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COLLEGE OF AGRICULTURE AND VETERINARY SCIENCES

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**COMMUNITY INVOLVEMENT IN WILDLIFE CONSERVATION AND
MANAGEMENT - A case study of Namunyak Wildlife Conservation Trust
(NWCT)**

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SUPERVISED BY

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**A project submitted to The University of Nairobi in partial fulfillment of
the requirement of the degree in Bachelor of Science in Wildlife
Management and Conservation.**

Date; 7TH MAY 2014

Declaration

I hereby declare that the work presented in this project report is my original work and has never before been submitted to any university or college for the award of a degree in Bachelor of Science in Wildlife Management and Conservation.

Sign.....

Date.....

Macharia Mary Njeri

J42/3075/2010

This work is submitted for examination with my approval as the student university supervisor

Sign.....

Mr. Henry Kahi

Date.....

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Dedication

I dedicate this work to my beloved parents Julius Macharia and Eunice Macharia for taking me to school and I highly appreciate their love, care, support and sacrifices they have contributed towards my entire education.

My dedication also goes to my sisters (Peris Wambui and Joyceline Mwithaga) and my brother (Moses Kagonye) for their moral support and encouragement towards my life.

I also highly thank my lectures and classmates who have been a great encouragement to me all along my course study.

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Apart from my efforts, the success of my project depends largely on the encouragement and guidelines of many others. I take this opportunity to express my gratitude first to Almighty God for the gift of life and to the people who have been instrumental in the successful completion of my project.

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Also my sincere appreciation goes to the entire management team of Namunyak Wildlife Conservation Trust and especially the following personnel for their hospitality, encouragement, advice and much assistance in completion of my project; the manager (Mr. Fred Njagi), senior warden (Richard Lokorukoru), Accountant (Mr. Stephen), Unit Community manager (Loila Letinina), Senior radio operator (Mr. Kalamon), Community coordinator (Tom Letiwa), Administration Driver (Alex Lemerita) Security Driver (Jamal Kudere).

I also wish to thank my translators for their efforts in support of this report: Martin Lemerita and Andrew Sadam.

List of abbreviations and acronyms

NWCT- Namunyak Wildlife Conservation Trust

KWS- Kenya Wildlife Service

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Abstract

This project study was carried out in six selected villages living at the perimeter of 15-25KM from Namunyak Wildlife Conservation Trust. It focuses mainly on the involvement of the local communities in the conservation and management of wildlife which coexists freely with them in the unprotected area. These community areas were: Nkangororeki, Loigama, Ntaparani, Lerug, Reteti, and Tintil all located in Samburu East.

From a development perspective, conservation ventures should only be considered 'successful' if local communities have some measure of control over them and if they share equitably in the benefits emerging from conservancy activities.

An empowerment framework is proposed as a suitable mechanism for aiding analysis of the social, economic, psychological and political impacts of wildlife conservation on local communities. Community wildlife service is a strategy recognized by the Wildlife Conservation and Management Act CAP 376. The Act calls for active community participation in wildlife conservation outside protected areas.

The Primary data collection was done from four main sources: questionnaire surveys, group discussion, interviewing key informants and researcher's observations. Data collected was analyzed quantitatively and descriptive statistics used with tables and graphs being the means of data presentation.

The results showed that NWCT has largely involved the local community in various activities and benefit sharing to enhance ease of management of wildlife resources both within and outside conservation area as discussed in the context below.

The findings of the study showed that NWCT has contributed to an increase in economic standards of the local community through various benefits that improve their livelihoods.

CHAPTER ONE

1.0. INTRODUCTION

Community conservation aims to provide an incentive for the sustainable management of biodiversity resources, by linking their maintenance with poverty alleviation or livelihoods benefits for the people living in their vicinity (Salafsky & Wollenberg, 2000). This has typically achieved through wildlife-linked enterprises, such as tourism. While it has formed a component of protected area outreach in some cases, community conservation is more commonly associated with land outside of the formal protected area network (Wells et al., 1992).

Community conservation emerged from the recognition that strictly protected areas often failed to consider the interests of local communities, reducing their willingness to support or abide by conservation regulations (Pimbert & Pretty, 1997; Kiss, 2004).

Indeed, in some areas, strict protection resulted in active hostility between conservation authorities and local communities. The need to engage communities in conservation was heightened by the realization that biodiversity resources are both subject to, and depend upon processes and policies, which act at national and global scale (Ancorenaz et al., 2007). Consequently, an approach which can reconcile the needs of biodiversity conservation and economic development was seen a vital tool particularly in developing nations.

Reporting on an integrated conservation and development project in Cameroon, Abbot et al, (2001) concluded that the inclusion of rural development initiatives promoting alternative livelihoods can improve the sustainability of conservation in an area by altering community attitudes and behaviors. While many of these beliefs persist, most of the current ideas about the community's role in conservation have changed radically: communities are now the locus of conservationist thinking.

If communities are involved in conservation, the benefits they receive will create incentives for them to become good stewards of resources. This vision of community is attractive and permits the easy contestation of dominant narratives that favor state control or privatization of resources and their management.

1.1. Background of the study problem

The study aims at establishing how communities are involved in wildlife conservation. Namunyak Wildlife Conservancy Trust covers a large area of 324,000 hectares with unique and diverse wildlife all in unprotected area. For easier management there is need for community support due to their daily coexistence with the wildlife.

Community involvement in wildlife conservation initiatives emerged through escalating protests and subsequent dialogue with local communities affected by international attempts to protect the wildlife within the area.

The object of community involvement in conservation is to incorporate improvement to their lives while conserving areas through the creation of community conservancies. While there have been some notable successes, unfortunately community-based conservation has often been ineffective because of inadequate resources, uneven implementation, and over-wishful planning. Co-management of either protected or an unprotected area combines local peoples' traditional knowledge of the environment with modern scientific knowledge of scientists as it can lead to increased biodiversity and better management of these areas.

Rural communities may live for centuries in relative harmony with the environment and the wildlife that surrounds them, but economic straits, rapid population growth, political and cultural changes, and outside demand for resources can disrupt the balance of this relationship.

Local people help manage their natural resources through training to become more effective stewards of their environment. This is done by educational institution programmes established by various conservation teams.

1.2. Problem statement

A great percentage of Kenya's wildlife occurs outside the formal protected areas i.e. on communal land. However, competitive land uses, could offer livelihood to these communities if no incentives are derived from wildlife conservation. For communities to continue living with wildlife on their areas, it has to prove that it is beneficial to them.

With increasing human population in Kenya, the land is increasing being converted to agriculture and settlements. The space for wildlife conservation will continue to reduce unless communities willingly accept to live with wildlife on private and communal areas.

My research aims to establish various ways that the local communities living with wildlife are involved in protecting and conserving them.

1.3. General objective of the study

The purpose of the study was to determine involvement of the local communities in wildlife conservation which also explain their attitude towards wildlife in communal lands.

1.4. Specific objectives of the study were:

1. To determine the perception of the local community towards wildlife conservation
2. To determine the ways the local community is involved in wildlife conservation
3. To find out the impacts of community wildlife conservation to the local peoples' livelihood
4. To determine benefits gained by local people from wildlife conservation

1.5. Research questions

1. How are you involved in conservation of wildlife in Namunyak wildlife conservation trust?
2. What benefits do you gain from wildlife conservation?
3. What are your attitudes towards community wildlife conservation?

