

**ASSESSMENT OF FACTORS AFFECTING ISIOLO COUNTY
COMMUNITY WILDLIFE CONSERVANCY WITH REFERENCE TO
ECOTOURISM DEVELOPMENT IN KENYA**

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**A Thesis Submitted to the Board of Post-Graduate Studies in Partial Fulfillment of the
requirements for Master of Arts Degree in Sociology (Community Development and
Project Management Option) of Egerton University**

EGERTON UNIVERSITY

MAY, 2017

DECLARATION AND RECOMMENDATIONS

DECLARATION

This thesis is my original work and to the best of my knowledge has not been presented for any institution of higher learning for a degree or diploma.

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RECOMMENDATIONS

This thesis has been submitted for examination with our recommendations as University supervisors.

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DEDICATIONS

This study is dedicated to my father the late Dida Ade Qampicha, My loving mother Dabo Godana Dadacha, My wife Fatuma Dida Kotile, My son Luqman and daughter Mansura.

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ABSTRACT

This study focused on the assessment of factors affecting Isiolo county community wildlife conservancy with reference to ecotourism development in Kenya. Community based wildlife conservancy has become a popular approach especially in Africa since it has been found to be effective in conservation of wildlife outside protected areas and ecotourism developments. However community based wildlife conservation approach faces a number of challenges undermining its achievement of ecotourism goals. Thus, the study established factors constraining community wildlife conservancy in achieving ecotourism. The objectives of the study were to establish community based factors affecting community wildlife conservancy in achieving ecotourism. To examine socio-ecological factors hindering development of ecotourism by community wildlife conservancy and to establish remedies to the challenges to eco-tourism development in Merti Sub-County. The study was guided by two theories; Structural functionalism Theory and political ecology Theory. Descriptive survey design was used; interview schedules and Focus Group Discussion were used to collect data from respondents. The study used stratified sampling to arrive at a sample of 120 households who were permanent resident of Merti, Cherrab and Kom Divisions of Merti Sub-County and purposive sampling of eight key informants, five men and three women who took part in FGD. Field data was analyzed using SPSS and Excel, analyzed data was presented using frequency table, pie charts, bar graphs and percentages. Pilot study was conducted at Archer's post, Samburu County of Kenya to establish suitability and clarity of the research instruments. Findings of this study indicated that majority of the respondents 92.5% believed that ecotourism development by community wildlife conservancy is ineffective because of effects of community based, socio-ecological and technical factors which requires an urgent remedies. Key community based factors identified are low level of education, high level of poverty, insecurity, inadequate infrastructure development and human wildlife conflict. Socio-ecological factors are habitat destruction, poaching, disease transmission, and compensation procedures. The study recommends inclusion of wildlife conservation and ecotourism study in primary and secondary school curriculum and formation of a body that shall oversee community wildlife conservation initiative and its welfare. This study concludes that factors affecting Isiolo county community wildlife conservancy with reference to ecotourism development are majorly limited to the community actions and hence this study recommends initiation of community capacity building forums and active management participation.

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LIST OF ABBREVIATIONS AND ACRONYMS

ASALS	Arid and Semi-Arid lands
CAMPFIRE	Communal Management Programme For Indigenous Resources
CBNRM	Community Based National Resource Management
CBWC	Community Based Wildlife Conservancy
CWC	Community Wildlife Conservancy
IES	International Ecotourism Society
IYE	International year of Ecotourism
KAWC	Kenya Association of Wildlife Conservancies
KWS	Kenya Wildlife Service
NGO	Non-Governmental Organization
NRT	Northern Rangeland Trust
UNEP	United Nation Environmental Programme
USAID	United State Agency for International Development
WTO	World Tourism Organization

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The problem of wildlife conservation has been a global concern due to the fact that unless proper measures are put in place, the endangered species of flora and fauna might be extinct in the near future. It has been universally agreed that tourism is the world's fastest expanding industry creating jobs for millions and sustaining livelihoods, but at the same time one of the limitations include destruction of the same resources that it intends to conserve. Ideally ecotourism encourages natural resource conservation in return for local and national economic benefits, in addition to offering local, national and international tourists an opportunity to enjoy and learn about nature while respecting local culture (Harris and Harris, 2002). The damages to the ecosystem attributed to the mass tourism are mainly habitat destruction, land degradation and pollution.

The United Nations declared 2002 as the International Year of Ecotourism (IYE). Ecotourism has been defined by the International Ecotourism Society (IES) as responsible travel to natural areas that conserves the environment and sustains the well-being of local people. Ecotourism has been globally adopted as an alternative to mass tourism (Foskett and Foskett, 1991). Some players in tourism industries have introduced a new concept of compensation called Eco-labeling to substitute for any environmental disturbances that might be caused by tourist during their stay (Lanza, Markaya, and Piglian, 1989).

This international definition of ecotourism implies that all revenue generating activities carried out under community based wildlife conservancy (CBWC) fall under this type of tourism. Ecotourism concentrate on visitors who were interested in touring wildlife and local population in their original ecosystem (Lindersay, *et al*, 2007). Rutten (2004) stated that wildlife conservation by local communities has drastically transformed in Africa especially Tanzania, Zimbabwe, Kenya, Botswana, Namibia and South Africa because several community based

wildlife conservancy have emerged as from late 1980s and early 1990s improving livelihood and preserving nature adopting community based natural resource management (CBNRM) program. According to Kenya Wildlife Service (KWS, 2010), more than 70% of the country's wildlife live outside protected areas, which include the national parks, reserves and sanctuaries. The protected area covers 8% of the Kenya land mass. This has given an opportunity to communities living around parks and reserve areas to initiate community based wildlife conservancies including protecting wildlife and engaging in ecotourism enterprise for financial gains in return for conservation, to accrue and conserving the same for future generation as sustainable livelihood alternative and to utilize their uses without compromising consumption of the same resources by future generations.

Kenya's wildlife population is declining at an alarming rate due to several factors including habitat loss, poaching, human wildlife conflict, natural calamities and disease and the decline will always affect the tourism in Kenya, which is popular for wildlife viewing(Kiarie, 2013).Wildlife conservation in Kenya greatly depends on the performance of private and community initiatives as the best approach (Butler, 2012).The idea of community based wildlife conservancy was borrowed from Southern Africa countries after success stories were registered from several community centered wildlife managements by the name Communal Management Programme for Indigenous Resources (CAMPFIRE). The initiative was introduced in Merti Sub-County by Ian Crag in 2007 under the auspices of Northern Rangeland Trust (NRT) as Biliqo-Bulesa community wildlife conservancy.

This study conceptualizes Community Wildlife Conservancy (CWC) as protection of wildlife in their natural habitat, including continuous monitoring and security surveillance as well as engaging in ecotourism and developing niche in eco products offer. Otiende *et al* (1991) Observed that wildlife and aquatic life are essential in the country's economic development because Kenya depends on wildlife as one of major sector enhancing foreign exchange and revenue earning hence need to be protected to achieve full potentials and realization of vision 2030. The community needs enlightening to accrue maximum benefit from the initiative by eradicating community based and ecological challenges on the way to the success of the initiative.

1.2 Statement of Problem

Community based wildlife conservancy has become a popular approach especially in Africa since it has been found to be effective in conservation of wildlife outside protected areas and for ecotourism developments. However, assessment of community based, ecological factors and technical factors affecting Isiolo county community wildlife conservancy with reference to ecotourism development in Kenya are not documented thus, the concern for this study.

1.3 Objectives of the Study

1.3.1 Broad objective

The broad objective of this study was to investigate factors affecting Isiolo county community wildlife conservancy with reference to ecotourism development in Kenya.

1.3.2 Specific objectives

The following were the specific objectives of the study:

- i. To establish community based factors affecting community wildlife conservancy in achieving ecotourism.
- ii. To examine socio-ecological factors hindering development of ecotourism by community wildlife conservancy.
- iii. To establish technical factors affecting community wildlife conservancy in adopting ecotourism.

1.4 Research Questions

The study was guided by the following research questions:

- i. How community do based factors affect community wildlife conservancy in achieving ecotourism?
- ii. What are the socio-ecological factors that hinder ecotourism by community wildlife conservancy?
- iii. How do technical factors influence adaptation of ecotourism by community wildlife conservancy in Isiolo County?

1.5 Justifications of the Study

This study focused on a subject that has been scantily studied. Few studies have been carried out to determine factors affecting community based wildlife conservancy in relation to ecotourism development. The community based wildlife conservancy approach has been widely accepted and currently there are more than ten community based wildlife conservancies operating in Samburu, Isiolo and Tana River counties under the auspices of Northern Rangeland Trust (NRT). Thus there is need to explore the challenges faced by this community initiative in the development of ecotourism in non-protected areas that will generate revenue for the conservancy projects.

Ecotourism has been identified as the fastest growing segment in tourism industry and as the major revenue earner for conservancies. Some of the challenges are community based and need to be addressed effectively to gain maximum benefits. This includes insecurity, human wildlife conflict, poverty, and others. With clear and efficient civic education and awareness plan this obstacle can be cleared to gain maximum conservational and ecotourism benefits. Socio-ecological factors like honey harvesting, human have triggered fires which has contributed to the destruction of the wildlife habitat in addition to poaching and charcoal burning.

Sustainable ecotourism products have been identified, This include wildlife viewing in their natural habitat, bird shooting, campsite, hot spring bath and nature trail in addition to direct interaction with the conserving community. The ecotourism products mentioned will generate revenue for the community development projects and also be able to serve future needs. The challenges affecting community wildlife conservancy in adopting ecotourism were outlined as community based and ecological factors, appropriate remedies were identified to eradicate them to gain maximum benefits. The findings of this study are hoped to contribute to the body of knowledge in the field of community wildlife conservation approach and ecotourism development, which is a new entrant to the tourism industry and the world of community development by providing solutions to outlined challenges. The findings of this study further boost economic benefit of CBWC approach to the nation and the communities in Isiolo County.

1.6 Scope and Limitations of the Study

The study was conducted in Merti Sub-County in Isiolo County, Kenya to establish challenges facing community based wildlife conservancy in promoting ecotourism. Ecotourism activities in the conservancy were started in 2007 and it have attracted a good number of tourists who mainly come for wildlife viewing and bird shooting at an attractive hot spring in kurro in the vast conservancy. Some respondents were ignorant of the objectives of the study and hence inability to get required information.

Majority of the respondents are illiterate and many were not able to understand objectives of the study. Isiolo is a security turbulent area and some respondents did not open up to some items of the study e.g. poaching. There was demand for incentives by some respondents to give vital information as others avoided participation for confidentiality reasons. In the situation where the respondents could not communicate in English, translation of the enquiries into Kiswahili or vernacular was done to enhance communication. For sensitive information like matters on poaching, the researcher promised utmost confidentiality and surety that the data was only to be used for intended purposes. The remote areas of Merti Sub-county were not accessible during rainy season due to poor road networks. Necessary measures were put in place to ensure that field work was accomplished when rains subsided.

1.7 Definition of Terms

Challenges – Hindrances to the achievement of ecotourism development by community wildlife conservancy in Merti Sub-County of Isiolo County, Kenya.

Community - Is a group of people living together in a specific geographical area, sharing believes, lifestyle, Norms, culture, traditions and common ownership to available natural resources.

Community based Factors –These are day to day community livelihood activities, which is in one way or another led to ecological disturbance by either contributing to the destruction of environment, displacement or elimination of wildlife species.

Socio-ecological Factors – These are community norms and value systems which condition traditional behaviour leading to indiscriminate killing of wildlife to harvest certain products for medicinal purposes as well as customary initiation rites that are considered as a requirement for leadership coronation and fame.

Technical Factors – These are managerial routine that demand clear modalities on how to deal with emerging issues e.g. wildlife disease outbreak management, competition over resource management and others, which will help in smooth running of the conservancy and developing partnership with stakeholders.

Community wildlife Conservancy – Communal collective protection and preservation of flora and fauna on community land for financial gains.

Ecotourism - Is environmentally friendly travel to where wildlife are conserved and found in their natural habitat, by indigenous community as an alternative livelihood Strategy, accompanied by selling of artifact and experience of cultural lifestyle by tourist.

Wildlife - all that relates to flora and fauna, their habitat, propagation and survival.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAME WORK

2.1 Introduction

This chapter contains literature review, theoretical frame work and conceptual framework of the study. Literature review cover matters on wildlife conservation and ecotourism challenges faced by community based wildlife conservancy. Theoretical frame work was used to inform the study based on wisdom behind community wildlife conservation, ecotourism and livelihood improvement. The study employed two theories Structural functionalism Theory and political ecology Theory to guide the research. The conceptual frame work shows diagrammatic relationship between variables under study in relation to other factors and established the interest of the study.

2.2.1 Community based factors affecting promotion of ecotourism by community wildlife conservancy in Isiolo County

The United Nation Environmental Programme (UNEP) and World Tourism Organization (WTO) have outlined general features of ecotourism as travel that will not only appreciate nature but also local community that undertakes conservation and their culture as part of travelers' experience, containing education and interpretation as part of tourist offer, generally organized and coordinated by small group who owns it, minimizes negative impacts on natural and socioeconomic environment, provide an alternative income and employment opportunities for local community. Denman, (2001) stated that, ecotourism support protection of natural areas by generating economic benefits for managers of natural areas, increasing local and visitors awareness of conservation and help in sustainable utilization of natural resources.

