya need to come up with projects like Kenya National dairy development project to boost livestock production in semi-arid and arid areas.

This also study recommends that government should help the Borana community address challenges facing livestock rearing. Although there is some support from government and NGOs, this support is not enough. The government and NGOs should encourage traditional drought coping mechanisms so as to enhance the community's resilience. The study also recommends that the government should address insecurity in the area to protect the pastoralists.

5.4 Suggestions for further studies

Further research should investigate Borana community's traditional peace building mechanisms and their applicability to addressing insecurity in the area. There is also a need to look at how cattle keeping can be used as a peace maker between various tribal groups leaving side by side.

Additional area for further research is on direct employment provided by cattle keepers and the economic value of this informal sector. Since livestock is seen as labour intensive venture, I did not come across evidence of estimated number of people employed in this important sector.

Future scholars should also look into traditional ways of disease prevention and cure for livestock and their effectiveness in Borana community. Further research should be done to establish borrowed traditional practices as well as exported traditional practices that address challenges of livestock rearing.

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APPENDICES

APPENDIX 1: HOUSEHOLD SURVEY QUESTIONNAIRE

LIVESTOCK REARING AND LIVELIHOODS OF THE BORANA COMMUNITY,
FUNAAN QUMBI VILLAGE, MARSABIT COUNTY HOUSEHOLD QUESTIONNAIRE

This project is conducted by; DIIDA KARAYU WARIO a masters student in Maseno University

Introduction is required:

Good morning/afternoon. My name is Diida Karayu, a student at Maseno University.

For this project I will ask you a few questions on the impact of livestock rearing on the livelihood of the Borana community. The information you give is very important to the study and your answers therefore will not be revealed to anyone and will remain anonymous. Your identity will also not be necessary because there is no use of names and participation is voluntary. You have a right to refuse to participate.

Do you agree to participate in the study? 1. Yes 2. No (If No, go to the next person).
Thank you for your time.

HH #.....Date. Survey.....

Village name.....Sub County.....

1. BASIC INFORMATION:

<p>P1. gender</p> <p><input type="checkbox"/> 1. male</p> <p><input type="checkbox"/> female</p>	<p>P2. Age of respondent (years)</p> <p><input type="checkbox"/> 1-20 <input type="checkbox"/> 20-29</p> <p><input type="checkbox"/> 30-39 <input type="checkbox"/> 40-49</p> <p><input type="checkbox"/> 50+</p>	<p>P3. Status in the community</p> <p><input type="checkbox"/> 1. Teacher <input type="checkbox"/> 2. Church clergy</p> <p><input type="checkbox"/> Households head</p> <p><input type="checkbox"/> 4. (Other) specify.....</p>
<p>p4. Villages</p> <p>1. <input type="checkbox"/> FunaanQumbi</p> <p>2. <input type="checkbox"/> Other (specify).....</p>		<p>P5. Relationship to household head if respondent is not the household head.</p> <p>1. Husband <input type="checkbox"/></p> <p>2. Wife <input type="checkbox"/></p> <p>3. Daughter <input type="checkbox"/></p> <p>4. Son <input type="checkbox"/></p> <p>5. Other (specify)... <input type="checkbox"/></p> <p>.....</p>
<p>Gender of HH</p>		<p>Marital status</p> <p>Level of education</p> <p>Family size</p> <p>Main source of income</p>

Q1.0. INFORMATION ON LIVESTOCK

INFORMATION ON LIVESTOCK

Q1.a. Do you keep livestock?

Yes No

1b: If yes, which ones (do not **read** the list for the respondent, allow multiple answers)

1. Cow 2. Sheep 3. Goat 4. Donkey 5. Camels

6. Others (specify).....

Q2.0. INFORMATION ON BENEFITS FROM LIVESTOCK

Q2.1- DIRECT BENEFITS (SOCIO-ECONOMIC)

To what extent do you agree with the following statements?

