

UNIVERSITY OF NAIROBI

DEPARTMENT OF SOCIOLOGY AND SOCIAL WORK

**AN ASSESSMENT OF THE EFFECTIVENESS OF ADOPTION OF ALTERNATIVE
LIVELIHOOD STRATEGIES ON SOCIO-ECONOMIC WELLBEING OF
PASTORAL COMMUNITIES IN KAJIADO COUNTY, KENYA**

BY

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DECLARATION

This research project is my original work and has not been submitted for a degree in any other university

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This research project has been submitted for examination with my approval as the University Supervisor.

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Prof. Chitere O. Preston

DEDICATION

I would wish to dedicate this research project to my parents, Mr. & Mrs. Kamau for the immense support they have given me throughout my studies

ACKNOWLEDGEMENTS

I thank God for His continued grace to complete this project. Much appreciation to my parents Mr. & Mrs. Kamau, for having confidence in me and their support this far and offering me opportunities that they never had. In terms of contribution to the progress of this project, I specially thank my supervisor, Prof Chitere O. Preston for his invaluable input, guidance and support.

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ABBREVIATIONS AND ACRONYMS

AMREF	African Medical and Research Foundation
ASALs	Arid and Semi-Arid Lands
GDP	Gross domestic product
IFAD	International Fund for Agricultural Development
ILRI	International Livestock Research Institute
MPIDO	Mainyoito Pastoralists Integrated Development Organization
NGOs	Non-Governmental Organizations
SPSS	Statistical Package for Social Sciences
SSA	Sub-Saharan Africa
UNECA	United Nations Economic Commission for Africa

ABSTRACT

Pastoralism is a key livelihood source for most people globally and makes an important contribution to Kenya's GDP. Due to population increase, climatic and weather variations, living conditions have been worsening for the Maasai in Kajiado County forcing them to adopt alternative livelihoods for their survival. The study assessed the effectiveness of adoption of alternative livelihood strategies on socio-economic well-being of pastoral communities in Ildamat Ward, Kajiado County. The study was anchored on the sustainable livelihood framework and induced innovation theory. The specific objectives of the study were: To establish the profiles of the pastoralists and their effect on alternative livelihood strategies, determine the current livelihood strategies of pastoralists in the study area, the alternative livelihood strategies adopted by the pastoralists and their effect on their well-being and find out the support provided by development agencies and its effect on the socio-economic well-being of the pastoralists. Descriptive research design was used and targeted household heads and key informants in the five sub-wards of Ildamat Ward. Disproportionate sampling was used in the selection of the household heads while purposive sampling was used in choosing key informants. A total of 136 household heads and 20 Key Informants who were chiefs and village elders were sampled. Questionnaires and interview guide were used to gather data which was analyzed using SPSS in which descriptive statistics were presented. Findings showed that there were more household heads who were male and aged 40-49 years, with education level of up to secondary school level. Majority of the respondents were married with a large number of 7-9 children. Further, findings showed that most of the household heads owned 101-250 livestock, especially cattle, goats and sheep with sale of livestock and milk being their main source of income. Majority of the respondents had large pieces of land of more than 151 hectares. A good number of the respondents had an income of more than Kshs 50,000. Gathering and selling of wild fruits/herbs, especially for medicinal purposes was the key alternative livelihood strategy adopted by the respondents. Most of the household heads and the key respondents agreed that there were development agencies in the study site and that most of them had been individually supported by them. AMREF, World vision and MPIDO were among the development agencies working in the area. Healthcare was identified as the major support received from the development agencies. Use of alternative livelihood strategies enhanced access to water and sanitation in addition to increasing frequency of nutritious meals per day. With increasing susceptibility of the pastoral environments, there was need for the National and county Governments and development agencies to strengthen access of households to alternative livelihoods that could enhance their wellbeing.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Globally, pastoralism is carried out on 25 percent of land area, providing 10 percent of world's production of meat and supporting approximately 200 million people and herds of almost one billion camels, cattle and other livestock like yaks and horses (IFAD, 2010). In Africa above 20 million individuals are pastoralists and their livelihoods are dependent highly on livestock or livestock products. In Sub-Saharan Africa, pastoralists raise native animals like cattle, goats, sheep, donkeys and camels. The animals act as the source of their livelihood by providing milk, meat, blood, trade, skin and transport (IFAD, 2010). Across the continents, the way pastoralism is practiced varies greatly, from the highly technologically advanced pastoral systems of Australia or the USA to partially subsistence systems in parts of Africa (Davies & Bennett, 2007). Despite the variations, certain features of pastoralism are very common, including using similar property regimes, the management practice of organized herd mobility and using of livestock breeds that are locally adapted, which are nearly universal all over European, South American, Asian and African pastoral systems (IFAD, 2010; Davies & Hatfield, 2008).

The Arid and Semi-Arid Lands (ASALs) in Kenya make up more than 84% of the entire mainland. It supports more than 25% of people and over 70% of livestock in Kenya (Yazan *et al.*, 2012). About 70% of the livestock in the country contribute directly to the livelihood of the pastoralist in the form of livestock products. These communities represent the population that is most susceptible in Kenya because of their inaccessibility to essential needs and infrastructure and also face environmental degradation. As a result, these pastoralist communities have remained to be the most faced with food insecurity and experience high

malnutrition rate in Kenya which at times goes beyond international emergency rate (Komote & Mwaura, 2017).

According to Kassahun *et al.* (2008), the practice of pastoralism entails widespread mobile tending of livestock on rangelands that are communal and the livelihood that is prevalent. The production system that is usually practiced in ASALs globally is mostly dependent on access to water, grazing lands and labour that guards the livestock (World Bank, 2013). It supports the livelihoods of most poor people globally (Wassie *et al.*, 2009). Pastoralists all over the world adopt a variety of livelihood strategies under varying situations and usually, there is a shift in emphasis from one strategy to another based on the need and the resources available (IFAD, 2010). Adaptation strategies can either be natural or non-natural resource based. They can also be food production strategies like livestock and crop production and wild produce collection and non-food strategies like sale of minerals, migrant labour, trade, and remittances (Nori, 2007). Samatar (2015) noted that adoption of alternative livelihood strategies aims at finding alternative ways of income generation and diminishing environmental challenges which are key to development.

Traditionally, pastoralists employed alternative livelihood strategies to ensure they survived during times of disasters. Mobility of stock, maximizing, diversifying and dispersing herds are some of the strategies adopted to reduce challenges in the changing and unpredictable setting (Kassahun *et al.*, 2008). Movement of stock guaranteed that there was accessibility to fresh pastures, enough minerals, supply of water, avoidance of overgrazing and competition from human and insect pests that carried diseases (Saranta, 2013). It also helped in expansion of herds. Pastoralism can either be trans-human or nomadic (Omar, 2018).

Kajiado County is based in Rift Valley and has a population of 687,312 (Kenya 2009 population census). There are several sub-counties within the county including Kajiado

central, North, West, South and East. The county proportion of individuals falling under the poverty line is approximately 47% compared to the country's 46%. In Kajiado there is poverty and hunger, and the situation is increased by frequent drought. The pastoral system in Ildamat ward, Kajiado central sub-county is susceptible to degradation environmentally and there is food insecurity among people in the community. Their livelihood is hampered by varied natural and socio-economic difficulties like numerous environmental challenges, absence of basic infrastructure, the low resilient capacity to deal with frequent drought and to recover from such susceptible circumstances and therefore the need to adopt alternative strategies.

1.2 Problem Statement

The Maasai are a well-known ethnic group around the world and are often viewed as a nomadic tribe who follow their herds to better grazing lands and water. Livestock have long provided economic security and a way for the Maasai to confront natural disasters, such as frequent droughts and disease, with some form of resilience and flexibility. Livestock can move to areas with rainfall, greener pastures, and away from pests. Due to the nature of the land they occupy and climatic factors, crops have been failing 2 out of every 5 years. The situation seems to be becoming worse, due to decreasing soil moisture levels and increased pressure due to population increase. Natural vegetation removed by plowing, has increased soil erosion, water runoff and greater evapotranspiration. This is a prerequisite for adoption of alternative livelihoods for their survival.

Pastoralism contributes significantly to the GDP in the global economies (Davies & Hatfield, 2007) but it is faced by a lot of challenges and shocks. It contributes significantly to the GDP in Kenya. According to Omar (2018), pastoralists possess 60% of the herd nationally producing about 10% of GDP. Information on the livelihood strategies that pastoralists involve themselves in is scarce although little is known on the effectiveness of the alternative

livelihood strategies adoption on their socio-economic well-being. This study thus sought to assess the effectiveness of alternative livelihood strategies adoption on socio-economic well-being of pastoralists, assessing the impact of already adopted alternative livelihood strategies and their effectiveness on eliminating damages among suffering as a result of drought and famine.

1.3 Research Questions

- i. What are the characteristics of the pastoralists in Ildamat ward, Kajiado County and their effect on alternative livelihoods?
- ii. What are the current livelihood strategies of pastoralists in the study area and their effect on pastoralists' welfare in Ildamat ward, Kajiado County?
- iii. What are the alternative livelihood strategies of the pastoralist in Ildamat ward, Kajiado County?
- iv. What is the support provided by development agencies and its effect on the socio-economic well-being of the pastoralists?
- v. What is the effect of adopting alternative livelihood strategies on the socio-economic well-being of the pastoralists in Ildamat ward, Kajiado County?

1.4 Objectives of the Study

- i. To establish the characteristics of the pastoralists in Ildamat ward, Kajiado County and their effect on alternative livelihoods
- ii. To determine current livelihood strategies of pastoralists in the study area and their effect on pastoralists' welfare in Ildamat ward, Kajiado County
- iii. To assess the alternative livelihood strategies of the pastoralist in Ildamat ward, Kajiado County.