1.6. Justification of the study

The research was designed at a time when community wildlife conservation has become widely encouraged and practiced mostly in the Northern Part of Kenya to promote wildlife conservation and the general socio-economic development of the pastoralists' communities through sustainable utilization of natural resources.

It is therefore important to investigate the involvement of local communities around Namunyak Wildlife Conservancy Trust in conserving this unique and diverse wildlife that coexist freely with people and their livestock in these communal lands. Opinions of these pastoral communities have to be highly recognized as this might mean to them 'taking away their grazing land' which would lead to a negative impact towards conservation.

Most of these local communities should be directly involved through provision of jobs, education awareness of the value of wildlife and other important projects to improve their livelihood which would render them consider wildlife their own to protect against extinction. Their involvement would also prevent and solve most of the human wildlife conflict and also reduce illegal activities within and outside conservation areas.

1.7. Limitations of the study

1. Poor means of communication within the conservancy making it difficult to communicate between different stations.
2. Logistics where the area to be covered is quite large thus unable to patrol the whole area having inadequate transport means within the conservancy.
3. Solar power supply shortage thus delays in entering data into my computer.
4. Language barrier- Since the questionnaires were written in English and most residents used their mother tongue, interpretation is needed.
5. Fear of insecurity where recently on 4th March 2014 some morans tended to go against the conservancy management.
6. Financial constraints. This is mainly due to the fact that the project was self-sponsored and done out of university premises.
7. Inadequacy of materials due to the fact that little research on the conservancy has previously been done.
8. Limited time set aside for the study: Owing to the short duration of the study I had to select a rather smaller study sample (n=60)

1.8. Assumptions of the study

- ❖ The local people know about the existence of wildlife within their communal lands.
- ❖ The data collection methodology from the residents was unbiased having Namunyak Wildlife Conservancy Trust occupying quite a large area of study.
- ❖ The researcher makes the assumption that the respondents who include Samburu community living in NWCT conservancy and management officials would be cooperative enough to give the required information of the study.
- ❖ The researcher assumed that the cited respondents are conversant with the involvement of the community in wildlife conservation.
- ❖ It was assumed that the respondents would answer the questions honestly and would not view this study as if they are being investigated.
- ❖ It is also assumed that resources allocated for this study in terms of money and time would be adequate.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

Community conservancies are crucial to the survival of Kenya's wildlife, both within and outside of our parks system. Approximately 70% of all Kenya's wildlife resides on community or private land outside Parks. The 30% of our wildlife that resides in the parks often spends much of the time outside the Parks, and is therefore often heavily dependent on both the pastures and the tolerance of the community and private landowners for its survival. Wildlife conservation outside protected areas is increasingly taking centre stage in global conservation discourse with the aim of involving local communities in their conservation. . This is due to various advantages gained from involving local people in wildlife management and conservation projects which include;

1. Creation in the peoples mind a feeling that the interest of their project are their interests too thus project success
2. It reduces human conflicts favoring acceptance of the project.
3. Since there is use of local resources in terms of knowledge and human resources the cost of the whole project could be lowered

The absence of a land use policy for the country has led to endless sub division of wildlife dispersal areas and wildlife corridors. Since the establishment of Community Wildlife Service (CWS) department, a lot has been done and achieved in community based wildlife conservation which is not embedded in the current legislation and hence the current challenges facing wildlife conservation and management outside protected areas.

Strategies and linkages with key wildlife stakeholders and the community have been identified to deal with emerging challenges which include, increase in human wildlife conflicts, bush meat trade, snaring of wildlife, disappearance of wildlife dispersal areas and corridors, inadequate community benefits and the need to represent a positive image for an organization.

The role of wildlife in the economic development of the country needs to be communicated to the people that bear the brunt of hosting wildlife on their land and community wildlife conservation is based on the principle that local communities shall participate in and benefit from wildlife conservation. Kenya Wildlife Service has an established network through KWS offices across the country to address issues of wildlife outside the protected area.

2.1. Community as common interests and shared norms

Community exists among individuals who share “common interests and common identification. Common and shared rather than individual and selfish attitude is what makes successful wildlife resources management more likely.

In a community, “individuals give up some of their individuality to behave as a single entity to accomplish goals”.

Internalized norms of behavior among members of communities can guide resource management outcomes in desired directions.

Community as shared norms is itself an outcome of interactions and processes that take place within communities, often in relation to those perceived as outsiders. But community as shared norms also has an independent positive effect on wildlife resource use and conservation.

2.2. Socioeconomic context for community wildlife conservation in Samburu Kenya

The northern rangelands are the most underdeveloped and economically marginalized region of Kenya. Across the region, poverty is significantly higher than the national average (Alkire & Santos, 2010) and in some Districts more than half the population lives below the Kenyan poverty line.

Communities are highly reliant on livestock, and limited income diversity leaves many vulnerable to resource shocks, such as drought (Esilaba, 2005). Many households are dependent on government and Non Governmental Organisation assistance programmes (Mwaniki et al., 2007), particularly during periods of resource scarcity.