Community based factors are day to day community livelihood activities that contribute to either destruction of environment, displacement or elimination of wildlife species. Ecotourism must generate enough revenue to motivate the community to continue the process of conservation and using the same resources without affecting the productivity of the same to provide for future generation (Harris and Harris, 2002). The level of poverty in the community is one of the major

obstacles to the promotion of ecotourism in Merti sub-county. According to Isiolo County Development Profile (2013), seventy one percent of the county population lives poverty line and the rural folks are the ones affected most. Having this situation in mind, certain wild herbivorous species some which are rare and endangered were targeted as an alternative source of food and poached for subsistence in Merti wildlife conservation areas. The culture of subsistence poaching is widely tolerated among the local people in Merti sub-county. The traditions allow consumption of bush meat especially during drought and famine conditions as an alternative to malnourished livestock.

Frequent droughts and ever changing climatic conditions have contributed to commercialization of poached bush meat. Gravy zebra and reticulated giraffe both of which are endangered and only available in Biliqo-Bulesa wildlife conservancy are the most targeted wild herbivorous species. Baldus, (2009) stated that, uncontrolled subsistence poaching of wildlife will out rightlylead to imbalance in the wildlife ecosystem, near extinction of rare species and disturbance in the wildlife food chain. With a probable decrease of herbivorous in the specific ecological areas then the natural predators will suffer and hence automatic catastrophe of death from hunger.

Herbivorous such as antelope, giraffe, buffalo, gazelles and zebra will decrease with poachers killing them indiscriminately, employing several barbaric and primitive ways, like snaring, spearing and others attacking them at night where it is believed that these species are having low night visions or are night blind. Unregulated use of wildlife resources becomes only second to habitat destruction and the major reason for wildlife extinction in many places (Baldus, 2009).The community possesses mindset of exploiting common property resources for their personal or individual's interests for the lack of defined ownership (Muchira and Onyari, 1996). There is an urgent need to stop the culture of subsistence poaching in Biliqo -Bulesa conservancy for the prosperity of the community conservation initiative. Carnivorous are largely safe from substance poaching as the culture detest their consumptions. This is the reason why their populations are increasing at higher rate in the conservancy areas.

Livestock keepers generally believe that wild animals are no man's property that can be killed at will and poached for individual benefits as in the tragedy of commons. The increase in poaching of wildlife in the national parks has been attributed to the herders who are grazing in rangelands adjacent to national parks and reserves. Muchira and Onyari, (1996) indicated that, of all poaching cases reported in 2012, seventy eight percent of them took place outside protected areas run by community and private ranchers while 22% happened in the protected areas managed by KWS. Poaching is a challenge faced by all wildlife conservation agencies which Biliqo-Bulesa conservancy is not an exception. It's upon all stakeholders to employ urgent measures to control poaching for prosperity of all.

Infrastructure was cited as one of the obstacle to achievement of ecotourism goals in Merti Sub County, According to Isiolo County Development Profile (2013), Isiolo County has a road network of 975.5km, out of which 3% are bituminized. Seventy seven percent of the roads are earth surface which are impassable during rainy seasons. The communication network is very poor since only 7% of the county has mobile network coverage. The roads network in the wildlife conservancy areas has remained in pathetic condition. For a longtime, there is no routine maintenance and the washed away sections are not reinforced with gabions and other erosion control measures.

The only bridge linking Isiolo town with Biliqo-Bulesa conservancy area which is at Gotu is low lying, patched on the river bed which is unused during floods and rainy seasons hence hindering free movement of visitors to and from the conservancy zones. To gain maximum benefit from ecotourism, the project areas need to be accessible at any given time either by road or air strips to facilitate easy mobility of tourists which is lacking in Merti sub-county community wildlife conservational areas. Human wildlife conflict was cited as one of the major problems in promotion of ecotourism development in Merti-Sub County. Ouma (1970) noted that, herders take care of their livestock against wildlife while farmers protect their crops against possible destruction by wildlife. Community takes caution by constructing a circular structure made of thorny tree branches to secure livestock from predators at night and strict surveillance during daytime grazing in the conservancy zones. Kipkeu *et al* (2014) lamented that, human activities

within Amboseli ecosystem have led to massive ecological disturbances which needed to be stopped to protect wildlife species and guarantee continuity.

According to Isiolo District Vision and Strategy (2005-2015), Human wildlife conflict was observed as a big problem in promotion of ecotourism development in Merti Sub -County. Pastoralist communities have long history of human wildlife conflict usually arising when wild animals attack their livelihood sources. Conservation increases population of predators threatening livestock and hence complains by the farmers increases risking the carnivores being killed by the affected farmer (Suich, Child, and Spencely, 2009). Revenge attack has been common in Merti wildlife conservation zones in absence of clear compensation policy and proper civic education on the benefits of wildlife. Locals resort to avenge for every livestock killed by the wild carnivores in Biliqo-Bulesa conservancy areas.

Education is one of the most important human needs but also regarded as a universal human right. It is a constitutional right of every citizen male and female to access education as it was declared by government free primary and subsidized secondary education. According to Kenya population and housing census of 2009. Illiteracy rate in the county stands at above 70%, this was attributed to nomadic life style, the culture of children labour, where young boys and girls are being trained at a tender age to be herders rather than taking them to the learning institution. Education is essential to poverty eradication and improvement of livelihood that need to expand and the illiteracy level gap filled as soon as is applicable.

Security of the tourists and the visitors is also another challenging factor as the ecotourism enterprises cannot thrive in the hostile and conflict prone areas. (Achebe, 1984, as cited in Reid, 1999), emphasized several factors which discourage tourism mainly reputation of a destination, attitudes and behavior of hosts also pricing of the tourism product and political stability. Buhali and Costa (2006) indicated that, people will not travel to areas that they feel unsafe and hence will either cancel their travelling plans or travel to another destination. Merti has been one of the volatile places when it comes to insecurity and ethnic conflict with the people of the neighboring district and hence need to redeem its image to attract tourists.

Security must be guaranteed for ecotourism projects to prosper by engaging locals in security issues and reconciliation with the neighboring rival communities, This is so because the same kind of community wildlife conservation initiative are also on going in the adjacent counties.

According to Isiolo District Vision and Strategy (2005-2015) loss of biodiversity, lack of security for wildlife and tourists are cited as some of the major problems preventing the district from enjoying full benefits of wildlife inside its borders. With proper security mechanism in place the locals are willing to take responsibility and team up with security agencies to enhance security for wildlife and visitors. Erickson, (2003) observed that, tourism is one of the very delicate product that need to be taken care of since destination background, security and safety concerns could alter the change of mind by tourist heading there and hence leading to loss of funds for community projects.

2.2.2 Socio-Ecological factors hindering ecotourism development by community wildlife conservancy

The cultural and socio ethos must be well understood in order for ecotourism to be sustainable. Ecotourism thrives upon the support of the local communities. Culture can be incorporated into planning and implementation of policies. These are community traditional behavior of undertaking rituals and norms leading to environmental destructions, indiscriminate killing of wildlife to harvest a certain product for medicinal purposes, initiation, fame, construction, fuel wood or as a requirement for traditional leaders coronation. Baldus, (2009) stated that, wildlife provides the community with basic needs. African wildlife is facing near extinct situation due to human overpopulation, uncontrolled subsistence hunting and underproductive wildlife management policies adopted and implemented by some countries.

Robert and Allen (1982) stated that, wildlife is the traditional source of medicine that has been in use since time immemorial and still practically cures several diseases. A number of herbivorous species were poached for cultural uses for example giraffe skins are used for making leather ropes and traditional milking container for its tender nature and durability, ostrich oil and Zebra fat are used as a special medical concoction for cure of some tough ailments by traditional medicine men. This mentality prevails among locals in the conservancy area that needed to be

tamed by providing an alternative to substitute wildlife raw product dependency. Local's consumption of forest products especially for constructions has long-lasting implications on sustainability of natural vegetations hence desertification and threatening of mass species (Willay, 2001).

This is practically what is going on in Biliqo-Bulesa conservancy area in Merti Sub-County. Suich *et al* (2009) observed that, uncontrolled harvesting of forest products in the name of firewood, charcoal burning, bush fire as a result of primitive honey harvesting techniques, palm leaves harvesting and selective cutting down of indigenous hardwood tree species for constructions and fencing. Though community conservancy, rangers are putting on strict surveillance and monitoring along the stream. Large areas of the conservancy boundaries are unguarded and hence unsustainable exploitations of these resources at threatening level might led to habitat destruction and hence endangering wildlife existence in conservancy.

Harris and Harris (1991) noted that, protection of forest and grass land is part of wildlife conservation that can't be ignored because savannah provides conducive and favorable habitat for many forms of wildlife, destruction of the habitat by either charcoal burning, cutting of trees for construction and curving as well as burning of the rangeland will lead to species elimination and loss. Currently clearing of the bushes along river bank for farming is common in the conservancy areas. Hulme and Murphree (2001) asserted that, locals will lose in terms of food, bamboo, grazing land and water to conservancy economic activities and even land. This led to lack of access to medicinal plants, building materials and even game meat, grass for thatching, poles for building and tree barks for string and construction are put under strict control for security and protection of wildlife in the conservation zone, unlimited access might be granted to some designated areas in the vast conservancy to prevent undesirable collective action from the local residence of Biliqo-Bulesa conservancy. Convention on Biodiversity (2002) asserted that, tourism in spite of the immense benefits contributes to the interferences on the environment and traditions of the host communities especially their lifestyle and moral standings.

Denman, (2001) suggested that, unreasonable and improper tourism had contributed to degradation of wildlife habitat and hence defeat the purposes of sustainability, thus the new

approach which is ecotourism, enables limited interferences with nature and give chance to interact with communities, share ideas, experiences and skills because the world has become global so as social interaction has also been globalized, it also helped in cultural transfers and enrichment as well as destination marketing by visitors.

Since ecotourism entails cultural interaction with the visitors community attitude toward the tourist and needed to be friendly since interactions with tourist help in cultural transfer and hence promotion of community products abroad. Reid (1999) observed that, instead of regional development tourism can lead to regional resentment, tourist behaviors such as scant dressing, and public display of affection between sexes, and so on may clash with local tradition and culture and can result in local opposition to the tourism industry. The community was marginalized for long and it is suspicious of the visitors, free mingling with the tourists might take time, but with proper civic education and awareness program this can be achieved in Biliqo-Bulesa conservancy in Merti Sub-County.

Lanza *et al* (1989) concluded that, tourism activities often have significant environmental impact on tourist destination, including congestion and pollution. This calls for adoption of ecotourism which has been proved to be having minimum effects on the environment and nature compliant. Another major problem is increase in crime, prostitution, use of drugs and other negative things that are associated with tourism. This behavior need to be tamed for the community to accept and appreciate the visitors in Merti Sub- County.

2.2.3 Technical factors curtailing community wildlife conservancy in promoting ecotourism

Wildlife livestock competition for scarce resource, Suich *et al* (2009) observed that, wildlife conservation usually lead to competition with livestock especially the grazers as their number increases, so will be their areas of dispersal leading to conflict with the livestock keepers over the scarce resources. Ogara *et al* (2013) noted that, Livestock and wildlife conservation on the same land as it is the case in Merti community wildlife conservancy will result in conflicts since proper resource sharing mechanism is required to be in place to avert any competitions that will end up challenging ecotourism which is basically wildlife based.

Wildlife disease transmission to livestock, Nyeki (1992) disagrees with the integration of livestock with wildlife because of many diseases transmitted by wildlife to livestock that are pandemic. The issue of wildlife diseases spreading among livestock has been a serious matter of concern, since the conservancy though widely believed to be vast unfortunately has no designated boundaries and fence. As that will defeat the essence of wildlife conservation in their natural habitat so the challenges of controlling transmission of wildlife diseases to livestock a raise and the argument is that, some of the wildlife diseases are fatal and can cause an outbreak among livestock in Biliqo-Bulesa conservancy.

Olney *et al* (1994) observed that, Wild animals transferred from different location to a new set up will always be fatal because they will spread diseases that can sometimes be pandemic to contain specially among the livestock. Buffalos have been singled out as one of the wild herbivorous spreading foot and mouth diseases among the livestock's while rabies have been largely associated with the carnivores. Wild animals posses natural immunity to same parasites and diseases, which are fatal to livestock and the conservancy, do not even compensate the locals in case of such eventuality in Merti Sub-County and hence resource restriction for the local herders.

Livestock and farmers compensation programme by KWS did not work well with pastoral community since frequent and consistent attack by wildlife on their livelihood source is a threat to their survival and way of life that is why Maasai morans have resorted to killing lions instead of compensations as they claim it is to teach the lion a lesson that feasting on livestock is wrong and punishable by death as culture dictates, otherwise the beast will think it is business as usual and will not stop the habit. Masila, (2013) affirmed that, wildlife destruction of farm crops has been a serious issue of concern because farmers become hostile to wildlife especially elephant, when they destroys several acre of plant in the field, reducing all effort and capital invested to nothing, in addition to reluctance by KWS to pay compensation. This attitude has created bad relationship between wildlife and neighbouring communities which think of an alternative of relocation or employing barbaric methods of wildlife control, snaring, poisoning and even indiscriminate killings which is a crime under constitution.