- iv. To examine the support provided by development agencies and its effect on the socio-economic well-being of the pastoralists in Ildamat ward, Kajiado County
- v. To assess the effect of adopting alternative livelihood strategies on the socio-economic well-being of the pastoralists in Ildamat ward, Kajiado County

1.5 Justification of the Study

The study will generate results which will contribute to the knowledge base and assist stakeholders like development agencies including Non-Governmental and Faith- Based organizations in understanding alternative livelihood strategies of pastoralists.

Further, the results of this study will provide the profiles of the pastoralists and therefore give information on why adoption of the alternative strategies may or may not be taking place. The results of this study will reveal the effect of adopting of alternative livelihood strategies on the socio-economic well-being of pastoralists and thereby close the knowledge gap in research in the field of alternative livelihood strategies.

1.6 The Scope of the Study

While focusing on pastoralism, this study was limited to assessing the effectiveness of alternative livelihood strategies adoption on social and economic welfare of pastoralists in the study area. It concentrated on establishing the establish of the pastoralists, determining the type of alternative livelihood strategies they had adopted, investigating the effect of adopting the livelihoods and finding out the support provided by development agencies and its effect on the socio-economic welfare of the pastoralists.

1.7 Limitations of the Study

The study was limited both in terms of time and cost. To overcome the cost limitation, the sample size was small, i.e., 136 household heads and 20 key informants. To overcome time limitation since the study area was large, research assistants were involved in data collection and enabled it to be completed within a short period.

1.8 Definition of Key Concepts

Alternative livelihood strategies – These are activities that the pastoralists in the study area involved themselves in as options for earning their livelihoods. The options enabled them to have money in their pockets, food for their household consumption and acquisition of assets (Alderman, 2008). The activities included crop farming, beadwork by women, craft production, gathering of wild fruits/ herbs.

Livelihood Strategies - A mixture of activities and options engaged in by people for achievement of their livelihood goals and use of their assets in preservation of their current livelihoods (Ellis, 2000).

Pastoralism - Widespread mobile livestock rearing on rangelands that are communal (Kassahun, Snyman & Smit, 2008).

Socio-economic well-being – State where material and non-material necessities of individuals, households and communities are fully gratified (Encyklopedia PWN)

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

In this chapter we review literature on: Pastoralism as an economic system, well-being of pastoral communities, livestock keeping as the main type of livelihood strategy and alternative livelihood strategies as well as characteristics of pastoralist households. We also present the theoretical and conceptual frameworks that guided this study as well as operational definitions of the variables of study.

2.2 Pastoralism as a social economic system

Pastoralists represent an estimated 5% of the total population of certain African nations and contribute between 10-44% of the GDP of those nations in which they operate (UNECA, 2017). Pastoralists contribute almost 90% of the meat consumed within East Africa with an estimated 60% of the products including milk and meat exported to West Africa thus playing a significant role across vast parts of Africa and improvement to the livelihoods of groups involved (ILRI, 2013). Whilst acknowledging the significant contribution of pastoralism to national economies, it is worth noting that most of pastoralists operate in arid and semi-arid lands where the settings are characterized by varying climate, recurrent droughts and unpredictable precipitation resulting to crop failure, decimation of mass herds, food insecurity, hunger and famines (UNECA, 2017).

Pastoralist livelihoods are often undermined by persistent or sporadic conflict with a range of groups including other pastoralists, farmers, commercial interests and the state (De Haan *et al.*, 2014). A number of efforts have been made to support pastoral communities, however, there are current criticisms of existing policy interventions in that they are often poorly implemented, lack adequate funding and are implemented by ill-equipped non-pastoral

administrators (Avis, 2018). It is important to assess the wellbeing of the pastoralists and evaluate how much has been done by development agencies to know the impact it has brought to them. Further, knowledge on what needs to be done is important so that the contribution towards the GDP can be enhanced as the livelihoods are improved. It is also difficult to disentangle targeted livelihoods interventions from broader programs to support pastoral development including conflict resolution, resilience and development programs.

2.2 Well-being of Pastoral Communities

Ngugi and Sanginga (2013) noted that production of livestock is a major livelihood endeavor among the pastoralists in the ASALs which contributes to security in food and nutrition, generation of income and well-being of households. Krall, et al. (2013) further observed that livestock remains a significant part of sustainability of livelihood in pastoral regions. Food insecurity challenge is shown by a crisis in livestock among the households in these regions. Silvestri et al. (2012) noted that livestock is therefore a key asset for improving resilience of susceptible individuals through diversification of risk and accumulation of assets.

Pastoralism areas are insufficiently subjected to the market economy regardless of being approximately 50 percent of the nation's livestock prized at 10 percent of the national GDP. Research has also shown that ASAL communities in Kenya have continued with their pastoral livelihoods, keeping vast herds of animals and selling them is never a priority even when the perennial droughts take place. Hesse and McGregor (2006) also indicated that there is also widespread theft, diseases, clashes of livestock and the reducing pastures and water.

According to Komote and Mwaura (2017), 80% of the land area in Kenya is ASALs with only 25 percent of the nation's populace being pastoralists who keep cattle, sheep, goats, camels and donkeys. They are approximately 50% of the nation's total livestock which amount to 1.6 mn tropical animal units providing 90% and 50% of the areas' employment

and incomes, respectively. Locally, the significance of livestock is shown in its 10% contribution to GDP, 42% contribution to agriculture and 50% contribution to labour force. Fitzgibbon (2012) however, observes that the ASAL areas are typified by a cycle of key droughts every four years.

2.3 Livestock keeping as the main type of Livelihood Strategy

Aklilu and Catley, (2010) noted that pastoralists comprise most of the inhabitants in the dry lands within Africa, traditionally exploiting natural resources to support mobile and a widespread livestock-keeping system. Their movement is dependent on the availability of pasture and water and using alternative livelihood strategies like splitting, diversification and maximization of herd in order to distribute the risk of losing livestock occurring from droughts, diseases and theft.

Belay (2016) noted that currently, maintaining resource-effective production of livestock has been made hard for the pastoralists due to a number of complicated developments. First, the traditional strategies they use are characterized by movements and therefore efficient only in settings that allow movement of livestock in vast areas. The susceptibility of the pastoralists to natural and man-made shocks has intensified due to the fact that government has developed policies and large-scale private enterprise restricting mobility of herds. Second, there has been pressure for land due to increase in population among the pastoralists and production of crops in the dry and risky areas thus leading to concentration of livestock in more confined regions resulting to degradation of environment. Third, climate variability has brought about long drought periods and drought cycles that are short, making pastoralists increasingly susceptible to food insecurity.

According to Kassahun *et al.* (2008), pastoralists adopt mobility of stock, maximization of herds, diversification of species and dispersion of herds to reduce risks of loss. Mobility of

stock ensures that livestock obtain pastures that are fresh as well as minerals and access water. There is also avoidance of overgrazing of pastures and competition from human and insect pests that are disease-carrying. It can either be transhumant or nomadic (Omar, 2018). Diversification of activities comprises combining various activities under similar management to minimize total loss risk when crisis like diseases strike. Kassahun *et al.*, (2008) also noted that livestock vary in the amounts of meat, milk, fat or blood production thus fulfilling varying functions. Further, various animal species allow pastoralists to effectively utilize pasture resources that are available as various species have behaviours that are non-competitive. Start and Johnson (2004) found out that diversification increases aggregate productivity although it requires more labour

Dispersion of herds involves distributing one's livestock to numerous zones to reduce local theft and disease risks. According to Mariam (1981), herd dispersion took many forms like stock loans, division of the stock into two or more herding units and separating whole households between two neighborhoods. Kassahun *et al.* (2008) said that in herds' maximization, keeping as many female animals as possible was the strategy used by pastoralists which ensured a stable supply of products to maintain their families. Thus, a large herd is geared towards survival; reduce risks and recovery after drought or other shocks

2.4 Alternative livelihood strategies

Aklilu and Catley (2010) note that pastoral communities in East and West African nations are frequently affected by different difficulties and disasters like drought, outbreak of livestock diseases, degradation of rangelands and disputes that are resource-based making pastoralism risky which pushes some individuals out of the pastoral system. Further, Fratkin (2013) indicated that drought and famine, reduction in livestock holdings, loss of grazing lands to farms and estates, common property resources loss, commoditization, increase in cash needs,

political insecurity, violence and abundance of small arms are some of the factors leading to pastoralists seeking for alternative livelihoods in Kenya.

According to Komote and Mwaura (2017), pastoralists have discovered strategies geared towards dealing with perennial drought that lead to reduction of herds and takes long before their recovery. However, droughts have become more recurrent and tenacious thus the recovery times have become too dumpy before another drought strikes. This has increased the pastoralists' susceptibility to drought resulting in many deaths of livestock. Franklin *et al.*, (2011) found out that pastoralists have in history tried to use initiatives like farming, foraging and migrating to urban areas during famine and drought. In the recent past, they have become more susceptible to famine and drought due to poverty and loss of stock because of minimized mobility, raiding and politics.

Studies have also shown that due to reduction in productivity of livestock and reduction in the rangelands among the pastoralists, they have been forced to seek alternative income and subsistence means for them to get food and supplement the reducing supply of livestock products. Morton and Meadows, (2000) noted that a good number of pastoralists have recently embraced a range of alternative activities that are income generating which are mostly undertaken when coping with famine. Some of the activities are firewood collection, burning of charcoal and Arabic gum collection. According to Ouma (2011), pastoralists living in Turkana County involve themselves in varying livelihood strategies like production of aloe, employment, irrigation agriculture along River Turkwel and fishing in Lake Turkana.