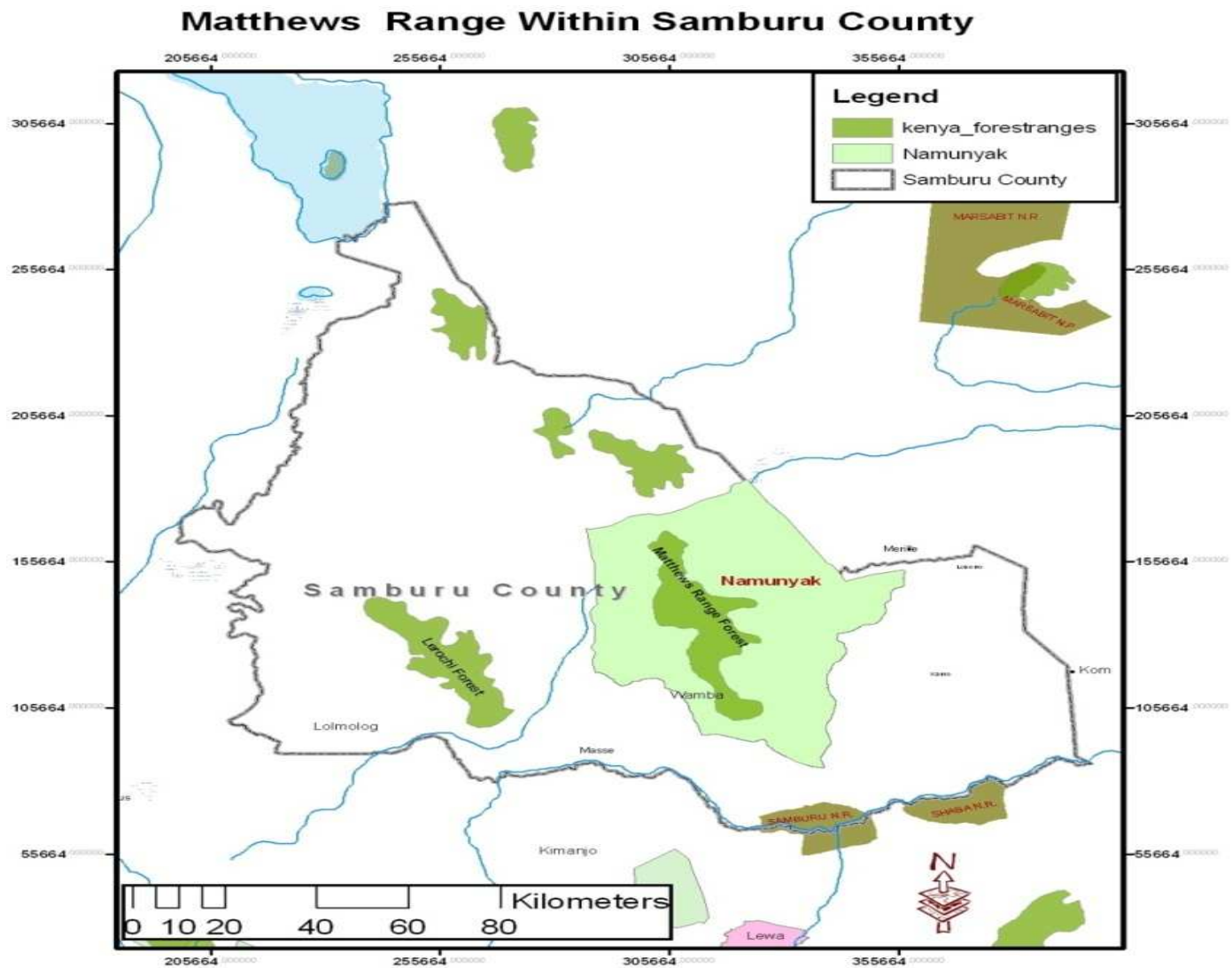
The pastoralist community is diverse and inter-ethnic, with each group moving across relatively large areas in search of suitable pasture. Traditionally, access to the grazing resource was managed using a decentralized system, administered by tribal elders.

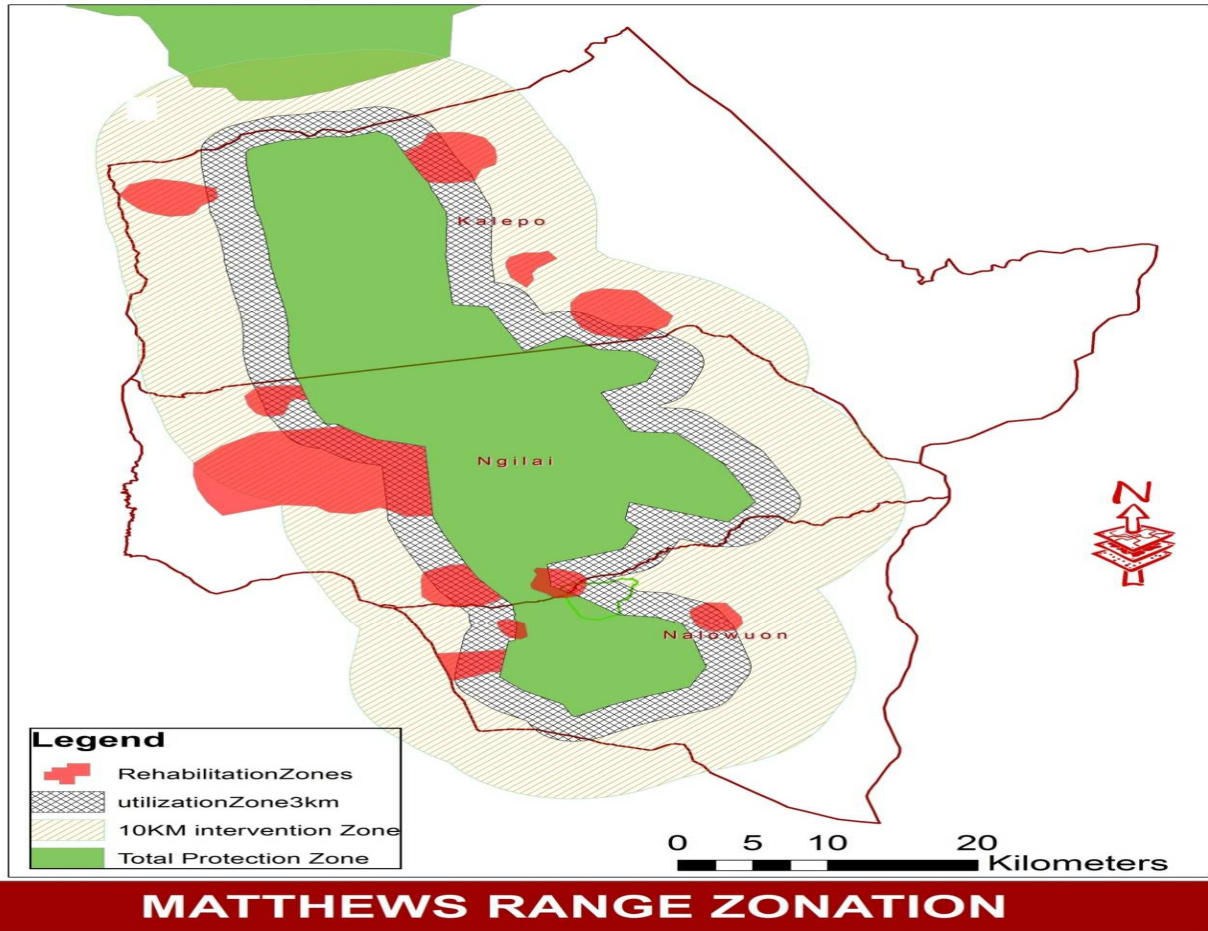
2.3. Ecological outcomes of community conservation

- Improve habitat condition of the semi-arid rangelands and the species which utilize them.
- Viable pasture management’s well as sustaining livestock production.

CHAPTER THREE: MATERIALS AND METHODOLOGY

3.0. STUDY AREA





Background

Namunyak wildlife Conservation Trust is a community wildlife initiative formed in 1995 and registered under the Trustees perpetual succession Act Cap 164 laws of Kenya. It is not a profits making organization. The conservancy is located within Samburu County in northern Kenya. Namunyak Conservancy can be accessed through the Isiolo-Marsabit A2 road, or the Lerata-Wamba-Kisima road.

Size and coverage

The Namunyak Wildlife Conservancy Trust conservation area covers 324,000 hectares divided into three conservation areas namely Nalowuon conservation units, Ngilai conservation units and Kalepo conservation unit. The conservancy also is encompassing the greater Mathews Ranges Forest, a high mountain range (up to 2,689 meters) with unique mountain forest vegetation that provides refuge to wildlife particularly in the dry season.

Climate and Seasonality

The rainfall distribution is bimodal with peaks of long rains in March/April and short rains in October/November, and therefore the area generally has two dry and two rainy seasons. Rainfall is relatively low and highly variable with mean minimum of 357mm and mean maximum of about 700mm.