The problem of insecurity is widespread in almost all community based wildlife conservancies as well as nation reserve and parks, recently the cabinet has decided to put several stringent measures to curb more deaths of wildlife especially elephant. Mwandabo, (2012) affirmed that, the government has taken stringent security and protective measures to assure safety of wildlife in and outside protected areas, this include the deployment of specialized security teams to all national parks and game reserves to fight increased poaching. It also directed flushing out of herders grazing their livestock in all national parks and reserves. According to Harris and Harris, (1991) Conservancies conserves biodiversity by controlling deforestation. This is so because most of the conservancies lie in the low grassland and arid areas if the cutting down of trees is not controlled the wild animals might not have even a shade to take shelter from burning sun of semi-desert and hence encourage forestation to take care of environment and for the prosperity of both flora and fauna.

According to Mwandabo, (2012), conservationist and security officials have raised a red flag over upsurge in poaching, in Tsavo National Park, the largest game conservancy in the country because of the influx of headers invading parks and game reserves in the pretext of looking for pasture for their livestock. Security was tighten including installation of digital cameras and sensors forcing poachers to head to unprotected areas such as ranches where KWS has control over game but not the land and where the wildlife are kept by individuals. The poaching menace was largely attributed to illegal herders who drive their animals into the ranches and uses herding as veil for poaching and hence strict security plans be introduced to curb poaching in the community conservancy areas.

The government has agreed to arm community rangers to deal with wildlife related crimes effectively, noting that about 50% of wildlife lives outside protected areas like ranches and conservancies, hoping that community rangers would help tackle widespread subsistence and commercial poaching (Mnayamwezi, 2012). Among many challenges faced by conservationist are lack of strict legislation for poaching crimes, since the punishment meted out to the criminals are believed to be too lenient to be a deterrent and hence continuity of the menace.

2.2.4 Remedies to the challenges of ecotourism development in Isiolo County

Extensive civic education and sensitization programme is needed to be carried out to educate community on the benefits of wildlife conservation and ecotourism development as an alternative livelihood option that can be sustainable to be used by future generation without compromising utilization by them at the moment and the consequences of hunting or poaching with punitive penalties as proposed in the new wildlife bill. According to Baldus, (2009), Rural dwellers wildlife knowledge and benefits will absolutely help them understand more of their benefits and changes their attitude positively to mutual conservation rather than indiscriminate exploitation at will. Sustainable use of wildlife resources should be a matter of concern to all stakeholders in community wildlife conservation initiative and it should be incorporated and in all policies plans and projects.

Early warning alert to the community for imminent disease outbreak among wildlife so as either to avoid the affected areas or to give vaccines to the livestock for the purposes of resistance locals have been accusing a certain wildlife conservation area for spreading certain pest widely resisted by wildlife but untolerated by livestock to compel them migrate away from rich grazing areas at the expenses of the wildlife. Formation of an umbrella organization, unlike stakeholders in other sectors of the economy, those in wildlife conservation do not have common body for coordination and voicing of their concerns. This state of affairs led to the raising of concerns to set up an organization for the common benefits and welfare of the conservancies and privately owned ranches where there is wildlife that owned by KWS. Community based wildlife conservancies and the private wildlife groups have been neglected for long and they have vowed to form an umbrella organization.

According to Gitonga, (2012), community and private wildlife conservancies are setting up an umbrella association as part of an effort to raise the standards of the Kenyan tourism industry; the proposed Kenya Association of Wildlife Conservancies (KAWC) will represent the interests of those left out by existing groups. The proposed association for wildlife conservancies will be targeting membership from 120 community and private ranches and local authorities with game reserves which have wildlife outside protected areas and animal protection groups. Capacity

building for the community based wildlife conservancies, since according to Kenya Wildlife Service (KWS) wildlife management in private and community conservancies, Game reserves, and National Parks do not operate at the same level. Kenya Wildlife Service (KWS) claimed that communities lack the capacity to manage animals and their standards are much lower than those in its national parks. Also locals need to be enlightened on the proper ways of handling honey harvesting without causing bush fire.

Nature trail for school children, this will develop conservation interests in school children as they appreciate and enjoy the scenery of the county it will motivate the desire to conserve and take care of the same for prosperity (Amoke, 2013). The nature trips inculcate appreciation of wildlife and preservation of the national heritage among the younger people hence developing desires for conservation and protection of wildlife. Legal reinforcement to control poaching and hunting of wildlife at will in Merti Sub-County. Fortunately, (2013), noted that, wildlife conservation and management bill and policy 2013, has proposed stiffer penalties for poachers ranging between a fine of Ksh1million and seven years in jail for those found poaching and engaging in trophy business up from previous Ksh 30,000 fine which was seen as lenient by conservationists. Previously, wildlife stakeholders have lamented on the lower fine and shorter sentence terms prescribed for wildlife related crimes. However, all appreciated the wildlife conservation and management bill and policy 2013 which will be deterrent for anybody who might think of engaging in hurting wildlife either by poaching or habitat destruction.

The conservancy must provide an alternative raw material for construction to the community to eradicate cutting down of indigenous trees. This can be done in form of identifying specific area exploitation or targeting specific species of tree, probably (*Prosopisjuliflora*) widely known as Mathenge, which can be a good substitute for building as it effects on environment and livestock are disastrous. While in case of medicinal herbs the alternatives are never found and the locals are referred to the health centers which are in most cases under stocked and not well suited to provide traditional herbal substitute. Locals needed to be granted unlimited access in to the conservancy zone to acquire the necessary herbs for preparations of traditional herbal medical concoctions.

Wildlife conservation and ecotourism need to be incorporated in primary and secondary school curriculum to instill protection and preservation of wildlife in the school children from the beginning. This early introduction will motivate love and study of wildlife in the heart of the learners and hence develop attachment and curiosity to know more about them and also work towards their safety and continuity. Children need to be taught about wildlife as a friend not an enemy and also a source of income and employment that requires to be protected at all time. Government input in the community wildlife conservancy is limited only to provision of land and protection of tourists and wildlife, this input need to be broadened to include provision of finance for operational costs, infrastructure development and also marketing. Most of the community conservation areas are geographically located in the zones which were marginalized for long and needed to be developed to achieve desirable goals in ecotourism development.

2.2.5 Integration of ecotourism in community based wildlife conservancy

It is widely believed that, tourism encompasses those activities that take people away from their usual place of residence for pleasure or a holiday and for reasons other than going to their normal place of work. And the tourists are those travelling solely for leisure or pleasure and comforts (Vivienne and Monett, 2008). Ecotourism has been noted to be the fastest growing segment of tourism industry and has been taught to be likely an alternative to mass tourism and subsequently an alternative sustainable livelihood strategy especially for locals in rural underdeveloped range lands in Northern Kenya. Most of the revenue gaining activities in the community based wildlife conservancies are ecotourism enterprises that heavily rely on the nature conservation by local community. These include eco-lodges, campsites, wildlife viewing, sand grouse shooting, artifact selling and cultural interaction and life style experiences by the visitors. Most of the natural areas are conserved by indigenous community as livelihood alternative strategy, because community are been motivated by revenues they gain from wildlife conservation and biodiversity sustenance.

Vivienne and Minett (2008) stated that, financial gains are what motivate community to take charge of the wildlife and treat ecotourism as an alternative livelihood option. The free hunting and poaching culture has been deeply rooted in the mind of the Merti community but with establishment of ecotourism activities the chances of hunting and poaching will be minimized

hence resistance to the initiative arises. Rutten (2004) stated that, wildlife conservation has drastically transformed in Africa specially Tanzania, Zimbabwe, Kenya, Botswana, South Africa and Namibia because several community based wildlife conservancy has emerged since late 1980s and early 1990s improving livelihood and preserving nature, adopting Community Based Natural Resource Management(CBNRM) program.

The Kenya Ecotourism Workshop, held in Nairobi from 13-17 September 1992, made recommendations concerning marketing of ecotourism products and promotion of community active participation. The ideas mainly dealt with local community initiative with framework for the involvement of the private sectors. The government was asked to take a leading role in developing mechanisms of private-sector local-community collaboration in wildlife conservation and ecotourism promotion.

It was noted that lessons had to be learnt from private-sector community activities in the form of campsites in the Maasailand area. This new approach had to be added to, or even replace, the concept of revenue sharing. The goals of traditional revenue-sharing besides being mostly inadequate has been an obstacle because the practice encouraged communities to participate in conservation but did not stress the need to improve their community based welfare. One of the functions of a Community Conservancy is to institute security operations to provide stability to wildlife, residents and visitors to the area. Conservancy security teams are hired from the communities in which they serve and are closely linked to Kenya Wildlife Service (KWS) and Kenya Police. The training success of Northern Rangeland Trust (NRT) Conservancy rangers has reinforced security throughout the northern rangelands and led to sharing of security data between NRT and KWS that enables both institutions to deal with poaching, security and human-animal conflicts effectively.

United State Agency for International Development (2008), asserted that, Conservancies are providing in some cases, significant and much needed income at the community and household levels. Whether or not income is being distributed equitably remains a question, and should be looked into carefully. They are serving to reduce conflict over cattle rustling, pasture, water and

bringing some security in this region. Several of the conservancies have not developed grazing plans and grazing committees to utilize consumption of natural resources more efficiently.

Community Conservation is hinged on the premise of empowering local people around the world and enabling them to realize their potential as protectors of their lands and resources and creators of their future by giving them capacity, skills and survival tactics. In this regard, Community based conservation is a response to older conservation movements that emerged in 1980s through escalating protests and subsequent dialogue with local communities affected by international attempts to protect the biodiversity of the earth. Older conservation movements disregarded the interests of local inhabitants. The objective of community-based conservation is to incorporate improvement to the lives of local people while conserving areas through the creation of national parks or wildlife refuges. While there have been some notable successes, unfortunately community-based conservation has often been ineffective because of inadequate resources, uneven implementation of the projects, and overly wishful planning (USAID, 2008). The concept of community participation in tourism and other development initiatives has gained support since the 1980s. Consequently, this concept was regarded as a strategy of an alternative livelihood option.

2.3 Theoretical Framework

This study was guided by two theories; Structural functionalism Theory and Political ecology Theory. The two theories complemented each other. Structural functionalism Theory was used to understand factors affecting development of ecotourism by community based wildlife conservancy in Isiolo County in relation with community based, socio-ecological and technical backgrounds. Political ecology Theory was used to understand the community interaction with their habitat and the relationship of protection and consumption of the natural species in their surrounding environment. This explained the fact that the relationship between the local conserving community and the wildlife is mutual and on symbiotic terms, that both parties required each other for continuity and survival.

2.3.1 Structural functionalism Theory

Structural functionalism theory is one of the major theoretical perspectives in sociology. It has its origins in the works of Emile Durkheim, Herbert Spencer, Merton and Talcott Parsons who were especially interested in social order grounded in the action frame of reference in the social system to achieve stability and solidarity (Merton 1957; Gross *et al.*1958). Structural functionalism theory are guided by the assumption that each part of society contributes to the stability and harmony of the whole society and every parts of society produce order, stability, and productivity. When one part of the system is not working or is dysfunctional, it affects all other parts and creates social problems.

The community is committed to the collective adoption and coordination by all parts of the social setup for success and prosperity and mutual communal interest. This explain the relationship between community wildlife conservancy initiative in Merti Sub-county and the desired anticipated ecotourism benefits that would ultimately come with such an effort when collective societal effort are directed toward eradicating obstacles on the way of accruing maximum benefit for the development of ecotourism by the community, society depend on reaching the equilibrium by been rational and basing their actions on what they perceive to be the most effective means of attaining their goal.

The community strives to achieve the balance between its parts to give relevance to achieve greatest satisfaction to its project, the wildlife conservancy benefit expectations cannot be a reality if some society members continue to undertake activities which undermine its productivity thus making it impossible to generate the revenues required for implementation of development programmes (Carling, 1992). The assumption is that if any of the community part tends to be dysfunctional the negative effects will be felt through the community body that is why equilibrium has to be maintained through the structure for the stability and continuous harmony to prevail (Scott, 1995).

The major reason of involvement in such communal collective action is monetary motivations which only come by engaging in preservation of flora and fauna in community land. The relationship here is collective and common for the betterment and prosperity of both community and the wildlife. One of the major weaknesses of functionalism perspective is it does not

encourage people to take an active role in changing their social environment, even when doing so may benefit them this will encourage social stagnation and dysfunction of the social structures hence invalidity. The call for status quo will render most of the social structures null and void hence unbalance, social change are to be incorporated and adopted as part of the social structure to maintain the equilibrium.

2.3.2 Political ecology Theory

Political ecology is the study of the relationships between political, economic and social factors with environmental issues and its discipline; it offers wide-ranging studies integrating ecological social sciences in topics such as degradation, marginalization, environmental conflict, conservation, and environmental identities and social movement's. The term political ecology was first coined by Frank Thone in an article published in 1935. The theory assumes that Indigenous people have important traditional environmental conservation knowledge which could contribute positively in conservation and sustainable utilization of wildlife through their indigenous control mechanism.

