The Role of Livestock Marketing in Improving the Pastoralists' Livelihoods through Income Generation: The Case of the Pastoralist Communities of Garissa District, Kenya

By

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November 2009
DECLARATION

I declare that this report is my original work and it has not been presented for a degree in any other university.

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This report has been submitted for examination with my approval as University Supervisor.

Signature: [Signature] Date 18/11/2007

Dr. K. Kiemo
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DEDICATION

To my late father Mr. Johana Thendiu who believed in the great value of education and did his best to support me reach the highest level possible.

To my loving and dear wife Dr. Joyce Njoki Njoro who has stood by me throughout this study. She urged me on and provided me with all the support possible. I am indebted to her because of her tremendous commitment.

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May God Bless you all.
<table>
<thead>
<tr>
<th>ACRONYMS</th>
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<tbody>
<tr>
<td>ALLPRO</td>
<td>ASAL Livestock and Rural Livelihoods Support Project</td>
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<tr>
<td>ALRMP</td>
<td>Arid Land Resource Management Project</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<td>CLIP</td>
<td>Community Livestock Initiatives Programme</td>
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<td>DLMC</td>
<td>District Livestock Marketing Council</td>
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<td>DLPO</td>
<td>District Livestock Production Officer</td>
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<td>ELMT</td>
<td>Enhanced Livelihoods Mandera Triangle Project</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organisation</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>HIV/AIDs</td>
<td>Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome</td>
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<td>HH</td>
<td>House Hold</td>
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<tr>
<td>ILO</td>
<td>International Labour Organisation</td>
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<tr>
<td>KCC</td>
<td>Kenya Creameries Cooperative</td>
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<tr>
<td>KLMC</td>
<td>Kenya Livestock Marketing Council</td>
</tr>
<tr>
<td>KMC</td>
<td>Kenya Meat Commission</td>
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<tr>
<td>LEZs</td>
<td>Livestock export zones</td>
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<tr>
<td>MoLD</td>
<td>Ministry of Livestock Development</td>
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<tr>
<td>NARC</td>
<td>National Rainbow Coalition</td>
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<tr>
<td>NGO</td>
<td>Non Governmental Organisation</td>
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<tr>
<td>SSA</td>
<td>Sub-Saharan Africa</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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ABSTRACT

A large part of Kenya is Arid and Semi Arid Lands (ASALs). The ASALs carry 50% of the livestock and 25% of Kenya’s human population (Government of Kenya, 2003). Most ASAL inhabitants are pastoralists and mainly depend on livestock as source of livelihood. Despite many resources available in the ASALs especially livestock, the region characterised by high poverty levels. Therefore, there is a need to examine whether livestock marketing has played the role of translating the livestock resource into income to meet various needs. The main objective of this research was to establish how the livelihoods of pastoralist communities living in the ASALs can be improved through an efficient livestock marketing system. The study was conducted in Garissa district and data was collected in April 2009. The survey covered 180 livestock keepers and 57 traders and 17 key informants. The findings indicated that there are many constraints experienced that impede livestock marketing. The main constraints were; long distance to markets, exploitation by middlemen and low prices among others. The study came up with many suggestions on how to deal with some of the livestock marketing constraints. The study also identified the key stakeholders in livestock marketing and their roles.

The study highlighted the important role played by the livestock sector in the ASALs and amongst the pastoralists. It provides meat and milk products and contributes to food security. It also offers the main occupation and employment, income from sales of livestock and is also used as an expression of wealth status. The study showed that women play a critical role in the pastoralist livelihoods as they are generally free to own and dispose livestock and their products and hence they are empowered. Conclusions from the study are that livestock keeping is very important and is the mainstay of 80% of pastoralists who depend on it for productive capital. Also there are many benefits to local pastoralists derived from the livestock enterprise. Most important is that livestock marketing can play a leading role in poverty alleviation in ASALs if the identified constraints are addressed. The study recommends that; Major investments are required; appropriate and pro-poor policies are formulated, livestock marketing facilities be provided; timely and reliable market information be provided; diversification on sources of livelihood be sought; and the denuded environment be rehabilitated.
CHAPTER 1: INTRODUCTION

1.1 Background

A large part of Kenya is found in dry areas that experience inadequate rainfall hence, unsuitable for arable farming. These lands are referred to as Arid and Semi Arid Lands (ASALs) and cover 75% of Kenya’s land surface. A large part to the Northern and Eastern part of the country is designated as ASALs (Upton, Martin. 2000). The annual median rainfall figures range from as low as 120 mm in North Horr, < 250mm in Samburu and Wajir, 311mm in Isiolo and 700 mm in Marsabit (Herlocker, D., Nicholoson, M and Allanson, S. (Eds). 1995). The ASALs carry 50% of the livestock and are home to 25% of Kenya’s human population (Government of Kenya, 2003). The area has the bulk of indigenous species of livestock and this contributes a big portion to the beef industry in Kenya. The important livestock species in ASALs are beef cattle, camel, goats and sheep. The main livestock products are milk, meat, hides and skins.

Most inhabitants of this vast region are pastoralists and mainly depend on livestock as their source of livelihood. Pastoralist production systems are defined as those in which 50% or more of household gross revenue comes from livestock or related livestock related activities (Gamba, Paul. 2005). The pastoralist livelihood system is adapted to low, erratic rainfall (IIRR\(^1\) et al, 2004:6). Pastoralists use dry-land-natural resources sustainably where no other land-use systems can thrive (GoK. 2008). Hence, their way of life is best suited to utilise this environment. Furthermore, pastoralism is believed to be a dynamic production system (IIRR\(^2\) et al, 2004:7). The pastoral communities are largely nomadic (SNV\(^2\), 2005). Hence, most pastoralists migrate from one region to another in search of pastures and water. This migration extends to the neighbouring countries such as Ethiopia and Somalia. This is due to the harsh climatic conditions prevalent in these areas.

Kenya’s pastoralist communities constitute seven out of the country’s forty-two main ethnic groups. They are mainly the Maasai, Samburu, Pokot, Turkana, Oromo, Somali and Orma. The other two, Keiyo and the Marakwet are considered semi-pastoralists. The total population for pastoralist and semi pastoralists in Kenya is estimated to be about 4.2 million.

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\(^1\) International Institute of Rural Reconstruction
\(^2\) Netherlands Development Organisation
covering an area of 423,661 square kilometres. These communities comprise only 6.6% of the country's total population (SNV, 2005).

Despite the availability of many resources especially livestock in the ASALs, the region is generally characterised by high poverty levels and this raises a lot of concern to the inhabitants, the government, politicians, development partners and other stakeholders. While the main resource base in ASALs is livestock, the livestock keepers are quite poor with over 60% living below the poverty line of one dollar per day (GoK, 2003). Recent statistics show that poverty incidence in North Eastern province is 64% ranging from 59% in Dujis Constituency (in Garissa District) to 70% in Wajir North Constituency (GoK, 2007). Similarly, this scenario is portrayed in most other pastoralist areas in the country.

1.2 Problem Statement

The pastoralists who are majority of inhabitants of ASALs in Kenya depend mainly on the livestock resource for their livelihoods. Despite their huge livestock resource, they have lagged behind in development and have not benefited adequately from it (ILRI3, 2006). Though the region holds half of Kenya’s livestock population, the poverty levels are extremely high. According to UNDP (2002), poverty means the denial of opportunities and choices to lead a long, healthy and creative life and also to enjoy a decent standard of living, freedom, dignity, self-respect and the respect of others.

This state of affairs is prevalent all over the region and is alluded to in many documents. Hence, the ASALs have lagged behind in developmental matters that cut across a wide spectrum like education, health and general infrastructural development. Therefore, there is a need to examine whether livestock marketing has played its expected role of translating the livestock resource into cash which can be used to meet various needs.

Among many possible reasons, one may attribute the poverty situation in ASALs to poorly developed livestock marketing system as this limits effective trading. A marketing system is comprised of a number of elements; the particular products and their characteristics being transferred from producer to consumer; the characteristics of participants (e.g. the producer, the trader, the consumer); the functions or roles that each participant performs in the market;

3 International Livestock Research Institute
and the locations, stages, timetable and physical infrastructures involved (II.RI. undated). The immediate causes of poverty may be lack of access to assets and to free markets (IFAD, 2002:23).

The main market structures required to facilitate livestock marketing are either in poor condition or do not exist at all. These include slaughterhouses, processing facilities, stock routes, holding grounds, quarantine grounds, Disease Free Zones, and water facilities. In Kenya, most facilities have become run down over the years after a policy shift in the mid 80s where the Livestock Marketing Division of the Ministry of Livestock Development (MoLD) stopped being involved directly in management and direct purchase of livestock. No wonder the incidence of poverty tends to be high with poor physical market access (IFAD4; 2002:13). IFAD adds that the underlying cause of poverty has been lack of reflection of the interests of the rural poor in key political, economic and institutional processes.

The ASAL region faces a myriad of other problems and to large extent, these constraints impede improvement of livelihoods of the pastoralist communities. The constraints can only be addressed if most of the bottlenecks are addressed through the concerted efforts by the government, development partners, private sector and the beneficiaries. It is only then that one can expect the economy of the area will boom and hopefully this will result in improved socio-economic development of the people.

There are many possibilities to address the prevailing poverty situation. In order to realise agriculture’s full potential to support wider growth and reduce poverty, poor countries’ agricultural development will need to build on market opportunities (DFID5, 2005: 17). Livestock marketing is critical to development of arid and semi-arid lands (McPeak, 2003).

Marketing is an important aspect of any livestock system (Bekure and Tilahun, Undated). It provides the mechanism whereby producers exchange their livestock and livestock products for cash. The cash is used for acquiring goods and services which they do not produce themselves, in order to satisfy a variety of needs such as food, clothing, medication and schooling. As livestock raising is the core economic activity in most arid and semi-arid areas, improved livestock marketing is seen as one of the ways to improve performance of this core

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1 International Fund for Agricultural Development
2 Department for International Development

3
economic activity and reduce poverty rates (McPeak and Little, 2006). Hence, functional livestock marketing is crucial if the poverty situation in Kenya’s ASAL areas is to be addressed.

This study examined how the livelihoods of pastoralists would change if identified constraints are addressed and if there is effective participation of the relevant stakeholders in marketing of the livestock and livestock products. The study focused on the sociological aspect of pastoralists by looking at the role of livestock marketing in poverty alleviation. It focused on the interventions that should be put in place so as to uplift the pastoralists’ socio-economic status.

The study results will help inform livestock policy and therefore contribute to meeting the national objectives of reducing poverty as espoused in various development policy documents. These documents range from the Kenya Vision 2030, Strategy for Revitalizing Agriculture (SRA) and the Economic Recovery Strategy (ERS). In addition, there is also the Millennium Development Goal No. 1. Its aim is to Eradicate Extreme Poverty and Hunger, by halving the proportion of people whose income is less than one dollar a day and also reducing by half the proportion of people who suffer from hunger between 1990 and 2015.

The study will also contribute to the body on knowledge of rural development. According to Peak and Little (2006), one realises that there is a gap in the literature on livestock marketing. Indeed scrutiny of works by scholars such as Bates (1981) indicate that discussion of marketing in agricultural realm focuses heavily on food and cash crops and very little if any on livestock. Several studies have been conducted in the ASALs but they have concentrated on the technical aspects e.g. livestock production and health issues among various livestock species. The ASALs also have experienced extensive studies on the environmental issues.

1.3 Research Questions

i) Who are the main players in livestock marketing along the value chain?

ii) What roles do the various actors play in livestock marketing?

iii) What constraints impede effective livestock marketing in order for livestock keepers/pastoralists to optimise on income generation so as to improve their livelihood?

iv) What are the interventions required to improve the livestock marketing in the ASALs?
1.4 Objectives of the Study

1.4.1 Broad objectives

The main objective of this research was to establish how the livelihoods of pastoralist communities living in the ASALs can be improved through an efficient livestock marketing system.

1.4.2 The specific objectives

1. To establish the main players/actors involved in livestock marketing.
2. To establish the role of different players and their involvement along the livestock marketing chain.
3. To determine the constraints encountered in marketing of livestock and livestock products along the marketing chain.
4. To establish possible interventions that would improve the livestock marketing situation and income generation for the pastoralists in the ASALs.

1.5 Justification of the study

The poverty levels are very high in the ASAL region that is predominantly inhabited by pastoralists. This study highlights the role of livestock marketing in poverty alleviation. It also suggests some ways and means of addressing some of the constraints experienced in livestock marketing by the pastoralist communities. This information is useful to the government, development partners/agents, traders and other stakeholders in formulating appropriate interventions.

In addition, various anthropological studies have been carried out in the area through initiatives such as the Pastoralist Risk Management Project (PARIMA). However, livestock marketing is a poorly studied area and few insights exist into the actual nature of real livestock markets and trading systems in different parts of the continent (Scoones and Wolmer, 2006: 13). For instance, Schult (1998) indicates that anthropological studies ignore the marketing of livestock in their analysis. This view is supported by Peak and Little (2006) who say that livestock marketing warrants a renewed examination of what to date has been relatively under-researched topic. Livestock marketing studies are essential to provide vital information on the operations and efficiency of the livestock marketing system for effective
research, planning and policy formulation in the livestock sector (Bekure and Tilahun. Undated)

1.6 Scope and Limitations of the study

The livestock sector is very wide. It ranges from the intensive production system practised in the highlands to the extensive system in the rangelands which include ranching and pastoralism. The sector also deals with a wide range of livestock species such as poultry, pigs and cattle among others. The study concentrated on marketing of camels, cattle, sheep and goats as these are the heavily traded species in the region. The scope of the study was limited to the production area in the pastoralist set-up as a complete study along the marketing chain (from production to terminal markets) would have required a lot time and resources.

The study restricted itself to the issues pertaining to effective livestock marketing and did not dwell on the poverty as this would make the study to be very wide. The study also delineated the pastoralism in relation to livestock keeping and not to other aspects of their lifestyles and culture. It only focussed on the access of livestock and livestock products to the local market and not to the export market whose standards and sanitary requirements are very high. A range of issues that influence effective livestock marketing were examined.

Another limitation of the study was that the data was collected during the prolonged drought conditions which were ravaging the country and therefore some of the pastoralists had migrated to other areas in search of pastures and water. Therefore data was collected only from those left behind. Similarly, there was a danger of the pastoralist community focusing their situation to the prevailing circumstances which were not fully representative of the marketing system. To minimise this limitation, the research collected data from the period covering the past one year as the recall period.

1.7 Definition of key Terms

- Livestock marketing system- refers to the total set up linking the producer to the consumers for delivery of livestock and livestock products as influenced by several facilities and factors.
- Middlemen – persons who take animals from producers and traders and then negotiate on their behalf with buyers and transporters.
• Value chain describes the range of activities from the producer to the consumer. It distinguishes the stages in supply process and support services and includes production, transportation and processing. A definition adapted from the GTZ Value Links Manual, The Methodology of Value Chain Promotion, First Edition. Eschborn. 2007 says that value chain is 'a sequence of related business activities (functions) from the provision of specific inputs for a particular product to primary production, transformation, marketing, and up to the final sale of the particular product to consumers'. This is the functional view of a value chain.

• Pastoralism- dynamic and sustainable production system that tries to optimize production by moving animals to take advantage of water and grazing resources (IIRI et al, 2004:20). It is a production system and way of life in which at least 50% of household gross revenue comes from livestock or livestock related activities (GoK, 2008).

• Pastoralist- A person who practices Pastoralism. According to GoK (2008), there are two major categories of pastoralists: some are very mobile (in the driest areas), while others are more sedentary. Pastoralists use dry-land-natural resources sustainably where no other land-use systems can thrive.

• Livestock keeper refers to the producer who in the context of this study are pastoralists

• Poverty- a situation in which individuals cannot raise the income required to meet a given level of basic needs. Poverty is a multidimensional social phenomenon. It ranges from food and material deprivation to the psychological experience of multiple deprivations.

• Absolute poverty relates to a household’s inability to meet its entire basic requirements (food and non-food).

• Livelihood- how people make a living (IIRI et al. 2004: 26). It comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. According to Chambers et al in Scoones (1998), a livelihood is sustainable when it can cope with and recover from stresses and shocks; maintain or enhance its capabilities and assets, while not undermining the natural resource base.
CHAPTER 2: LITERATURE

2.1 Introduction
This chapter of the study discusses the significance of the livestock sector in the livelihoods of pastoralists and its potential role in poverty alleviation. The role of institutional support and the need for having adequate market structures to act as catalyst for trade is also discussed. The role of parastatals and cooperatives as marketing bodies are also highlighted.

The policy issues and their significance to improving the livestock sector and enhancing livestock marketing amongst livestock keepers are also discussed. The important role of animal health is mentioned as well as the linkage of gender on livestock marketing. Finally, the constraints that inhibit the livestock sector to contributing meaningfully to improving the socio economic status of the ASAL community are mentioned.