The minimum and maximum daily temperatures within the Matthews Range Forest and surrounding lowlands recorded for the last decade are estimated at 12.3⁰C – 15.5⁰C minimum and 31.8⁰C to 32.8⁰C maximum. The extreme variation of recorded monthly Range of temperatures shows a large disparity Range of at least 16.0⁰C while the mean monthly Range varies between 5.5⁰C and 7.5⁰C (Range Resource Master Plan, 1991).

Geology and Soils

The geology of the ecosystem arose from erosion of the pre-Cambrian basement rock system that consists of metamorphic and sedimentary rocks. The rock system has gneiss, granites and fluvial accumulation of sediments and soils deriving from volcanic activities. The soils within the Matthews Range Forest Ecosystem have evolved from five geological formations.

1) Soils of the mountains and hills: These are well drained, shallow to deep with varying color and texture, and are generally rocky.

2) Soils of the low level plateaus: These are moderately well drained, shallow to deep, dark brown, slightly calcareous, clay to clay loam, and boundary in most places.

3) Soils of the foot slopes of hills and mountains: **These are well drained, very deep, dark reddish brown to light, sandy to sandy clay loam.**

4) Soils of the uplands: These are well drained, shallow, reddish brown to yellowish brown, in some places calcareous, gravelly sandy clay and rocky.

5) Soils of the erosional plains: These are well drained, shallow to deep, reddish brown, clayey to sandy clay loam, and in some places with rock outcrops.

6) Soils of the Alluvial plains: These are well drained, very deep, pale brown, saline, calcareous, stratified sands and sandy loams

7) Soils of the lowlands: These soils are generally waterlogged, very deep, dark greyish brown, saline calcareous clay.

People

The Namunyak conservancy is inhabited by the Samburu pastoralists whose economic occupation is livestock rearing and live side by side with the wildlife. As an alternative measure to improve livelihood members established a community conservancy to protect wildlife and the eco-system as well as to generate income from their eco-tourism facilities.

Fauna

Being a wildlife conservation area, the site is rich in wildlife species some which are rare and endemic to only this particular area in the world. These include the grevy zebra, Elephant, leopard, reticulated giraffe, buffalo, African wild dog, beisa oryx, gerenuk, greater and lesser kudu, De Brazza and black-white colobus monkey - endemic to the Mathews, wild dog duikers, elands, ostriches, among other bovines and big cats.

Flora

The site is in a semi-arid area with a very pristine environment and is dominated by *Acacia tortilis*, *Commiphora Africana*, *Acacia seyal* and array of shrubs

The Matthews Range (locally known as Mt Uarges), consists of evergreen forest dominated by species of *Podocarpus*, *combretum*, *croton*, *Juniperus* and *Olea* at higher elevations. Species found at lower elevations include *Acacia*, *Commiphora*, *Cordia* and *Newtonia spp* as well as aloe and wild flowers.

Namunyak Wildlife Conservation Trust (NWCT) is a member the Northern Rangelands Trust (NRT). Its main objective is to promote wildlife conservation and the general socio-economic development of the Samburu community through sustainable utilization of natural resources.

Topography and soil

Samburu County is located on the eastern side of lowlands between the Samburu Central highlands and Isiolo County. High level plateau built by repeated floods of lava from the Rift Valley dominate the central and northern part of the county. Most of the county is covered with rocky soils formed from the lava which is not good for arable farming.

The soil at the proposed site is volcanic loam. The site has a flat terrain, slightly sloping from the hills and stands at an elevation of 805 meters above sea level

Land tenure

After independence in the 1960s , the government of Kenya adopted a new policy on rangelands use and management, whereby communal areas were adjudicated and demarcated into group ranches, In Kenya a group ranch is a unique form of land tenure, whereby an area of land is demarcated , given little and shares are allocated to the senior members of a family.

Hereditary rights to the same are passed to the family members when they are of age. The same tenure arrangements also provide for individual land ownership. The unregistered land remains as trust land, held in trust by the local authorities such as county councils on behalf of local communities. Land has been demarcated and divided into group ranches and to a lesser degree to private ownership.

With more Land falling into group ranches and private ownership, the more flexible communal uses including grazing have been disrupted. In town this has greatly affected livestock distribution and mobility, as is also the case with wildlife.

The changing patterns of land use have set the stage for the development of conflict between wildlife and the pastoralist, which was not the case before the establishment of group ranches. Pastoralists were able to move about to avoid concentration of wildlife intensive areas at certain seasons, not only for conflict reasons but also to minimize chances of transmission of diseases from the wildlife. Most of the area is owned communally as group ranches (Sarara and Sapashe) and adjudication areas (Ngilai West, Ngilai Central, Nkare Narok and Ndonyo Uasin areas). The main land use system is pastoralism, however, for the past few years local communities have ventured into beekeeping and nature based Tourism.

Social programs and enterprise development programs must work in conjunction so that wildlife education can complement economic benefits to wildlife. These should be two integral components of a grassroots program as long as both aspects can be sustainable.

The Samburu District presents a unique opportunity to involve local people who have cultural inclination to tolerating elephants, in elephant conservation and research. Most wildlife utilizing the Samburu areas are free ranging and require a greater area than simply the demarcated reserves. In a region where firearms are illegally and readily available and poaching affects the elephant population, the involvement of local people in conservation is of paramount importance.

This grassroots awareness program has presented an approach to community conservation which does not assume that all humans are in constant conflict with wildlife. It explores the perception of the Samburu people who live with wildlife and uses this knowledge to promote man's interest in wildlife. Local systems of knowledge on wildlife and conservation have existed throughout the African continent in the past. By utilizing already existing systems as the foundation of community conservation programs, it becomes possible for local people to take a lead in defining their own changing wildlife ethics.

Changes in treatment and behavior towards wildlife may occur because of economic incentives or benefits of community conservation programs. It is however to look beyond providing tangible, economic incentives for behavioral changes toward wildlife.

3.1. METHODOLOGY

3.1.1. Research design

The method used for the research was mainly questionnaires. Open-ended and closed ended questionnaires were administered to obtain data from the communities and also accompanied by direct field observation by the researcher. Considering the short time frame of the study period, questions were depicted to a number that were manageable. In total there were eleven questions

3.1.2. Population and sample

The target population in the study was the local communities living adjacent to NWCT and from whom a sample of 60 respondents was drawn from the entire population. The sample was selected using random sampling. The majority were women, who comprised 60 % of the total sample while 40% were men.

3.1.3. Data collection procedures

3.1.3.1. Primary data collection

Data collection was done using four main sources: questionnaire surveys, group discussion, interviewing key informants and researcher's observations.

3.1.3.2. Household Questionnaire survey

Closed and opened questionnaire was used to collect the information from the community areas adjacent to the NWCT which were distributed at random. For the closed questions, the respondents had to provide „yes“ or „no“ answers whereas open ended questions, the respondents were free to express their opinion. A maximum of three days period was given to the respondents to answer the questions before collecting them. Household sampling was primarily done because these were the main victims of living freely with wildlife.

A photo which includes I and the household ‘*manyatta*’ residents which I questioned



3.1.3.3. Group discussion

I conducted two group discussions; one in Reteti village and the other with some fellows living inside in Sarara area. The brief discussions included mainly their opinions on the impacts of NWCT to their future livelihoods. I took notes as well as probe the questions and the information collected was mainly used to supplement the household questionnaire survey.