2.5 Theoretical Framework

2.5.1 The Sustainable Livelihood Framework

The framework that guided this study was the Sustainable Livelihood Framework (SLF) as articulated by the Department for International Development (DFID) in 1999. The framework shows that people have goals that they desire to obtain in their lives. In striving to achieve

them, they undertake certain activities (livelihood strategies) using particular resources (livelihood assets) which are accessible. However, this endeavour is mediated by structures and processes, which determine access, terms of exchange and returns. The interplay of these processes takes place in a wider external environment of vulnerability.

According to the SLF, a livelihood system is composed of five components linked, interrelated and affecting each other in many ways. They are livelihood assets, transforming structures and processes, livelihood strategies, vulnerability context and livelihood outcomes. Each component has sub - elements that internally affect each other. Human, social, natural, physical and financial assets are the livelihood assets differentiated by SLF that individuals need in the attainment of livelihood outcomes that are positive and no single asset is enough to give outcomes that people are seeking for. Accessibility to these assets is mostly dynamic and limited making individuals to combine them in innovative ways and thus survival.

Structures are organizations whether private or public responsible for setting and implementing policy and legislation, delivering of services, purchasing and trade and performing roles which affect livelihoods. Processes on the other hand are the means through which structures function and are composed of policies, legislation, institutions, culture and power relations. Structures and processes shape the livelihoods of individuals since they promote or hinder accessibility to particular types of capital, livelihood strategies, decision-making bodies and sources of influence. They determine the exchange terms between various types of capital and returns from any livelihood strategy. They also have a direct effect on whether individuals are able to have a feeling of inclusion and well-being.

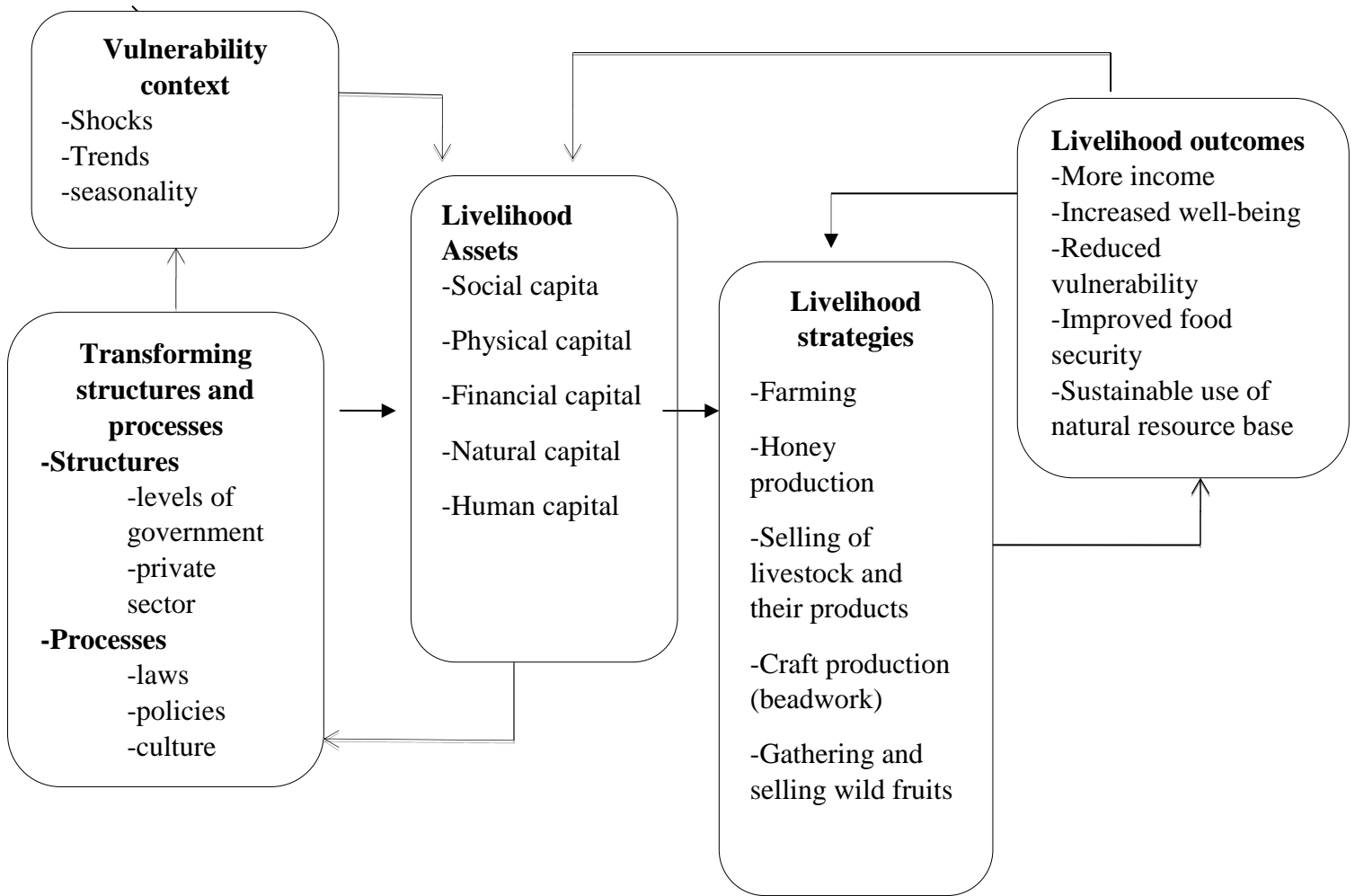
SLF shows that individuals exist in a context of vulnerability which is typified by trends, shocks and seasonality that cause direct and indirect difficulties. Livelihood assets availability is influenced by trends and variations in population, natural resources, national

and international markets, trade and globalization. Similarly, shocks in human health (sicknesses, death of a family member) in nature (drought, floods, and cyclones), crops and livestock (diseases, theft) as well as conflict affect availability of assets and peoples' livelihoods. Further, seasonality in prices, production and health or employment chances also influences assets availability and individuals' livelihoods.

Livelihood strategies in SLF, contains the range and combination of choices that individuals make and the activities they involve themselves in to ensure they achieve their livelihood goals. Productive activities, investment strategies and social arrangements are part of livelihood strategies. Diversity of assets accessible to the individuals considering the vulnerability context and transforming structures and processes is the key determinant of the livelihood strategies which are either adaptive or coping. Long-term choices and activities are what adaptive strategies are all about while short-term choices and activities that people make and undertake due to shock are the coping livelihood strategies.

Livelihood outcomes are the goals that individuals work at attaining in their lives. They differ from household to household and community to community. According to SLF, the common ones are more income, increased well-being, reduced vulnerability, improved food security and more sustainable use of the natural resource base. A household or community can pursue one or more of these goals. Goals motivate people thereby determining their behaviour and priorities.