2.2 Poverty Levels Amongst Livestock Keepers
According to UNDP (2002), poverty means the denial of opportunities and choices to lead a long, healthy and creative life and also to enjoy a decent standard of living, freedom, dignity, self-respect and the respect of others. Globally, more than 2.8 billion people, close to half the world’s population, live on less than US$2 a day. Approximately one quarter of these poor people, are livestock keepers (Blench R., Chapman R. and Slaymaker T. 2003). According to Pica-Ciamara, Ugo (2005), most of the rural poor raise livestock and about 41 million are pastoralists mainly located in the arid and semi arid areas. According to Thornton K., Kruska R.L., Henninger N., Kristjanson P.M, Reid R.S., Atieno F., Odero, A.N and Ndegwa. T (2002), 22% or 336 millions of people were living below the poverty line by year 2000 in Sub-Saharan Africa (SSA). A study conducted by the International Labour Organisation (ILO) in Tanzania in 2002, indicates that the pastoral communities are in major crisis today as they are economically, politically and socially marginalized. These concerns are captured in IFAD (2002:18) by the following questions: Why is there such rural poverty alongside such production potential? What has happened? What has to change?

Concerns have been raised by various authors on the current high levels of poverty in Africa including the Eastern and Southern region. This is despite the vast reserves of natural resources found in abundance in various parts of the continent. According to Blench et al (2003), poverty statistics from ASALs portray a grim picture worldwide. This view is supported by Peak and Little (2006) who say that the ASALs contain some of the highest
poverty rates in Sub-Saharan Africa. Perhaps no population suffers more from material
deprivation and low incomes than pastoralists (Peak and Little, 2006).

2.3 Importance of livestock in economic development
The livestock sector plays a significant role to the national economies of many countries.
Livestock are one of the few means of using natural resources, and so it is perhaps not
surprising that livestock feature in the livelihoods of so many of the poor households in the
regions (ILID, 1999). According to Delgado et al (1999), livestock production is an important
source of income for the rural poor in developing countries. Livestock contribute to the
livelihoods of at least 70% of the world’s rural poor (ILID, 1999). This resource has a large
potential of alleviating poverty in this vast area (ILRI, 2006). In international trade, livestock
and livestock products account for about one sixth of all agricultural trade by value while the
value added by livestock in the global farm economy is around 40%. Meat exports (bovine
and poultry) make up half the total value (Upton, 2001).

Of the 1.3 billion poor worldwide, around 42% (555 million) depend on livestock as part of
their livelihood (ILRI, 2006). The World Bank estimates that livestock are the main
livelihood for up to 200 million pastoralists and agro-pastoralists in arid and semi-arid
environments worldwide. This is also a fact in the Kenya’s ASALs and where livestock
resource is the mainstay of this region’s economy. This region covers 80% of the country’s
land mass (Republic of Kenya, 2008).

The livestock sub-sector accounts for about 10% of the entire Gross Domestic Product (GDP)
and about 42% of the agricultural GDP (Republic of Kenya, 2008). Livestock raising
employs the majority of people and is by far the largest source of revenue generation in the
arid and semi-arid areas of Eastern Africa (Peak and Little, 2006). It provides 50% of the
employment opportunities offered by the agricultural sector and 95% of the ASAL household
incomes. It is estimated that 67% of the total red meat in the country comes from ASAL areas
(Gamba, 2005).

The main avenue for wealth creation in ASALs is through trade of both live animals and also
their products although the greatest returns lie in value addition. The role of livestock
marketing is important and if well-managed, livestock trade has the potential to lift millions
of people out of poverty (Oxfam International, 2002). There are several success stories in
Africa where livestock has played an extremely important economic role and lessons can be drawn. The livestock production systems in the Sahelian countries, which is based mostly on pastoral systems, makes it possible for beef to be produced at a globally competitive price compared to the United States and the European Union (ILRI, 2006).

In some southern African countries of Botswana and Namibia, livestock accounts for 90% of agricultural GDP (IFAD, 2002:16). Namibia and Botswana are often touted as the model which African producers must follow (Scoones and Wolmer, 2006: 14). These countries have relevant institutions that enhance trade in livestock and livestock products. They have strong and functional veterinary services, facilitative policy frameworks and adequate and efficient market facilities such as slaughterhouses, stock routes, holding grounds, quarantine grounds, ranches and water facilities, among others.

One can also draw lessons from Somalia which is still able to export animals to the Middle East despite the political turmoil prevailing. Somalia which neighbours Kenya to the East has the highest number of pastoralists (60%) in the total population (Schoronsch, 2004). In 1990 in Somalia, about 55% of Somalis were directly engaged in the rearing of livestock which was 3.3% of the continents’ livestock, including half of the one-humped camels, almost one tenth of sheep and goats combined. The sector accounted for at least 40% of the GDP while exports of livestock and their products accounts for 80% (FAO, 2004). The Somali system has always had a very strong commercial orientation and considerable numbers of animals especially the small ruminants (sheep and goats) are sold to the Gulf States (Schoronsch, 2004).

Is there any alternative livelihood in ASALs? Data from Kenya shows families in irrigation project earning annual incomes in excess of 20% than those operating small scale farms, 200% higher than those engaged in pastoralism (Bates, 1981). Though the earnings from irrigation maybe high, the environment in ASALs is very fragile and may not be suitable for irrigation due to leaching, dangers of new invasive plants (weeds), reduction of grazing lands and resistance to change by the community. A recent attempt by the government and investors to introduce sugar cane farming in the Tana Delta has been resisted strongly by the Ormas who are pastoralists and occupy areas along the Tana River. Hence, this change of livelihood can introduce conflicts among communities.
2.4 Commercialisation amongst pastoralists

Barter trade has characterized the pastoralist economy for a long time. An example is the exchange of livestock i.e. goats with donkeys; or livestock with cereals, especially during the very dry spells. It is also a cultural practice for these communities to keep livestock as a safety net for possible future drought periods and this inhibits entrepreneurship (SNV, 2005). Although pastoralists do not mainly rear animals for commercial purposes, their gradual integration into the cash economy and the frequent recurrence of drought are increasingly pushing them to sell more animals than before (Aklilu, 2002).

The pastoralists fetch very little money from the sale of livestock as they only sell in times of drought as a last resort. Land in most areas is also not enough for grazing. A contributing factor alluded by Bates (1981) is that it was taken from traditional grazers by government without compensation. This means that the communal grazing lands continue to dwindle and this exacerbates the situation. During drought, which is defined as a significant reduction of forage and or food production due to water deficiency during a rainy season (Herlocker et al. 1995), cereals prices are very high as the production is low while animal prices go down as they lose much weight.

The need for cash exchanges are however on the increase. This is to cater for foodstuffs and school fees among other needs and as such, sale of livestock in cash has become a major practice though it is always done as the last option (SNV, 2005). Commercial livestock is also becoming increasingly important with the breakdown of drought coping mechanisms (AGREF, 2005). This will provide a good opportunity for pastoralists’ involvement in livestock marketing as a means of increasing their household incomes.

The motivation behind and stigma associated with livestock marketing in the region has changed drastically since the colonial period. Indeed it has gone from a situation where the assumed view of livestock producers towards marketing was indifferent or even negative to a realisation that intervention to improve pastoral incomes and food security are highly desired (Peak and Little, 2006). Due to a lot of trainings and awareness creation, the pastoralists have started appreciating their livestock as liquidity which can be converted into cash.
2.5 Projected demand for livestock products

It is expected that demand for livestock and livestock products will increase tremendously and therefore trigger an unprecedented growth in the industry. This phenomenon referred to by Delgado et al (1999) as livestock revolution is expected to provide income growth opportunities for many rural poor by year 2020. The prediction is similar to the green revolution of the 70s that transformed grain farming and filled food baskets especially in South East Asia. This is a tall order for developing countries to realise since both the production and marketing systems are still inefficient. Another prediction is that in about two decades, a significantly changed livestock sector will produce about 30% of value of the global agricultural output (World Bank, 2001). This calls for the pastoralist production system to position itself to take advantage of the expected increase in demand of livestock and livestock products.

Africa has a large potential to tap from the predicted demand since sale of livestock and livestock products is the major source of income for the pastoralist. Local meat and meat products are produced under natural conditions (organic conditions) and this is likely to attract the health conscious consumers who form the bulk of the rich members of a society. In an improved economy, there will be a predictably higher consumption of animal based proteins which include meat and milk.

2.6 Institutional support in livestock marketing

The role of institutional support is crucial as there has been disproportionate neglect by the government. Livestock marketing provides an indispensable link between producers and meat consumers (IPAR, 2004). In marketing livestock as a commodity, various inherent difficulties have to be considered: livestock as a commodity and capital, high perishability, scattered supply, individual variability, multiplicity of uses, varied investment requirements, seasonality in trade, among others (Muthee, 2006). This then calls for investment into the development of properly functioning marketing systems where market outlets are clear and support services such as marketing information and animal health are easily accessible. There are various stakeholders involved in livestock marketing. These include pastoralists, traders, trekkers, middlemen, brokers, county/municipal councils, veterinary department, transporters, stock traders/butchers, community-based livestock groups and donor projects (Muthee, 2006). All these stakeholders have different but important roles to play in the livestock marketing chain.
Most of the marketing facilities have deteriorated in condition while land in some areas has changed from its original use and or ownership. However, some of these facilities are still used by traders while enroute to the secondary and terminal markets. Poorly developed markets mean that pastoralists cannot sell animals when they need to (IIRI et al 2004). In Kenya, most of the marketing livestock infrastructure was developed through the government’s Livestock Marketing Division in the 1960’s to facilitate marketing when the Kenya Meat Commission (KMC) was operational until its collapse in 1994 (IPAR, 2004). It had a strategic role of being a buyer of the last resort in times of need.

Efforts should focus on creating effective markets by encouraging the private sector. Getting markets working is probably the most important challenge for countries if they are to revitalise their agricultural sectors (DFID, 2005: 29). Accelerating the process of rural reconstruction (including development of market access), expanding choices, improving access to information, creating the conditions for equitable market relations for the poor—all these must be at the very top of the development and poverty-reduction agenda (IFAD, 2002:24). The private sector may not be attracted into the region due to the poor infrastructure and insecurity.

There are arguments as to whether free market principles of demand and supply should be left to operate in the pastoralists set-ups. The mainstream literature is unambiguous that the private sector’s poverty reducing role arises from the free play of market forces (USAID, 2004). However, it is quite unwise to let livestock trading in the ASALs to operate fully under those tenets as the challenges facing this region are enormous and therefore there is need for intervention on many aspects. Market liberalization will not contribute to the reduction of poverty until better market linkages have been forged (IFAD, 2002:24).

Infrastructural development is crucial for properly functioning marketing systems. According to Awoundo (1987) there is tendency to concentrate development efforts in a few selected urban centres and leaving the rural areas with poorly developed infrastructure. Poor transport infrastructure limits market access from many farmers in the developing world (DFID, 2005: 11). During the formulation of the Poverty Reduction Strategy Paper (PRSP) through a participatory process involving both domestic stakeholders and development partners, the first priority identified was to improve marketing systems and infrastructure. In all pastoral districts this was the highest ranked constraint. The current system where live cattle are
trucked up to 1,000 km along poor roads cannot develop the sector. Further, deficiencies in electricity supplies and telecommunications are widening this “infrastructure gap”. The government has not provided adequate facilities or has neglected the existing ones. Marketing structures constructed either through government projects or NGOs are in poor condition where they still exist (IPAR, 2004). According to (Aklilu, 2003), market yard facilities such as feed and water troughs, livestock sales, loading ramps and crushes have been neglected by the councils who continue collecting taxes. As stated by USAID (2004), the government should provide a favourable investment environment.

The government needs to play a catalytic role in order to spur development in these and other similar areas that are lagging behind in development. There are four main reasons given to justify development interventions to improve functioning of livestock markets (Peak and Little, 2006). These are environmental protection, income and livelihood improvement and poverty reduction. Any responsible government is obliged to contribute to these goals. The Ministry of Development of Northern Kenya and Other Arid Areas was created under the Kenya’s coalition government early in 2008. If well funded, the Ministry will play a leading role in fostering the area’s development and therefore help reverse the current scenario.

To improve the situation, one can draw lessons from the success stories of the Giant Tigers. In many successful Asian economies, the state engaged in markets and invested heavily in infrastructure and services in order to get agriculture growing as a means to enabling wider growth and poverty reduction (DFID, 2005:17). The document adds that as countries develop, and the private sector matures, the rationale for the state to perform this function diminishes.

2.7 Role of marketing bodies e.g. cooperatives and parastatals

Besides employing a significant proportion of the population, marketing adds value to the product at each point of transaction (IPAR, 2004). The past failure of many state organisations is undeniable, but in many instances the private sector is not providing a viable alternative (DFID, 2005: 14). Though state parastatals e.g. Kenya Meat Commission (KMC) and Kenya Creameries Cooperative (KCC) play a leading role in marketing, they have not always been successful. According to Stambuli (undated), state enterprises that maintained unmitigated dominance exacerbated pressure on the fiscal budget, claiming more resources to cover their losses, while their government resisted demands for restructuring.
The KMC was established under Cap 363 of the laws of Kenya to promote the country’s meat industry through purchase and slaughter of livestock and marketing of livestock products in the local and export markets. An additional role of KMC was to act as a strategic drought management tool and a buyer of last resort. KMC was also a tool for stabilizing livestock prices (GoK, 2004). The institution ceased operating in 1994 due to mismanagement but was later revived in 2003 by the former NARC government but is reportedly operating under capacity due to marketing challenges making it difficult to compete in the local and export market. The KCC fell under similar fate and was also rescued through the states’ intervention where millions of tax payers’ money was used.

Cost of marketing in cooperatives is very high. According to Bates (1981), recent research reports a sharp inflation in the Kenya costs of marketing. Bates adds that the rising costs of marketing result from plain inefficiency, poor storage, inefficiently scheduled transport and disposal, careless contracting in both procurement and sales. He also says that this problem is not confined to Kenya.

There have been several factors leading to poor performance of these organisations. One reason is interference by government and unsustainability of government parastatals (Bates, 1981). An example given is lowering of prices. The author says that both the KMC and KCC were compelled by the government to offer their products on the internal markets at prices that were well below the world price for meat and dairy products. This may have contributed to their collapse before the recent re-opening.

When confronted by the need for revenue, however, states have always found means of diverting funds from these agencies to the public coffers. These institutions also are turned into cash cow by individuals who find ways of siphoning resources into their pockets thereby enriching themselves. All these problems bedevil the marketing boards, and all appear to be exacerbated by their monopsonistic status; because they are able to set the prices, they can afford to be inefficient, for they can push the costs of their inefficiency to the farmers. A monopsony is a single buyer; and where there are many sellers but only one buyer, the buyer can strongly influence the price at which economic transactions will take place (Bates, 1981). Luckily, apart from KMC and KCC, there are now many private sector buyers for livestock products (meat and milk) especially in the major towns like Nairobi and Mombasa.
A point to note is that corruption in these institutions is not confined to public servants. Similar tendencies have arisen when the state has empowered cooperative societies to serve as marketing channels (Bates, 1981). This is exemplified in coffee cooperatives for small scale coffee producers, who market through cooperative societies, obtain roughly 30% less of the portion of the world market price compared with large scale plantations who market directly through the coffee board (Bates, 1981).

It is recorded for crop farmers that when producers are numerous and widely scattered, the cost of organising are higher (Bates, 1981). This is also true of livestock producers in pastoralists’ set-ups where producers are scattered in a large geographical area and in some cases migrate away altogether. Hence, it is difficult to organise pastoralists (livestock producers) into a strong marketing group as the costs of mobilisation and management maybe high. There is limited presence of marketing groups or co-operatives, with the result that most producers are responsible for their own marketing (IPAR, 2004). I have confined my discussion to the two main parastatals in the livestock sector. However, many other parastatals in the overall agricultural sector have performed equally badly.

2.8 Policy and legal framework

With the right policies and supportive investment at local, nationalistic and global levels, today’s agriculture offers new opportunities to hundreds of millions of rural poor to move out of poverty (World Bank, 2007). The Bretton Woods’ institution adds that pathways out of poverty open to them by agriculture include smallholder farming and animal husbandry. According to Pica-Ciamara (2005), the policy challenge therefore is not only to create conducive macroeconomic and institutional environment, but also to make the growth process pro-poor, and livestock holders deriving benefits from market opportunities and escaping low-income equilibria. By adapting policies that confound the operations of markets, third world governments undercut the productive potential of their farm population (Bates, 1981).

If the livestock sector is well managed and supported, it has the potential of alleviating poverty and generating wealth that will further lead to economic growth. Despite this, Kenya allocated only 1.22% of its budget to the sector (Aklilu, 2003). The Maputo Declaration signed by the heads of States committed governments to allocate at least 10% of national budgetary resources towards the agricultural sector (which includes livestock) by 2008.
Perhaps the importance the country attaches to the sector can be seen in various documents. For example, Kenya’s PRSP had a single paragraph referring to livestock production in semi-arid areas; envisage meat processing and animal health (Blench et al. 2003). Further, there was no recognition of the important role played by pastoralism in Kenyan economy. It seems that this situation is not unique to Kenya. In many countries, public expenditure on agriculture has fallen, often to the point where even the basic functions, including regulatory and legal systems and infrastructure cannot be provided (DFID, 2005:14). Also the document adds that important support services such as extension and veterinary have also contracted.