I and three gentlemen from Sarara rangers' camp whom we discussed some of the conservation issues in Namunyak conservancy.



3.1.3.4. Interviewing key informants

Interviews were conducted with the key conservancy staff including the senior warden, assistant warden, and community coordinator. The aim was to cross-check the information provided by the local community on their involvement in wildlife conservation.

3.1.3.5. Observations

Economic activities carried out by the communities were seen and problems faced by the people due to wildlife conservation in the unprotected areas were observed. These problems included livestock wildlife conflict and human wildlife conflicts.

3.1.3.2. Secondary Data Collection

Relevant supplementary data was collected from NWCT publications, Wildlife Carcasses Datasheets and the online internet resources.

3.1.4. Data analysis

Data from the questionnaires was analyzed using descriptive statistics whereby tables, pie charts and graphs have been used as means of data presentation. Cross tabulations, frequencies and percentages were obtained. Descriptive statistics will be used to report the responses. Quotations of some key informants and group discussants were used to give the final report a deep and well-backed analysis.

CHAPTER FOUR: RESULTS AND DISCUSSION

This chapter discusses the various findings obtained from analyzed data collected from field based on the objectives of the study.

4.0. Respondent sex structure

As shown by the table below 40% of the respondents were men while 60% was women. This is due to their differences on the understanding of conservation issues. This bias may be the product of three factors;

Firstly, in many pastoralist communities young men between the adolescence and approximately 30 years are considered ‘warriors’ whose role is to protect the community from threats to their physical security (Spencer, 2004). During their time as warriors, men have limited interaction with women outside their nuclear family and seldom marry, with the result that there is often a significant age gap in between husband and wife (Spencer, 2004). Consequently, in later life, an increasing proportion of households become female-headed.

Secondly, upon explaining the information required to the household, male respondents frequently stated that he had limited knowledge of some of the issues to be discussed and requested the interview be conducted with his wife.

Thirdly, the presence of the female lead researcher at each interview may have meant that women rather than men felt comfortable disclosing sensitive information.

Table 1: sex structure of respondents

Sex	Frequency	% of the total
Male	24	40
Female	36	60
Total (n)	100	100

4.1. Age structure of respondents

As shown in table 2 below 50% of the respondents were between 21-30 years followed by those aged 41-50% with 25%. Those aged 31-40 years had 16.67% and the lowest sample was aged 50< with 8.33%.

Table 2: Age structure of respondents

Age	Frequency	% of the total
21-30	30	50
31-40	10	16.67
41-50	15	25
50<	5	8.33

4.2. Level of education of respondents

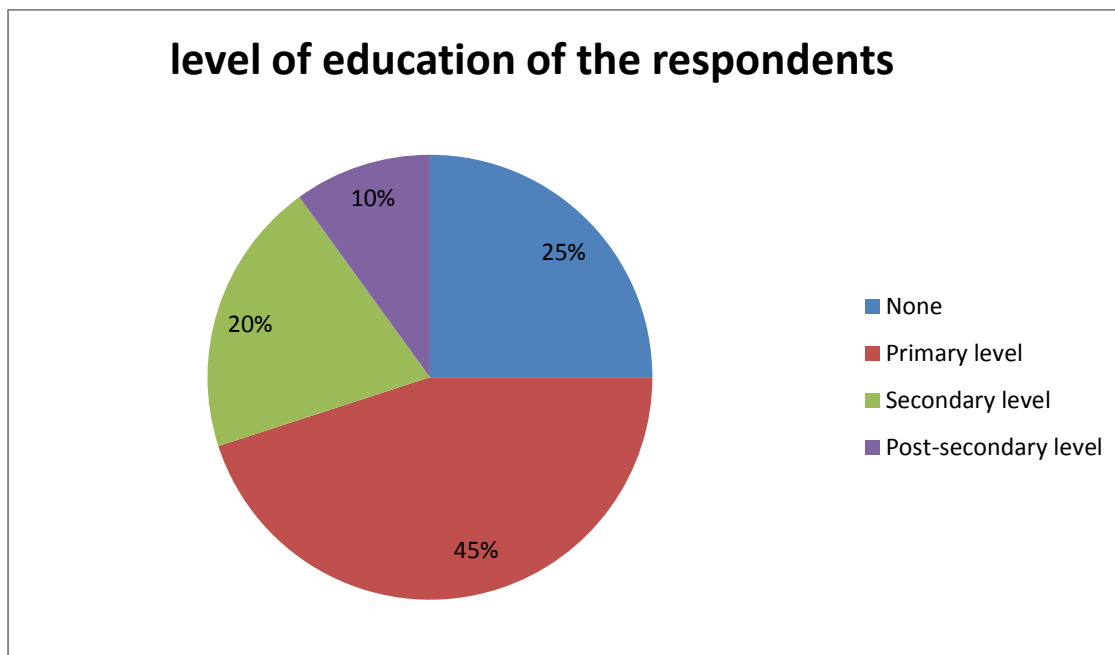
The data in table 3 reveal that most of the respondents had attained primary education with a percentage of 45%, followed by 25% of the respondents who have never been to school, 20% had secondary school level certificate while 10% had college or university certificate.

Education affects many aspects of their life, including their attitude and involvement in conserving wildlife resources living freely within their communal lands. With local community being illiterate or having a very low level of education, changing attitudes and opinions by creating awareness through formal education may be less successful.

Table 3: Data on numbers and percentages of level of education of respondents

Level of education	No. of respondents	% of the total
None	15	25
primary	30	50
Secondary level	12	20
Post secondary level	3	5

Figure 1: Pie chart illustrating the percentages of the level of education of the respondents