This implies that selective cultural or traditional protection of specific flora and fauna are deeply rooted in the culture of the Merti sub-county indigenous population. The society exploits available flora and fauna on need bases and at economical rate. Local consumption of both flora and fauna are natural and it has never altered normal food chain in any given ecosystem in specific traditional setup. Sutton and Anderson refer to Dobzhansky (1972), Cohen (1974) and Kirch (1980) points out that the primary mechanism by which human adapt to environment is by cultural interaction. Each culture has a distinct ecological adaptation which will allow integrations to achieve desired goals.

Sutton and Anderson (2010) acknowledges Steward (1955) who points out that cultures in similar environments may have similar adaptations; all adaptations are short live and are constantly adjusting to changing environments. The cultural and socio ethos must be well understood in order for ecotourism to be sustainable. Ecotourism thrives upon the support of the local communities. Culture can be incorporated into planning and implementation of policies. Socio-ecological influences are for instance behavior of undertaking rituals and norms leading to environmental destructions, indiscriminate killing of wildlife to harvest a certain product for

medicinal purposes, initiation, fame, construction, fuel wood or as a requirement for traditional leaders coronation.

Wildlife provides the community with basic needs. Unregulated cultural consumption of wildlife products will risk life of endangered species and wildlife in general. The tragedy of common perception needed to be change to common mutual benefits. Chhetri (1986) maintain that adaptation is a two way process, it involves an interaction between the tourist and the host community and localization of tourist product offered by the community based wildlife conservancy. The arguments against enclosure of land for conservation are that it harms local people and their livelihood systems by denying them access to the grazing areas and restricting their resource consumptions. Under normal circumstance culture must be related to the local environment.

The objections by political ecologists is that land use regulations are made by third party and the government, denying access, denying ability of local people to conserve species in areas under their jurisdiction this policies will render indigenous people more vulnerable and at risk of vengeance against wildlife. It tends to link community with the environment conservation focusing the role of community in protecting nature and gaining sustainable livelihood through wildlife enterprises. The relationship between community and environment is symbiotic however environmental destruction and ecological disturbances will automatically lead to human displacement and livelihood disruption. Thus equilibrium must be maintained at all time.

2.4 Conceptual framework

The Conceptual framework below show relationship between independent, dependent and intervening variables under study and their effects in influencing challenges facing Isiolo County community wildlife conservancy in achieving ecotourism development goals.

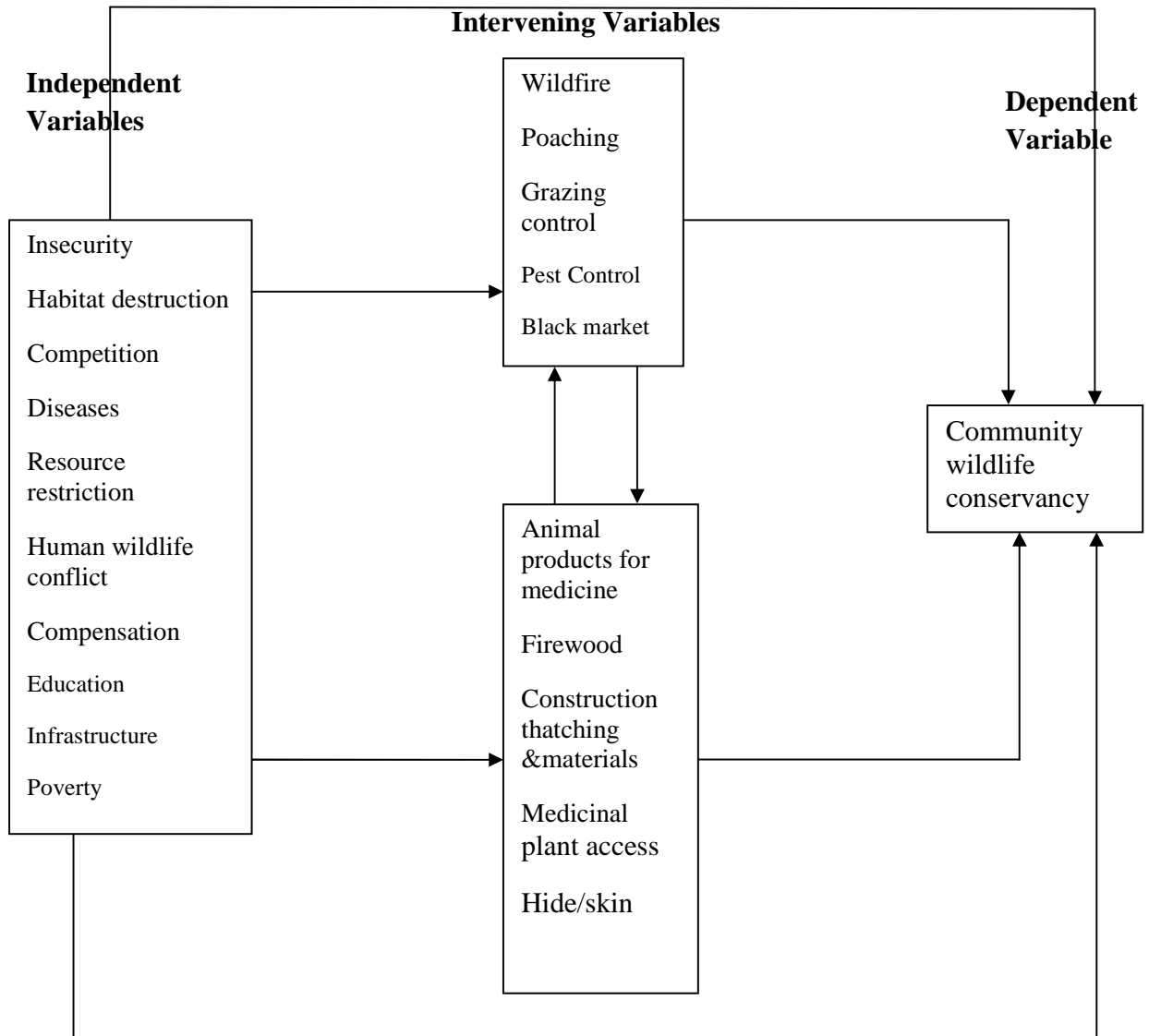


Figure 2.1: Conceptual Frame Work showing Relationship between independent, dependent and intervening variables

The framework in Figure 2:1 Show inter- relationship between study variables, community based wildlife conservancy stand as independent variable that is affected by both community based, technical and socio-ecological factors. Community based factors affecting Isiolo County community based wildlife conservancy in relation to ecotourism development included poverty index, infrastructural development, educational level and insecurity. Technical factors are diseases transmission control mechanism, security management and dispute resolution methods while socio-ecological factors influencing development of ecotourism by community based wildlife conservancy included the following: construction materials harvesting from forest, medicinal herb access, consumption of bush meat, domestic uses Zebra and Ostrich oil, and wildfire caused by honey harvesters, charcoal burners and bandit from rival neighboring communities.

That there was inter-relationship between community based socio-ecological and technical factors that highly challenge ecotourism development by community based wildlife conservancy. The dependent variable which is challenges to ecotourism was additionally equally influenced by prevalence of the following obstacles whose presence hinder ecotourism promotion and development by community wildlife conservancy in Merti Sub-County, insecurity, hunting, poaching, habitat destruction, diseases, resource restriction, grazing control and competition.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the study area, research design, unit of analysis, target population and sampling procedure, methods of data collection and data analysis.

3.2 The Study Area

The study was conducted in Merti Sub-County in Isiolo County of Kenya. The Sub-County comprises of three divisions, namely Merti, Cherrab and Kom, it borders, Isiolo Sub- County to the South, Garbatulla to the East and North East, Wajir and Marsabit to the North and Samburu to the West. It is located in northern part of the county and classified as one of the Arid and Semi-Arid lands (ASALs) in Kenya. According to Kenya Population and housing census of 2009, it had an estimated population of 20,341 with a total household of 4,294 and an area of 12,623km² (See Fig, 3.1 on pg. 27). The population comprises of sedentary and mobile pastoralist who depends on livestock as a livelihood base and there have been frequent conflicts over grazing areas with the neighbouring communities, some of the conflicts are basically attributed to the poverty and livestock theft by rival communities and the revenge attack but community conservancy has minimized conflict by having community wildlife rangers from rival communities working side by side in maintaining peace and security.

The Sub-County has an active community wildlife conservancy which was established in Kom in the year 2007; the conservancy covers an area of 3,841km². Biliqo-Bulesa Conservancy was started in collaboration with Northern Rangelands Trust (NRT), KWS and local community to create greater protections, for people and wildlife and for ecotourism ventures; it's one of the largest community conservancies under the auspices of NRT. Previously before the initiation of the conservancy, there was an alarming case of insecurity, banditry, influx of illegal firearms, wildlife habitat destructions and extreme poaching. The establishment of the conservancy was timely and a good idea thus it was accepted by the community and other conservation stakeholders. Community need to value wildlife since the whole idea is to have mutual relationship for sustainability of both.

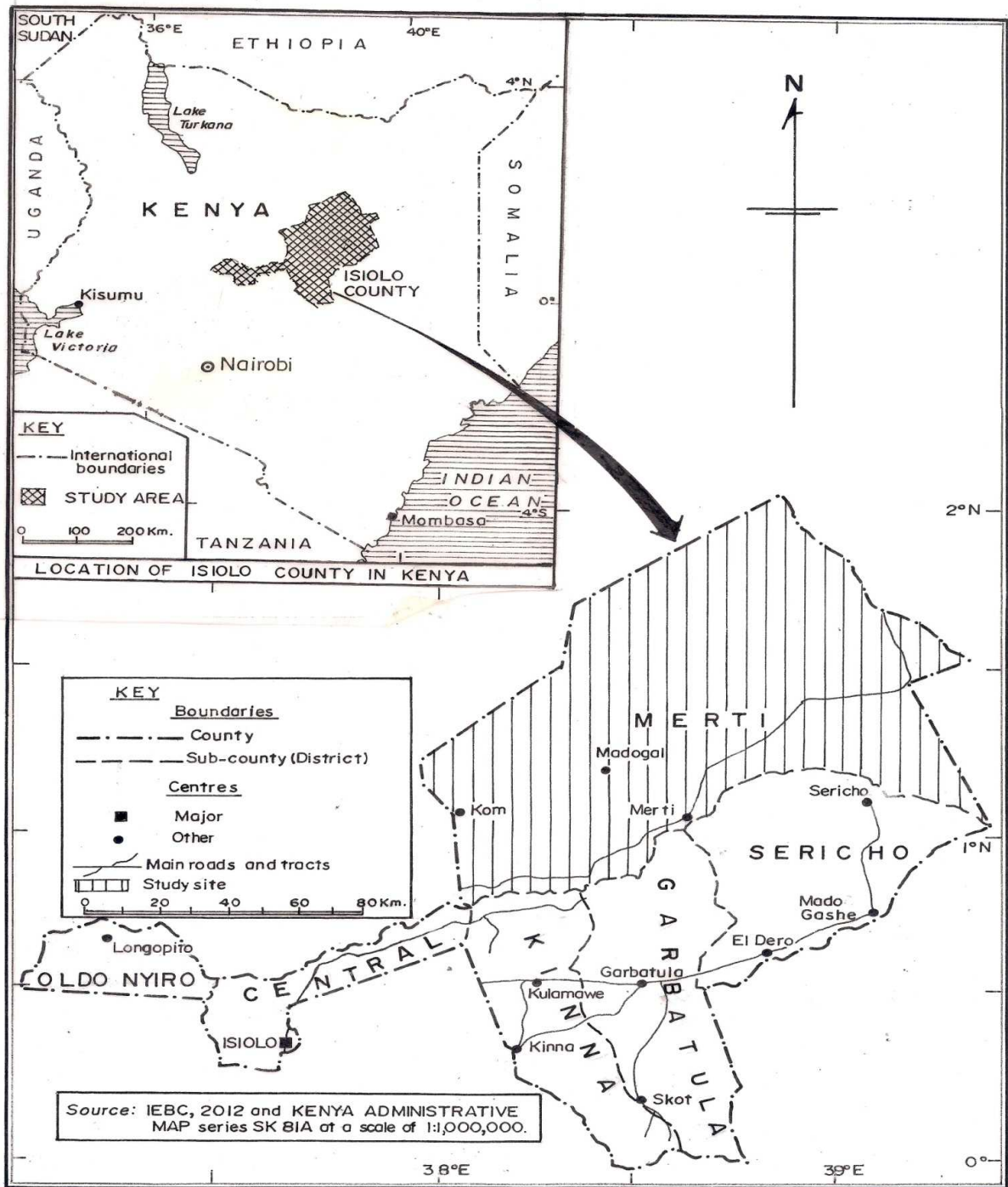


Figure 3.1 Map of Merti Sub-County showing study area.