Figure 2.1: Sustainable Livelihood Framework



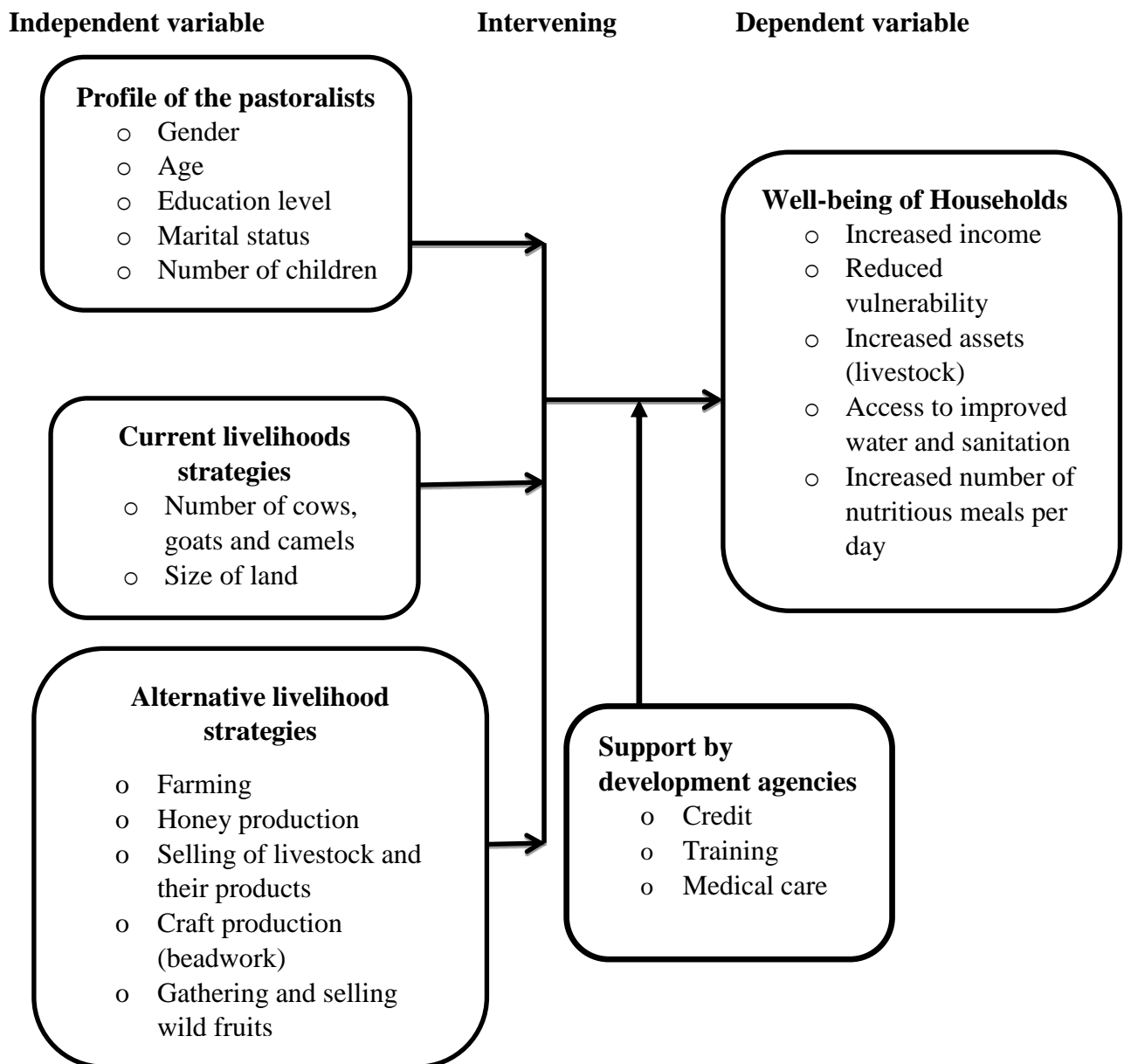
2.5.2 Induced Innovation Theory

This theory was initially propounded by Hicks in 1932 and has been empirically assessed within the past 40 years. This theory has been mostly significant in focusing the concentration of economists on innovation technologically thereby coming up with strategies that can improve livelihoods. This theory asserts variations in comparative prices of factors should stimulate the creation and implementation of new technology to save the comparatively more expensive factors (Kako, 1978). Having in mind the evolution of times and the need to change to adopt to the new innovations, the issues of climate variability among the pastoralists vast areas and the new innovations that have been put in place that can be adopted by pastoralists. This theory is important as it informs factors that can affect the adoption of alternative strategies by pastoralists. This will in turn change the livelihoods of the pastoralists.

2.6 Conceptual Framework

According to Mugenda and Mugenda (1999) conceptual frameworks represent a group of broad or expansive ideas and other principles that are drawn from specific fields of analysis and surveys that are relevant to a research study. They help in structuring studies. Following our review of literature and the relations emanating among the alternative livelihood strategies, well-being and other variables, the conceptual framework is shown in Figure 2.1. The conceptual framework demonstrates how the study's independent, intervening and the study's dependent variables are related.

Figure 2.2: Conceptual Framework



2.7 Operational Definitions

Alternative livelihood strategies – These are activities that the pastoralists in Ildamat involve themselves in as supplementary sources of their livelihoods. The sources cushion them against vulnerability by providing them income, food and other necessities of their households. The livelihood strategies included crop farming, gathering of wild fruits/herbs, beadwork by women, craft production among others.

Main livelihood strategies: These are livestock mainly cattle, goats and sheep.

Profiles of the pastoralists: These are the characteristics of the pastoralists which are: Age, gender, formal education level, marital status and number of children.

Well-being of households: This is the overall level of material, non-material aspects of the pastoralists' lives including, income and access to health services.

Support by development agencies: This is the assistance given to the respondents by NGOs, FBOs, and any development agency operating in their area that was geared towards ensuring that the pastoralists had a comfortable life like giving of financial support to buy more livestock in case of calamity.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on presenting the research design and approach while highlighting the procedures for data collection and analysis. Additionally, it highlights the key ethical considerations which guided this study.

3.2 Research Site

The data in this study were collected from Kajiado County. We selected Kajiado owing to its being one of the major pastoralist areas in Kenya. Kajiado County lies at the southern edge of the former Rift Valley province, and about 80 kms from the Kenyan capital of Nairobi. The name Kajiado was derived from the Maasai word “Olkeju-Oado” which means “the seasonal long river” that flows through Kajiado town. The County occupies an area of 21,901 square kilometers and borders Narok to the west, Nairobi, Nakuru and Kiambu to the north, Makueni and Machakos to the east, and Taita-Taveta and Tanzania to the south (see Figure 3.1). According to the 2009 Kenya population and housing census, Kajiado County had a population of 687,321 people (ROK, 2009). The County has five constituencies: Kajiado North, which is the most cosmopolitan, Kajiado Central, Kajiado South, Kajiado West, and Kajiado East.

Economic activities in Kajiado County are mainly pastoralism in areas where the Maasai are predominant, tourism (Amboseli National Park), and community conservancies being the key focus, real estate, sand harvesting, mining, and general enterprises. Kajiado County has experienced rapid urbanization due to its proximity to Nairobi, which is the Kenyan national capital with many industries and private developers who have built homes in the area to avoid the congestion in the city. This county is the home of Africa’s largest soda ash mining that is located in Lake Magadi. Kajiado County has in the recent past, been the center of exploration

3.4 Units of analysis and Observation

The unit of analysis was livelihoods of the sampled households. The unit of observation was either the husband or wife in the sampled households including, Assistant Chiefs and village elders who represented the key informants.

3.5 Study Design

Descriptive research design was used. Chandaran (2004) opines that this type of design is suitable for describing and portraying traits of an event, situation and a group of individuals. This helps the researcher to obtain comprehensive and correct information about the phenomenon of study which in this case was the effectiveness of adoption of alternative livelihood strategies by households and its effect on their well-being.

3.6 Sample Size and Sampling Procedure

3.6.1 Sampling of sub-sites of study

Creswell and Creswell (2017) observed that sampling represented the process of selecting a subset of individuals from a statistical population. Kajiado has Kajiado Central, Kajiado North, Kajiado East, Kajiado West and Kajiado South sub-counties. We selected Kajiado Central Sub-county which was more accessible than the others. The sub-county had five wards which included Purko, Ildamat, Dalalekutuk, Matapato North and Matapato South. The researcher focused on Ildamat ward because it was easily accessible due to its dense population in contrast to other wards which were sparsely populated. The ward which had an estimated population of 9,900 people and covered an area of 290 km² comprises five sub-wards which included: Esukuta, olkiloriti, Oloyiankalani, Hospital and Market sub-wards (KNBS, 2009). According to the County Integrated Development Plan (CIDP) Kajiado, 2013-2017 the main economic activity in Kajiado Central sub-county is pastoralism. More particularly, Ildamat ward is a key pastoralist area and is mostly affected by adverse weather conditions leading to mobility of its residents in quest for pasture and water for their

livestock. It is based on these unique demographic and climatic challenges that the study sought to examine the practice of alternative livelihood strategies of the households living within the ward. Pastoralists in this area are settled with individual parcels of land such that households had their own pieces of land.

The study site of Ildamat ward was divided into five sub wards (Esukuta, olkiloriti, Oloyiankalani, Hospital and Market) which we treated as clusters. We chose to collect data in all the five wards/clusters.

3.6.2 Sampling of heads of households

There were Esukuta, olkiloriti, Oloyiankalani, Hospital and Market sub-wards in Ildamat Ward which we treated as clusters. We chose to sample 30 household heads from each of the five (5) clusters. With the help of the Assistant chiefs and village headmen of each cluster, we started from one point (place) in the sub-cluster and purposively sampled household heads in all directions until our target of 30 was reached. This gave a total sample of 150 household heads for the 5 clusters.

A sample of 150 heads of households was chosen across the five sub wards. The process of sampling was disproportionate and did not take into consideration the respective population of the sub-wards in line with the number of pastoralists' households. That is, we sampled an equal number of household heads (30) from each cluster irrespective of its total number. The sub-samples drawn from the sub-wards are presented as shown in Table 3.1.

3.6.3 Sampling of Key informants

Purposive sampling was adopted in choosing key informants. Assistant Chiefs and village elders were chosen as key informants because of their strategic positions as local leaders in addition to their role as resource persons in the area. As shown in table 3.1, a total of 20 key informants were selected with 3 village elders and 1 assistant chief chosen from each sub-

ward. The information they provided about trends in alternative livelihood strategies in the study area gave insights that added value to the research.

Table 3.1: Sample Size

Sub-locations	Estimated Households	Key respondents		Key informants	
		Targeted Household heads	Household heads interviewed	Ass. Chiefs	Village elders
Market	250	30	26	1	3
Hospital	317	30	28	1	3
Oloyiankalani	503	30	27	1	3
Olkiloriti	706	30	27	1	3
Esukuta	945	30	28	1	3
Total	2,721	150	136	5	15

3.7 Data Collection and Analysis

3.7.1 Household Survey

The survey was done using a questionnaire (Appendix II). With assistance from the Assistant chief and village headmen of the sampled clusters, we moved into each of the clusters and purposively chose household heads in all directions. We interviewed them using an open-and close-ended questionnaire. The personal contact of the researcher with the respondents allowed room for further probing. This offered the researcher the chance to ask the respondent questions in a way they understood well and clarified the questions to ensure the collection of correct information. The open-ended questions allowed the respondents to communicate their views freely without being forced to fit within the answers. The close-ended questions were presented to the respondents with a set of answers that closely represented their views to choose from.

3.7.2 Interviews with Key Informants

The key informant interviews were carried out using a key informant guide (Appendix III). Interviews with key informants helped in triangulating data obtained from household heads. Assistant Chiefs and village elders participated in the interviews and were useful in giving detailed understanding of the adoption of the alternative livelihood strategies by the pastoralists and how it affected their well-being.

3.8 Data Analysis and Presentation

Quantitative data was obtained from questionnaires and was taken through data analysis phases. Data cleanup involved editing, coding and tabulation in order to detect any anomalies in the responses and also assigning specific numerical values to the responses for further analysis. Qualitative data that was collected from the key informants was first reviewed to ensure it was done. To analyze qualitative data, the Framework Based Approach proposed by Ritchie *et al.* (2003) was used. This involved classifying and organizing data into a thematic framework based on key themes, concepts and categories. Data was then keyed in using SPSS for analysis.

Analysis was later done using SPSS. The analysis entailed the use of descriptive and inferential statistics since this helps in simplifying large data sets and therefore allowing understanding of the specific set of observations in a study. This included generation of summary statistics in the form of means, standard deviations and percentages and presented in form of graphs, tables and pie charts.