According to Pica-Ciamara (2005), it is found that policies are consistent across geographical regions and agro-ecological zones and largely neglect the livestock sector. There are indications that there have been efforts in formulating some policies. However, these policies nevertheless seem to have some inherent weakness as highlighted in Pica-Ciamara (2005) through the following examples:

i) Agriculture and livestock sector policies are not adequately addressing the most binding constraints affecting livestock holders.

ii) Livestock policies have been either completely overlooked or examined as a mixture of macroeconomic, agricultural and livestock sub-sector interventions, which do not always benefit poor livestock holders.

iii) Most policy documents fail to appreciate the role of livestock in poverty reduction; in particular they treat livestock production and poverty disjointly and assume that the overall objective for the sub-sector is increased meat/milk rather than militating against poverty.

Significant reforms are ongoing in the financial sector, in animal health and in extension services delivery, while the issues of marketing and market reforms are marginally addressed. It is clear that national governments should formulate policies and enact laws that address inequalities of their people. For Kenya, this can be done by formulating favourable policies that will address the constraints hampering trade of livestock and livestock products in ASALs.
2.9 Animal health and Livestock Marketing

The veterinary requirements applied for local trade are not as stringent as those for the export trade. This does not in any way undermine the necessary precaution for the in-country trading but only ensures minimum safety standards are met and at the same time not strangle the local trade. As Scoones and Wolmer (2006: 16) observe, food safety regulations for local trade and markets therefore should be geared to local needs and conditions not the precautions of external trade. Several livestock diseases are endemic in the region and outbreaks of diseases such as the Rift Valley Fever causes a lot of economic losses to the livestock keepers and the country as happened in 2006.

In Kenya, there are several regulations that govern the livestock industry. Those relevant to the livestock marketing i.e. movement, slaughter, export of live animals and marketing of processed products are covered in the following Acts:

- The Animal Diseases Act Cap 364
- The Meat Control Act Cap 356
- The Stock Traders Licensing Act Cap 498
- The Hides Skins and Leather Trade Act Cap 359
- The Kenya Meat Commission Act Cap 363
- The Public Health Act Cap 242
- The Stock and Produce Theft Act Cap 355

When these laws are applied firmly, the pastoralists view these actions as punitive. For example, when there is a disease outbreak, quarantine is imposed through Animal Diseases Act Cap 364. This makes it illegal to move animals from the infected zone and therefore renders the livestock markets closed during such periods. Meat Control Act Cap 356 and the Public Health Act Cap 242 regulate handling of meat and meat products from slaughterhouses to the consumers.

The live animals cannot be moved after 6 pm as this is prohibited by authorities. This elongates the duration of delivering the animals to a terminal market. It is tedious for the animals which have to be held overnight along the route without water and proper feed.
However, all these laws are meant to control disease outbreaks, prevent spread of diseases and most important safe guard the health of animals and human beings. Hence, the laws should be applied prudently and the department of veterinary services should be facilitated adequately to conduct their role effectively. When the disease situation is under control, the livestock trade can thrive. Proper veterinary services are crucial if livestock marketing is to thrive. In addition, education of pastoralists on the need to support disease control measures such as vaccination and livestock movement control should be given more attention.

2.10 Gender Issues in Livestock Marketing
There are important gender issues which relate to livestock marketing especially amongst the pastoralists. According to IFAD (2002:15), there is substantial agreement that woman-headed households are disadvantaged in their access to land, livestock, assets, education, health care, and credit and extension services. The issue is not only markets. It is also assets and the challenge of securing the rights of the poor to the land and water that are at heart of their livelihoods (IFAD, 2002:24).

The pastoralists' culture is very strong on gender issues. Ownership and control of resources on gender basis is quite clear in ASALS. Women have been identified as the major managers of small ruminants (sheep and goats) in most production systems (Valdivia, 2000: 36). The author adds that studies show that women control of small ruminant income benefits their families. Sheep and goats when in control of women can be liquidated for investment purposes. Unlike cattle, which tend to be in the domain of men, be it for market, cultural, or social reasons, sheep, goats and poultry are owned by women. The women market the sheep, and control the income from this enterprise. Hence, this access enables womenfolk to meet some of their basic needs.

2.11 Challenges encountered in livestock marketing
In marketing livestock as a commodity, various inherent difficulties have to be considered: viz. livestock as a commodity and capital; high perishability, scattered supply, individual variability, multiplicity of uses, varied investment requirements, seasonality in trade, among others (Muthee, 2006). Hence, increased trade is not an automatic guarantee of poverty reduction. The experience of developing countries exposes the gap between the great potential benefits of trade on the one side, and the disappointing outcomes associated with growing integration through trade on the other (Oxfam International, 2002:7).
To ensure that livestock keepers exploit the potential of livestock resource in order to reduce poverty and increase their wealth, impeding constraints must be tackled by those concerned. Some of the factors constraining market development are: insecurity through cattle rustling, recurrent droughts, low literacy levels, endemic livestock diseases and inappropriate policies which hamper rather than facilitate trade. Others are high animal health costs and delivery problems, poor or absent marketing infrastructure, poor roads, insecurity, lack of organized markets and lack of credit facilities just to mention a few. For international trade, there are stringent measures which the developing countries find difficult to meet e.g. sanitary and phyto-sanitary measures (CLIP, 2003). Some of these constraints are discussed below:

The producers are exploited by middlemen in the livestock trade. Too many middlemen affect the efficiency of the livestock markets in the region. In the northern rangelands, many livestock keepers engage in very little direct livestock trading and hence, the involvement of middlemen reduces the profit margin for the livestock keepers (Aklilu, 2003). It is also known that middlemen form cartels at terminal markets such as Njiru and Dagoretti markets in Nairobi and Kiambu respectively. This therefore locks out the livestock producers from trading directly with the buyers and therefore reduces their profits. Due to the involvement of middlemen, the producers' profits are minimised. These can range from 47% to 52% depending on the butchery outlet in the market chain (Aklilu, 2003).

Another major challenge is to encourage monetarization of pastoralist economies. Pastoralists are not always keen on selling their animals even in times of hardship. This is because the large numbers act as a security against future loses and also as wealth status. This situation is not unique in Kenya. In Botswana, traditional farmers regard cattle as a financial buffer mechanism, only to be used when cash shortages are experienced. This factor affects the continuity of marketing and causes producers to become inconsistent in terms of supply with a direct implication on sales through the various channels (Nkhori, 2004:7).

The attitude of pastoralists in commercialisation is highlighted by McPeak and Little (2006) who observed that the household livestock supply curve appears to be modestly backward-bending i.e. sales volumes respond negatively, to increased prices. This is interesting as one would expect that higher prices would encourage sales. However, this could be happening when the animals have recovered from a drought and the livestock keepers try to build their herds from losses incurred. Hence, the owners may not have motivation to sell the surviving
animals and these will lead to short supply in the market. Of crucial importance is that strategies of enhancing the cash economy amongst the pastoralist communities be put in place.

Another major concern in livestock marketing is transport. According to Aklilu (2003), transport constitutes a major cost factor in livestock trading. In Kenya, 25-40% of the total cost of livestock brought to terminal markets from the Northern pastoral areas is accounted to transport since truck owners charge more for livestock than for consumer goods. Many of the livestock traders do not own trucks; such traders incur considerable costs and realise lesser margin on a truckload basis than those with their own means of transportation. It costs between Ksh 2500-3500 per head of cattle and Ksh.357-500 per sheep/ goat for transport to Nairobi (Aklilu, 2003).

Livestock traders are also taxed heavily along the marketing chain. Livestock are the most repeatedly (and perhaps the most highly) taxed agricultural commodity in the region (Aklilu, 2003). In addition to numerous official taxes, there are unofficial levies that amount to exploitation of the traders by various officials and at different points along the marketing chain. The amount paid by Kenyan livestock traders is significant (Aklilu, 2003).

Another concern is insecurity which becomes a major hindrance to the development of the ASALs. The ASALs experience insecurity due to banditry activities that leads to loss of animals and also may cause physical harm to livestock keepers or even loss of lives. A lot of resources are used by the government and development workers to maintain security. This insecurity is mainly manifested in cattle rustling and is motivated by cultural beliefs, demand for dowry, perceived heroism and expectation of a particular age-set. Interestingly, insecurity may actually increase livestock market participation rather than discourage according to Peak and Little (2006). This assertion is debatable since the victims may not have any animals left to sell in the primary market. Besides the moral issue of trading in stolen property, there is also violation of Kenyan laws which sets a maximum jail term of seven years if one is found with stolen livestock.

Proper infrastructure would be a facilitating factor to trade. However, in the ASALs, physical infrastructure such as roads is almost non-existent in most areas or is in a dilapidated
condition. This hampers effective trading due to high costs of transactions and increased time taken to travel in the vast region.

Droughts are recurring more frequently with severe consequences as they cause a lot of misery. The current increase in drought frequency and severity has triggered a downward spiral in disaster vulnerability and poverty (German Agro Action in United Nations, 2008). The recurring droughts lead to deteriorating livestock conditions and high mortality of livestock. Worse still, this situation at times results in loss of human lives.

To exacerbate the challenges mentioned above, the production in developed countries is heavily subsidised by the state as opposed to the developing countries. In some European countries, subsidy can be as high as 2 USD per cow. Hence, developing countries find it harder to export their produce and local farmers face unfair competition in the markets (DFID: 2005: 12). This results in unfair trade since it becomes practically impossible for local products to compete in the international market. In contrast, production quota is not a problem to the extensive pastoralist production systems which are dominant in the region and Africa in general. With abundant labour in most of these countries, livestock becomes a sector which can be depended upon to generate wealth so long as the quality of products is improved and production costs minimised. The full potential of markets cannot be realised unless poor countries have access to markets in rich countries (Oxfam International. 2002).

Environmental degradation is also an issue of concern especially at watering points where large herds of animals gather frequently. In addition, there are several invasive plants such as *Prosopis juliflora* popularly known as ‘Mathenge’. This is a perennial deciduous thorny shrub that occupies large tracts of grazing land and hampers proper utilization of the environment apart from causing harm to both humans and animals.

In addition to the challenges mentioned above, there has not been a clear government policy to support livestock marketing and the general development of ASALs. All these problems lead to high economic losses to the livestock keepers. Development initiatives by government and donors have not yielded much positive and long lasting change. Perhaps it is due to the aforementioned issues that the government in 2008 created a new ministry to address the challenges afflicting the region.
While most constraints are similar across the continent, some are fundamentally unique to specific areas. The constraints are also not always addressed uniformly. For instance, livestock traders in Somalia manipulate social relations to circumvent problems of insecurity (Peak and Little, 2006). To address this momentous task of reducing the constraints, concerted efforts of the local and central governments, NGOs, development partners and the community members is mandatory. Under favourable environment, trade in livestock and livestock products is likely to increase. Some of the regional countries are attempting to address this by; improving their market infrastructure, addressing the endemic disease situation by creation of livestock export zones (LEZs) and enacting favourable policies. A case in point is the Sudan Livestock and Marketing Project which filled a major need in Sudan’s livestock and marketing systems (World Bank, 2001).

The review of literature surrounding the marketing of livestock and livestock products indicate that rampant poverty prevailing in the ASAL areas of Kenya can be alleviated. The benefits will accrue to many along the livestock value chain e.g. the producers, the traders, the animal health service providers and those involved in value addition of the livestock and livestock products. This is especially true as the demand for animal protein is projected to increase tremendously by year 2020 according to Delgado (1999). The prevailing constraints to livestock marketing have resulted in reduced and fluctuating incomes accruing to producers, thus limiting the potential of livestock sector as a vehicle for poverty reduction (GoK, 2001; 19). There is a need to address the prevailing constraints and also put in place an enabling environment that will catalyse trade.

2.13 Theoretical framework

According to Podolny (2007), a large number of sociologists have been seeking to demonstrate that the operation of the market can be better understood if it is conceptualised as a social mechanism. Podonly adds that economic sociology draws on sociology’s broader corpus of analytical constructs to rethink the operation of the market. Hence, a number of theories will be used to deepen our understanding of the linkage of marketing and sociology. These include the modernisation theory and the social exchange theory.

The modernisation theorists explain lack of modernity in third world countries. Modernisation theory categorises societies as either modern or traditional. The modern
societies are the rich north while the traditional societies are the poor south. The theory blames the victim for failing to develop and the theorists are therefore referred to as internalists. This theory takes a simplistic approach of underdevelopment in our societies through the dichotomy of comparing a developed society and an underdeveloped one. Modernization theory argues that the problem is internal, and that the only solution is for third world governments to drag their people out of a "traditional" way of life and into a modern, capitalist future. This perspective ignores the problem of damage already done to the supposedly traditional way of life in the third world, as well as demanding that the world’s poor ignore the ecological and moral problems attached to capitalism, as have the rich countries. From a modernization perspective, the degree of industrialization, urbanization, and cultural values are the main indicators of change in development in a country.

This is familiar in Kenya where pastoralists’ communities are blamed about their lack of development without understanding and appreciating the many challenges encountered in their environment. Manufacturing is equated to modernity yet there are very few if any manufacturing facilities in the ASALs. Hence, one can postulate that the region lacks modernity. If a processing facility such as a modern slaughterhouse is established as is being planned through the government, the pastoralist would be expected to provide their animals as raw materials which would be processed and sold at a higher value by the owners of capital. Patterns of change in Third world countries are largely determined by international political and economic forces, these forces originate from the industrial led nations (Bates, 1981).

The traditional society is stagnant and unchanging (Isbister, 2001). Its values are spiritual and not values of individual self-betterment. Rhythms of life are circular and not linear and progressive. Traditional world is emotionally comfortable, a world in which each person has a place that is secure. The traditional person identifies with his or her ancestors and emulates them. Routine work is performed to maintain one’s place in the society. They lack innovativeness and there is no distinction between daily life and spiritual life. This to a large extent defines the pastoralists’ way of life. Citizens with traditional psychological and cultural traits place less value on achievement, hard work, investment, savings and other such characteristics. They emphasize subsistence living and cultural values embraced by local communities and religions. They have traditional economies, characterized by low levels of industrialization, very small middle class, scarcity of food and high rates of unemployment.
As part of modernisation process, the peasantry is compelled to surrender its resources to the upper class, to the state and the industrial sector (Bates, 1981). In the pastoralists' context, what comes to mind is the exploitation by middlemen and excessive taxation of livestock traders in livestock marketing. This can be explained by modern exchange theory by George Simmel who talks of tension of relationships arising from actors who try to manipulate a situation thereby increasing the potential of conflicts. According to Bates (1981), resources from agriculture are appropriated from peasants to meet the needs of businessmen and industrialists.

Another theory relevant to the study is the Social exchange theory which was initiated by Hormans (1958). It was developed to understand the social behaviour of humans in economic undertakings. Exchange theories make use of rewards and costs and resources when discussing the foundation of interpersonal exchange. According to Zafirovski (2003), the key tenet of social exchange theory is that human behaviour is in essence an exchange particularly of rewards or resources of primarily material character (wealth). The theory views actors as dealing not with another actor but with the market responding to various market characteristics. It proposes that social behaviour is the result of an exchange process. Social ties among market actors are seen as conduits for information, about exchange opportunities and conduits for trust; stronger social relations allow for the sharing of more complex information between the buyer and seller than simply price and quantities (Podolny (2007).

The theory also proposes that human beings always act under constraints but they still compete with one another in seeking to make profits in their transactions. The purpose of this exchange is to maximize benefits and minimize costs. According to this theory, people weigh the potential benefits and risks of social relationships. When the risks outweigh the rewards, people will terminate or abandon that relationship. There are several actors in livestock marketing and their dealings can be explained by this theory. Actors in exchange can be, not only individuals but also groups, and that in-group processes and intergroup relations are more complex than being sets of market transactions (Zafirovski, 2003). In the study, these actors are the traders, producers and the middlemen. This study related to exchange theory and through participatory analysis sought people's solutions on how their livelihoods can be improved by improvements in livestock marketing.
Conceptual Framework

The study aimed at finding out why poverty in ASALs is rampant despite prevalence of a large livestock resource. A major assumption is that if an effective livestock marketing system is in place, the pastoralists will have an opportunity to sell their livestock and livestock products. The study’s empirical questions will help explain the following:

a) That to have an effective marketing system in place some major constraints should be addressed. Most of the bottlenecks can be addressed through the concerted effort by government, development partners and the beneficiaries.

b) Effective marketing leads to improved sales and higher profitability for the livestock keepers. It is important to note that commercial livestock is also becoming increasingly important with the breakdown of drought coping mechanisms (AGREF, 2005).

c) With more involvement of pastoralists in livestock marketing there will be more cash flow. It is expected that the economy of the area will boom and this will result in socio-economic development of the area.

However, increased trade is not an automatic guarantee of poverty reduction. The experience of developing countries exposes the gap between the great potential benefits of trade on the one side, and the disappointing outcomes associated with growing integration through trade on the other (Oxfam International, 2002:7).