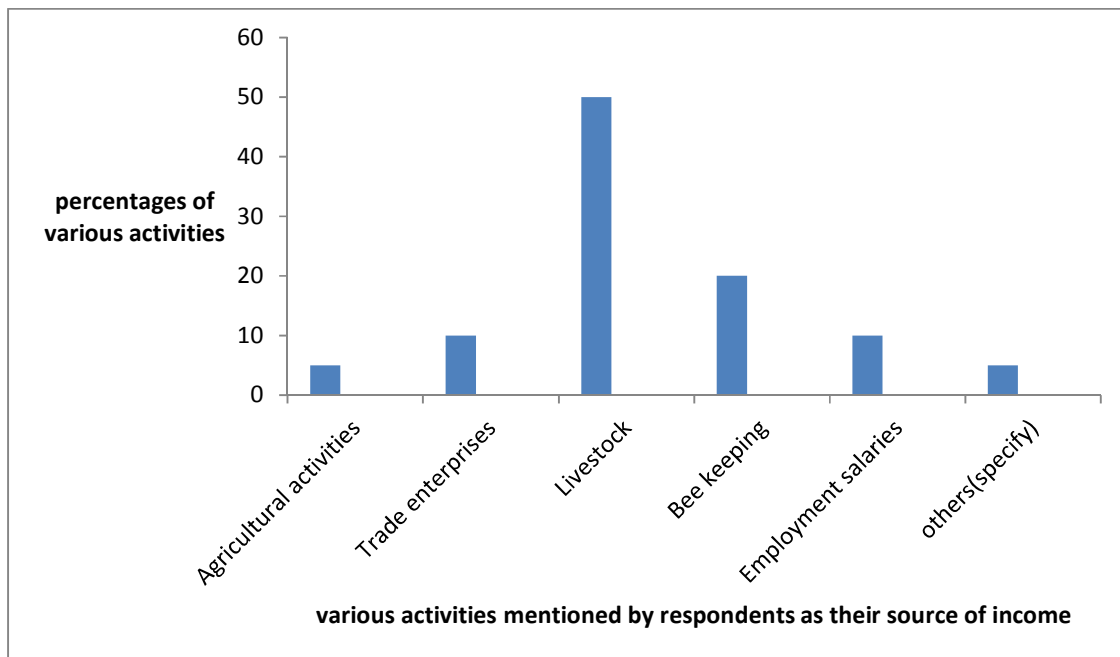
4.3. Source of income

As shown in the graph 1 below these communities predominantly depend on livestock and animal husbandry where they engage in the sale of livestock to generate cash. However, there are changing land uses which lead to limited amount of other agricultural activities. Livestock numbers and distribution have changed overtime, dictated by the natural as well as human related catastrophe like drought, disease and persistent insecurity.

The economy remains largely subsistence-based with few households generating income from salaried employment. Since conservancy establishment, these participating communities have reported an increase in access to employment at both the household and community levels.

Importantly, many of the employment opportunities offered by the conservancies and allied organizations are accessible to community members who either did not attend school or did not complete their education.

Figure 1. A graph showing percentages of various activities mentioned by respondents as their source of income



As observed livestock keeping is the main economic activity among these pastoral communities.

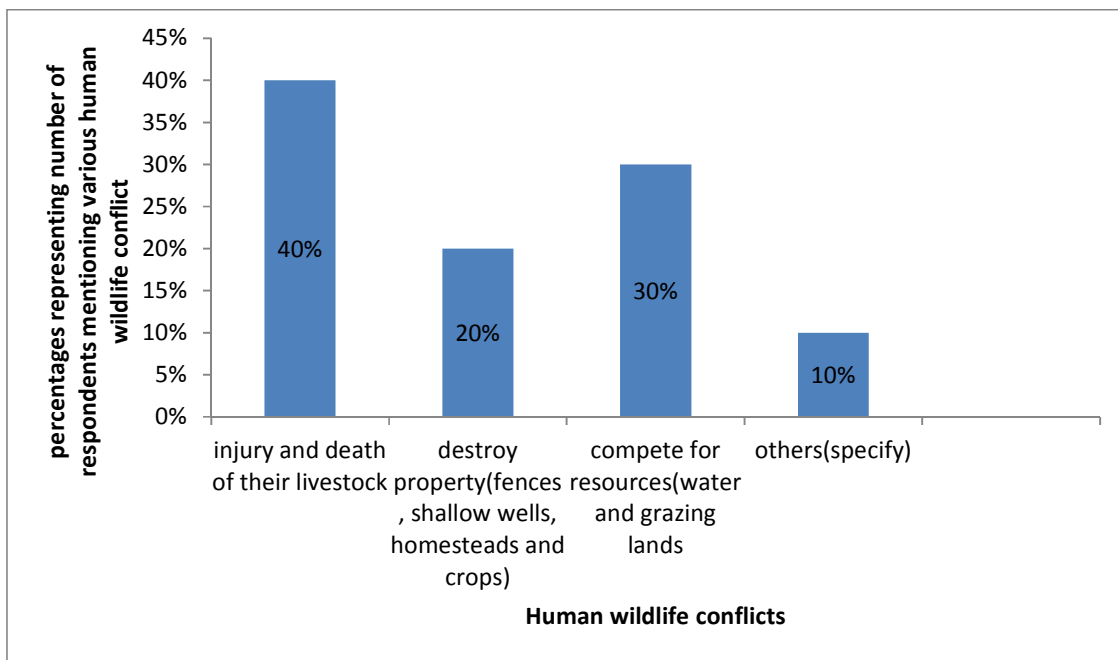
Photographs of cattle herds grazing along the Sereolipi road-Samburu county



4.4. Human wildlife conflicts;

As shown in fig 2 most respondents said that the wild animals caused death and injury of their livestock (40%), 20% mentioned that this animal destroy their property which included fences, shallow water wells, homesteads and crops, 30% complained of the wild animals competing for resources mostly water and grazing lands with their livestock while others gave other specific conflicts like the elephants blocking road paths by felling tree branches, tiresome chases by elephants and nuisance noises from hyenas.

Fig 2: Graph showing percentages of human wildlife conflicts mentioned by the respondents



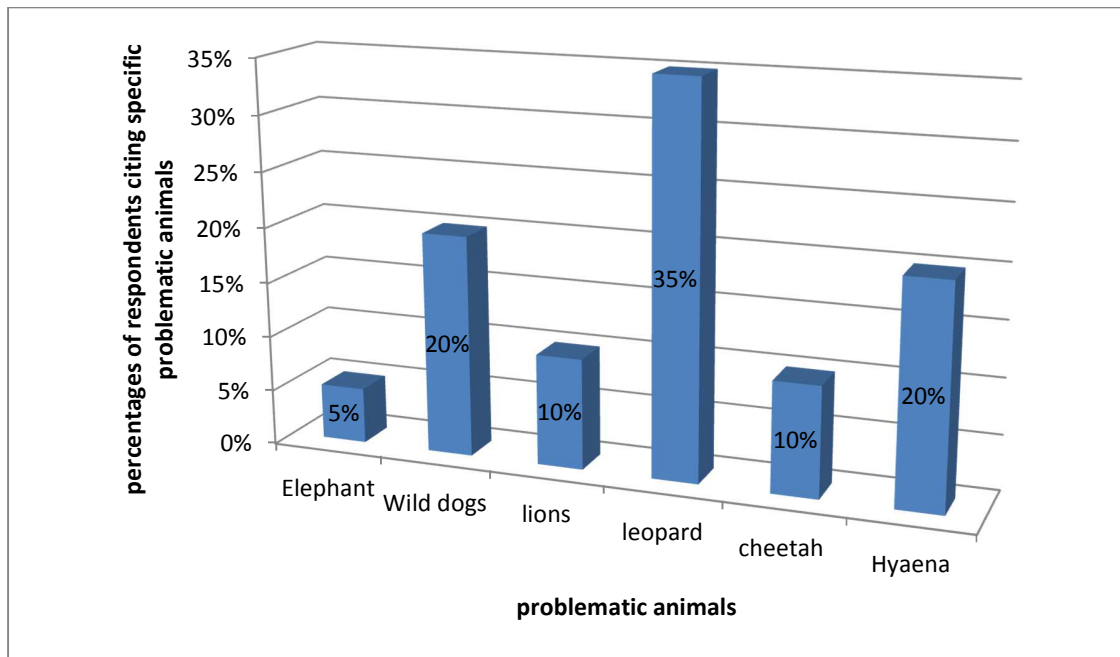
Picture of a camel cut off tail by a lion at Sarara rangers' camp.