3.9 Ethical Considerations

Voluntary and informed consent was sought by the researcher before interviewing each respondent. The respondents were notified about the intention of the study and that the information they provided would be confidentially handled.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

In this chapter, we present results of the study in terms of: current livelihood strategies, alternative livelihood strategies, characteristics of the pastoralist households, support provided by development agencies to the households and effect of adopting the alternative livelihoods on their well-being. The findings are presented in tables, graphs and pie-chart.

4.2 Response Rate

The response rate represents the extent to which the gathered data was inclusive of all the sampled members (Babbie, 2012). Nearly 136 household heads were interviewed using questionnaires. All the respondents targeted were 150.

Table 4.1: Response Rate of the Household Heads

	Frequency (n)	Percent (%)
Interviewed	136	90.7
Not interviewed	14	9.3
Total	150	100

According to Table 4.1, 136 household heads were interviewed which represents a response rate of 90.7%. Babbie (2012) denoted that a response rate of 50% is acceptable, 60% good and 70% very good for analysis and publishing. A very good response rate was obtained in this study since the researcher personally interviewed the household heads. Those not interviewed were not available for the interview.

4.3 Characteristics of the Pastoralists

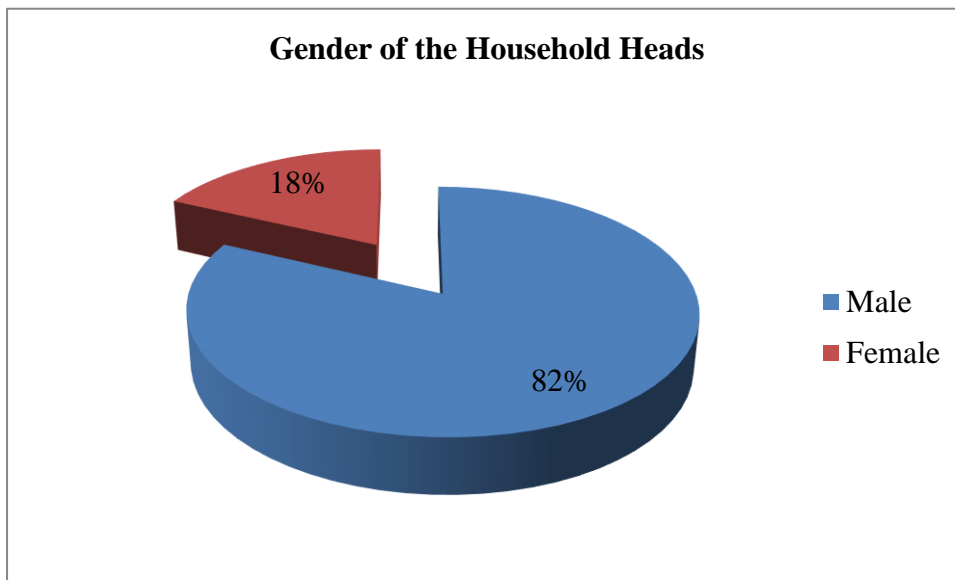
The first objective of study was to establish the characteristics of the pastoralists sampled for this study. The characteristics included: gender, age, highest education level, marital status

and the number of children of the household heads. Tables and figures were used to present the profiles.

4.3.1 Gender of the Household Heads

Studies done among pastoralists such as that of FAO (2012) showed that pastoral societies are more male-dominated than most other subsistence systems. In this study the gender of the household heads sampled are shown in Figure 4.1. Nearly 82% of the respondents were male while 18% of them were female.

Figure 4.1: Gender of the Household Heads



The figure confirms the above studies that in the pastoral communities, the household heads remain as men. The few household heads that were women represented the widowed and those of the men who might have gone to seek for pasture for their livestock and were therefore not available during data collection.

4.3.2 Age of the Household Heads

Studies by Rogers (1983) showed that younger farmers are more innovative and keen to take risk than older ones. This could also be true of pastoral communities that are in transition to settled life such as those of the study area. The responses relating to age are highlighted in

Table 4.2 which shows that 42.5% of the respondents were aged 40-49 , 31.0% were above 50 years, 14.2% were aged 30-39 while 12.4% were aged 29 years and below.

Table 4.2: Age of the Household Heads

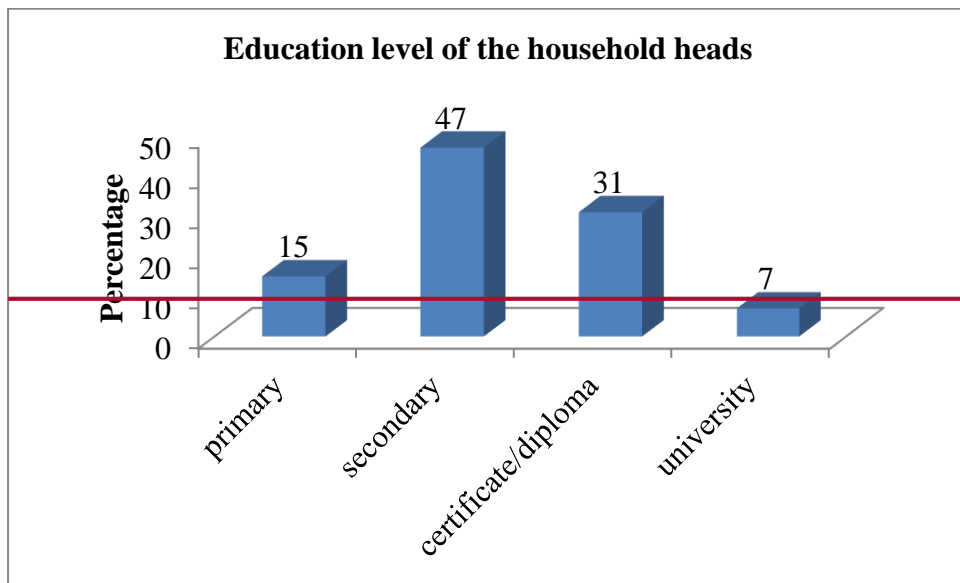
Age of the Household Heads	Frequency (n)	Percent (%)
29 years and below	14	10.3
30-39	26	19.1
40-49	58	42.6
50 and above	38	27.9
Total	136	100.0

Majority of the participants were aged above 40 years (70%). As people age, adopting new and current livelihood strategies may be difficult and since most of the household heads were aged, the county government and development agencies may have a hard time convincing them on the current methods which would improve their well-being.

4.3.3 Education Level of the Household Heads

Studies show that highly educated individuals are exposed and easily adopt new livelihood strategies (Jiao *et al.*, 2017). Figure 4.2 shows that a majority (47%) of the household heads had secondary level of education, 31% had certificate/ diploma , 15% had primary while only 7% were educated to university level.

Figure 4.2: Highest Education Level of the Household heads



A study by Kibera (2013) on education among pastoralists indicated that mobile schools could give more opportunities for school age going children and suggested necessary mitigation steps in planning of nomadic education. This could explain why most Household Heads had education level to secondary school since mobility looking for water and pastures for livestock were common in Ildamat ward. Most of the respondents had relatively low education and therefore adopting current livelihood strategies could prove a hard task for them leading to their being poor.

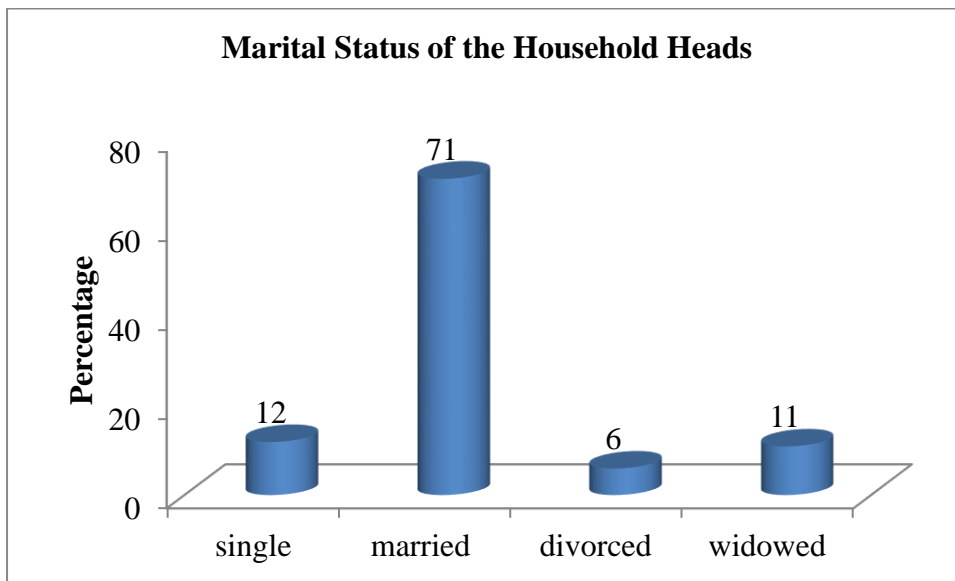
4.3.4 Marital Status of the Household Heads

Among the pastoral communities young men are usually assigned to a social category which makes it possible for older men to have several wives because *moran* warriors are not allowed to marry until they graduate. Women are typically responsible for milking and dairy processing and thus important for husbands to have more wives (FAO, 2012). In some communities, widows and divorcees are denied the right to own property that has been left by their deceased husbands. This is common in rural areas where women are commonly considered as the property of their husband's clans and are usually voiceless amidst

challenges of their homes and property being taken away (HAI, 2004). In instances where people are married and have harmony, it may be easier to adopt current livelihood strategies since they are able to share the ideas compared to single, divorced or widowed households.