Effective livestock marketing systems entail having the adequate supply and demand. Hence, there should be enough good animals offered for sale and also willing and able buyers. Generally, it also requires that there is a “place” i.e. market arena for exchange of goods (animals) to take place. This requires availability of proper facilities and relevant institutions and actors (Veterinary department, Livestock Production Department, other government agencies, civic authority, traders, middlemen, transporters, NGOs and service providers among others) to play their designated roles.

This is expected to generate income among various players and pastoralists in particular. This will in turn provide the pastoralists with sufficient income to meet their basic needs and improve on their livelihoods. Several factors influence the efficiency and effectiveness of the marketing system. This includes climatic conditions, animal diseases, policy and legal...
framework, security, market forces, culture, environment among many others. If all these factors are favourable, the livestock marketing system is expected to thrive and therefore ultimately lead to improved livelihoods through income generation and creation of employment. This would be expected to have an impact in poverty reduction amongst the pastoralists in the long run. It is also expected that the economy of the area will grow and this will result in socio-economic development of the area.

The following framework explains the potential role of livestock marketing in income generation. It also shows the need for conducive environment that includes favourable climatic conditions, supportive policy, proper security, proper infrastructure, adequate demand, controlled animal diseases among others. With increased income, the framework postulates that there will be positive impact in terms of improved livelihoods. All these will be answered by the research questions that look at 1) various players and their roles in livestock marketing 2) main constraints and 3) possible interventions.

Figure 1: Schematic representation: Expected Impact of an Effective Marketing System

Source: Author (2009)
CHAPTER THREE: METHODOLOGY

This section of the methodology includes the research design, discussion of the site and its description, sampling procedures, sources of data and data collection procedures. It also includes the units of analysis and observation and finally the data analysis tools used.

3.1 Research Design

The research design for this study was survey method. Information was sourced from the livestock keepers and traders through interviews using pre-tested questionnaires. For discussions with key informants, a guide with open ended questions was used. The key informants included government officials from several ministries and or departments, officials of donor funded projects the Kenya Livestock Marketing Council (KLMC) officials, NGO representatives and political leaders among others. Direct observation also played a key role in providing information. The information collected included the community’s perception of poverty, income levels, main types of livestock reared, main market outlets, main players and their various roles; and the major constraints experienced in livestock marketing.

3.2 Site selection and description

This study was conducted in Garissa district in the North Eastern Province. The original Garissa district was subdivided by the government into three new districts i.e. Garissa, Lagdera (in May 2007) and Fafi (in July 2007). The old Garissa district has an estimated total human population of 430,414 people, a total area of 35,310 km², and 61,488 households. Garissa (after the subdivision) now has 56,881 km² with four divisions (Central, Sankuri, Balambala and Danyere), total human population of 137,493 and 19,642 households. The administrative divisions selected for data collection Sankuri in Garissa District and Daadab (in the newly curved Lagdera District). Sankuri division covers 1952.2 km², has a human population of 11,713 (1999 national census) and population density of 6 persons/km². Daadab covers 4505.9 km² a human population of 103,671 (1999 national census) and density of 29 persons/km².

The dominant agronomical occupation is nomadic pastoralism. Most of the inhabitants of Garissa are ethnic Somalis who are pastoralists. The major clans in the region belong to the Ogaden sub-clan of the Somali Darod. There are also a small number of other minority tribes
commonly referred to as corner tribes. The district was selected as it is representative of the pastoralist communities and is easily accessible from Nairobi by an all weather tarmac road. The district has a lot of livestock marketing activities and is the main gateway to the other regions of the country that provide the secondary and terminal markets.

Garissa Market where livestock traders' data was collected is located within the Garissa Municipality and is among the largest and most vibrant livestock markets in Kenya. According to the District based MoLD officials, this is the largest and most important cattle market in Southern "Somali Cluster" and the biggest livestock market in East and Central Africa. The DLPO's 2008 reports indicates that the market handles 5200 cattle, 900 goats, 500 sheep and many camels per market day. The Garissa livestock market operates every Wednesday. Its market catchments include Southern and Central Somalia, Southern Ethiopia, North Eastern Province and Isiolo District. It is both a terminal market and transit market for Nairobi, Athi River, Mombasa and other major towns.

3.3 Sampling design and Sample size

The research targeted key stakeholders in the livestock marketing sector i.e. the pastoralists (livestock keepers) and livestock traders from within and outside the district. The administrative divisions covered by the study were Sankuri in Garissa District and Daadab (in the newly curved Lagdera District) and these were purposively selected through a non-probability design by consulting the District Livestock Production Officer (DLPO). This gave a good comparison as Sankuri is near Garissa town while Daadab is over 100 kilometres away. The livestock keepers in Daadab division were randomly selected through single stage sampling design from a sampling frame based on a list of livestock keepers availed by the UNDP's Millennium Villages Project. Those from Sankuri Division were also randomly selected through convenience or accidental sampling by counting and skipping several manyattas. The traders were selected by convenience sampling through the assistance of a Livestock Production Assistant from the MoLD based at the market. These traders come from several parts of the country such as Nairobi, Mombasa, Thika, Mwingi, Kitui, Wajir and Garissa town among many other places.

The sample had representation of both men and women. The sample size covered 180 livestock keepers (67 males and 113 females) in the two divisions and 57 livestock traders (4 males and 13 females) at the Garissa livestock market. This was found to be adequate as it
would have required a lot of financial resources and time to cover a larger sample. In any case, the information gathered from the livestock producers and traders was triangulated to improve on data reliability and validity by in-depth interviews of the key informants.

The 17 key informants included the Dujis (Area) Member of Parliament and Assistant Minister for Livestock Development. 2 Ministry of Livestock Development staff in the District, 2 Municipal Council officials, 3 NGO representatives, Leaders of various Livestock Marketing Associations at the district and in Nairobi and ALRMP officials based in the district and in Nairobi.

3.4 The unit of analysis and the unit of observation

**Unit of Analysis:** According to Trochim, William M.K. (2006) the unit of analysis is the major entity that you are analyzing in your study. It is the focus of the research where analytical process is carried out. The unit of analysis for this study is the livestock keepers and the traders.

**Unit of Observation:** The unit of observation for livestock keepers was the household. For the livestock traders, the unit of observation was the Garissa livestock market. This is where the observation was made i.e. where the main data was collected. Due to the migratory nature of the inhabitants and the severe drought at the time of the study, some people especially males had migrated.

3.5 Sources of data

Data for this study was sources from primary and secondary sources. The primary data was collected using pre-tested questionnaires administered to livestock keepers and traders while detailed discussions were held with key informants. Secondary data was sourced from various Ministry of Livestock Development reports.

3.6 Data collection procedures

Collection of data was through face to face interviews using questionnaires administered to both livestock traders as well as livestock keepers. These questionnaires had both closed and open ended questions. Due to the language barrier, data collectors who speak the indigenous Somali language assisted in interviewing the livestock keepers as well as the traders of
Somali origin. An interview guide was used for discussions with key informants. Throughout the study, visual observations were made so as to reinforce what the respondents had shared.

3.7 Data analysis

The data collected was analysed to give key findings of the study. The data was analysed using Statistical Package for Social Scientists (SPSS 11.5 for Windows) and the open ended questions were coded according to major themes or issues. Charts and graphs were generated using Microsoft Office Excel 2008. The information gathered from the respondents was triangulated by in-depth interviews of the key informants. The results have been presented in the form of descriptive and inferential statistics, including graphs, pie charts and frequencies in form of percentages.
CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

The field data was collected from 3rd to 10th April 2008 in Sankuri division in Garissa and Daadab division in Lagdera district. The findings are discussed on the basis of analysis of qualitative and quantitative data collected from the livestock keepers (pastoralists) in the two divisions and the livestock traders operating at Garissa Livestock Market. The information gathered from key informants in livestock marketing and livestock industry in general has also been synthesised.

4.1 PERSONAL CHARACTERISTICS

4.1.1 Livestock keepers

Livestock keepers are the producers and are basically pastoralists. Majority of the respondents (94.6%) interviewed were livestock owners while 4.2% were employees. Among the 180 livestock keepers interviewed, 113 were females while 67 were males. From the survey conducted, the livestock keepers at HH level are disaggregated as follows:

Table 1: Livestock keepers’ disaggregation at HH

<table>
<thead>
<tr>
<th>Livestock keepers’ disaggregation at HH</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male household heads</td>
<td>46.4</td>
</tr>
<tr>
<td>Female spouses</td>
<td>40.6</td>
</tr>
<tr>
<td>Daughters</td>
<td>6.7</td>
</tr>
<tr>
<td>Sons</td>
<td>5.7</td>
</tr>
<tr>
<td>Son-in-law</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Table 2: Marital status of the livestock keepers’ respondents

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>90.6</td>
</tr>
<tr>
<td>Widows or Widowers</td>
<td>5.0</td>
</tr>
<tr>
<td>Single (unmarried)</td>
<td>4.4</td>
</tr>
</tbody>
</table>

The average (mean) number of wives was 1.44 and ranged from 1 to 7. The number of children per household ranged from 1 to 20 with an average of 6. Other members who lived within the HH were relatives such as cousins (average of 2.32/HH) and grandparents (average
of 2/HH). The size of the household and its dependants has a direct bearing on the household head as he/she is expected to provide support for their upkeep and other financial needs.

4.1.2 Livestock Traders

The livestock traders are of mixed origin as they come from various destinations such as Wajir, Mwingi, Kitui, Thika, Nairobi, Mombasa, Garissa town among other places. There are also traders from the neighbouring Somalia. The total number of traders interviewed was 57 (44 Males, 13 Females). The table below indicates their ages:

Table 3: Age of traders (years)

<table>
<thead>
<tr>
<th>Age of traders (years)</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male (N=44)</td>
<td>25</td>
<td>67</td>
<td>46.26</td>
</tr>
<tr>
<td>Female (N=14)</td>
<td>28</td>
<td>67</td>
<td>43.07</td>
</tr>
<tr>
<td>Overall (N=56)</td>
<td>25</td>
<td>67</td>
<td>45.46</td>
</tr>
</tbody>
</table>

On the overall, the average age of traders was 45 years and ranged from 25 to 67. This implies that those dealing in livestock trade are chronologically mature persons.

4.1.3 Education levels

Education level attained by the livestock keepers and traders is depicted in the table 4 below:

Table 4: Highest education level attained by respondents (%)

<table>
<thead>
<tr>
<th>Category</th>
<th>No formal education</th>
<th>Primary level</th>
<th>Secondary level</th>
<th>Tertiary training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock keepers</td>
<td>86.8</td>
<td>10.9</td>
<td>1.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Traders</td>
<td>70.8</td>
<td>25</td>
<td>4.2</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 4 shows that majority of the livestock keepers as well as the traders had no formal education. Very few had attained secondary level or attended any tertiary training. The findings imply that the illiteracy level was high. However, 46.3% of the livestock keepers had attended *duksi*<sup>6</sup>, the Islamic religious based informal education compared to 45.8% of the traders.

<sup>6</sup> Islamic religious based informal education
4.2 LIVESTOCK PRODUCTION AND RELATED ISSUES

4.2.1 Animal Husbandry Practices

Proper feeding, animal health care and breeding are some of the animal husbandry practices required to keep the animals healthy and improve their productivity. Hence, animal health interventions such as vaccinations, de-worming and spraying against external parasites are practised by a large proportion (93.3%) of livestock keepers. Those who practised at least one aspect of improved husbandry especially feed supplementation with forages were 94.4%. Improved animal breeding through use of improved breeds was practised by 28.3% of the pastoralists’ households while 68.3% practised improved livestock feeding which entails supplementation of the normal browse.

4.2.2 Drought Effects

At the time of the survey in April 2009, drought was already ravaging the region and access to pastures and water posed a major challenge. Hence, most of the livestock keepers (95.3%) indicated that they have experienced problems in rearing livestock. About 54% had experienced livestock mortalities between one to two animals (mean of 1.46) due to drought. In addition, 32% of the HHs indicated that on average, four members per household had migrated to other areas. The maximum number of persons per HH that had migrated was 30. They had migrated with an average of 6 (six) camels, 15 cattle and 49 sheep/goats.

4.2.3 Access to Water for Livestock

Water is a major nutrient for livestock. Water for both animals and household was sourced from a well (94%), a dam (26%) or a river (67%). In Sankuri division, majority of people accessed water from River Tana (65%) which passes nearby while in Daadab division, majority sourced water from a well (81%). The time taken to access water ranged from 2 minutes to 3.5 hours depending on location. See Table 5 for details:

Table 5: Time taken to access water

<table>
<thead>
<tr>
<th>Time Taken</th>
<th>River</th>
<th>Well</th>
<th>Dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average time</td>
<td>74 min.</td>
<td>43 min.</td>
<td>52 min.</td>
</tr>
<tr>
<td>Minimum time</td>
<td>2 min.</td>
<td>2 min.</td>
<td>10 min.</td>
</tr>
<tr>
<td>Maximum time</td>
<td>3.5 hrs.</td>
<td>2 hrs.</td>
<td>10 hrs.</td>
</tr>
</tbody>
</table>
Table 5 shows that the shortest time taken to access water from a river and a well was 2 minutes. In contrast, some pastoralists took as much as 3 and ½ hours to fetch water from a river. This is a lot time lost that could be used in other useful and productive ways.

4.2.4 Training and Capacity building amongst the livestock keepers

A large majority (92%) of pastoralists have not received any training on livestock keeping. Only 8% of the livestock keepers had received some training on technical matters of livestock keeping. This implies that it is a challenge for the livestock keepers to produce good quality animals that are marketable and can fetch good prices.

For those who had received training, the topics covered included animal husbandry practices such as improved feeding, forage production, forage conservation, animal health and livestock marketing among others. The livestock keepers were also trained on HIV/AIDS prevention and control at the hospital. This is a useful cross-cutting issue as it affects all.

The trainings were facilitated by the Ministry of Livestock Development; NGOs such as CARE Kenya and Handicap; and also the United Nations agencies i.e. UNDP (Millennium Villages Project) and UNICEF. The trainings were conducted at the Agricultural Training Centre, various project sites e.g. Millennium Villages Project at Dertu. Some trainings were also conducted in the field and at home (manyattas) so as to reach the pastoralists easier.

4.2.5 The training needs of livestock keepers and livestock traders

Both the livestock keepers and the livestock traders expressed a big desire to be trained on animal health and livestock production matters. Incidentally, HIV/AIDS featured prominently and was ranked second by livestock keepers as priority area for training. For traders, their second priority for training was record keeping. This is expected as traders are in business and would want to improve on their skills. The tables 6a and 6b below summarise the training needs for livestock keepers and the traders.

<table>
<thead>
<tr>
<th>Training needs for livestock keepers</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal health</td>
<td>29.7</td>
</tr>
<tr>
<td>Animal production and hygiene</td>
<td>17.3</td>
</tr>
<tr>
<td>HIV and AIDS</td>
<td>20.9</td>
</tr>
</tbody>
</table>
Table 6b: Training needs for traders

<table>
<thead>
<tr>
<th>Training needs for traders</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic animal health</td>
<td>32.4</td>
</tr>
<tr>
<td>Record keeping</td>
<td>18.6</td>
</tr>
<tr>
<td>Marketing</td>
<td>17.6</td>
</tr>
<tr>
<td>Group formation</td>
<td>10.8</td>
</tr>
<tr>
<td>HIV and AIDS</td>
<td>9.8</td>
</tr>
<tr>
<td>Credit management</td>
<td>7.8</td>
</tr>
<tr>
<td>Forage production and conservation</td>
<td>2.9</td>
</tr>
</tbody>
</table>

4.3 SOCIO-ECONOMIC ASPECTS IN LIVESTOCK MARKETING

4.3.1 Occupation of livestock keepers

Majority of the livestock keepers indicated that their primary source of income is livestock keeping. A few of them do irrigation farming along River Tana in Sankuri division. However, most of them were involved in more than one occupation. See Table 7 and figure 2 for details.

Table 7: Occupation of Livestock Keepers in order of priority

<table>
<thead>
<tr>
<th>Primary sources of income</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock keeping</td>
<td>79.4</td>
</tr>
<tr>
<td>Farm work</td>
<td>16.7</td>
</tr>
<tr>
<td>Business /self employment</td>
<td>15.0</td>
</tr>
<tr>
<td>Salaried employees</td>
<td>2.2</td>
</tr>
</tbody>
</table>

*Some respondents had more than one activity, hence the total percentage is above 100%
The findings indicate that even those pastoralists who do not keep livestock, they are involved in trade of live animals as well as products such as milk and meat. They also make handicrafts and practice beekeeping. See Table 8.

Table 8: Sources of income for non livestock keepers

<table>
<thead>
<tr>
<th>Source of income for non livestock keepers</th>
<th>Frequency (%)^8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale of livestock products like milk and meat</td>
<td>64.4</td>
</tr>
<tr>
<td>Sale of animals (that had been purchased)</td>
<td>59.4</td>
</tr>
<tr>
<td>Made handicrafts</td>
<td>8.4</td>
</tr>
<tr>
<td>Beekeeping</td>
<td>2.8</td>
</tr>
</tbody>
</table>

4.3.2 Gender Perspectives in livestock marketing

An estimated 80% of the livestock traders are men according to a Livestock Traders Marketing Society of Kenya official. This state is attributed to tradition, the inherent difficulties experienced in livestock trade and long distances travelled.