The respondents also cited most problematic animals leading to these human wildlife conflicts and I analysed and presented them in the fig 3 below.

Leopards seemed to be most troublesome killing and injuring a great number of their livestock with 35% followed by hyenas with 20%. Freely roaming wild dogs were also reported to invade homesteads and kill their goats at night with 20%, cheetahs and the lion seemed to have an equal percentage of harm to the local while elephants though having the high population in the area seemed to be less problematic with 5%. The local people claimed to have friendly coexisted with the elephants in the bush where they are used to trek for several kilometers due to inadequate transport means.

Figure 3: Shows the most problematic animals cited by the respondents



4.5. Responses of respondents on the impacts of the conservancy on their life.

Most of the respondents (96%) seemed to know existence of Namunyak Wildlife Conservancy Trust but 4% did not know its existence. 75% only knew what it does but 25% did not have an idea of what NWCT entails. Some of the respondents (40%) went ahead and explained the negative impact of the conservancy on their pastoral way of living while 60% considered it being beneficial to their livelihood. These negative impacts included completion of water and pastures with their livestock, death and injury to their livestock and themselves. Most of these respondents also liked the idea of having NWCT because security improved in the area. The percentage of their involvement in conserving the wildlife within the conservancy was 83% while 17% said that they are not involved in any way.

4.6. Ways the conservancy involve locals in their conservation strategies

Benefit sharing- Revenue (from all sources) divided into 60% for community and 40% ploughed back for conservation.

These are in terms of;

Bursaries

Across all the six communities, access to secondary education has become significantly easier for participating communities.

Improving access to education has been one of the focal areas for the community funding in the conservancies. This is particularly the case in the Namunyak, where bursaries to assist in the payment of secondary and higher education fees are the most important direct financial benefit for households .

Development projects like water projects where areas away from natural water flow are supplied with piped water from Matthews's ranges or boreholes dug for them.

Medical services

Medical care has become increasingly affordable in conservancy communities. For those unable to afford transportation to hospital the conservancy assists them with the community vehicle. Since the conservancies started, community members can call for the vehicle's assistance in an emergency, a change which was reported by individual households.

Lower human wildlife conflicts

This is related to destruction or disruption of human life that is attributed directly to wild animals. Types of conflict include; Crop destruction; property damage; livestock predation; human Injury human death; lack of land use & land tenure policy putting people and wildlife in conflict; population increase- limited space; human encroachment into wildlife areas hence increase in land use pressure & incompatible uses such as agriculture, settlement & urbanization; human threat Loss of human life & injuries caused by wildlife and loss of livestock through predation with no compensation.

Market for livestock –NRT buys cattle from the locals to provide proper market thus improving their livelihoods.

Security -Improvements in the physical security of communities was perceived to be the most important impacts of conservancy establishment during household interviews, while in Namunyak the decline in insecurity was second only to transportation benefits in importance. Across the three communities, 63% of respondents reported their households were safer than prior to conservancy establishment. Radio communication is critical to the provision of security, and as one NWCT staff member explains, may have a role in encouraging trust and co-operation between different ethnic groups and stakeholders in the region.

Transport and communication- the conservancy vehicles are used by the community in times of emergencies like hospital case. Their chiefs are given radio call headsets to use them in reporting human wildlife conflicts and any other illegal activities near residential areas concerning wild animals.

Assist in compensation procedure- The conservancy connect the locals with the KWS in cases where there is livestock wild animal conflict. These are reports where predators kill or injure their precious animals or in cases of human wildlife conflicts. Pictures are sent to KWS and full details which follows compensation as a form of mitigating human wildlife conflict.

Burial funding where funds from the conservation issues is used to help the locals during funeral.

Employment - The establishment of community institutions to provide conservation and development benefits has led to a number of new jobs being created in the region. In all communities, a change in the proportion of households deriving income from employment has increased.

Cultural footprint- Elders uses their indigenous knowledge to track poachers' direction of escape.

Education programme- Community awareness programmes are held in Wamba, Lerata and Sereolipi. They hold discussions on conservation with the field officer and video shows displayed and Wildlife clubs are mobilized in primary and secondary schools to participate in wildlife drama activities. They are also taught how to involve themselves in activities such as;

1) **Beekeeping:**

Improved beehives and modern beekeeping techniques were introduced to local farmers. This is aimed at promoting honey production which in turn leads to improved livelihoods.

2) **Tourism:**

Wildlife, culture and scenic sites are major tourist attractions in the region. The communities are organized into wildlife conservation groups and together with the local county council and other investors own tourist lodges (Sarara tented camp and Kitich camp) and camp sites within the ecosystem. This is a source of employment and income for the local communities.

3) Business enterprises

This includes livestock trade, food stuffs and retail shops within the local trading centres. In addition sale of Samburu artefacts, hides and skins, ethno botanical medicines are also encouraged.

Community coordinator- Tom Letiwa- addresses men from Loigama village on issue of the importance of wildlife and how to plan holistically when they want to utilize grazing land effectively to avoid competition with wild grazers.



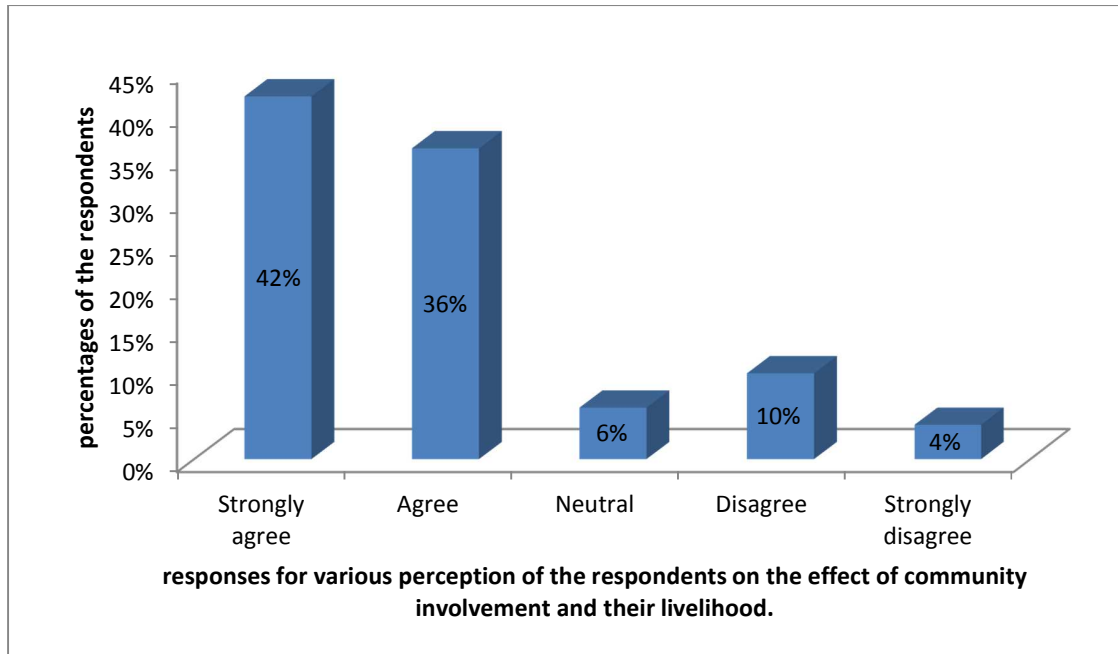
4.7. As I observed various components available had been indicated as shown in table below