Figure 4.3 shows that 71% of the household heads were married, 12% were single, 11% were widowed while 6% were divorced.

Figure 4.3: Marital Status of the Household Heads



The figure shows that a large number of household heads were married and that there was likelihood of adoption of the alternative livelihood strategies as promoted by the county government and development agencies aimed at improving their well-being.

4.3.5 Number of Children reported by the respondents

Studies by Fratkin *et al.* (2004); Hauck and Rubenstein (2017) and ILO (2013) have shown that children are highly utilized among pastoral communities in the daily herding of cattle and other livestock. The more children a family has, the better since labour used for looking after their livestock would be readily available.

The study established the number of children of the household heads (Table 4.3). Of the 136 respondents, 27.9% had 4-6, 32.4% had 7-9, 24.3% had more than 10 while 15.4% had less than 3 children.

Table 4.3: Number of Children

Category	Frequency (n)	Percent (%)
3 and below	21	15.4
4-6	38	27.9
7-9	44	32.4
10 and above	33	24.3
Total	136	100

In is clear from the above results that most of the household heads were men, most were aged 40-49 years and had education level of secondary school. Further, most of them were married with 7-9 children.

4.4 Current Livelihood Strategies

4.4.1 Livestock Keeping as the Main source of Livelihood

The second objective of this study was: “To determine current livelihood strategies of pastoralists in the study area and their effect on pastoralists’ welfare”. The indicators of the main sources of livelihood were: livestock keeping, land size owned and income from livestock. Meeting of household’s subsistence needs depended on the number of livestock owned and grazing pastures.

According to Bobadoye *et al.* (2016), pastoralists depend greatly on the rearing of livestock which plays a significant function in their livelihood, protection from disaster in addition to social capital. Ouma *et al.* (2012) noted that pastoralists depend wholly on their livestock as a

livelihood source thus the high numbers of the livestock they keep. They noted further that meat and other livestock products from the pastoralists are usually sold in the high demand markets of Nairobi and Mombasa. Bobadoye *et al.* (2016) also noted that there has been a supply of the pastoralists' Kenyan meat reaching the Tanzanian market within the East African region and globally, the United Arab Emirates and there are new and rising markets in Qatar, Oman, Kuwait, Somalia and Egypt.

Table 4.4 shows that 25.7% of the respondents owned 101-250, 22.8% had 51-100 while 18.4% had 251-500 cattle. The table also shows that 32.4% of the respondents had 101-250 while 23.5 had 51-100 goats and that 28.7% of the respondents had 101-250, 26.5% had 50 or less while 19.9% had more than 251 sheep.

Table 4.4: Number of Cattle, Goats and Sheep owned by the respondents

Numbers	Cattle		Goats		Sheep	
	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)
50 or less	24	17.6	19	14.0	36	26.5
51-100	31	22.8	32	23.5	11	8.1
101-250	35	25.7	44	32.4	23	16.9
251-500	25	18.4	21	15.4	39	28.7
501 and above	21	15.4	20	14.7	27	19.9
TOTAL	136	100	136	100	136	100

4.4.2 Size of Land

In this study, we asked the respondents to indicate the size of land they owned in hectares and they responded as shown in Table 4.5. The ownership was reported by 13.2% of the

respondents as less than 20, 20.6% had 101-150, 17.6% had 21-50, 33.1% had 151 and above while 15.4% had 51-100 hectares of land.

Table 4.5: Size of Land owned by the respondents

Hectares	Frequency (n)	Percent (%)
Less than 20	18	13.2
21-50	24	17.6
51-100	21	15.4
101-150	28	20.6
151 and above	45	33.1
Total	136	100.0

In regard to size of land owned, the Assistant chief of Oloyiankalan sub-ward stated that:

“most of the residents here have land sizes which are 151 hectares and above”. This was in support of what the household heads indicated since most of them indicated that their land sizes were more than 151 hectares.

The population among the pastoralists has been low due to drought and other natural catastrophes. This explains why the parcels of land in the study site for most respondents was high. Even with the real estate entrance in the rural communities, most lands among the pastoralists are communally owned and therefore decision to subdivide takes long.

4.4.3 Income from Livestock as the main source of livelihood

The study evaluated the main income sources for the respondents. Results in Table 4.6 show that the main income source for the household heads was sale of both livestock and milk (46.0%), sale of livestock (29.8%) and selling of milk (24.2%)

Table 4.6: Main Source of Income

Main source of income	Frequency (n)	Percent (%)
Selling livestock	75	29.8
Selling milk	61	24.2
Both livestock and milk	116	46.0
Total	252	100

An Assistant Chief stated that

“selling of *livestock and milk are the main sources of income*”.

4.4.4 Approximate Monthly Income

We also asked the respondents about the approximate income they earned per month and they responded as shown in Table 4.7. The table shows that 18.4% of the respondents had an income of Kshs 5,001-10,000, 16.2% had Kshs 20,001 – 50,000, 33.1% had more than Kshs 50,000, 14.7% had Kshs 10,001-20,000 while 18.4% had an income of Kshs 5,000 or less.

Table 4.7: Approximate income earned by the respondents per month

Income per Month (Kshs)	Frequency (n)	Percent (%)
Less than 5,000	25	18.4
5,001-10,000	24	17.6
10,001-20,000	20	14.7
20,001-50,000	22	16.2
More than 50,000	45	33.1
Total	136	100.0

These results contradict those of Thornton *et al.* (2006) and Boone *et al.* (2011) who found that most pastoral areas particularly those of the Maasai demonstrate extensive poverty relative to global and local rural poverty thresholds. The above incomes that were reported by the respondents show that they were not as poor as noted by Thornton *et al.* (2006).

4.5 Alternative Livelihood Strategies

The third objective of this study was: “To assess the alternative livelihoods carried out by the household heads”. The indicators of alternative livelihoods included: Crop farming, honey production, beadwork by women, leasing of land to outsiders, craft production, gathering and selling of wild fruits, formal employment, tourist’ camps and income from wage employment of the respondent and his/her household members.

A study done by Saranta (2013) showed that Isiria Maasai of Lolgorien had diversified their livelihood strategies into gathering of local wild vegetables and fruits, crop cultivation and agricultural based enterprises. Further, a report by ILRI done by Watson and van Binsbergen (2008) showed that the pastoralists in Turkana had diversified their livelihood strategies into production of honey, fishing, irrigated agriculture, making of baskets and handicrafts, hides and skins processing and selling, and small businesses which were geared towards increased income and improvement of their welfare. This had also led to increased livestock and reduced vulnerability to famines that were frequent in the region. Dinku (2018) also noted that there was need for a detailed research on the most appropriate alternative livelihood strategies of pastoralists so that an improvement of their livelihoods can be realized.

Table 4.8 shows that gathering and selling of wild fruits and beadwork by women were the most adopted alternative livelihood strategies by the household heads. Gathering and selling of wild fruits was reported by 18.4% of the respondents while beadwork (largely by women) was reported by 14.3%. Other alternative livelihood strategies reported by the respondents

were crop farming (13.9%), leasing of land to outsiders (11.1%), honey production (9.0%), tourists' camps (4.9%), wage/formal employment (4.5%), craft production (9.4%), business (6.1%) and income from grown-up children (8.2%) .

Table 4.8: Alternative Livelihood Strategies reported by the household heads

Livelihood strategies*	Frequency (n)	Percent (%)
Crop farming	34	13.9
Honey Production	22	9.0
Beadwork by women	35	14.3
Craft Production	23	9.4
Gathering and Selling of Wild Fruits	45	18.4
Wage/Formal Employment	11	4.5
Tourists Camps	12	4.9
Income from sons/daughter/relatives	20	8.2
Leasing of land to outsiders	27	11.1
Business	15	6.1
Total	244	100

A village elder in Olkiloriti sub-locations stated that:

“gathering and selling of wild fruits and crop farming are the key livelihood strategies adopted by the pastoralists”.

On the other hand, the Assistant Chief of Esukuta sub-location stated that:

“honey production is the major livelihood strategy for the pastoralists”.

An Assistant chief in Hospital sub ward said that wage/ formal employment was a key livelihood strategy for the pastoralists.

A study done by Komote and Mwaura (2017) on the sources of income among the pastoralists of Saku Sub- County in Marsabit County, showed that most of their respondents' livelihood sources was from the sale of crop products mostly from crops that were drought resistant as well as from selling of animal products, formal employment and business.

While some respondents reported one or two sources, some of them had up to 5 alternative livelihoods. On the basis of the livelihoods reported by the respondents, we created categories of these variables as 1-2, 3-4 and more than 4 sources and the distribution is shown in Table 4.9 below.

Table 4.9: Distribution of the Household heads according to the number of their alternative livelihoods

Alternative Livelihood scores	Frequency (n)	Percent (%)
More than 4	24	17.6
3 - 4	62	45.6
1 - 2	50	36.8
Total	136	100

4.6 Support of the Households by Development Agencies

According to Czubaet *al.* (2017), crises faced by many pastoralists in Africa have been on the rise and of increasing intensity in the recent past. Due to the effect of climate variability, political marginalization, loss of grazing fields and movement restrictions as given by the national and county governments, a good number of pastoralists are unable to overcome these effects and thus the need for their assistance by development agencies. Accordingly, Czuba *et al.* (2017), indicated that such support usually takes many forms with nutrition and food security taking priority of most development and humanitarian agencies which in most cases provide assistance in kind in the form of food.

The study sought to find out whether there were development agencies in the study area, whether the agencies offered support to the pastoralists and the extent to which the support affected the well-being of the pastoralists sampled. Indicators of the support were training on crafts, credit and medical care

The agencies operating in the study area were: AMREF, Mainyoto Pastoralist Integrated Development Organization, World Vision and Feed the Children.