The findings indicate that nearly all the women interviewed (98.9%) amongst the pastoralists are free to own and rear animals separately from men. The main species of animals owned by

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^8 Some respondents had more than one activity, hence the total percentage is above 100%
women are camels, cattle, shoats, chicken and donkey. The types of animals owned by women are shown in the figure below.

Figure 3: Animals owned by women

In a pastoralist set up, chicken rearing is limited and is a preserve of women. The study found out that only 59.2% of HH rear or own chicken. The average number of chicken per HH was 9 (nine) and ranged from 1 (one) to 60. The reasons given by the pastoralists for not rearing chicken are indicated in the table below:

Table 9: Reasons for not rearing chicken

<table>
<thead>
<tr>
<th>Reason for not keeping chicken</th>
<th>Frequency ( %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predation by wild animals</td>
<td>31.2</td>
</tr>
<tr>
<td>Ignorance on the importance</td>
<td>26.0</td>
</tr>
<tr>
<td>Poultry diseases</td>
<td>16.8</td>
</tr>
<tr>
<td>Negative attitude</td>
<td>13.9</td>
</tr>
<tr>
<td>Not common in their culture</td>
<td>6.9</td>
</tr>
<tr>
<td>Not profitable</td>
<td>5.2</td>
</tr>
</tbody>
</table>

Table 9 indicates that the main reasons that led to less activity of chicken rearing included: predation by wild animals, ignorance on its importance, poultry diseases and negative.

Shoats refer to sheep and goats
Apart from live animals, the main livestock products that women traded in were milk (32.8%) and meat (27.7%). They also traded in hides and skins, eggs, ghee and honey. See Figure 4 for details.

Figure 4: Types of livestock products sold by women

<table>
<thead>
<tr>
<th>Comparative livestock products sold by women (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>milk</td>
</tr>
<tr>
<td>meat</td>
</tr>
<tr>
<td>hide and skins</td>
</tr>
<tr>
<td>eggs</td>
</tr>
<tr>
<td>ghee</td>
</tr>
<tr>
<td>honey</td>
</tr>
</tbody>
</table>

Decision making on resources (livestock disposal and use of income)
The study indicated that women had a lot of leeway on owning livestock and deciding on disposal and use of the income. See Table 10 for details.

Table 10: Livestock decisions made by women

<table>
<thead>
<tr>
<th>Type of Decision</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling livestock products (milk, meat, hides and skins)</td>
<td>99.4</td>
</tr>
<tr>
<td>Selling animals</td>
<td>97.8</td>
</tr>
<tr>
<td>Freedom of using income derived from the livestock sales</td>
<td>97.2</td>
</tr>
</tbody>
</table>

Table 10 indicates that nearly all pastoralists' women (99.4%) can make decisions about selling of animals and their products. Majority (97.8%) are free to use the income derived from the livestock sales.

The study found out that in 79% of the cases, the woman makes decision on how the money derived from livestock sales is to be spent but this can also be decided by the spouse (14.4%), and to a less extent the brother (2.2%).
4.3.3 Household Income Levels

The research findings indicate that the largest group of livestock keepers earn between Ksh. 5,001-10,000 per month followed by those earning Ksh. 1000-5000. This implies that 72.3% of the livestock keepers earn less than Ksh. 10000 per month. See table 11 below:

Table 11: Livestock keepers’ monthly household income

<table>
<thead>
<tr>
<th>Total household income per month (Ksh)</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000-5,000</td>
<td>30.7</td>
</tr>
<tr>
<td>5,001-10,000</td>
<td>41.6</td>
</tr>
<tr>
<td>15001-20000</td>
<td>7.2</td>
</tr>
<tr>
<td>Over 20,000</td>
<td>1.8</td>
</tr>
</tbody>
</table>

The study indicated that the overall average HH expenditure was Ksh. 6853 per month with a wide range from Ksh. 50 to Ksh. 50000 per month per HH. These figures imply that most of the pastoralists cannot meet their basic requirements from their earnings.

4.3.4 Average no. of animals owned by poor and rich persons

Poverty has been a reality among the pastoralists as indicated in the literature and various statistics. Hence, the study undertook to establish the average number of animals owned per household, and also by the poor and rich HHs as perceived by the community.

Table 12: Average Number of Animals owned per household

<table>
<thead>
<tr>
<th>Species of Animal</th>
<th>Average no. of animals</th>
<th>Household</th>
<th>Poor Person</th>
<th>Rich Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camels</td>
<td>7</td>
<td>0</td>
<td>108</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>11</td>
<td>10</td>
<td>206</td>
<td></td>
</tr>
<tr>
<td>Sheep/goats</td>
<td>63</td>
<td>50</td>
<td>439</td>
<td></td>
</tr>
<tr>
<td>Donkeys</td>
<td>2</td>
<td>10</td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

Table 12 shows that a rich person owns over 100 camels while a poor person has nil. Similarly the former has over 200 cattle while a poor person owns only 10. The number of goats and sheep owned between the two categories is equally wide. The disparity in ownership of donkey is not wide. This is possibly because even poor persons require donkeys for duties such as fetching water and transportation. In addition to the number of livestock owned, the community perceived the rich and poor person to have different attributes as indicated in Tables 13a and 13b below:
Table 13a: Attributes of a rich person

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wealthy and has lots of livestock</td>
<td>29.5</td>
</tr>
<tr>
<td>Dresses smartly</td>
<td>14.5</td>
</tr>
<tr>
<td>Has good diet</td>
<td>11.1</td>
</tr>
<tr>
<td>Has good education and practises farming</td>
<td>10.1</td>
</tr>
<tr>
<td>Have many wives</td>
<td>8.7</td>
</tr>
<tr>
<td>Respectable</td>
<td>7.9</td>
</tr>
<tr>
<td>Healthy and lives in town</td>
<td>5.1</td>
</tr>
<tr>
<td>Has vehicles</td>
<td>3.2</td>
</tr>
<tr>
<td>Is proud</td>
<td>3.2</td>
</tr>
<tr>
<td>Has business</td>
<td>1.8</td>
</tr>
<tr>
<td>Meets all basics needs</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Table 13b: Attributes of a poor person

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not meet basics (i.e. has poor diet and poor dressing)</td>
<td>52.3</td>
</tr>
<tr>
<td>Has few or no livestock</td>
<td>24.1</td>
</tr>
<tr>
<td>Has no education</td>
<td>11.7</td>
</tr>
<tr>
<td>Has no wife/child</td>
<td>6.2</td>
</tr>
<tr>
<td>Disrespected/steals</td>
<td>4.4</td>
</tr>
<tr>
<td>Unhealthy and weak</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Tables 13a and 13b point at some of the attributes of wealth as perceived by the livestock keepers/pastoralists. A rich person is perceived to own a lot of animals as seen in table 12. The poor persons are those unable to meet their basic needs include clothing. Another important attribute distinguishing the poor and the rich is education. There are many other attributes differentiating the two categories of people as shown in the two tables above.

4.3.5 The main causes of poverty and its effects

The livestock keepers in the district generally face economic challenges and are perceived to be poor. Traders attributed the poverty of livestock keepers to several factors as indicated in Table below:
<table>
<thead>
<tr>
<th>Cause of poverty</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrent droughts</td>
<td>18.5</td>
</tr>
<tr>
<td>Outbreak of animal diseases</td>
<td>13.0</td>
</tr>
<tr>
<td>Exploitation by middlemen</td>
<td>13.0</td>
</tr>
<tr>
<td>Ignorance/lack of knowledge</td>
<td>13.0</td>
</tr>
<tr>
<td>Lack of credit facilities</td>
<td>9.3</td>
</tr>
<tr>
<td>Predation from wild animals</td>
<td>4.6</td>
</tr>
<tr>
<td>Large families</td>
<td>4.2</td>
</tr>
<tr>
<td>Lack of industries</td>
<td>3.7</td>
</tr>
<tr>
<td>Insecurity</td>
<td>2.8</td>
</tr>
</tbody>
</table>

The main cause of poverty amongst the pastoralists as perceived by the traders was attributed to recurrent droughts followed in the second position by outbreak of animal diseases, exploitation by middlemen and ignorance/lack of knowledge.

The livestock keepers said that the main effects or impacts of poverty are; i) high levels of malnutrition (29.7%), ii) prevalence of crime (22.8%), iii) human diseases (15.7%) and iv) illiteracy (15.7%).

4.4 MAIN ACTORS/PLAYERS IN LIVESTOCK MARKETING AND THEIR ROLES

The research findings indicate that there are many stakeholders in livestock marketing. They perform different roles such as brokerage, collecting cess and taxes, transportation, disease control and issuing permits among other roles. The main stakeholders are; the middlemen at 30.8% who do brokerage. They are followed by the Municipal and County Council (30.1%) who collect tax and issue permits. Third in importance are the traders at 22.9%. Other important stakeholders highlighted were the government departments especially the veterinary department that issues movement permits and some NGOs.

4.4.1 Middlemen

One category that is integral to the livestock marketing is the middlemen. Most of the key informants indicated that the middlemen, also referred to as brokers have dominated livestock trade and exploited both the trader and the producer. They act as a linkage between producers and traders. The producer does not have access to potential buyers and hence uses brokers.
Traders from outside the district may fear of banditry attack in the interior (production areas) because of the far distances when sourcing animals. Similarly, the producers who reside many kilometres away from Garissa market can encounter insecurity risks along the way. The brokers know the interior and are familiar with the environment and hence take advantage of this fact. Hence, the middlemen play a crucial role of linking the livestock keepers and traders. They operate mainly on clan basis and their operations are informal.

However, they have been associated with many undesirable practices. They are widely known to exploit both sides. They also influence trading by setting the price as the livestock traders are not organised while the producers are generally ignorant. These middlemen have cartel like tendencies and can incite buyers at the livestock market. Furthermore, for a trader (in some instances) to access a lorry for transport, he/she has to use a *dhilal* (broker). They have even been reported to take the animals violently from the producers.

### 4.4.2 Government

The most important government Ministry involved in livestock marketing is the Ministry of Livestock Development (MoLD) which has two departments that complement each other. The Livestock Production department provides advisory and extension services while the Veterinary department provides livestock disease control and surveillance. The MoLD is implementing the ASAL Livestock and Rural Livelihoods Support Project (ALLPRO) implemented by the African Development Bank. This project is constructing a modern slaughterhouse in Garissa town. The project is also funding many community based demand driven projects (including marketing groups) through 80% grants with the balance being provided by the beneficiaries. The project is also building the capacity of many groups.

Other government departments included the Provincial Administration which provides overall coordination at the district. Security which is crucial in livestock marketing is provided by the Administration Police and the Kenya Police. The Ministry of Development of Northern Kenya and Other Arid Areas implements the Arid Land Resource Management Project (ALRMP), an important World Bank donor funded project. Key stakeholders indicated that this project has a lot of resources which have been used for 'hardware' development and should therefore focus on 'software' i.e. capacity building of community members to ensure sustainability. The Kenya Meat Commission (KMC) was also mentioned.
though its livestock purchase arrangements and grading system was said not to be favourable to the local pastoralists.

The Ministry of Local Government through the Municipal and County councils is an important institution in livestock marketing. The councils are supposed to provide and maintain market structures to facilitate trade. There were strong feelings from various stakeholders that the councils have not done enough despite the revenue collected through cess from the livestock trade.

4.4.3 NGOs
Several NGOs e.g. CARE (Kenya) and Terra Nuova have played an important role in livestock marketing. CARE (Kenya) has provided support in training, credit provision and development of linkages. For example, in 2005-06, the NGO through the Livestock Improvement Marketing Enterprise (LIME) Project was involved in sourcing markets for live animals. This was done through a destocking programme that involved buying and fattening of livestock and linking pastoralists to tertiary markets in Nairobi and Mombasa. They were also involved in capacity building of Pastoralist Producer Groups (PPG), Business Development Services and trainings in livestock production and animal health matters. CARE (Kenya) also supported training of community members on HIV/AIDS prevention and control. Currently, CARE (Kenya) is piloting a credit scheme through Equity Bank meant to give loans to producers and traders.

4.4.4 Development partners
Several Donor development partners have implemented development projects in the district that impact on livestock marketing. An example is the UNDP (Millennium Village Project at Dertu) that has established the first pastoralist millennium village aiming to achieve the Millennium Development Goals of halving poverty by half in 2015. There is also the African Union- Inter African Bureau for Animal Resources (AU-IBAR) that implemented the North Eastern Pastoralist Development Programme (NEPDP) funded by the United States Agency for International Development (USAID). The USAID is also funding Enhanced Livelihoods in the Mandera Triangle (ELMT) a regional project jointly implemented by CARE, Save the Children and Veterinaires Sans Frontières-Suisse (VSF). These projects have been involved in broad based activities implemented through other partners such as the livestock marketing associations and the line ministries i.e. MoLD.
4.4.5 Local leaders and civil society groups
Local institutions and actors comprising of Livestock Marketing Associations (DLMC and KLMC), women groups, community elders, the local leaders especially the area MP and civic leaders play important role of mobilising the pastoralists and linking them to various service providers and development agencies. They also play an advocacy role to agitate for more resources and better services for the ASALs.

4.4.6 Private sector
Service providers such as the Agrovet companies, local butchers and the local slaughterhouse operators, livestock producers, transporters were among key players. The traders especially from outside the district played a central role by offering the main outlets. Two banks namely, the First Community Bank and Equity Bank provide credit facilities as well as banking services. The two banks have partnered with several NGOs and development partners to provide credit facilities to traders.

4.5 FINANCIAL RELATED MATTERS IN LIVESTOCK MARKETING

4.5.1 Sales of livestock by livestock keepers in 2008
For purposes of recall, year 2008 was used as the reference point for livestock sales. The proportion of livestock keepers who sold livestock within that year were 92.7%. Almost all of them sold camels, cattle, sheep/goats and donkeys. The sales were conducted at the homestead, at the primary market and in the secondary market.

Nearly all (98.3%) livestock keepers indicated that the markets are reliable. Similarly, 86% of the livestock keepers indicated that they had access to livestock marketing information which was mainly transmitted through mobile phones.

4.5.2 Type of livestock sold by livestock keepers
Different species namely camel, cattle, sheep and goats were sold at various prices as male/female and mature or young stock. The categories sold are shown in the figure 5.
Figure 5 shows that the largest numbers of animals sold comprised of bucks (mature he-goats), followed by bull camels and mature bull cattle. Very few livestock keepers sold female and young stock implying that their sales were targeted the meat market and not for rearing or breeding purposes.

### 4.5.3 Livestock Prices

Table 15: Livestock prices in Ksh per species and category

<table>
<thead>
<tr>
<th>Type of animal</th>
<th>Minimum Price</th>
<th>Maximum Price</th>
<th>Mean Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mature Camel (Bull)</td>
<td>15,000</td>
<td>60,000</td>
<td>35,960</td>
</tr>
<tr>
<td>Mature Camel (Female)</td>
<td>12,000</td>
<td>58,000</td>
<td>38,818</td>
</tr>
<tr>
<td>Mature Cattle (Bull)</td>
<td>10,000</td>
<td>35,000</td>
<td>24,821</td>
</tr>
<tr>
<td>Mature Cattle (Cow)</td>
<td>6,000</td>
<td>28,000</td>
<td>17,089</td>
</tr>
<tr>
<td>Mature Sheep/goat</td>
<td>1,500</td>
<td>5,000</td>
<td>3,019</td>
</tr>
<tr>
<td>Mature Donkey</td>
<td>1,500</td>
<td>13,000</td>
<td>7,054</td>
</tr>
</tbody>
</table>
Table 15 and Figure 6 indicate that the prices vary widely. A mature camel bull was sold from Ksh 15000 upto Ksh 60000. The average price for mature bull cattle was about Ksh 25000 while for a mature sheep/goat it was about Ksh 3000. According to McPeak and Little (2006:106), animals prices are largely influenced by its genetic and phenotypic attributes (sex, age, breed, weight and body condition), the purpose of buying (slaughter, resale, rearing), as well as other market factors including the type of market (primary, intermediary or terminal) and the environmental conditions at the time of sale (drought or normal rainfall year).