(Strongly-agree) 4. (Agree) 3. (Somehow-agree) 2. (Disagree) 1. (Strongly-disagree)

- 2:1:1 Livestock as major source of food 5 4 3 2 1
- 2:1:2 Livestock as major source of income 5 4 3 2 1
- 2:1:3 Livestock provides transport services in the village 5 4 3 2 1
- 2:1:4 Livestock products are used for clothing 5 4 3 2 1
and as bedding (hides and skin)

Q2.2: DIRECT BENEFITS TO HOUSEHOLDS (SOCIO-CULTURAL)

To what extent do you agree with the following statements?

5. (Strongly-agree) 4. (Agree) 3. (Somehow-agree) 2. (Disagree) 1. (Strongly-disagree)

- Livestock is important in weddings (paying dowry 5 4 3 2 1
- Livestock is used during initiation ceremony 5 4 3 2 1
- Livestock provides food during burials 5 4 3 2 1
- Livestock is used during naming of new born 5 4 3 2 1
- Livestock is used for offerings and libation 5 4 3 2 1

Q 2.3: HOUSEHOLDS’ OVERALL PERCEPTION ON LIVESTOCK

On a scale of 1 to 4, where “1 is not important and 4 is very important”

How important is livestock to this community?

- 4. Very important 3. (Important) 2. Somehow important 1. (Not important)

Q3. Number of wives and children (from all wives for male headed household). i.e.

Dependents.....

Q4 what are is the ratio of the number of children to that of livestock in the Households (wealth).....

Q5. HOUSEHOLD CHALLENGES FACED IN LIVESTOCK REARING

Q5.1. On a scale of 1 to 5, where 1 is “strongly disagree” and 5 is “I strongly agree”

What is your opinion on the following statements on challenges faced by the community?

(

5) Strongly-agree (4) Agree (3) Somehow-agree (2) Disagree (1) Strongly-disagree

Insecurity is mainly due to; a) tribal clashes 5 4 3 2 1

b) Drought 5 4 3 2 1

(c) There are no ready markets for livestock product 5 4 3 2 1

(d) Soil erosion has made land untenable 5 4 3 2 1

(e) Animal diseases are a major concern 5 4 3 2 1

(f) Others (specify) 5 4 3 2 1

Q6. . What do you think should be done to help curb those challenges?

.....
.....
.....
.....

Q7.0: THE COMMUNAL INVOLVEMENT WITH LIVESTOCK.

Q7.1: On the daily **activities** handled by men, women, children and the elderly, **DO YOU agree or disagree** that **MOST are on livestock rearing?**

1. Strongly agree 2. Agree 3. Somehow agree 4. Disagree 5. Strongly disagree

Q 7.2: Are there communal LAWS on livestock protection?

Yes No

Q 7.3: Suggest ways you think the community can use to increase numbers of livestock in the community?

.....
.....

.....

APPENDIX 2: KEY INFORMANT INTERVIEW GUIDE

NAME OF KII

POSITION

SUB COUNTY

1) What are the benefits that Borana community gets from rearing livestock?	
2)	
3) Do you believe that competition among livestock traders may affect consumers' welfare?	
4) Do you think that the wealth of a house hold head in Borana community affects the	
5) Number of wives and children (dependents), power or influence they have?	
1) Explain the Social, economic and cultural values of livestock to the Borana people of FunaanQumbi	
2) Explain some of the ways to mitigate those challenges faced by the cattle keepers.	
3) Do you get any kind of support to overcome these challenges?	
4) Elaborate the community resilience in midst of livestock rearing challenges faced by the village of FunaanQumbi?	
5) Are there programs and policies to effectively address the needs, risks and vulnerabilities of pastoralist communities in FunaanQumbi area?	