3.3 Research Design

The study used descriptive survey design, which is a method of collecting information by interviewing or administering questionnaires to sample of individuals to collect data on their opinions, attitude, habits or any variety of education or social issues (Orodho, 2005). The study utilized interview schedules and focus group discussions as instrument of data collection. This study used descriptive survey design to establish factors affecting community wildlife conservancy in promoting ecotourism in the study area. The design is preferred where subjects respond to series of statement or questions in an interview schedule and where it is inexpensive to collect information from a relatively large number of respondents.

3.4 Population and Sampling Procedure

3.4.1 Target Population

The study was conducted in Merti Sub- County in Isiolo County of Kenya. The Sub-County comprises of three divisions, namely Merti, Cherrab and Kom, According to Kenya Population and housing census of 2009, it had an estimated population of 20,341 with a total household of 4,294. The study area had an accessible population of 2050 households from which a sample was drawn to help describe the phenomenon under study.

3.4.2 Sampling procedure

The sample size was calculated by estimating proportion using Kothari formula. Kothari (2004) affirms that, if the items in the population are homogeneous, a small sample can be used to describe the population. Kathuri (1993) observed that a minimum of 100 respondents is a representative sample for survey research. The first step in finding sample size using Kothari (2004) formula is to specify confidence level and the precision. Confidence interval for universe

proportion (p) is given by: $p = \pm z \cdot \sqrt{\frac{p \cdot q}{n}}$ where p = Sample proportion, q = 1-p,

z = the value of standard variant at a given confident level from table Showing area under normal curve.

n = sample size.

The value of P is then estimated based on the researcher's personal judgment or result of a pilot study. For this research, personal judgment was applied.

$$\text{Precision rate: } e = z \cdot \sqrt{\frac{p \cdot q}{n}} \quad \Rightarrow \quad e^2 = \frac{z^2 \cdot p \cdot q}{n} \quad \Rightarrow \quad n = \frac{z^2 \cdot p \cdot q}{e^2}$$

$$\text{However, for finite population: } n = \frac{z^2 \cdot p \cdot q \cdot N}{e^2(N-1) + z^2 \cdot p \cdot q}$$

Therefore, given population of $N = 2050$, $e = 0.03$, $p = 0.03$,

$Z = 1.96$ (table value at 95% confidence level)

$$n = \frac{1.96^2 \times 0.03 \times 0.97 \times 2050}{\{0.03^2(2050-1)\} + \{1.96^2(0.03 \times 0.97)\}}$$

$$n = \frac{229.17}{1.95589} \quad n = 120$$

The sample size for the study was therefore 120 household heads proportionately distributed across all the sub-areas as shown in Table 3.2.

Table 3.2: Population and Sample Size

Division / Location	Target Population	Sample size
Merti	600	$\{\frac{600}{2050} \times 120\} = 35$
Biliqo	250	$\{\frac{250}{2050} \times 120\} = 15$
Bulesa	350	$\{\frac{350}{2050} \times 120\} = 20$
Malka Galla	250	$\{\frac{250}{2050} \times 120\} = 15$
Korbesa	350	$\{\frac{350}{2050} \times 120\} = 20$
Yamicha	250	$\{\frac{250}{2050} \times 120\} = 15$
TOTAL	2050	120

Source: MDO Office, Merti Development Organization (2014)

The study area had an accessible population of 2050 households from which a sample size of 120 household members was drawn using Kothari (2004) formula and stratified random sampling to proportionately distribute respondents across the study area. Purposive sampling was undertaken to identify eight key informants, five male and three women who took part in Focus Group Discussion.

3.4.3 Unit of Analysis Population and Sampling Procedure

The unit of analysis was household heads in Merti Sub-County. Study regarded any household head aged 18 years and above as its respondent. According to Kenya Population and housing census of 2009, the study area had an estimated population of 20,341 people with a total household of 4,294. Accessible population of 2050 households was drawn as sample and sample size of 120 household heads were arrived at using Kothari formula as sample size for the study.

3.5 Methods of Data Collection

Interview schedule and Focus group discussions were used as a primary data collection method. Interview schedule was used to collect data from respondents while eight key informants who were senior chief, religious leader, local CBO manager, local wildlife conservancy manager, youth leader, area women group chairperson, women member of county assembly and a lady teacher were purposively identified and took part in focus group discussions which provided in-depth information on the quarries derived from three specific objectives of the study. Secondary data was obtained from documented and undocumented literature such as government and non-governmental organization reports, bulletins, articles, institutional brochures, academic journals, and the internet.

Focus group discussion (FGD) was applied to opinion leaders, in Merti Sub-County to share their experiences on the factors affecting community wildlife conservancy in promoting ecotourism in the study area. Focus group discussions involved both gender in the study area. One of the benefits of using Focus Group Discussion is that it is highly efficient for qualitative data collection since the amount and range of data are increased by collecting from several people at the same time. It provides an opportunity to go deeper into issues as group was relatively small. It was easier to handle most controversial issues such security and poaching in small, manageable, and less threatening group.

3.5.1 Piloting the Interview Schedule Questions

In order to assess suitability and clarity of the interview schedule questions, it was piloted with 3 women and 5 male respondents at Archers post, in Samburu County, Kenya. The reason for conducting pilot study in Samburu County was to establish suitability and clarity of the data collection instrument. Archers post was chosen because of nomadic and pastoralist life style of Samburu is similar to the respondent of the study area.

Moreover there were several community wildlife conservancies which were established in Samburu County managed Samburu community, hence Samburu understand more on the weakness and the beauty of the communal wildlife conservation, ecotourism and challenges to its prosperity. Pilot evaluation form was completed by the participant and suggestions on general layout, instructions clarity and wording of questions were made. Proposals on inclusion of new items to the interview schedule were made. Based on these experiences, some changes were made to improve the interview schedule questions.

3.6 Data Analysis

The data for the three objectives of the study was analyzed using descriptive statistics in which percentages, tables and pie chart were used to provide comprehensive analysis. Data was coded manually before entering into the Statistical Package for Social Sciences (SPSS) and Excel. The results of the study were summarized and then presented in percentages, bar graphs, tables and pie charts.

3.7 Ethical Consideration

Ethical issues are considered in research to protect the respondents and to guide the researchers against abuses of their right. This study strictly adhered to all laid down ethical procedures and conduct by safeguarding confidentiality and anonymity of the respondents and also using the collected data only for the purposes that they have been collected for. This study also informed the respondents about their right to answer or decline to answer a particular question they feel uncomfortable with while participating in the study.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

Detailed findings of this study based on the views of the respondents collected using interview schedules and focus Group Discussion are presented according to the objectives of the study. The findings are presented in form of percentages, pie charts, frequency tables and bar graphs. In addition, it also gives the interpretations of the results and a detailed discussion focusing on the research objectives. The first section presents background information, age level of educational, marital status of the respondents. The second section presents Community based factors affecting promotion of ecotourism by community wildlife conservancy. The third section presents Socio-ecological and technical challenges affecting adoption of ecotourism by community wildlife conservancy, analysis of the views of the household heads and the key informants towards conservancy ecotourism development challenges in Isiolo County, Kenya.

4.2 Results

4.2.1 Background characteristics of the respondents

The background characteristics of the respondents considered were gender of household heads, age, and educational attainment, marital statuses of the respondents, occupation, and geographical location of the respondent.

4.2.2 Gender of household heads

This study involved both male and female-headed households. The study assessed the role played by both gender in management of the family. In the family gender role refers to the expected duties and responsibilities specified by socio-cultural factors. Culturally, females perform house wife tasks caring for the children and domestic duties. On the other hand, males were assigned out-door activities such as looking after livestock, keeping security, and being bread winners. In the study, it was found out that, majority of the individuals interviewed were males closely followed by females. It is generally practiced in the study area that female household heads are accorded all privileges and respect as males. Female headed household

commonly results after the death of the husband and few cases as a result of divorce; the disparity in gender representations is minimal as shown in Figure 4.1.

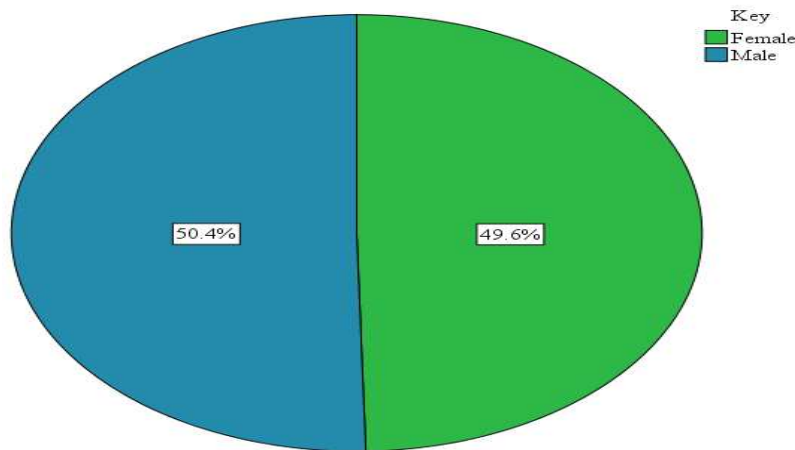


Figure 4.1: gender of respondents

The study findings in Figure 4.1 indicated that majority (50.4%) of the respondents were male headed households while female headed households had 49.6% representations in the study. This study observed that the disparity between male and female headed household was insignificant. This was attributed to the culture of wife inheritance which is deep rooted in the community. There is also common tolerance for widows who do not willing to be inherited, such widows are given all privileges like male headed household and regarded as leaders and family heads. Female household heads had full liberty on administration of family properties, financial management and political stands on behalf of the family or the household she is heading.

4.2.3 Age of the respondent

This study considered any male and female household head who was 18 years and above as its respondent. Society assigns various role to different members of the community according to age groups, these duty definitions include, leadership, labour, medicine administration and security. In this connection, a person at the age of 18 years and above is considered an adult and capable of making sound and mature decisions including starting his own family and taking over all responsibility of an adult member of the community. It was for this reasons that this study considered persons aged 18 years and above as respondents. This is reflected in Table 4.1.

Table 4.1: Age of the respondents

	Frequency	Percent
18 -24 Years	17	14.2
25 - 31 Years	25	20.8
32 - 38 Years	22	18.3
39 - 45 Years	15	12.5
46 - 52 Years	13	10.8
53 - 59 Years	14	11.7
60 Years and above	14	11.7
Total	120	100%

N=120

The findings of the study in Table 4.1 revealed that, Twenty point eight percent of the respondents surveyed were in the age category of between 25 and 31 years. This age bracket also suit government definition of youth, youth are important segment of any given community, because if not carefully handled youth unemployment and utilization, can lead to several problems: delinquency, spiral of crimes, robbery and even increase cases of HIV infections. This was followed by 18.3 percent who were aged between 32 years and 38 years. The age bracket of 46 to 52 years had the least number of respondents constituting 10.8%. Most of the respondents were people in productive age that can probably understand the study objectives and be part of solution to the questions this study intends to solve. However, as it can be seen in Table 4.1 above, there was an even distribution of individuals within the age categories.

4.2.4 Level of education of the respondent

Education is one of the important human needs but also regarded as a universal human right. It is a constitutional right of every citizen male and female to access education as it was declared by government free primary and subsidized secondary education. According to Kenya population and housing census of 2009, the rate of illiteracy in the county stands at above 70%, this was attributed to nomadic life style, the culture of children labour, where young boys have been trained at a tender age to be herders rather than taking them to the learning institution. Girls are

also introduced to look after sheep at a tender age of as young as seven years. Also the scarcity of learning centres, and hardship involved in attending far flung located schools from residential manyattas. Education is a key to poverty eradication and improvement of livelihood that needed to be expanded and the illiteracy level gap filled as soon as it is applicable. The disparity between male and female educational level is shown in Figure 4.2.

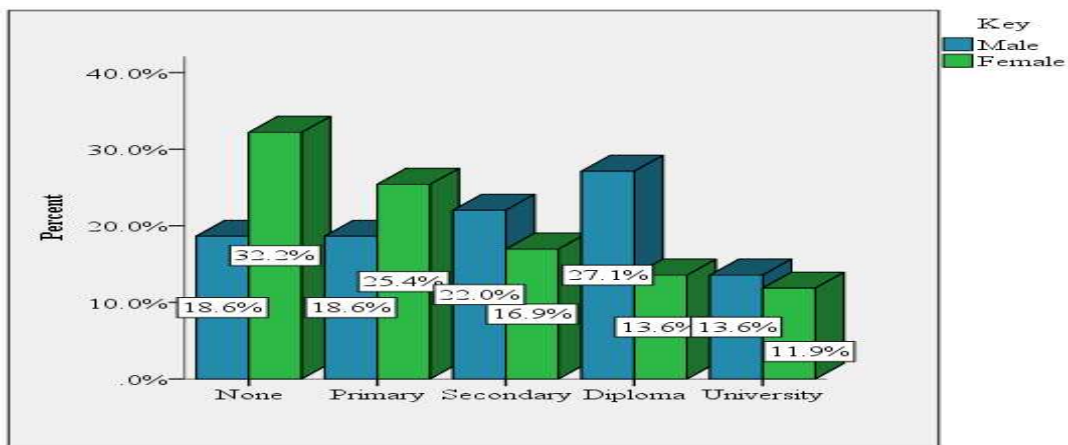


Figure 4.2: Educational levels of the respondent

The findings of the study in Figure 4.2 revealed that 32.2% of female respondent did not have formal education compared to 18.6% of male respondent. Majority of those with no education or primary education are female. Primary-level education for both gender constitute 44% of the respondents. Persons with secondary level of education constituted 38.9% of the respondents. However, more males than female had secondary education and above. While those with Diploma and university level of education constituted of 40.7% and 27.2% of the respondents respectively. It is worth noting that at the university level, the disparity between male and female significantly reduces. For instance during the interview one of the female respondent remarked that:

‘We did not understand why our young children’s will not be allowed to relieve their parents in taking over their usual herding job; culturally we pass the mantle to our children and it a tradition that has been there for generation and generations’

(Source: Female respondent, 42 years old, 2015)

The implications of such sentiment showed that, the community culture is so much deeply rooted that locals only valued livelihood wholly on livestock stock dependence and hence requires a lot of enlightenment on the importance of education.