African Medical and Research Foundation (AMREF): This is an organization addressing the needs of vulnerable populations especially women, children, and youth. It has offices in some parts of Kenya. It addresses the burden of infectious diseases, non-communicable diseases and maternal mortality. The organization has ground-based mobile medical services and flight clinics for the under-served and remote areas in Kajiado. It helps the community of this study in health care issues.

Mainyoto Pastoralists Integrated Development Organization (MPIDO): This organization had offices in Kajiado town and involved pastoralists in capacity building and empowerment usually through training. The training was aimed at helping them diversify their sources of income and sustenance of their lives during drought seasons. Skills like beadwork were imparted to women.

World Vision: This is an international Christian humanitarian organization, dedicated to working with children, families and communities worldwide to reach their full potential by addressing the causes of poverty and injustice. In Kajiado, the organization was helping in improving households' access to sustainable drinking water supply by drilling boreholes and increasing access to sanitation facilities and hygienic practices.

Feed the Children: This is an organization that deals with the poverty situation among the pastoralists especially due to drought. The organization gives food to the communities to ensure that their children are well fed.

Other organizations included Duputo-E-Maa and II'laramatak community concern.

When we asked the household heads about the agencies that operated in the study area, they answered as shown in Table 4.10. The table shows that 77.9% of the household heads agreed that development agencies were operating in the area with 70.6% having been individually assisted by the development agencies.

Table 4.10: Respondents' reports about Support provided to them by Development Agencies

	Availability of the Development Agencies		Received support from the Development Agencies	
	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)
Yes	106	77.9	96	70.6
No	30	22.1	40	29.4
Total	136	100	136	100

Training on crafts was reported by 27.2%, 33.8% received credit while 39.0% received health care support and were the major support received from the development agencies. Some household heads received both credit and health care support from the development agencies.

Arvis (2018) and Cruba *et al* (2017) noted that a number of efforts had been made in support of pastoral communities although there were criticisms that the existing policy interventions were usually poorly implemented owing to the fact that they lacked enough funding and that the non-pastoral administrators responsible for implementation of the policies were ill-equipped. According to Longley and Wekesa (2008), most donors and development agencies assist the pastoralists with food aid whenever there is a crisis.

Table 4.11: Type of Support given by the Development Agencies

Type of support	Frequency (n)	Percent (%)
Training on crafts	58	27.2
Credit	72	33.8
Healthcare	83	39.0
Total	213	100

*Some respondents mentioned more than one type of support

All the Assistant Chiefs and village elders in all the sub wards indicated that there are development agencies in the areas. The village elders of Esukuta stated that:

“training on crafts and giving of credit were the kind of support accorded to the pastoralist by the development agencies”.

The Assistant Chief of Oloyiankalani sub-ward said that;

“the development agency (Tanathi Water Company) was drilling boreholes for them with an aim of using the water for agriculture” .

These responses supported those given by the household heads.

Most of the respondents reported that they had been individually assisted by the development agencies. Health care support was reported to be the major support received from the development agencies. Improved water and sanitation access in addition to improving the number of nutritious meals daily were also reported as having been received by the household heads.

4.7 Wellbeing of Household Heads’ Households

We asked the respondents about the effect of adopting alternative livelihood strategies on the well-being of the households. Adopting alternative livelihood strategies is expected to cause a

positive impact and lead to improved livelihoods of people. Table 4.12 shows that adopting alternative livelihood strategies improved water and sanitation access in addition to improving the number of nutritious meals daily with 23.5% and 31.2% of the household heads, respectively. Further, 19.0% of the household heads indicated that it reduced vulnerability and increased assets/ livestock (17.0%) and increased incomes by 9.3% of the household heads.

Table 4.12: Respondents’ reports about effect of alternative livelihoods on their well-being

Wellbeing*	Frequency(n)	Percent(%)
Increased income	23	9.3
Reduced vulnerability	47	19.0
Increased assets/livestock	41	17.0
Access to improved water and sanitation	58	23.5
Increased number of nutritious meals per day	78	31.2

A village elder in Hospital sub-ward said that;

“Adopting alternative livelihood strategies improves water and sanitation access in addition to improving the number of nutritious meals daily”.

Accordingly,

“improved food security, increased well-being, reduced vulnerability due to variability in climate and increased income” were mentioned as key effects of adopting alternative livelihood strategies by the pastoralists.

According to Dinku (2018), an in-depth understanding of alternative livelihood strategies of pastoralists is critical in any endeavor to bring advancement of their livelihoods. He noted further that the effect of diversification of the household livelihood is exceedingly varied and there is need for the policymakers' to highlight on effective ways of fostering diversity.

Based on the well-being indicators adopted by each household, the household heads were categorized on their basis as 1-2 and above 2 and the distribution is as shown in Table 4.13.

Table 4.13: Distribution of the respondents on the basis of number of Well-being indicators they reported

Well-being indicators reported	Frequency (n)	Percent (%)
Above 2	56	42.6
1 – 2	78	57.4
Total	136	100

4.8 Relationship between well-being of respondents and the other variables

Cross-tabulations of the dependent variable which is well-being of households with the independent and intervening variables was done to show the relationships between them. Further, the chi-square test was carried out to determine whether the relationships were significant or not. The results are shown using tables.

4.8.1 Relationship between socio-economic characteristics and well-being of the households

Results from cross tabulations as shown in Table 4.14 show the relationship between the socio-economic characteristics and the well-being of the households. The relationships between all the socio-economic characteristics and well-being were insignificant. That is, most men reported above two effects of the alternative livelihoods adopted which were more –or-less like those reported by women. Results further showed that respondents who were

aged 40-49 years reported more on the effect of adopting the alternative livelihoods with 35 of them having above 2 effects. Respondents who had secondary school level of education reported on the effect of adopting the alternative livelihoods with more having experienced above 2 effects. This was followed by those with certificate/diploma level of education. Moreover, respondents who were married reported more of the effect of adoption of livelihood strategies with most of them having experienced more than 2 effects. Respondents who had approximate income of above Kshs. 50000 reported on the effect of adopting the alternative livelihoods with more having experienced above 2 effects. This was followed by those with approximate income of Kshs. 5001-10000 and 20001-50000. Moreover, respondents who had approximate income of Kshs. 10001-20000 reported more of the effect of adoption of livelihood strategies with most of them having experienced 1- 2 effects.

Table 4.14: Relationship between socio-economic characteristics and alternative livelihoods

Independent/Intervening Variables	Well-being indicators		Total
	1-2	Above 2	
Gender			
Male	42	68	110
Female	14	12	26
Total	56	80	136
Chi-square =2.130 df = 1 P = 0.144			
Age (Years)			
Below 29	8	6	14
30-39	8	18	26
40-49	23	35	58
50 and above	17	21	38
Total	56	80	136

Chi-square =2.890 df = 3 P = 0.409			
Education level			
Primary	11	10	21
Secondary	25	39	64
Certificate/ diploma	20	28	48
University	0	3	3
Total	56	80	136
Chi-square =3.311 df = 3 P = 0.346			
Marital Status			
Single	12	14	26
Married	27	36	63
Divorced	6	9	15
Widowed	11	21	32
Total	56	80	136
Chi-square =0.959 df = 3 P = 0.811			
Approximate Income			
50000 or less	11	13	24
5001-10000	16	17	33
10001-20000	14	9	23
20001-50000	15	17	32
Above 50000	0	24	24
Total	56	80	136
Chi-square =21.854 df = 4 P = 0.000			

4.8.2 Relationship between livestock farming and well-being of respondents

Results shown in Table 4.15 are cross-tabulations to establish the relationship between livestock keeping and well-being of respondents. The results indicated that the relationship between livestock farming (number of cows) and well-being of respondents was significant ($p=0.000$). This means that livestock farming positively affected the lives of the pastoralists.

Respondents who had 101-250 cows, reported to have 1-2 effect of adopting the alternative livelihoods. Respondents with other categories of cows had experienced above 2 effect of adopting the alternative households and therefore improved well-being.

Table 4.15: Livestock Farming and Well-being of Respondents

No. of cows	Well-being indicators		
	1-2	Above 2	Total
Less than 50	7	17	24
51-100	15	16	31
101-250	20	15	35
251-500	14	11	25
Above 500	0	21	21
Total	56	80	136
Chi-square =22.746 df = 4 P = 0.000			

4.8.3 Relationship between Agency Support and Wellbeing of the Households

Results shown in Table 4.16 are cross-tabulations to establish the relationship between development agencies and well-being of respondents. The results indicated that the relationship between development agencies and well-being of respondents was insignificant ($p=0.26$). Respondents who had received support from the development agencies reported on the effect of adopting the alternative livelihoods with more having experienced above 2 effects. Moreover, only 24 respondents who had not received support from the development agencies reported having experienced more than 2 effects.

Table 4.16: Development Agencies and Well-being of Respondents

Development agencies	Well-being indicators		
	1-2	Above 2	Total
Yes	34	56	90
No	22	24	46
Total	56	80	136
Chi-square =1.269 df = 1 P = 0.26			

4.8.4 Relationship between Wellbeing of the Households and Alternative Livelihoods

Cross tabulations to establish the relationship between well-being of households and alternative livelihoods was carried out and the results are shown in Table 4.17. The relationship between wellbeing of the households and alternative livelihoods was insignificant ($p=0.086$). Respondents (50) who had adopted 1-2 alternative livelihoods reported 1-2 effects of adopting the alternative livelihoods, 34 respondents who had adopted 3-4 alternative livelihoods, reported above 2 effects (well-being) while 24 respondents who had adopted more than 4 alternative livelihoods experienced above 2 effects.