All traders and the majority of livestock keepers (98.3%) indicated that there is price variation due to seasonality (drought and rainy seasons). The prices are higher during the rainy season. This finding is supported by McPeak and Little (2006:106) who say that cattle prices are significantly lower in drought compared to normal years. This is possibly because pastoralists reduce their sales at the outset of rains so as to rebuild their stocks making demand to outstrip supply. The higher prices could also be linked to increased transportation costs during wet periods since the terrain becomes very difficult for trucks and other vehicles.
The average numbers of animals sold and potential earnings per HH are indicated in the table below:

### Table 16: Average number of livestock sold and potential earnings per HH in year 2008

<table>
<thead>
<tr>
<th>Animal Species</th>
<th>Average number sold / HH</th>
<th>Mean Price (Ksh)</th>
<th>Potential earnings/ per year (Ksh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camels</td>
<td>7</td>
<td>35,960</td>
<td>251,720</td>
</tr>
<tr>
<td>Cattle</td>
<td>11</td>
<td>24,821</td>
<td>273,031</td>
</tr>
<tr>
<td>Sheep/goats</td>
<td>65</td>
<td>3,019</td>
<td>196,235</td>
</tr>
<tr>
<td>Donkeys</td>
<td>2</td>
<td>7,054</td>
<td>14,108</td>
</tr>
</tbody>
</table>

Table 16 indicates that depending on the number of animals sold and the price, an individual household had a potential of generating substantial income for their needs.

### 4.5.5 Factors influencing selling and buying of livestock

Pastoralists sell their livestock first and foremost because of financial needs and secondly because of anticipating a drought. The study indicated that the main reasons for selling livestock in order of priority are as follows:

1. Financial needs (90.4%)
2. Anticipating a drought (58.4%)
3. Because trading was their occupation (23.6%)
4. To meet other needs (12.4%)

### 4.5.6 Purpose of buying animals by the traders:

The findings indicated that traders buy animals mainly for onward sale to terminal markets (62%), for immediate slaughter (24%) and for fattening and selling at a later date (13%).

### 4.5.6 Market outlets

The market outlet preferred by the majority of livestock keepers which they frequently use for the livestock sales was the secondary market such as the Garissa market. They also sold their animals at the primary market or at the homestead (ranked 3rd) in that order. See table 17 below:
Table 17: Market outlet preferred by livestock keepers

<table>
<thead>
<tr>
<th>Market outlet</th>
<th>Preference (as %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1&lt;sup&gt;st&lt;/sup&gt; Priority</td>
</tr>
<tr>
<td>Homestead</td>
<td>0.6</td>
</tr>
<tr>
<td>Primary</td>
<td>6.7</td>
</tr>
<tr>
<td>Secondary</td>
<td>94</td>
</tr>
</tbody>
</table>

Analysis of the results indicates that Garissa market is preferred because it is a big market and has ready buyers, offers better prices and is easily accessible for pastoralists especially from Sankuri division.

4.5.7 Main outlets for live animals from Garissa Market

Most of the animals are destined outside Garissa district. See table 18 below:

Table 18: Main outlets for live animals from Garissa Market

<table>
<thead>
<tr>
<th>Place or Market</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstated markets</td>
<td>31.6</td>
</tr>
<tr>
<td>Mombasa</td>
<td>21</td>
</tr>
<tr>
<td>Nairobi and environs (Njiru and Dagoretti)</td>
<td>21</td>
</tr>
<tr>
<td>Garissa town</td>
<td>16</td>
</tr>
<tr>
<td>Kithyoko</td>
<td>7.0</td>
</tr>
<tr>
<td>Masinga</td>
<td>1.8</td>
</tr>
<tr>
<td>Thika</td>
<td>1.8</td>
</tr>
</tbody>
</table>

From table 18, the main markets outlets mentioned were Mombasa and Nairobi followed by Garissa town. Other outlets were Kithyoko, Masinga and Thika.

4.5.8 Linkage between Traders and Producers

The animals from livestock keepers were mainly sold through livestock traders (59.8%), middlemen (32.8%) and butchers (6.9%). The main linkage between traders and producers was said to be through brokers and is informal. These middlemen are mainly involved at the secondary market and their fees vary from Ksh 100-200 per cow.
4.5.8 Mode of transactions and payment

Majority of the livestock keepers (98%) transact using cash (money) and therefore barter trade was very negligible (2%). Most payments were immediate (96%) and very few were conducted on credit basis (4%). The payments were paid in a single cash sale transaction for 96.5% of the traders while 1.8% sold as credit but under an informal contract.

4.5.9 Payments duration for the credit sales

Figure 7a: Promptness of credit payments to livestock keepers

![Duration of Payments to livestock keepers](image)

Figure 7b: Duration of payment to traders

![Duration of Payment to traders](image)
Figure 7a shows that when livestock keepers sell on credit, they are paid from one week up to a month. In contrast, most of the traders (82.5%) were paid immediately for their sales (see figure 7ba). Hence, the credit period for traders was short. Most likely the traders needed their money more urgently for more purchases and trading.

4.5.10 Transportation of animals and costs involved
Most of the animals were trekked on hoof to the primary and secondary markets using attendants. However, transport of animals to the terminal markets in parts of Eastern Province, Mombasa and Nairobi and other places is done on trucks (lorries).

Table 19: Proportion of animals transported on hoofs or trucks

<table>
<thead>
<tr>
<th>Destination</th>
<th>% trekked</th>
<th>% trucked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary markets</td>
<td>75.0</td>
<td>25.0</td>
</tr>
<tr>
<td>Secondary markets</td>
<td>77.6</td>
<td>22.4</td>
</tr>
</tbody>
</table>

4.5.11 The cost of transportation to terminal markets
The cost of transportation to terminal markets (per truck carrying about twenty animals) range from Ksh.8,000 to Ksh. 40,000 with an average of Ksh.24,846. This was confirmed by the CEO, KLMC who said that transporters charge Ksh 25,000-27,000 per lorry of 20 animals and Ksh 40,000 per lorry carrying 27-30 animals to Nairobi. The cost of trekking animals ranged from Ksh. 200 to Ksh10,000 per trip and averaged Ksh. 2,448 depending on the distance and other attendant costs.

4.5.12 Licenses and other costs at the Garissa market
The study identified multiple taxations including cess and other expenses paid at the Garissa market when animals are traded. These costs include livestock movement permits, council taxes, transportation and bribes along the route.

Table 20: Costs incurred at the Garissa Market

<table>
<thead>
<tr>
<th>Cost</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal council cess</td>
<td>Ksh 160/cow by the traders</td>
</tr>
<tr>
<td>County council cess(^{10})</td>
<td>Ksh 100/cow</td>
</tr>
</tbody>
</table>

\(^{10}\) for ‘export’ i.e. moving the animal out of the district
The study found out that majority of traders (81%) pay contingency fees (bribes, inducements etc) to the council Askaris at the market and police at the road blocks while only 19% do not pay anything. Further findings indicate that there were many road blocks from Garissa to Nairobi and most of them are used for extortion (Personal communication with KLMC). It was alleged that the traders had to pay per lorry about Ksh 300 during the day and Ksh 500 during the night. When all expenses are considered, it costs between Ksh 2000-2500 per cow on truck delivery to Nairobi over and above the buying price of the animal.

4.5.13 Market Competition
The research gathered information that there was stiff competition due to the influx of animals from Somalia which are sold cheaply in Garissa market. This is because the Kenyan livestock sub-sector is intertwined with Southern Somalia and Ethiopia (Personal communication with a Kenya Red Cross official). When there are many traders at the market, there is more competition for the animals and the producer may get a better price. There is no auction of animals in this market and most of the buying is through direct negotiation between the seller and buyer. Weighing balance is not used but instead ‘eye-ball ing’ determines the size and quality of the animal.

4.5.14 Infrastructure needed for livestock marketing
The traders identified the main types of infrastructure required for livestock marketing and ranked them in order of importance as shown in figure 8 below.
From figure 8, water and sanitation (39.8%) was ranked as the top priority requirement in the livestock market. According to the findings, 88% of the traders indicated that water was generally available in the market centres but 12% had no water. Marketing facilities that include loading ramps, vaccination crush and shade (used by veterinary officials) were second in importance at 23.3%. The market structures have been put up by the councils as well as some development partners through projects.

4.6 CONSTRAINTS IN LIVESTOCK MARKETING

The findings indicate that there are many constraints experienced by both the livestock keepers and traders that impede livestock marketing. The main constraints experienced by both groups were; long distance to markets, exploitation and low prices. See table 21a and 21b below:

Table 21a: Constraints experienced by livestock keepers

<table>
<thead>
<tr>
<th>Constraints experienced by livestock keepers</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distant markets</td>
<td>53.3</td>
</tr>
<tr>
<td>Exploitation by middlemen</td>
<td>17.2</td>
</tr>
<tr>
<td>Low prices</td>
<td>14.4</td>
</tr>
<tr>
<td>Others</td>
<td>11.2</td>
</tr>
</tbody>
</table>
Table 21b Constraints experienced by traders

<table>
<thead>
<tr>
<th>Constraints experienced by traders</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Markets being far away</td>
<td>16.3</td>
</tr>
<tr>
<td>Exploitation by middlemen</td>
<td>23.8</td>
</tr>
<tr>
<td>Low prices for livestock</td>
<td>23.8</td>
</tr>
<tr>
<td>High transport costs</td>
<td>11.6</td>
</tr>
<tr>
<td>Water scarcity and or drought</td>
<td>8.2</td>
</tr>
<tr>
<td>Heavy taxation</td>
<td>6.8</td>
</tr>
<tr>
<td>Livestock theft and insecurity</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Some suggestions given for addressing the livestock marketing constraints as are depicted on Figure 9 below:

Figure 9: Solution to livestock marketing constraints

As shown in figure 9, the main suggestions given on ways and means of addressing the livestock marketing constraints is to ensure that markets are located nearer (45.6%). The other solutions proposed was to encourage group formation, educate the pastoralists and provide good infrastructure.
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY

The study was conducted in Sankuri division of Garissa district and Daadab division in the newly created Lagdera district in North Eastern Province. The sample size was 180 livestock keepers who are basically pastoralists and 57 livestock traders from within and outside district. Seventeen key informants within the district and at national level were interviewed using a checklist to corroborate the findings and share their views especially on policy matters. The key informants included various government officials, NGO representatives, leaders of traders associations, political leaders including the area Member of Parliament among others. Data analysis was done using SPSS. The research site was purposively selected and interviews were conducted amongst the livestock keepers within the randomly selected households. The traders were also selected randomly at the Garissa Livestock Market. For both the livestock keepers and the traders, pre-tested questionnaires with open and close ended questions were administered through face-face interviews.

The research findings indicate that pastoralists' households have families averaging six children in addition to other dependants such as cousins and grandparents. Most families are polygamous. Hence, there is economic burden on the household heads. Most members of the households have very little formal education. Education and training improves the way people view life and helps in faster uptake of development. Hence, there is a challenge when such a big proportion of the population is illiterate or semi-literate. The level of understanding on development and policy matters is low since a large proportion of the livestock keepers have not attended any training or workshops by NGOs or the government agencies. Such a community is likely to be taken advantage of by dishonest politicians or unscrupulous traders.

5.11 Importance of Livestock Keeping

The study highlighted the important role played by the livestock sector in the ASALs and amongst the pastoralists. It provides meat and milk products contributing to food security. It offers the main occupation or employment and generates income from livestock and livestock products' sales. Livestock is also used as an expression of wealth status. A rich person was
perceived to have over 100 camels, 200 cattle and 400 sheep and goats. A poor person was said to have about 5 camels, 10 cattle and about 50 sheep and goats.

5.1.2 Gender Perspectives in Livestock Marketing

Women play a critical role in the pastoralists' livelihoods as the majority of those found in *manyattas* were women. Contrary to popular belief, the findings indicated that pastoralist women can own all types of domestic animals. They are also free to dispose livestock and their products such as meat, milk, hides and skins and use the proceeds without much reference to other people. Most of the small scale traders dealing with camel milk and *nyirinyiri* in Garissa town were women mainly organised in groups.

The fact that women have freedom to own animals and make decisions on disposal implies that there is an element of empowerment. Since women are involved in marketing of livestock and livestock products albeit on a small scale, this enables them to contribute positively in household incomes and also to development.

The study also established that some women keep chicken for domestic purposes in the *manyattas*. The main constraint against chicken rearing was predation from wild animals but also lack of exposure to its usefulness as a source of nutrition and household income.

5.1.3 Socio-Economic Issues

The study indicates that under pressure from droughts or other calamities, pastoralists can sell their animals to avoid losses. Hence, a well organised marketing system can act as a safety net during drought. The prices of animals differ depending on season where they show a downward trend during the drought. Due to ignorance and residing in remote areas, most of the producers were not aware of prices at the terminal markets. In contrast, most of the traders had access to livestock marketing information through mobile telephones. This helps them decide when to deliver animals to a certain destination and ensures that their exploitation is minimised at terminal markets such as Dagoretti. The main problems identified were; low prices, distant markets and exploitation by middlemen. The prices fluctuate regularly and at the time of the study they were quite low as the local purchasing power had been eroded due to the global recession and the drought in the country.

*processed camel meat product that is a delicacy and can be preserved for several months*
The research overwhelmingly showed that majority of the producers sold their animals to meet their financial needs. Some earlier studies e.g. by Aklilu had suggested that due to cultural practises, pastoralists are not geared towards cash economy and do not dispose off their livestock easily. Hence, they do not keep their wealth as cash nor do they save proceeds from animals’ sales but retain their wealth as live animals. However, findings from this research showed that very few producers used barter trade indicating that the community has shifted to a cash economy. This implies that pastoralists rely heavily on livestock marketing to generate income for their needs. The study also indicates that transactions were on cash basis. This protects the producer from crafty traders through non payment for animals sold on credit. The livestock keepers should be educated on other opportunities where they can invest their money. These would encourage them more to dispose off their livestock and bank the money when high risk factors such as drought are prevalent. This will minimise environmental degradation and also secure livelihoods for the vulnerable groups.

Livestock keeping and marketing requires a large capital outlay yet credit packages offered at the moment to the pastoralists are either inadequate or inappropriate. In the remote areas, banks/mobile banks and micro-finance institutions are not available. In addition, since majority are Muslims, they do not use the traditional banking system. Therefore, there is a need to develop halal banking and an easy way of giving credits where livestock can be used as collateral. This is important for restocking at the end of drought once the rains start as it will provide capital. There are several financial institutions operating in Garissa town but only one or two have sharia compliant packages especially the accounts that do not levy or pay riba (interest) from savings and for loans.

The study highlighted that income levels are low and poverty is prevalent amongst the majority of pastoralists. Most of the inhabitants cannot meet their basic needs easily. This state of high poverty levels prevailing in the area brings a myriad of social as well as health problems within the community. The vices include insecurity, rape, prostitution, theft, idleness while the health problems are associated with malnutrition.

5.1.4 Main Players/Actors in Livestock Marketing and their roles along the value chain

There are many actors in livestock marketing who play different complementary roles. The services offered range from trainings, security to regulatory role. Those identified in the study
include; Livestock Traders, Producers, Livestock Marketing associations (KLMC, DLMC), Ministry of Livestock Development (Livestock Production Department and Veterinary Services), Donor funded projects (ALLPRO and ALRMP), Development Partners e.g. AU-IBAR, Commercial Banks e.g. First Community and Equity Banks, Transporters, Middlemen, NGOs e.g. Terra Nuova (piloting traceability of animals) and CARE (K). Others are, Local Authority (Municipal and County Councils), women groups, community elders, agrovet companies, Security Agencies (Administration Police and Kenya Police) and the Kenya Meat Commission (KMC) which provides a market outlet in Nairobi. However, despite all their efforts, poverty is still prevalent in the region and therefore there should be coordination so that their efforts can bear fruits.

The Ministry of Livestock Development is meant to provide a conducive policy environment to facilitate enhanced and sustainable growth of the livestock sub-sector. The Ministry through Veterinary services provides disease surveillance, movement permit, branding, data collection and treatment. The Livestock Production Department provides advisory or extension services. According to the American Meat Institute (undated), the most appropriate government role in today’s livestock marketing system is to enforce the existing laws and regulations that ensure fair and non discriminatory business practices among producers and packers, while allowing producers the freedom of choice on how best to market their livestock. The government was perceived to be a very important player by many stakeholders. However, it was felt by some stakeholders that the government’s linkage is weak. This could be due to the chronic by the government underfunding and understaffing.

The NGOs play an important role especially in capacity building alongside other development partners. Lessons learnt indicate that an NGO’s direct involvement in livestock marketing chain results in market distortions and may result in huge livestock losses. Therefore, the NGOs should not be involved directly in value chain (Personal communication with an NGO Project Manager).

Middlemen play a major role in livestock marketing and cannot be wished away. The producer can either sell directly, through middlemen or through traders but there is a clear need to shorten the chain. According to Little, Peter (2006), the broker’s role is to match the buyer with a seller, the latter often has travelled 100 km or more to market, and to insure the legitimacy of the sale (including the assurance that the animal(s) are not stolen). Although
they are viewed as exploitative, middlemen still play an important role of linking the trader and the livestock keepers/ producers. Their role should be re-examined so that harmony and more benefits can accrue to producers and traders.

Other important institutions are the livestock marketing associations which assist in facilitating trade. All these organisations/institutions which have different roles need to work together for synergy. According to the area M.P. who is also is a leading livestock trader, most of these institutions are playing their roles well. However, several stakeholders singled out the Municipal council for not providing the necessary amenities at the market.