4.2.5 Marital status of the respondent

Marriage is an avenue where community's destiny and continuity is being placed. The community in the study area practices polygamy and having several children is an honor and pride. Those married persons who take proper care of their families are accorded respect and status in community because one of the major criteria of choosing a community leader is by examining one management of their own family if someone is found not firm and obeyed at home then he has no chances of becoming community elder. Marriage is normally accompanied with extra responsibilities to an individual as a wife and husband, mother and father and in-laws because the newly wedded person is required traditionally to provide necessary basic requirements to his family. Majority of the respondent are married followed by single. This is indicated in Figure 4.3.

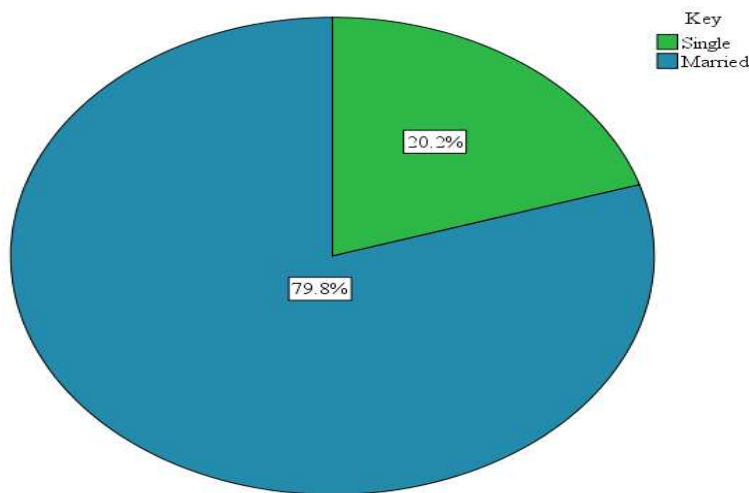


Figure 4.3 Marital Statuses of the Respondents

The study findings in Figure 4.3 revealed that most of the respondents were married. The findings of the present study confirmed that 79.8% are married respondents while widow and divorcees are counted as married going by their previous status and by the virtue of being the household head of their married or divorced husbands. Single individuals who are household heads of their

families stand at 20.2%. Household head position can be entrusted to both genders as the case might be and a single individual can be a household head in a given circumstance.

4.2.6 Occupation of the respondents

Majority of the respondents do not have any formal occupation because of the illiteracy rate which is very high in the entire study area, this stands at 28.0%. This is followed by herders at 19.5% who take herding as an occupation mostly those employed to undertake herding in exchange of wages and the owners of the larger herds of livestock. Then teachers at 17.8%, teachers form the largest single occupation of intellectuals in the study area. This is then followed by traders at 15.3%. The least represented occupation is politics at 0.8%. As shown in Figure 4.4

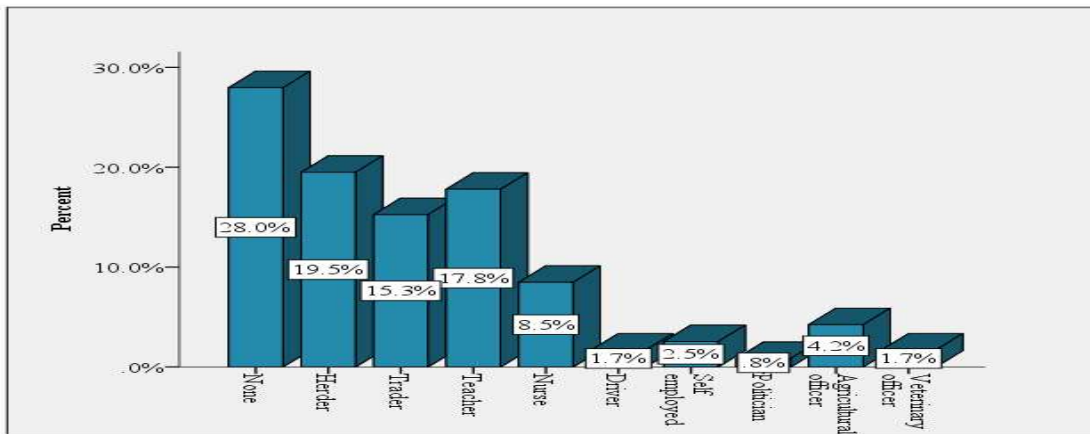


Figure 4.4 Occupation of the respondents

The study in Figure 4.4 observed that majority of the respondents does not have any formal occupation because of the poverty and illiteracy level which stands at above 70%. This is followed by herders at 19.5%. Herding is most prevalent occupation in the study because livestock is considered as a major livelihood source, as shown in Figure 4.4 above, herding is undertaken from the tender age disregarding the sex of herder one of the male respondents stated that:

‘No man and a woman in this community will claim any honors and appreciation if there have never looked after cows, goats, sheep’s and camels, because whoever have not accompanied them during famine and abundance will hardly understand their sufferings’
(Source: Male respondent, 54 years, 2015)

Herding can be undertaken by others as an occupation for those who have no any other skills or experiences as it requires no expertise but in most cases it's the owners of the livestock and the immediate family members who take responsibility of taking care of livestock. And then teachers constitute a big percentage of the employed cadre in the community at 17.8%. This is then followed by traders at 15.3%. The least represented occupation is politics at 0.8%.

4.2.7 Demographic distribution of respondent

Majority (29.2%) of the respondents interviewed came from Merti location. This is so because Merti is the sub-county headquarter and a market center. According to Kenya housing and population census of 2009 the town had a population of approximately 15,000 people thus, making it most populated division. The distribution was determined by using stratified random sampling to proportions made in the sample size. Figure 4.5 shows the respondent distributions.

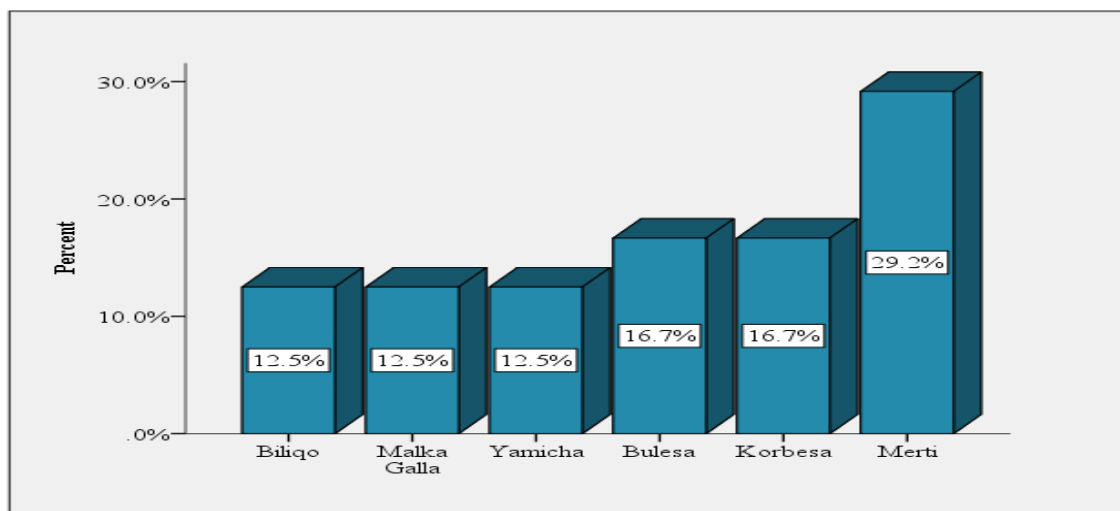


Figure 4.5 Demographic distribution of respondent

The findings in Figure 4.5 show that majority of the respondents interviewed came from Merti location at 29.2%. An equal number of respondents came from Bulesa and Korbesa location each at 16.7%. This was the same case for Biliqo, Yamicha and Malka Galla locations each at 12.5%.

4.3 Community based factors hindering development of eco-tourism by Isiolo County community based wildlife conservancy

4.3.1 Effect of the high level of poverty on ecotourism development by the conservancy

The level of poverty in the county generally is too high. It stands at 71% with majority of residence living with less than a dollar a day. Most of rural population lives in object poverty because of recurrent drought, which in most cases wipes off their livelihood asset base. Because of the high rate of illiteracy, the chance to formal employment was minimal as majority of locals do not have any academic qualifications. Most of schools going children drop out of school because they cannot be provided with subsistence unless they also remain in livestock manyattas where they can trek for several kilometers before they arrive at school and going back the same root in the evening not withstanding their personal security from wild animals and snakes. Majority of the respondents affirmed that poverty is a major obstacle in promotion of ecotourism in the study area as shown in Table 4.2

Table 4.2: Influence of poverty on ecotourism development by Isiolo community wildlife conservancy

	Frequency	Percent
Yes	117	97.5
No	3	2.5
Total	120	100%

N=120

The study finding in Table 4.2 revealed that 97.5% of the respondent affirms that poverty level in the community was Challenge to ecotourism development and an insignificant number, 2.5%, said poverty was not a challenge. When the respondent were further questioned on how poverty level affects ecotourism, majority claimed that some wild animals are hunted for food hence decreasing populations of certain species, the hunters are not selective in killing for bush meat, they kill babies and even breast feeding mothers since they are interested either with meat or trophy. As shown in Table 4.3.

Table 4.3: Effects of animal based ecosystem goods on ecotourism development

	Frequency	Percent
Wild animals are hunted for food	105	87.5
Wild animals are poached for trophies	12	10.0
Not relevant	3	2.5
Total	120	100%

N=120

The findings in Table 4.3 showed that, when the respondents were further asked how poverty level poses challenge to eco-tourism, 87.5% said that wild animals were hunted for food. This happens especially during famine when livestock become weak and no longer provide enough milk and meat provision hence wild animals become an obvious substitute. Some members of the community are habitual hunters for bush meat, wild animals such as antelopes, gazelles, zebra, buffalos, and giraffe are most targeted while birds like ostrich are also killed for their tender meats, eggs and most valued oil which is said to be remedy for some tough sickness. A second major effect of poverty was that wild animals were poached for trophies. This is because Rhino horn and Elephant ivory are deemed to fetch good money in illegal animal trophy trade. This is one of the major reasons as to why people are killing these humble and beautiful innocent animals.

4.3.2 Effects of roads and communication network on ecotourism development by community wildlife conservancy

Isiolo County has a road network of 975.5km, out of which 3% are bituminized. Seventy seven percent of the roads are earth surface which are impassable during rainy seasons. The communication network is very poor since only 7% of the county has mobile network coverage. The roads network in the study areas has remained in a pathetic condition for a longtime, there is no routine maintenance and the washed away sections are not reinforced with gabions and other erosion control measures. The only bridge linking Isiolo town with the study area which is at Gotu is low lying patched on the river bed which is also unused during floods and rainy seasons hence hindering free movement of visitors to and from the conservancy zones. The bridge itself

was constructed by British during colonial days. When asked if the road network is well developed in the conservancy areas, majority of the respondent said not well developed, implying the roads are in pathetic condition and something needed to be done to improve standards. As show in Table 4.4

Table 4.4: Condition of roads in the conservancy ecotourism area

	Frequency	Percent
Yes	4	3.3
No	116	96.7
Total	120	100%

N=120

The study findings in Table 4.4 confirmed the fact that, lack of proper infrastructure development is a challenge to promotion of the ecotourism in the study. Majority of the respondents, while 96.7%, said that the road networks are not developed in the conservancy ecotourism area. Female respondent remarked that:

‘There is no road at all, what is available is just path, what kind of road is it that takes some one traversing a distance of less than two hundred kilometers for twelve hours, the concerned ministry needs to visit and experience the suffering we are going through, I think some measures should be taken to improve on road conditions if we are to gain from ecotourism programs in our areas’

(Source: Female respondent, 40 years old, 2015)

An insignificant number of 3.3% of the respondent said that the roads were developed in the ecotourism area. The individual who claimed that the roads were not developed said that the existing roads were in bad state.

4.3.3 Effects of Human wildlife conflicts in ecotourism development in the conservancy

Human wildlife conflict is known to be eminent and unavoidable. Wild carnivores are flesh eating and the livestock is an alternative food basket for them, however, the herders will not take it lie down but will avenge for any livestock killed by wild animals either by killing or poisoning carcasses of the dead to cause mass killing of any predator who might come to feed on the

carcass. Human in most cases are culprit in the conflict with wild animals by either encroaching on their habitat or poaching them for food or trophies as shown in Table 4.5.