Table 4.17: Alternative Livelihoods and Well-being of the Households

Wellbeing	Alternative livelihoods			Total
	1 - 2	3 - 4	More than 4	
1 – 2	50	28	0	78
Above 2	0	34	24	58
Total	50	62	24	136
Chi-square =2.941 df = 1 P = 0.086				

4.9 Conclusion

In this chapter, we have presented the data we collected from household heads and key informants. Results show that gathering and selling of wild fruits and bead work by women

were the most adopted alternative livelihood strategies by the household heads. Additionally, most household heads agreed that development agencies were operating in the area and had been individually assisted by the development agencies. Further, the relationship between the socio-economic characteristics and the alternative livelihoods was significant. The relationship between livestock farming (number of cows) and wellbeing of the households and alternative livelihoods was insignificant.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

The study aimed at assessing the effectiveness of adoption of alternative livelihood strategies on socio-economic well-being of pastoral communities in Ildamat Ward, Kajiado County. The specific objectives of the study were: To established the characteristics of the pastoralists and their effect on alternative livelihoods, determined the current livelihood strategies of pastoralists in the study area and effect on their well-being, assessed the level of well-being of the pastoralists sampled and examine the support provided by development agencies, its effect on their socio-economic well-being and investigate the effect of adopting alternative livelihood strategies on the socio-economic well-being of the pastoralists.

Data was collected using questionnaires where household heads, Assistant, Chiefs and village elders were interviewed. There was a response rate of 90.7%.

The study examined the characteristics of the pastoralists and established that 82% of the respondents were male while 18% of them were female, 42.5% of the respondents were aged 40-49 years with 47% of the household heads having secondary level of education. Further, 71% of the household heads were married. Results also showed that 65.4% of the household heads were polygamous with 32.4% having 7-9 children.

The study examined the main livelihood strategies in the study area. Livestock keeping was the main livelihood strategy. Nearly 26% of the household heads owned 101-250 cows, 32.4% had 101-250 goats while 28.7% of the household heads owned 101-250 sheep. Further, 33.1% had 151 hectares and above while the main income source for the household heads was sale of

livestock (55.1%) and selling of milk (44.9%). Additionally, 33.1% had more than Ksh 50,000 monthly income from the sale of livestock and their products.

The study examined the type of alternative livelihood strategies adopted by the pastoralists in the study area. Gathering and selling of wild fruits/herbs and bead work by women were the most adopted alternative livelihood strategies in the area. Gathering and selling of wild fruits/herbs was reported by 18.4% of the household heads while bead work by women by 14.3%.

The study investigated the effect of adopting alternative livelihood strategies on the socio-economic well-being of the pastoralists. Improved water and sanitation access in addition to improving the number of nutritious meals daily (23.5% and 31.2%, respectively) were reported as the main effect of implementing the alternative livelihood strategies by the household heads.

The study also established that there were development agencies in Ildamat ward and 77.9% household heads agreed that development agencies were operating in the area and 70.6% of them had been individually assisted by the development agencies. Health care (39.0%) was reported to be the major support received from the development agencies.

5.2 Conclusion

The results of the study suggest that adopting alternative livelihood strategies is critical for the key role it plays for the socio-economic well-being of pastoralists in the study area. The study found out that after adopting alternative livelihood strategies, significant changes in the socio-economic wellbeing of the households was experienced. Accessibility to improved water and sanitation, number of nutritious meals per day increased as well as an increase in assets/livestock, reduced vulnerability and increase in income. It was also evident that support provided by development agencies had positive effect on the socio-economic well-being of

pastoralists. Health care was the most important support that the pastoralists obtained from the development agencies which improved their well-being.

5.3 Recommendations

5.3.1 Policy Recommendations

- a. Sale of both milk and meat were found to be the main source of income to the pastoralists. There is therefore need for the county government to establish well-structured markets for them.
- b. Bead work mostly done by women was a key alternative livelihood adopted by the pastoralists. There is need for more training on the same and further, the pastoralists should be encouraged to gather themselves in groups to enhance mass production of the same to fetch good markets.
- c. Results showed that 67% of the pastoralists had approximate income less than 50000. There is need for development agencies, in addition to the county government, to empower the pastoralist communities to make them become self-reliant and establish themselves so that in case of droughts and flooding, their lives can move on without calling on the government for interventions.
- d. There is also need for county government and development agencies to encourage pastoralists to join and form small groups and associations with the purpose of helping them adopt alternative livelihood strategies and overall livelihood improvements. These will help in enhancing flow of information. Further, they will help in marketing, inputs and equipment procurement besides giving households negotiating power.

- e. There is need for the pastoralists to adopt the alternative livelihoods available to caution them on the effect of climate change in the area. They should be exposed on the importance and the value of the alternative strategies on their livelihoods.

5.3.2 Further Research Recommendations

The study recommends a similar study to be conducted covering more than a ward (County or a country). The study was conducted in one ward i.e. Ildamat and therefore the results may not be generally applicable to all sub counties/counties. The study was also limited to household heads, assistant chiefs and village elders as the respondents and therefore a similar study should be done where more respondents are targeted.

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APPENDICES

Appendix I: Introduction Letter

Sammy Kamau Ngugi,
University of Nairobi,
Faculty of Arts,
P.O. Box 30197-00100,
Nairobi.

Re: Project

I am a master's student undertaking a Masters of Arts at the Faculty of Arts, Nairobi University. I am developing a research project entitled assessing the effectiveness of alternative livelihood strategies adoption on socio-economic welfare of pastoral communities in Ildamat Ward, Kajiado County. The data collection process is essential in meeting the requirements for completing my masters of arts degree in sociology (rural sociology and community development). You are hereby requested to provide feedback by filling out the questionnaire to the best of your knowledge.

Yours faithfully,

Sammy Kamau

Appendix II: Questionnaire

Thank you for your decision to participate in this study. The questionnaire is part of a Master of Arts in sociology (Rural sociology and community development) research project on Assessing the effectiveness of alternative livelihood strategies adoption on socio-economic welfare of pastoral communities in Ildamat ward, Kajiado county. The survey is structured into five sections with both open-ended and multiple-choice questions. Kindly answer the questions to the best of your knowledge. There are no right or wrong answers. All information provided in this survey will be kept confidential.

SECTION A: Household heads background Information

1. Gender of the respondent
 - i. Male []
 - ii. Female []
2. Age of the respondent
 - i. 29 years and below []
 - ii. 30-39 []
 - iii. 40-49 []
 - iv. 50 and above []
3. Highest Education Level of the respondent
 - i. Primary []
 - ii. Secondary []
 - iii. Certificate/ Diploma []
 - iv. University []
4. What is your marital status?

- i. Single []
- ii. Married []
- iii. Divorced []
- iv. Widowed []

5. Are you polygamous

Yes []

No []

If Yes, how many wives

6. How many children do you have

- i. 3 and below []
- ii. 4 - 6 []
- iii. 7 - 9 []
- iv. 10 and above []

SECTION B: LIVELIHOOD SOURCES

7. How many cows do you have?

- i. 50 or less []
- ii. 51-100 []
- iii. 101-250 []
- iv. 251 and 500 []
- v. 501 and above []

8. How many goats do you have?

- i. 50 or less []
- i. 51-100 []

ii. 101-250 []

iii. 251 and 500 []

iv. 501 and above []

9. How many sheep do you have?

i. 20 or less []

ii. 21-50 []

iii. 51-100 []

iv. 101 and 250 []

v. 251 and above []

10. What is the size of your land?

i. 20 hectares or less []

ii. 21-50 hectares []

iii. 51-100 hectares []

iv. 101 and 150 hectares []

v. 151 and above hectares []

11. What is your main source of income?

i. Sale of livestock

ii. Sale of milk

12. Approximately how much income do you have per month?

i. 5000 or less []

ii. 5001 – 10000 []

iii. 10001 – 20000 []

iv. 20001 - 50000 []

v. Above 50000 []

SECTION C: Alternative Livelihood Strategies

13. Which one among the following alternative livelihood strategies have you adopted? (Tick appropriately)

Farming	
Honey production	
Beadwork by women	
Selling of livestock and their products	
Craft production (beadwork)	
Gathering and selling wild fruits	
Wage/ formal employment	
Tourist camps	
Income from employed sons/ daughters	
Leasing of land to outsiders	

SECTION D: Effect of Adopting Alternative Livelihood Strategies

14. What is the main effect of adopting the alternative livelihood strategies that you have adopted? (Tick appropriately)

Increased income	
Reduced vulnerability	

Increased assets (livestock)	
Access to improved water and sanitation	
Increased number of nutritious meals per day	
Others	

SECTION E: Support Provided by Development Agencies

15. Are there development agencies in Ildamat ward, Kajiado County that assist in improving the socio-economic welfare of pastoralists?

Yes []

No []

If Yes, which ones

- i.
- ii.
- iii.

How many of the agencies supported you?

.....

16. What kind of support did the development agencies provide?

Purchasing of livestock	
Training on crafts	
Credit	
Medical support	

THANK YOU

Appendix III: Interview Schedule

Thank you for your decision to participate in this study. The interview is part of a Master of Arts in sociology (Rural sociology and community development) research project on Assessing the effectiveness of alternative livelihood strategies adoption on socio-economic welfare of pastoral communities in Ildamat ward, Kajiado county. The interview has five open-ended questions. Kindly answer the questions to the best of your understanding. There are no right or wrong answers. All information provided in this survey will be kept confidential.

1. What are the land sizes in this area in hectares?

.....

2. What are the main sources of income in this area?

.....

3. Which alternative livelihood strategies have been adopted by most people in this area?

i.

ii.

iii.

4. What are the effects of adopting the alternative livelihood strategies that have been adopted in this area?

i.

ii.

iii.

5. Are there development agencies in this area? If yes, what kind of support do they provide?

i.

ii.

iii.

THANK YOU