Livelihood	Component Indicator
Security	<p>Social Cohesion ,Physical Security</p> <p>Security from human-wildlife conflict</p>
Health	<p>Awareness of medical care , access to medical infrastructure ,affordability of medical care</p>
Opportunities	<p>Income, access to paid employment and to alternative livelihoods</p>
Education	<p>Awareness of education ,access to affordable primary education and affordable secondary education</p>
Transportation	<p>Access to roads and affordable transportation</p>
Natural Resources	<p>Availability of grazing</p> <p>Quality of accessible grazing resource</p> <p>Access to firewood or fuel products</p> <p>Access to timber</p> <p>Access to water for the household</p> <p>Access to water for livestock</p>

4.8. Ways local communities use to conserve wildlife

- **Reporting illegal issues;** this include poaching, wildlife carcass reports and charcoal burning
- **Volunteers in conservation** where local people volunteer to work within the conservancy until job opportunity prevail.
- **Rescue baby elephants from wells**
- **Holistic Grazing management** - increasing access to the grazing resource is the product of both improved security and resource management
- **Culture** –This is where it is against the community to kill most wild animals elephant, dik-dik and squirrels.

4.9. Figure 4- A graph showing percentages of the perception of the local people on future improvement of their livelihoods with increased involvement in community wildlife conservation.



The results (depicted in figure 4) of the study however, indicated that though majority (strongly agree 42%, agree 36%) of the respondents were optimistic that the community livelihood will improve in the future after significant involvement in conservation, similarly (10% disagree, 4% strongly disagree) of the respondents are of contrary opinion. The main reason given for the improvement of the livelihoods is that the local people will now get more employment opportunities, holistic grazing management programmes and improved security and peace in the region.

Those respondents who did not believe that their livelihoods will improve cited that they are going to lose access to the resources in the core conservation areas especially the grazing land for the livestock, water and firewood

Other respondents did not seem to have any idea of what the conservancy benefits them and how it would finally improve their livelihoods thus neutral.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.0. CONCLUSION

The study established that NWCT has contributed to an increase in the livelihoods of the individual household by reducing poverty through direct benefits in cash from school bursaries, health services among others. Individual '*manyatta*' owners earn extra income from tourists visiting the '*manyatta*'. Idle moran (warriors) has been integrated in the conservation and management activities where they were made scouts, tour guides and entertain guests at cultural '*manyatta*'. This has played a dual role as it has addressed the issue of unemployment and cattle rustling which is associated with morans. Community conservation has also stimulated development in terms of roads, communication, water provision, education promotion, support of small income generation enterprises that has improved general welfare of the community.

The NWCT is also building capacity in the local community through training and awareness creation. It was notable that establishment of conservation area resulted to better management of natural resources both within conservation area and outside. Conservation area has been designated in the group ranch-constitution and elders have been empowered through the co-ordinations of grazing committees in various zones of the group ranch to make decision regarding grazing patterns. Increased security measures through regular patrols and radio network has dramatically reduced incidences of insecurity including the cattle rustling menace, poaching and human wildlife conflicts.

There is no doubt that the future survival of wildlife in northern Kenya, and in all areas outside community conservancies is dependent on the participation of local communities. Community participation in conservation should be done through organizing meetings and seminars to educate them on the importance of wildlife which is a similar research by Louise Glew, Malcolm D. Hudson & Patrick E. Osborne who were evaluating the effectiveness of community-based conservation in northern Kenya (August 2010).

5.1. RECOMMENDATIONS

- ❖ There is need for NWCT to involve the local community when designing its activities to avoid misunderstanding when it comes to implementation.
- ❖ NWCT should give equal opportunities to women and men in all conservation activities to boost the positive attitude of the entire local population towards wildlife since currently where I was stationed we had two ladies only out of 46 rangers.
- ❖ Locally-base project implementers and effective and sustainable local institutions are crucial for project success and sustainability with a long-term commitment to the area should be encouraged because they are more likely to succeed.

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CHAPTER SIX: APPENDICES

6.0. QUESTIONNAIRE

Dear respondent,

I am a student at the University of Nairobi, pursuing a degree in BSc. Wildlife Management and Conservation. I am conducting a study that is intended at assessment of the involvement of the local community in wildlife conservation and management in NWCT- Samburu County.

Attached please find a questionnaire meant for gathering information for this study. Kindly fill the questionnaire honestly and to the best of your knowledge. All responses will be handled with absolute confidence and will be used solely for the purpose of this study.

1. (a) Sex of the respondent(s) (i) Male [] (ii) Female []
(b) Age of the respondent(s) (i) 21-30 [] (ii) 31-40 [] (iii) 41-50 [] (iv) Over 50 []

2. What is the level of your education?

- (i) None [] (ii) Primary Level [] (iii) Secondary level [] (iv) Post-secondary []

3. What is the source of income for your livelihood?

- (i) Bee keeping [] (ii) livestock keeping [] (iii) Trade [] [IV] others (specify) []
[v] Agricultural activities []

4. Does wildlife cause any harm to your livelihood?

- (i) Yes [] (ii) No []

If YES what type of harm?

- (a) Destroy my property (crops, fences, and livestock) []
(b) Cause injuries and death []
(c) Compete for resources (grass, land and water) []
(d) Others (specify)

5. Which wildlife animal(s) do you consider to be most problematic?

.....
.....

6. (a) Do you know Namunyak Wildlife Conservancy Trust?

(i) Yes []

(ii) No []

(b) Do you know what the conservancy does?

(i) Yes []

(ii) No []

(c) If yes in 2(b) above explain briefly

.....
.....

(d) Do the activities in 2(b) above interfere with your pastoral way of life?

(i) Yes []

(ii) No []

Explain your answer

.....
.....

7. Did you like the idea of having a conservancy in your area?

(i) Yes []

(ii) No []

Explain your answer

.....
.....

8. Do you have any involvement in conserving the wildlife within the conservancy?

(i) Yes []

(ii) No []

If involved in any activities list them below

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

9. Do you get any benefits from the Namunyak conservancy?

(i) Yes []

(ii) No []

If (yes) list some of the benefits gained

.....

.....

.....

.....

10. In what ways do you help in management and conservation of the wildlife living freely in your communal lands?

.....

.....

.....

11. The livelihood of the local people will continue to improve significantly with increased community involvement in wildlife management and conservation in Namunyak Wildlife Conservancy Trust?

(i) Strongly agree [] (ii) Agree [] (iii) Neutral [] (iv) Disagree [] (v) strongly disagree []

Thank you very much for your time and participation!

Mary Macharia

Researcher

6.1. PHOTOGRAPHS TAKEN

A photo of a giraffe found killed lions in NWCT (3rd February 2014)





Arrested moran suspects holding ivory in Wamba police station reported by local people who view wildlife conservation positively in Namunyak region.

I escorted by a ranger (Daniel Iereesh) as I questioned some of the youths as they grazed and gave their herd water at the same points wild animals take water.