Table 4.5: Prevalence of human wildlife conflicts in the conservancy areas

	Frequency	Percent
Yes	119	99.2
No	1	0.8
Total	120	100%

N=120

The study findings in Table 4.5 revealed that majority of respondents 99.2% agreed that there exist human wildlife conflict in the conservancy. The mostly reported cases are lions, hyenas, and leopards killing livestock in the areas adjacent and in conservancy zone despite precautions taken by the livestock farmers, normally herders construct a semi-circular structures made of thorny trunks of tree branches to make boma for livestock for the purposes of protecting them from wild carnivores especially at night. But reported cases of wild animals, killing or injuring human are minimal. Only 0.8% of the respondent claimed that there was no human wildlife conflict in the conservancy. When further asked how human wildlife cases are handled, majority of the respondents said compensation by KWS others said revenge attack could be a solution while some claimed that there is no plan to handle such cases as shown in Table 4.6.

Table 4.6: Tackling of human wildlife conflict cases by both community and the conservancy management

	Frequency	Percent
Compensation	98	81.7
Revenge attacks	7	5.8
No action	15	12.5
Total	120	100%

N=120

The study findings in Table 4.6 showed that majority of respondent 81.7%, when further asked on how human wildlife conflict cases are handled said compensation. This has been so because community had discovered killing or poisoning of killer wild carnivore does not help in replacing the killed livestock, thus the best option was to photograph the carcasses and report to Kenya wildlife service county compensation board to verify the claim and compensate them accordingly, while 5.8% of the respondent said revenge attack could be a solution, while 12.5% claimed that there is no action taken to handle human wildlife conflict.

4.3.4 Tourist security in the conservancy area

Isiolo county and specifically the study area is the most turbulent security zone because of frequent cattle rustling, banditry and robbery along Isiolo-Wajir road. Security of the tourist and visitors is paramount for the continuity of the eco-tourism product and the image of the destination to the stakeholders. Several cases of the attack on the tourist heading to Shaba Game Park had devastating economic effects on the revenue collection of the defunct Isiolo county council in the past. Security of the visitors is actually what will market the spot and give it clean bill of health if carefully protected. Many respondents attested to the fact that visitors are not safe in the conservancy areas; this is because of the delicate security situation of the areas and the fact that conservancy zones are open area without any fence and also far flung from the security provision agencies as shown in Table 4.7.

Table 4.7: Influence of safety and security of tourists in promotion of ecotourism

	Frequency	Percent
Yes	27	22.5
No	86	71.7
No idea	7	5.8
Total	120	100%

N=120

The findings in Table 4.7 revealed that, most of the respondents at 71.7% felt that visitors and tourists were not safe spending, camping and touring the conservancy. While 22.5% of the respondents felt that the visitors and tourists were safe in the conservancy, while 5.8% of the

respondents did not have any idea about the safety of visitors and tourists. When further enquired on what are some of the threats to the security of the tourists and visitors, majority of the respondent identified banditry as a major threat; bandit attack mostly happen along the road to the conservancy zones and occasionally in the conservancy areas. The proliferation of small arms in the area after the fall of Somali government in 1991 had influenced acquisition of the same by locals and neighboring communities hunting for uses either in cattle rustling, robbery, and poaching wildlife either for subsistence or trophies. The threats to the visitors' security are as shown in Table 4.8.

Table 4.8: Threats to the security of visitors to ecotourism areas in the conservancy

	Frequency	Percent
Banditry	70	58.3
Robbers	12	10.0
Rivalry between communities	4	3.3
No idea	7	5.8
Not relevant	27	22.5
Total	120	100%

N=120

According to the findings of this study in Table 4.8, it showed that 58.3% of the individuals interviewed cited banditry as the biggest threat to safety of visitors and tourists. This is followed by robbers at 10%. A small group at 3.3% said that rivalry between communities was also a threat to safety of visitors and tourists. 22.5 % said that the question of threat to the security of the visitors was not relevant, while 5.8% said they have no ideas on any kind of threat to visitors and tourists in the conservancy.

4.3.5 Livestock wildlife resource competitions

Wildlife and livestock are kept on the same geographical areas although the later has to migrate and settle in the restricted conservancy areas during dry seasons when pastures in their usual grazing areas are exhausted. This proximity between wildlife and livestock are not encouraged by the conservancy managers because they claim the closeness might bring several cases of

human wildlife conflict and hence disadvantage wild herbivorous by easily finishing grass and water in their habitat same times livestock are denied access to some water spots which had unlimited access by wildlife. This treatment resent the community in some occasions to forcefully graze and use water in those wildlife designated water pan. When asked if there was competition for pasture and water in the conservancy, majority of the respondent confirmed in affirmative as shown in Table 4.9 below.

Table 4.9: Effects of competition for resources between wild animals and livestock

	Frequency	Percent
Yes	119	99.2
No	1	0.8
Total	120	100%

N=120

The study findings in Table 4.9 revealed that, 99.2% of respondent agreed that there existed competition for pasture between wild animals and livestock. This was attributed to uncontrolled grazing routine and inefficient monitoring programmes. The competitions usually happen during droughts when livestock invade the conservancy zones. A male respondent claimed that:

‘The conservancy segregate against our live stocks because there limiting our grazing zones to those areas where there are no plenty of rich pastures, the rich pasture zones are reserved for wildlife and hence limiting our access to the best grazing grounds, also the conservancy some other times introduces a certain pest which were not tolerated by livestock to force us leave the entire grazing areas for wildlife this unorthodox behaviour need to be stopped for all of us to share available resources equitably’

(Source: Male respondent, 39 years old, 2015)

The extent of competition for pastures between livestock and wild herbivores was so great that sometimes it almost led to deadly confrontations, locals in the study area felt that the conservation area managers need to equally allow livestock free grazing movement in the conservancy as they use to enjoy before the inception of the conservancy, they also call for free access to water point that were lately enclosed and the entrances only opened at night when

livestock could not move to have water for the fear of wild animals. Insignificant number of the respondent 0.8% claimed that there was no competition for water and pasture in the conservancy areas. When further asked on how the competition for pasture and water was managed in the conservancy, majority of the respondents claimed that there was no management plan for the control of competition which the study pointed out as one of the challenges to ecotourism development as shown in Table 4.10.

Table 4.10: Influence of wildlife livestock resource competition management modalities in promoting cohesion in the conservancy

	Frequency	Percent
No plan	72	60.0
Grazing on rotational basis	7	5.8
Specific area designated	40	33.3
Not relevant	1	0.8
Total	120	100%

N=120

The study showed in Table 4.10 that 60% of the respondents claimed that there was no particular plan on how to handle the competition for pasture between the wild animals and livestock in the conservancy which could be the possible reasons as to why most of the human wildlife conflicts happen during dry seasons. There was need to put in place an efficient and elaborate grazing pattern to avoid competition and unnecessary human wildlife conflict. While 33.3% of the respondents said that the competition was handled by having areas specifically designated for grazing while 5.8% said the competition was handled by having rotational grazing plans.

4.4 Socio-ecological factors influencing promotion of ecotourism by community wildlife conservancy in Isiolo County

4.4.1 Effects of fuel wood and construction materials sourcing from wildlife habitat

It is worth noting that, all respondents 100% said that the most commonly used fuel for cooking was firewood. This implies that, habitat destruction was going on at an alarming rate. Since all

firewood are sourced directly from the wild animals' habitat, there is an urgent to the effect that, locals be provided with an alternative fuel wood to ease on the destruction of forest and favorable wildlife breeding areas. Likewise the community resort to the forest for construction of their dwelling and building materials. All respondents also agreed that the community get their medicinal herbs from bushes and areas both within and outside the conservancy.

4.4.2 Effects of selective species unlimited exploitation to ecotourism destination promotion

Specific wild animal species have been singled out and targeted either for food, trophy and also as an alternative traditional medicine for cure of tough ailments. Generally wild carnivores are not attacked without any valid reasons because culture detests their consumption, lions are only killed in event they attacked livestock likewise hyenas, leopards and Elephants were not targeted either for food or preparation of traditional medical concoctions as shown in Table 4.11.

Table: 4.11 endangered species targeted for food, medication and trophy and their influences on site visiting by tourists

	Frequency	Percent
Ostrich and Zebra	43	35.8
Zebra and Giraffe	6	5.0
Ostrich and Giraffe	6	5.0
Ostrich	20	16.7
Zebra	22	18.3
Giraffe	12	10.0
Zebra, Ostrich and Giraffe	11	9.2
Total	120	100%

N=120

According to the findings of this study in Table 4.11, all respondents agreed that specific wild animals were killed to harvest some organs for medical concoctions to treat some tough illnesses. The most preferred animals were a combination of ostrich and zebra 35.8% followed by zebra only 18.3% and then ostrich only 16.7% and then giraffe only 10%. Likewise all respondents also agreed that the community allows consumption of game meat. When asked under what

circumstance the community allowed consumption of such meat, everyone claimed during famine.

4.4.3 Causes of wildfire in the conservancy

When asked if there were cases of bush fire in the conservancy all respondent answered in affirmative. Since it was established that bushfire occurred frequently in the conservancy causes of this problem was enquired and among the cause honey harvesting was identified as a major cause of bush fire. This is so because of the lack of skills and primitive ways of harvesting honey employed by community honey harvesters. This method involves use of fire and smoke which was not professionally handled and hence results in fire consuming acres of grazing lands and wildlife habitat destroying and displacing unimaginable number of species as shown in Table 4.12.

Table 4.12: Effects of unskilled honey harvesters in causing wildfires in the conservancy

	Frequency	Percent
No	4	3.3
Yes	116	96.7
Total	120	100%

N=120

According to this current study findings in Table 4.12, majority of respondents 96.7% felt that honey harvesting contribute to wildfires in the conservancy this was as a result of poor handling and honey harvesting skills that locals are employing, primitive techniques which has been blamed as cause of bushfire in the conservancy should be replaced with modern way of honey harvesting which yield more quality and standard honey and also environment friendly. While only 3.3% of the respondents felt honey harvesting did not cause the wildfires. The further inquiry on the other possible causes of the wild fire in the conservancy is as shown in Table 4.13.

Table 4.13: Influences of lighting of wildfire in ecotourism development by the conservancy

	Frequency	Percent
Bandits	58	48.3
Charcoal burners	28	23.3
Rival communities	16	13.3
Both bandits and charcoal burners	14	11.7
Not relevant	4	3.3
Total	120	100%

N=120

The study revealed in Table 4.13 that, minority of the respondents at 3.3% denied honey harvesting causes wildfires in the conservancy areas, majority of the respondents felt that the major cause of the wildfires were the bandits at 48.3%. This was followed by charcoal burners at 23.3% and then rival communities 13.3%. While 11.7% of the respondents felt the cause of wildfires were combination of both the bandits and charcoal burners.

4.4.4 Diseases spread by wild animals to livestock in the conservancy area

There are some serious diseases that can be transmitted by wild animals to the livestock as a result of geographical proximity and interactions. Both wild carnivores and herbivores are carriers of diseases which can sometimes results in an outbreak. Most of the wild herbivores are known to be having high immunity and can resist such pandemics contrary to livestock which are highly prone to attack by such diseases, when asked if there can be transmissions to livestock the respondents answered as in Table 4.14.

Table 4.14: prevalence of wildlife diseases transmission to livestock in the conservancy

	Frequency	Percent
Yes	118	98.3
No	2	1.7
Total	120	100%

N=120

The study findings in Table 4.14 revealed that, majority of the respondents 98.3%, said that there were cases of wild animals spreading diseases to the livestock in the conservancy. While an insignificant number, 1.7%, said that there were no such cases. Further inquiry by this study reveals some common wild animal diseases transmitted to livestock in Biliqo-Bulesa conservancy as shown in Table 4.15.

Table 4.15: Effects of killer diseases spread by wild animals to livestock in curtailing ecotourism development by community wildlife conservancy

	Frequency	Percent
Rabies	79	65.8
Foot and Mouth	25	20.8
Rabies and Foot and Mouth	14	11.7
Not relevant	2	1.7
Total	120	100%

N=120

The study findings in Table 4.15 revealed that, the most widely transmitted disease by the wild animals to the livestock was rabies, which was attested to by 65.8% of the individuals interviewed. Rabies are usually transmitted by wild carnivores when they attack livestock, their saliva on the grass also results in infections, likewise livestock licking or smelling carcasses of dead animal as a result of rabies can also lead to infection. The second most widely spread disease was foot and mouth disease 20.8%; this is spread mostly by wild herbivorous. 11.7% of the individuals said that the wild animals spread both rabies and foot and mouth diseases.

4.4.5 The culture of poaching and bush meat consumption

The community allows poaching of wild herbivores for food. Locals in the study area for long time had mentality that, wildlife in the community land belong to nobody and anybody can have them at will either by hunting for food or poaching for trophies. The tragedy of common is practically in play among pastoralist communities since time immemorial that require to be erased and replaced with the mindset that wildlife is everybody's asset that is needed to be protected by everybody in the community. It is only carnivorous who are safe from poaching as

food since community cultural beliefs and norms do not allow consuming them. These cultures accelerate the rate of poaching in the conservancy Majority of the respondent affirmed the fact that there were cases of poaching in the conservancy as shown in Table 4.16.