5.1.5 Constraints in Livestock Marketing

The study found out that there are many challenges which negate the expected benefits accruing from livestock keeping for pastoralists. Some studies in other parts of Kenya such as Turkana have suggested that lack of marketing opportunities and the weak position of the pastoralists in the national livestock market is the major hindrance to development (Snow, 1984:159; NORAD 1989; Chabari, 1994). This seems to be the general position in many pastoralists set ups including the North Eastern Province.

The study highlighted many constraints that prevent realisation of the livestock sector’s full potential along the whole value chain and inhibit realisation of optimal benefits. There is inadequate funding by both the government and development agencies to the livestock sector and the whole region. The constraints include poor or non-existent infrastructure, unfriendly policies, poor attitude by pastoralists, ignorance/lack of awareness, inadequate government support for extension and other services and low literacy levels among others.

At production level, there is a dearth of proper technical skills in animal health and husbandry practices. The climatic weather is harsh and recurrent droughts have become more frequent and severe over the years. Pastures and water for both human and animals are scarce leading to conflicts and insecurity flare ups. This means that alternative means of livelihood should be explored and adopted so as to manage droughts. As Awuondo (1987) suggested, there is an urgent need to diversify the pastoral economy as this would help them to have viable alternatives.
There are no specific policies addressing livestock marketing. The Sessional Paper No. 2 of 2008 on National Livestock Policy is inadequate as it does not give comprehensive direction on livestock marketing. Most of the key informants singled out policies and legislations as being very unfriendly to both the producer and trader and some of them date back to the colonial era. An example given by many stakeholders is the regulation prohibiting transportation of animals after 6.30 pm. It leads to lose of animals' condition due to the long travel and many hours without feed or water. This may lead to livestock mortalities in some cases.

There are also multiple taxations along the value chain as livestock move from one council to another. This includes a landing fee levied by Nairobi City Council without providing pastures and water for the animals. These councils were accused of not ploughing back some of the revenue to improve the livestock marketing.

Most of the necessary livestock marketing facilities are in poor conditions or are non-existent. For instance, the livestock stock routes and holding grounds are no longer working. There is little or no water along the stock routes at strategic points and the animals' condition deteriorate and eventually fetch lower prices at the market. The stakeholders indicated that there are higher chances of animal disease spread since stock route facilities are not working and therefore it is difficult for veterinary authorities to monitor. These situation leads to major disease outbreaks and is worsened by the porous borders especially along the Somalia border. Frequent outbreaks include Foot and Mouth Disease and Contagious Bovine Pleuro Pneumonia (CBPP) among others. In 2006, there was a major outbreak of the deadly Rift Valley Fever (RVF) leading to major devastations. These disease outbreaks have led to heavy livestock mortalities, major economic losses as well endangering human health.

5.1.6 Possible solutions to address livestock marketing constraints and poverty

Finally, the research established that poverty is a real issue of concern among the pastoralists. Since most pastoralists have very low earnings, it is quite a challenge for them to meet their basic needs. The study enumerated many causes leading to high levels of poverty in the ASALs including the recurrent droughts, animal diseases and exploitation by middlemen. The paradox is therefore that despite presence of large numbers of livestock, the inhabitants linger in poverty and are in a state of deprivation. The study showed that poverty brings many
social ills within the society and negative impacts on the community. These include insecurity/crimes, high illiteracy levels and health problems such as malnutrition.

The stakeholders suggested ways of addressing some of the constraints and combating poverty. This is through concerted efforts by all to address the causes. An affirmative action with specific funding is required for the region. These suggestions can be summed as follows:

a. Formulating pro-poor policies. The research highlighted that for profitable livestock marketing to be realized there is a need to put in place a supportive legal and policy framework that safeguards the interests of pastoralists.

b. Providing the necessary infrastructure. Apart from the livestock marketing facilities, the government should catalyse the region’s development by leading in major investments on public infrastructure especially all weather roads and social amenities (e.g. schools and health facilities). The area lacks any industries and a start point is to put up meat factory with linkage to KMC.

c. Provision of formal and informal education. Indeed, access to social amenities like health and education remain a dream for many pastoralists. Hence, education for the pastoralists should be promoted including provision of mobile schools to improve on literacy levels.

d. Organizing the community in groups for development purposes. A lot of efforts should be put in increasing capacity building so as to raise awareness.

5.2 CONCLUSIONS

The study confirmed that livestock keeping is very important and is the mainstay of 80% of pastoralists who depend on it for productive capital. According to Mkutu (undated), all aspects of pastoral social and economic life are ordered in relation to livestock and the environment in which they live. Indeed, livestock is an expression of wealth and one gets respect based on the volume of livestock owned. Livestock boosts an individual’s status and provides a social benefit of networking with people along the marketing chain. According to Schultz (1998), livestock serves as insurance for many people in African societies and market becomes the scene of social exchange.

There are many benefits to local pastoralists derived from the livestock enterprise such as creation of employment through trading opportunities. There is also contribution to food security through such products as milk and meat. It provides income that can be used for
purchasing cereals, clothing, medical and school fees as well as for investing in other areas. In ASALs, livestock also provides transportation especially the camels which carry young children or the whole pastoralist's manyatta during migration. Hence, livestock is central to the pastoralists' livelihoods.

The study established that there are many stakeholders involved in livestock marketing. From the analysis of their roles, most of these players contribute positively in the sector but there is lack of coordination amongst all these players. This includes the government and its various agencies which play a facilitation role and provide crucial services albeit with inefficiencies. The government does not play its role in an optimal way due to shortage of resources. The NGOs, Livestock marketing associations, the Civic authorities, transporters among others all play an important role in facilitation of livestock marketing. Despite the presence of all these institutions, poverty is still prevalent and there is need to re-examine the development strategies applied.

There are many challenges ranging from climatic, geo-physical, economic, political and social that impedes effective trade of livestock and livestock products. These constraints are caused by many factors and contribute to the high poverty levels. The infrastructure is really wanting and most of the roads are generally in very poor conditions. In fact, there has been no tarmac or all weather roads beyond Garissa town or Isiolo town which are the two major entry points to the ASALs. This affects efficient transportation and increases costs of doing business and providing various services. However, there is renewed government effort to construct tarmac roads beyond these two major towns and some construction work has started. If these constraints are tackled, then the livelihoods of the pastoralists can improve.

Livestock marketing can play a leading role in poverty alleviation in ASALs. Poverty is prevalent in the ASAL region and has negative impacts on the community. The community lags behind a lot in development and therefore major infrastructural development is required. With more involvement of pastoralists in livestock marketing there will be more cash flow. As variously stated, there are many constraints encountered and the costs involved are high. Conducive environment needs to be put in place through formulation of pro-poor policies that facilitate marketing and enhance trade. In addition, a lot of capacity building is required for both the producers and traders. Insecurity, negative attitude, ignorance and low literacy levels within the pastoralist should be addressed urgently. If most of the constraints are addressed
through concerted efforts by the stakeholders viz. the government, political leaders, civil society, development partners and the beneficiaries, then livestock marketing system may become more efficient and therefore contribute to improvement of the pastoralists’ economic livelihoods.

Though livestock is at the heart of pastoralists’ livelihoods, diversification of the economy is needed as climate change has led to frequent droughts that leave devastation from starvation to livestock deaths. This is evident from the massive livestock deaths witnessed in the last months of 2009 and widely reported in the electronic and mass media.

In relation to modernization theory, one is able to mirror the pastoralist set-up as the traditional social which is slow to change to ‘modernity’ attributes. This is explained by many factors including the unwillingness to change and lack of exposure and incentives. The social exchange theory talks of many actors in an exchange process with possible conflicts arising. The study showed that there are many actors involved in livestock marketing. The middlemen/brokers have been shown to cause conflicts with producers, buyers and even transporters. Hence, the theories help ground the study from a sociological perspective.

Finally the research brought out useful lessons for policy makers and also indicated areas of further research.

5.3 RECOMMENDATIONS

Key stakeholders including the government, political leaders, civil society, and livestock marketing associations amongst others should come up with a way forward to address the constraints preventing the livestock industry to contribute its potential role of poverty alleviation in ASALs. Indeed, an ASAL Marshall Plan is required to transform the area from being a perpetual poverty stricken area to a prosperous and self sufficient region.

1. Major investments are required by the public sector in all areas of infrastructural developments in the ASALs as most are dilapidated or non-existent e.g. all weather roads, electricity, communication and export abattoirs. The wealthy indigenous pastoralists should also be encouraged to invest in their region and not only in Nairobi or other major towns. These investments will trigger development in the area.
2. **The government should formulate appropriate, friendly and pro-poor policies** to address the problems encountered in livestock sector and in other related areas such as water and environment. The government should establish a Livestock Marketing Board/Authority to provide impetus to the industry as is found in other enterprises such as tea, dairy, cotton, sugar, sisal to name a few. It will be expected to regulate local and export trade. Also, livestock attachés should be appointed and posted to strategic missions to lobby for trading opportunities for Kenya’s livestock and livestock products.

3. **Livestock marketing facilities should be rehabilitated and new ones established** by the government together with the livestock marketing associations. The Municipal and County councils should reinvest in the livestock sector by ploughing back resources. They should avail properly equipped markets nearby since these two institutions derive most of their revenue from levying the sector. Further, there is a need for value adding and establishment of cottage industries. The country should focus on potential external markets for livestock and livestock products e.g. in COMESA, Mauritius, Egypt, Middle East and South East Asia. This is in line with the **Vision 2030**, which is the country’s blueprint that talks of implementation of 4-5 Disease Free Zones and livestock processing facilities to enable Kenyan meat, hides and skins to meet international marketing standards. It also talks of more domestic processing of these products for regional and international markets.

4. **Timely and reliable market information should be provided** by the government, development partners and marketing associations such as KLMC. Market information is crucial in any marketing activities. Its provision should be intensified by improving the current system through mobile service providers and the local FM stations to broadcast livestock prices. This is important to empower the livestock keepers and minimise exploitation by middlemen. Established marketing bodies/associations such as DLMC can oversee honest brokerage to minimise exploitation by middlemen and selling through auctions should be adopted. Both traders and producers should organise themselves into groups so as to have more control and minimise exploitation by middlemen. In addition, capacity building in technical aspects and business skills should be intensified so as to increase the pastoralists’ awareness and be in a better position to make informed decisions. In addition, HIV/AIDS was recommended strongly as a topic that needs to be included during trainings.

5. **There is a need for diversification by the pastoralist on sources of livelihood** and not rely solely on the livestock sector. This can be done by adaption of technologies and
relevant development packages that can be scaled up but take into account any possible social and environmental negative impacts. An example would be intensifying on the irrigation farming along River Tana which is a permanent river. Another potential income earner is the eco-tourism as the area has wild animals observed during the study such as antelopes, dikdiks, ostriches, guinea fowl, warthogs and giraffes.

6. **The pastures and denuded environment should be rehabilitated** by the government in collaboration with the community and partners. This is by instituting good management practices such as adopting the recommended land carrying capacity, harvesting and conservation technologies. Proper utilisation of resources such as pastures and water will help minimise conflicts. Hence, there is also a need to optimise on resource use due to climate change by keeping the most suitable animals for dry areas such as camels. Early Warning System and mitigation measures should be put in place to deal with cyclic droughts that have become more frequent and severe.

**Areas of further research**

1. There is a need to examine ways and means of influencing the pastoralists to seek and adapt alternative sources of livelihoods to compliment their dependency on livestock keeping as a way of spreading risks against the vagaries of weather.

2. There has been an influx of animals from Somalia and neighbouring countries resulting in market competition. Hence, the influence of cross-border trade should be examined to establish the effect on the local pastoralists.

3. There is a need to establish why the livestock keepers are usually reluctant to sell animals regularly until when they are confronted by an urgent and pressing need or when a drought is eminent.
REFERENCES


Annexes

Annex I: Field Data Collection Questionnaire for Livestock keepers

Questionnaire Code

Date of interview: (dd/mm/yy) [__ / __ / __] TIME STARTED _____ TIME ENDED _____

Name of data collector: ........................................................................................................
Name of respondent: .................................. Sex of respondent: ... M/F
Age(years).................................
Division.................................. Village/
Sub-location...........................................................

Highest education Level (tick one); 1) none 2) primary level 3) secondary 4) tertiary
Duksi (Islamic education) Yes/ No

Position of respondent in livestock keeping/business [___] (1=Owner, 2=Employee 3= others
(specify) _________________________

1. Respondent's relationship to the household (HH) head | [__] code

<table>
<thead>
<tr>
<th>Household head</th>
<th>2 = Spouse</th>
<th>3 = Son</th>
<th>4 = Daughter</th>
<th>5 = Daughter-in-law</th>
<th>6 = Son-in-law</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 = grand child</td>
<td>8 = Niece</td>
<td>9 = Nephew</td>
<td>10 = House help (maid or boy)</td>
<td>11 = Grandparent</td>
<td>12 = Other (specify)</td>
</tr>
</tbody>
</table>

2. Marital status

<table>
<thead>
<tr>
<th>1 = Married</th>
<th>2 = Single</th>
<th>3 = Divorced</th>
<th>4 = Living together</th>
<th>5 = Not applicable (&lt; 18yrs)</th>
<th>6 = Widow / widower</th>
</tr>
</thead>
</table>

3. HH dependents;

No of children..............................; No of wives..........................
Other(s) (Specify) .................................................................

4. Main occupation (primary activity) - tick only one

<table>
<thead>
<tr>
<th>0 = Livestock keeper/producer</th>
<th>1 = farm work</th>
<th>2 = Salaried Employment</th>
<th>3 = Business / trade</th>
<th>4 = Labour e.g. herdsman</th>
<th>5 = Retired with pension</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 = retired without pension</td>
<td>7 = Pupil student</td>
<td>8 = self employment</td>
<td>9 = Professional / Private employment</td>
<td>10 = Other (specify)</td>
<td></td>
</tr>
</tbody>
</table>
5. What are your other/alternative sources of income?

<table>
<thead>
<tr>
<th>Source of Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales of livestock products (milk, meat)</td>
</tr>
<tr>
<td>Sale of animals</td>
</tr>
<tr>
<td>Beekeeping;</td>
</tr>
<tr>
<td>Farming;</td>
</tr>
<tr>
<td>Handcrafts;</td>
</tr>
<tr>
<td>Business;</td>
</tr>
<tr>
<td>Wage employment;</td>
</tr>
<tr>
<td>Remittances from family/friends</td>
</tr>
<tr>
<td>Other (specify)</td>
</tr>
</tbody>
</table>

6. How many animals does your household own?

<table>
<thead>
<tr>
<th>Type</th>
<th>Numbers (figs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camel</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td></td>
</tr>
<tr>
<td>Sheep/goat</td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
</tr>
</tbody>
</table>

7. Who are the main players involved in livestock marketing

<table>
<thead>
<tr>
<th>Player</th>
<th>Role or type of involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. Are you improving your livestock rearing by any practises? (Tick yes/no)

- Improved breeding e.g. by use of superior breeds or doing selection (yes/no)
- Improved feeding (other than just grazing the animals e.g. use of forages, mineral salt, concentrates etc) (yes/no)
- Proper animal health care e.g. vaccinations, treatment, deworming (yes/no)
- Others (specify)

9. Name the source of drinking water for human and animals?

<table>
<thead>
<tr>
<th>Source of water</th>
<th>Time taken to the source (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>River</td>
<td></td>
</tr>
<tr>
<td>Well</td>
<td></td>
</tr>
<tr>
<td>Dam (water pan)</td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
</tr>
</tbody>
</table>

10. Have you received any training on livestock matters? Yes/no

11. If yes, give details of the training you have received in livestock matters (Tick the type of training received)

<table>
<thead>
<tr>
<th>Type of training provided</th>
<th>The organisation that organised the training</th>
<th>Where the training was done</th>
</tr>
</thead>
</table>
12. What are your training needs at the moment (List 3)

1. ____________________________________________________
2. ____________________________________________________
3. ____________________________________________________

13. What influences the decision to sell animals/indicate in order of importance why you sell livestock (most important reason as No. 1)

Anticipation of drought (yes/no)
(Elaborate)

Financial need (yes/no)
(Elaborate)

Trade as an occupation (yes/no)
(Elaborate)

Other reason (specify) (yes/no)
(Elaborate)

14. Did you sell livestock in the last one year (2008) (yes/no)

15. Type of livestock sold

<table>
<thead>
<tr>
<th>Camel</th>
<th>1 = Adult male</th>
<th>2 = Adult female</th>
<th>3 = Young stock</th>
<th>4 = Other(Specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>1 = Adult male</td>
<td>2 = Adult female</td>
<td>3 = Young stock</td>
<td>4 = Other(Specify)</td>
</tr>
<tr>
<td>Shoat</td>
<td>1 = Adult male</td>
<td>2 = Adult female</td>
<td>3 = Young stock</td>
<td>4 = Other(Specify)</td>
</tr>
</tbody>
</table>

16. Animals sold per year:

<table>
<thead>
<tr>
<th>Place</th>
<th>Type of animal</th>
<th>How many sold (number)</th>
<th>Average price per animal (Ksh)</th>
</tr>
</thead>
</table>

17. Buyer type

| 1 = Trader | 2 = Middlemen | 3 = Butchers | 4 = marketing group | 5 = Other(Specify) |
18. Is there price variation due to seasonality during drought and rainy season? Yes/No

19. If yes when is the price higher? During drought/rainy season (tick one)

MARKET OUTLET

20. Which type of market outlet do you most frequently use for your livestock sales? (Tick the most frequently used). If more than one rank 1, 2, 3,)

- At the homestead/farm gate/boma
- Primary market
- Secondary market
- Other (specify)

21. Why do you utilise this type of market outlet?
1. 
2. 
3. 

22. Are markets reliable? Yes/No

If No please explain

23. Do you have access to Livestock marketing information? Yes/No

If Yes specify source(s)

NATURE OF PAYMENT OR CONTRACT WHEN ANIMALS ARE SOLD

24. Do you practice barter trade during any transaction? Yes/No

If yes elaborate

25. What is your most frequently used mode of payment during sale of animals?

1 = Cash sale  2 = On credit – sale with written agreement  3 = On credit – sale without written agreement

26. If credit how prompt is the payment?

Payment | Tick most appropriate
----------|-----------------------
Less than a week |  

GENDER PERSPECTIVE

27. Can women own animals? Yes/no

28. Which type of animals do women own (in order of priority)
   1. ___________________________________________________________
   2. ___________________________________________________________
   3. ___________________________________________________________

29. Can women sell the animals? Yes/no

30. Can women sell livestock products? Yes/no

31. Which type of products do women sell (list in order of importance)
   1. ___________________________________________________________
   2. ___________________________________________________________
   3. ___________________________________________________________

32. Can women freely use the income derived from livestock and livestock products’ sales? Yes/no

33. Who makes the decision on how the money derived from livestock sales is to be spent?

<table>
<thead>
<tr>
<th>Self</th>
<th>Spouse (specify)</th>
<th>Son</th>
<th>Brother</th>
<th>Father</th>
<th>Other (specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

34. Does the HH own or rear chicken? Yes/No

35. If yes how many?...........................................

36. If no why
   1. __________________________________________________________________
   2. __________________________________________________________________
   3. __________________________________________________________________

37. Have any members of the HH migrated due to the current drought? Yes/No

38. If yes, how many people from your household have migrated?.....................
39. How many animals have they migrated with?