APPENDIX 3: OBSERVATION CHECKLIST

- A. Animal care.
- B. Water is the major scarce resource : storage capacities and cleaning
- C. Clustered houses, high temperatures during day and cold nights.
- D. Big families are wealthy. Larger number of wives and children
- E. Almost every household has livestock, unhealthy livestock, and diseases attack.
- F. Soil erosion, soil degradation
- G. Community lifestyle

THANK YOU FOR YOUR PARTICIPATION IN THIS SURVEY

1.2 APPENDIX 4: MAP OF KENYA SHOWING MARSABIT COUNTY

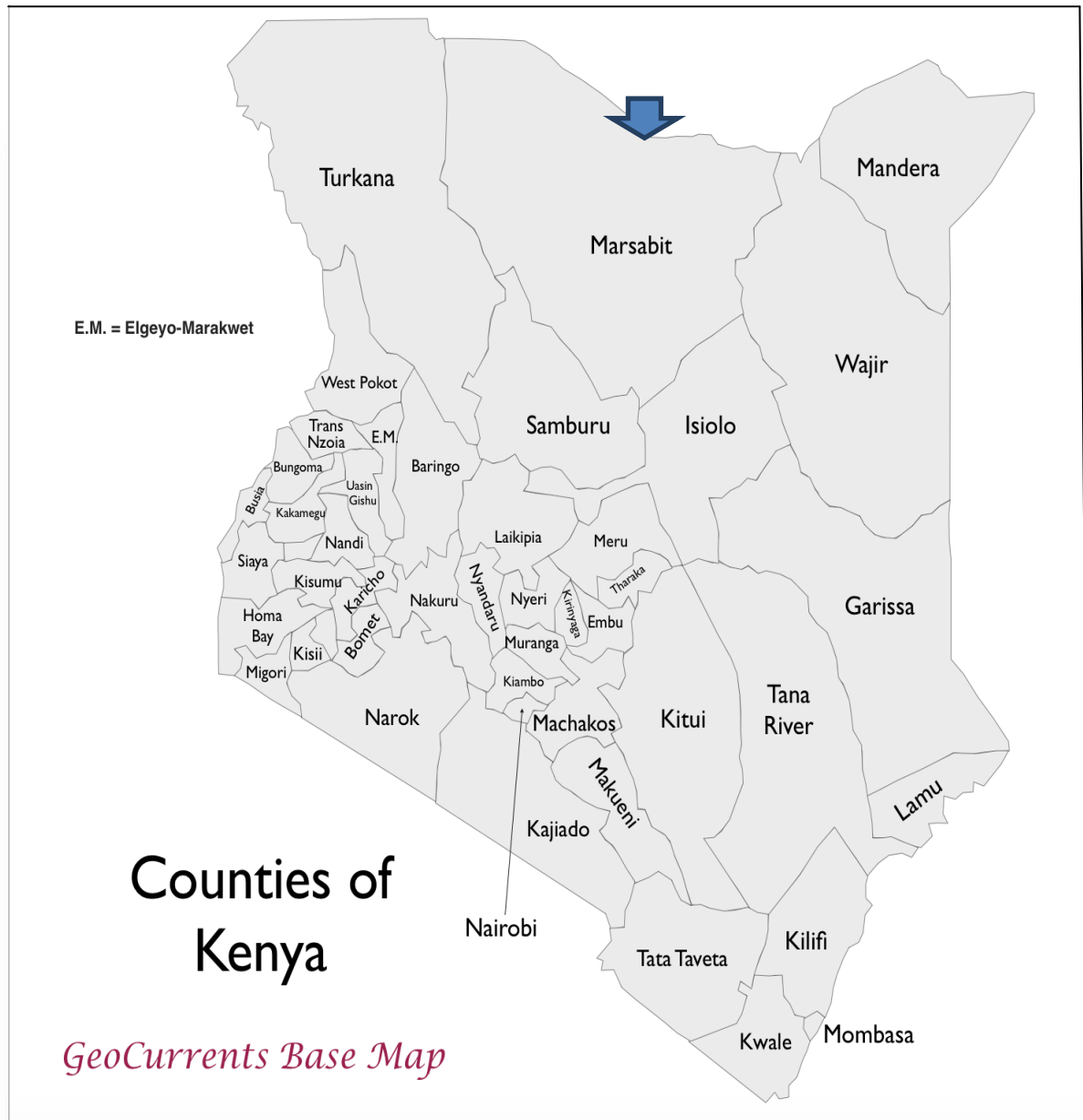


Figure 1 Arrow showing FunaanQumbi on the map of Kenya