<table>
<thead>
<tr>
<th>Type</th>
<th>Numbers (figs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camel</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td></td>
</tr>
<tr>
<td>Sheep/goat</td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
</tr>
</tbody>
</table>

40. Have you experienced any livestock deaths due to the current drought? Yes/No

41. If yes how many animals have died in your household?..................

<table>
<thead>
<tr>
<th>Type</th>
<th>Numbers (figs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camel</td>
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</tr>
<tr>
<td>Cattle</td>
<td></td>
</tr>
<tr>
<td>Sheep/goat</td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
</tr>
</tbody>
</table>

SOCIO-ECONOMIC CHARACTERISTICS OF THE COMMUNITY

42. Give me three characteristics of a wealthy person in your community?

1. _______________________________________________________
2. _______________________________________________________
3. _______________________________________________________

*In terms of livestock indicate the wealth by livestock numbers.*

<table>
<thead>
<tr>
<th>Type</th>
<th>Numbers (figs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camel</td>
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<tr>
<td>Cattle</td>
<td></td>
</tr>
<tr>
<td>Sheep/goat</td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
</tr>
</tbody>
</table>

43. Give me three characteristics of a poor person in your community? What is poverty according to the community i.e. their perception?)

1. _______________________________________________________
2. _______________________________________________________
3. _______________________________________________________

*In terms of livestock indicate the poverty by livestock numbers.*

<table>
<thead>
<tr>
<th>Type</th>
<th>Numbers (figs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camel</td>
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<td>Cattle</td>
<td></td>
</tr>
<tr>
<td>Sheep/goat</td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
</tr>
</tbody>
</table>

44. In your own opinion what are the visible impacts of poverty in your community?

1. _______________________________________________________
2. _______________________________________________________
3. _______________________________________________________
45. How are the community members combating the above impacts?

1. __________________________________________
2. __________________________________________
3. __________________________________________

46. Do you get any support e.g. in training, credit, animal health services?

<table>
<thead>
<tr>
<th>Source of support</th>
<th>Type of support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HOUSEHOLD INCOME AND EXPENDITURES

47. In which of the following groups do you estimate your monthly total household income, from livestock, all working members, business income, pensions and remittances from elsewhere? | _______ |

1 = Less than 1,000 Ksh per month
2 = 1,000 – 5,000
3 = 5,001 – 10,000
4 = 10,001 – 15,000
5 = 15,001 – 20,000
6 = 20,001 – 25,000
7 = More than 25,000
8 = More than 50,000
9 = More than 100,000

48. Please indicate an estimate of your monthly total expenditure: ________ (Ksh)

49. Do you experience any problems during livestock production? Yes/No

50. If yes, list the main problems you experience during livestock production

1. __________________________________________
2. __________________________________________
3. __________________________________________

51. List three constraints experienced in the livestock trade/marketing

1. __________________________________________
2. __________________________________________
3. __________________________________________

52. What can be done to improve the situation?

1. __________________________________________
2. __________________________________________
3. __________________________________________
Annex II: Livestock Traders' Questionnaire

Questionnaire Code _________________________

Date of interview: (dd/mm/yy) [_____/_____/______] TIME STARTED ______ TIME ENDED ______

Name of data collector: ............................................................................................................................

Name of respondent:.......................................................Sex of respondent:....M/F Age (years)...........

Division.............................................Village/ Sub-location.................................................................

Highest education Level (tick one); 1) none 2) primary level 3) secondary 4) tertiary

Duksi (Islamic education) Yes/No

1. Name the main destination of your livestock sales (market/ town/ district)

2. Where do you usually buy your livestock (market ........................./ town............................../ district...........................................)

3. After buying livestock how soon do you pay for it?

| Immediate | After a week | After a month | After a longer period (more than a month?) |

4. After selling livestock, how soon do you get paid for it?

| Immediate | After a week | After a month | After a longer period (more than a month?) |

5. How do you transport livestock to the primary market? (Tick the appropriate answer)

Trekking

Trucking

6. How do you transport livestock from the primary or secondary market? (Tick the appropriate answer)

Trekking

Trucking

7. What costs are incurred during transportation of animals from buying centre to the final market (terminal market or selling place)?
<table>
<thead>
<tr>
<th>Type of cost</th>
<th>Amount (Ksh)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. What is your main aim for purchase of livestock

- Fattening
- Immediate slaughter
- Onward sale in terminal markets
- Other (specify)

9. Please tell me the prices of various animals

<table>
<thead>
<tr>
<th>Type</th>
<th>Price (Ksh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mature Camel</td>
<td></td>
</tr>
<tr>
<td>Mature cattle (Bull)</td>
<td></td>
</tr>
<tr>
<td>Mature cattle (cow)</td>
<td></td>
</tr>
<tr>
<td>Mature Sheep/goat</td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
</tr>
</tbody>
</table>

10. Please state if you pay in cash or by credit and the type of contract you use when conducting livestock business.

- Cash sale
- 2 = Cash sale – informal contract
- 3 = On credit sale – single sale
- 4 = On credit sale – informal contract
- 5 = On credit sale – formal contract
- 6 = Other (Specify)
11. What trade licenses are you required to pay for livestock marketing?

<table>
<thead>
<tr>
<th>Type of License</th>
<th>Whether paid (Y/N)</th>
<th>Amount paid /year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock Trade license</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Municipal/county council</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ministry of Trade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service charge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Movement permit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veterinary Staff inspection fee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Do you pay any contingency protection fee (police, council askaris.)

Yes/no (tick one)

13. If yes how much do you pay? KSh............./month (if payment is per trip specify)

14. What is the cost of transporting animals to the secondary or terminal market (specify the market)

<table>
<thead>
<tr>
<th>Market (destination)</th>
<th>Cost in Ksh/animal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. Have you received any type of support e.g. training, credit?

<table>
<thead>
<tr>
<th>Type of support</th>
<th>Source of support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. What are your training needs at the moment? (List 3)

1. ____________________________________________
2. ____________________________________________
3. ____________________________________________

17. List the infrastructure required for livestock marketing?

1. ____________________________________________
2. ____________________________________________
3. ____________________________________________

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18. Is water available at the market for the livestock? Yes/No

19. Is there price variation due to seasonality during drought and rainy season? Yes/No

20. If yes when is the price higher? drought or rainy season (tick one)

21. In your opinion, why are most livestock keepers in the district facing economic challenges and are generally poor?

1. 
2. 
3. 
4. 
5. 

22. What can be done to improve the economic status of the livestock keepers/pastoralists?

1. 
2. 
3. 

23. Give three constraints to the livestock marketing (starting with the most important as no. 1)

1. 
2. 
3. 

24. What can be done to improve the livestock marketing situation?

1. 
2. 
3. 

-Thank you-
Annex III: Checklist for the key informants

- Who are the main players in livestock marketing in Garissa?

- Role of various institutions, development agencies; are they playing their role well? (MoLD, CARE, AU-IBAR, ALRMP, MP, Councils, KLMC, Ministry of Northern Kenya and other Arid areas, Butchers, slaughterhouse operators)

- Is there any government or NGO support to livestock marketing (to both traders and producers)

- How are traders linked to producers and vice versa? How would you describe the relationship/linkage between producers and traders? What factors or reasons contribute to that situation?

- What Benefits do local pastoralists derive from the livestock enterprise in general?

- What policies exist to safeguard interests of pastoralists?

- What problems are encountered in livestock marketing?

- What should be done to improve livestock marketing?

- What should be done to improve the economic status of the livestock keeper/pastoralist?
Annex IV: Map of the Survey area (Garissa and Lagdera Districts, North Eastern)
Annex V: Summary table of livestock population figures, distribution and trends

The table below reflects the estimated livestock figures for the current Garissa District for a five year period.12

<table>
<thead>
<tr>
<th>Type of Livestock</th>
<th>Current</th>
<th>2009</th>
<th>2008</th>
<th>2007</th>
<th>2006</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Dairy</td>
<td>98</td>
<td>79</td>
<td>72</td>
<td>77</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>Beef Cattle (Local)</td>
<td>77,110</td>
<td>87,110</td>
<td>254,538</td>
<td>246,488</td>
<td>265,633</td>
</tr>
<tr>
<td></td>
<td>Exotic Beef / Sahiwal crosses</td>
<td>7</td>
<td>7</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td>Poultry</td>
<td>Indigenous</td>
<td>10,400</td>
<td>12,900</td>
<td>45,000</td>
<td>33,450</td>
<td>35,000</td>
</tr>
<tr>
<td></td>
<td>Layers</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>Broilers</td>
<td>300</td>
<td>800</td>
<td>300</td>
<td>300</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>Ducks</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>Turkeys</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>Geese</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td>Goats</td>
<td>Local</td>
<td>256,000</td>
<td>204,100</td>
<td>628,526</td>
<td>535,370</td>
<td>563,400</td>
</tr>
<tr>
<td></td>
<td>Dairy (German Alpines – bucks)</td>
<td>90</td>
<td>35</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td>Sheep</td>
<td>Hair</td>
<td>97,000</td>
<td>109,260</td>
<td>305,186</td>
<td>257,330</td>
<td>287,480</td>
</tr>
<tr>
<td></td>
<td>Wool</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td>Pigs</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td>Bee Hives</td>
<td>KTBH</td>
<td>3220</td>
<td>3220</td>
<td>3140</td>
<td>268</td>
<td>600</td>
</tr>
<tr>
<td></td>
<td>Langstroth</td>
<td>112</td>
<td>112</td>
<td>60</td>
<td>30</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Log hives</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>158</td>
<td>300</td>
</tr>
<tr>
<td>Camels</td>
<td>nil</td>
<td>39,000</td>
<td>36,270</td>
<td>101,170</td>
<td>100,168</td>
<td>101,800</td>
</tr>
<tr>
<td>Rabbits</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td>Dorkeys</td>
<td>nil</td>
<td>24,000</td>
<td>21,320</td>
<td>67,925</td>
<td>61,759</td>
<td>63,050</td>
</tr>
<tr>
<td>Horses</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td>Emerging Livestock</td>
<td>Ostrich</td>
<td>3</td>
<td>3</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>Guinea fowls</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>Quails</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>Crocodiles</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
<tr>
<td></td>
<td>Pigeons</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
</tbody>
</table>

Source: Garissa District Annual Report (July 2008 – June 2009); District Livestock Production Officer

---

12 Statistics from 2005-2007 refers to the old Garissa district before splitting into three (Garissa, Lagdera and Fafi)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cattle number sold</th>
<th>Shoats number sold</th>
<th>Camel number sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>24,395</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td>32,664</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td>33,449</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>65,127</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1993</td>
<td>67,076</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>62,351</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>80,795</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>86,400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>87,332</td>
<td>42,902</td>
<td>2,016</td>
</tr>
<tr>
<td>1998</td>
<td>107,810</td>
<td>79,878</td>
<td>5,030</td>
</tr>
<tr>
<td>1999</td>
<td>91,700</td>
<td>63,100</td>
<td>3,198</td>
</tr>
<tr>
<td>2000</td>
<td>114,277</td>
<td>70,338</td>
<td>2,198</td>
</tr>
<tr>
<td>2001</td>
<td>108,210</td>
<td>61,418</td>
<td>6,418</td>
</tr>
<tr>
<td>2002</td>
<td>132,978</td>
<td>81,768</td>
<td>1,702</td>
</tr>
<tr>
<td>2003</td>
<td>64,469</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>2004</td>
<td>76,357</td>
<td>13,570</td>
<td>No data</td>
</tr>
<tr>
<td>2005</td>
<td>83,204</td>
<td>28,010</td>
<td>No data</td>
</tr>
<tr>
<td>2006</td>
<td>80,256</td>
<td>31,505</td>
<td>No data</td>
</tr>
<tr>
<td>2007</td>
<td>105,667</td>
<td>25,457</td>
<td>No data</td>
</tr>
</tbody>
</table>

**Source:** DVO - Garissa. DLPO - Garissa. ARLMP – Garissa. Little (2005)
Annex VII: Key Informants and List of elders met during data collection

A. Key Informants

1. Hon. Aden Barre Duale, M.P Dujis Constituency and Assistant Minister for Ministry of Livestock Development
2. Mr. Nathaniel Mtunji; Project Manager- NEPDP implemented by AU-IBAR
3. Mr. Ibrahim Hussein Mohamed; Regional Manager-N. Eastern-Kenya Red Cross
4. Mr. Mohammed Haji; Project Manager, CARE (Kenya)-Enhanced Livelihoods Mandera Triangle Project (ELMT)
5. Mr. Jelle; CARE (Kenya)- Enhanced Livelihoods Mandera Triangle Project (ELMT)
6. Dr. Ahmed M Mohamed (Team Leader)-Dertu -Millennium Village Project
7. Mr. Abbas Mohammed; CEO- Kenya Livestock Marketing Council
8. Mr. Hassan Issa Harret, Chairman- Livestock Marketing Association- Garissa
9. Mr. Ahmed Hassan- Chairman District Livestock Marketing Council
10. Mr. Alinoor Hassan Abdi- Treasurer,- HILAC Livestock Traders Society – Garissa
11. Mr. Muse Sambul Sugul Livestock Traders and Marketing Society- Garissa
12. Mr. Mohammed Abdi Santur ; Treasurer- Municipal-Council of Garissa
13. Mr. A.A Bashir ; Deputy; Town Clerk- Municipal-Council of Garissa
14. Mr. Saadi Noor- Community Development Officer- Garissa; ALRMP
15. Mr. J.N. Mwambaga- Support to Local Development Officer, ALRMP, KICC-Nairobi
16. Mr. Abdi M. Ali ; District Livestock Production Officer, Garissa
17. Mr. Francis Nthimba-LPA, Livestock Production Department- Garissa

B. Elders who guided the survey team in Dertu (Daadab) and Ali-Kune

1) Hassan Yarrow Abdi -Dertu Village
2) Hassan Gaway Ahmed -Dertu Village
3) Kasim Sheikh Bashir -Dertu Village
4) Abdi Rage Aden -Dertu Village
5) Issack Ahmed Buul -Dertu Village
6) Mohammed Ahmed Abdi -Dertu Village
7) Mohammed Aden- -Ali-Kune Village
8) Mohamed Siyat -Ali-Kune Village
9) Ahmed maalim Nathif- Ali-Kune Village
10) Muhumed Yussuf -Ali-Kune Village
Annex VIII: Pictures taken during the research process in Garissa District-April 2008

Picture 1: Njoro Thendiu, the researcher during data collection in Sankuri, Garissa

Picture 2: Ms Ubah Ibrahim one of the research assistants interviewing a livestock keeper in Daadab

Picture 3: Camels at a watering point near Dertu

Picture 4: Mobile vet lab at Garissa Livestock market for screening animals and facilitating trade

Picture 5: Loading ramp for animals at Garissa market

Picture 6: Trucks for ferrying animals to terminal markets e.g. Nairobi or Mombasa

N.B. Photos by Isaac N. Thendiu