Table 4.16: Effect of subsistence and commercial poaching of wild herbivorous in achieving sustainable ecotourism

	Frequency	Percent
Yes	118	98.3
No	2	1.7
Total	120	100%

N=120

The study findings in Table 4.16 showed majority of the individual, 98.3% agreed that there were cases of poaching in the conservancy while an insignificant number, While 1.7%, said that there were no cases of poaching in the conservancy. On how the poaching cases are handled the respondents gave their views as shown in Table 4.17.

Table 4.17: Effect of inadequate legislation on terming wildlife poaching in attaining vibrant ecotourism by community wildlife conservancy

	Frequency	Percent
Arrests	81	67.5
No action	37	30.8
Not relevant	2	1.7
Total	120	100%

N=120

The study findings in Table 4.17 revealed that, 67.5% of the respondent said that, arrests were made in case of poaching where culprits are caught or reported. While 30.8% claimed that there was no action taken on culprits in poaching cases.

4.5 Ecotourism products offered by community wildlife conservancy in Merti Sub-County

These are the eco-tourism product offered by Biliqo-Bulesa conservancy. Each conservancy has unique ecotourism product, rare gravy zebra and sungroose bird which are found in plenty at hot spring of Kurro was an outstanding product for tourist attraction and many more including reticulated giraffe, elephants, lions hyenas, kudus, gazelles, antelopes, buffalos, tortoise and others, with some other products as bird watching, camp site, bird shooting, wildlife viewing in their natural habitat and tourists experience of cultural life style of host community which also helps in cultural transfer and closer interactions with people of different countries and backgrounds. The priorities for the ecotourism product were as shown in Table 4.18

Table: 4.18 Influence of unique ecotourism offer in attracting tourists to community wildlife conservancy

	Frequency	Percent
Wildlife viewing	66	55.0
Bird watching and campsite	2	1.7
wildlife viewing and campsite	21	17.5
wildlife viewing and bird shooting	9	7.5
Campsite, bird shooting and wildlife viewing	4	3.3
Campsite	14	11.7
Bird shooting	4	3.3
Total	120	100%

N=120

The study findings in Table 4.18 revealed that, the major ecotourism activity undertaken by the community is wildlife viewing. Majority of respondents 55% pointed to this as the major ecotourism activity. It was followed by wildlife viewing coupled with campsite 17.5%. The third ecotourism activity was just campsite on its own 11.7%. On the least scale, the community undertook bird watching coupled with campsite 1.7% as less likely interesting product by tourist in the conservancy.

4.5.1 Other sources of revenue for community wildlife conservancy

On other revenue generating activity in the conservancy, respondent give their views as in shown in Table 4.19.

Table 4.19: Influence of collective community activities in generating revenue for the conservancy

	Frequency	Percent
Annual events	52	43.3
Cultural events	66	55.0
Artifacts selling	2	1.7
Total	120	100%

N=120

The study findings in Table 4.19 showed that, Cultural events were the most preferred way of generating revenue other than ecotourism activities 55%. It was followed by annual events 43.3% and then sale of artifacts at an insignificant 1.7%.

4.5.2 Sustainability of community wildlife conservancy as livelihood alternative

This is continuous maintenance of the ecotourism product without exhausting them .When asked if community wildlife conservancy could be a sustainable livelihood alternative, majority of the respondent answered in affirmative as shown in Table 4.20.

Table 4.20: Impact of community wildlife conservancy in enhance livelihood

	Frequency	Percent
Yes	109	90.8
No	11	9.2
Total	120	100%

N=120

The study findings in Table 4.20 revealed that, Majority of the respondents 90.8% agree that community wildlife conservancy can be a suitable livelihood alternative. Only 9.2% of the respondents think otherwise.

4.6 Factors affecting Isiolo County community wildlife conservancy in developing ecotourism

These are the obstacles in the way of achieving ecotourism promotion in Isiolo County, Kenya. The hindrance can be removed with appropriate remedies to achieve maximum benefits from ecotourism products offered by the conservancy, the respondent outlined challenges as in Table 4.21.

Table 4.21: Major challenges to ecotourism development by community wildlife conservancy in Isiolo County

	Frequency	Percent
Poaching and habitat destruction	10	8.3
Poaching	39	32.5
Poaching and bandit attacks	19	15.8
Poaching and poor roads	20	16.7
Poaching and bushfires	25	20.8
Bushfires and habitat destruction	3	2.5
Inadequate resources	2	1.7
Bushfires	2	1.7
Total	120	100%

N=120

The study in Table 4.21 showed that all respondents said that community wildlife conservancy had some challenges in promoting ecotourism. According to the individuals interviewed, the biggest challenge to ecotourism development is poaching at 32.5%. This is followed by poaching coupled with bush fires at 20.8%. The least challenges to ecotourism development however are inadequate resources 1.7% and bushfires 1.7%. Poaching is a major issue in ecotourism development.

4.7 Remedies to the challenges to promotion of ecotourism in Isiolo County, Kenya

The remedies will help in achieving maximum benefits from ecotourism projects in the study area. The respondent views on how to eradicate challenges are shown in Table 4.22.

Table 4.22: Ways of eradicating challenges to ecotourism development

	Frequency	Percent
Improve security, education, roads and medical care	10	8.3
Improve roads and medical care	2	1.7
Improve security, education and medical care	9	7.5
Improve security and education	9	7.5
Improve education, roads and medical care	14	11.7
Improve security, roads and medical care	5	4.2
Improve security, education and roads	28	23.3
Improve security and roads	22	18.3
Improve education and roads	21	17.5
Total	120	100%

N=120

The study in Table 4.22 revealed there was combination of factors affecting the development of ecotourism in the community. These factors needed improvement in order to eradicate the challenges to ecotourism development. Majority of the respondents said that for these challenges to be eradicated there was need to improve security, education level and roads 23.3%. A significant number also said that there was need to improve on security and roads only 18.3%. While 17.5% of the respondents said that there was need to improve on the education level and roads only while only 1.7% said there was need to improve on roads and medical care. Majority of the respondents 92.5% claimed that ecotourism development by community is ineffective since it is affected by community based, socio-ecological and technical factors while insignificant 7.5% said it is effective because there were no obstacles undermining its development.

4.8 Focus Group Discussion Results

Focus group discussion deliberated factors affecting Isiolo County community based wildlife conservancy with reference to ecotourism development. Focus group discussions tackled measures put in place to educate community on the benefit of wildlife conservancy, infrastructure development, security arrangements, and management of competitions between wild herbivores and livestock and challenges facing eco-tourism promotion. The focus group discussion was conducted by having a group of 3 women and 5 men who represented views of the local from the study areas. The results were as follows;

Box 4.8.1: Influence of the low level of education or illiteracy in promoting ecotourism by community wildlife conservancy

Area: Merti

Size of group: 3 women and 5 men

Gender: Male and female

Findings

The group was of the view that, “offering scholarship to the bright and needy students, taking opinion leaders for workshops on the benefits of community wildlife conservations, benchmarking and more civic education”.

The findings in the above FGD revealed that community members needed to be informed in equivocal terms that wildlife protection is equally important in their life as livestock. This should be done by educating as many children as possible so that, the benefit of wildlife to the community will be spread to all and sundry and also by offering scholarship to those students in higher learning institution. Community elders are also to be exposed to benchmarking tours to other areas under similar kind of wildlife conservation to spread the same gospel to the locals. Civic education is what is required to instil benefits of the wildlife in the minds of the conserving community and also supporting indigenous wildlife conservation approaches.

Box 4.8.2: Effect of Infrastructure under development in eco-tourism promotion and destination marketing

Area: Merti

Size of group: 3 women and 5 men

Gender: Male and female

Findings

The group had this to say on infrastructure development as one of the challenges to eco-tourism promotion. “Roads leading to conservancy areas are under developed earth roads and in bad conditions also impassable during rainy seasons. This will hamper tourist mobility and even hate for destination because of hardship involved while touring in such areas. Likewise the communication network is very poor, since the only reliable communication available is located at some 100km away at Merti town, there is need to improve infrastructure to have smooth flow of tourist to the conservancy areas”.

The focus group discussion (FGD) in Box 4.8.2 above revealed that, roads in Biliqo-Bulesa conservancy are a big obstacle to the smooth flow of visitors to and from the conservancy. The earth roads are impassable during rainy seasons hence stops the continuous visit by the tourists. The communication net work was also a challenge however the conservancy relies on radio communication availed at some strategic locations in the conservancy to monitor attacks on wildlife and visitors. Infrastructure is critical factors to have destination image portrayed positively thus urgent need in putting them in proper order in conservancy.

This study wish that road network be given priority especially in the wildlife conservation area, this will facilitate easy mobility of the tourist and help also in case of emergencies to reach out to any corner of the conservancy for timely and speedy rescue effort, likewise communication gadgets to be provided to rangers and workers in the Biliqo-Bulesa community wildlife conservancy zone for monitoring, surveillance and report of any threat to wildlife and locals in the conservational areas.

Box 4.8.3: Effects of insecurity in ecotourism promotion by community wildlife conservancy

Area: Merti

Size of group: 3 women and 5 men

Gender: Male and female

Findings

The group was of the view that, “security of the visitors is paramount to the image and marketability of the destination. So security matters should always be taken with a lot of carefulness. The conservancy has regular armed rangers trained by KWS in collaboration with NRT who are working hand in hand in ensuring visitors and wildlife safety through Biliqo-Bulesa community wildlife conservancy. Local herder also has security arrangement in coordination with ranger’s security arrangement where they are assigned a certain area for surveillance and monitoring hence control banditry and intruders away from the conservancy. Radio communication placed at different strategic posts also helped in giving alerts on poachers, robbers, bandits and raiders from neighboring community and hence instant response to the distress calls from such areas”.

The outcome of focus group discussion (FGD) in Box 4.8.3 above revealed that, participants were keen to emphasize on the security of the visitors, likewise human and wildlife, several security measures have been put in place to guarantee security of all parties. The conservancy rangers have helped in having peace from bandits, poaching and raiding by adjacent communities. The security could be a thing of the past if incorporated with new technologies of using tracking devices and installation of the digital cameras and bullet shot sensors across the conservancy. All participants are happy with the security arrangement and asked more reinforcement of the same in near future. The study established that security measures put in place by the Biliqo-Bulesa wildlife conservancy only work perfectly if all stake holders are fully engaged and the security areas shared to have organized and coordinated security management by all parties in the conservational areas. The study appreciate the employment of young men to be wildlife rangers by Biliqo-Bulesa community wildlife conservancy, this helped in reduction of unemployment and preservation of wildlife by people who are conversant with the local culture and traditions.

Box 4.8.4: Management of resource competitions between wild herbivores and livestock

Area: Merti

Size of group: 3 women and 5 men

Gender: Male and female

Findings

The group had this to say. “There are no specific designated areas for wild animals specifically herbivorous and hence they share the same area for pasture and water with livestock. This automatically results in conflict with herders. The rate at which wild herbivorous are feeding is high compared to livestock, livestock are taken into an enclosed Bomas at night for security reasons while wild herbivorous feeds for twenty four hours. The herders also complain of bias on the conservancy officers for restricting livestock from accessing reserved rich pasture areas claiming that, they are wildlife reserves or are elephant breeding areas and so on. It was also noted with concerns that conservancy officials are employing unorthodox means to expel livestock from the rich pasture areas by introducing certain insects or even diseases which are highly tolerated by wild animals and detrimental to livestock to create space for wild animals at the expense of livestock which is unfair and irresponsible”.

The outcome of FGD in Box 4.8.4 above revealed that, having wildlife and livestock under the same proximity will automatically result in frequent conflict. The study confirmed that Biliqo-Bulesa wildlife conservancy has no physical boundaries nor there was no specific area designated for livestock, so the likelihood of sidelining livestock to the advantage of wildlife was imminent because livestock were normally kept at the peripheries of the grazing areas. This was attested by participants who witnessed denial of livestock from accessing certain pasture rich area by conservancy staff in the name of designated area for elephant breeding or using unsuspecting biological means to frighten livestock in leaving pasture rich areas. The study established that there was no competition control plan to reduce effects of conflicts or even share available resources equitably, therefore an urgent need to develop controlled grazing pattern to achieve friendly wildlife and livestock coexistence in the study area.

Box 4.8.5: Factors affecting promotion of ecotourism by community wildlife conservancy in Isiolo County-Kenya

Area: Merti

Size of group: 3 women and 5 men

Gender: Male and female

Findings

The group had this to say, “Infrastructure development and improvement of the existing ones; roads need to be redone and maintained. Communication network to be developed to give enough coverage in case of an emergency or distress call, medical facilities to be initiated and those centers fully equipped with necessary equipments and medicines, civic education to be expanded to cover entire Sub-County, education to be taken seriously and sponsorship to be offered to the students in various institutions of learning to help community learn from the success of few, poaching, wildfire and competition over pasture and water between livestock and wild animals to be organized in a routine manner to prevent conflicts”.

The outcome of the focus group discussion (FGD) in Box 4.8.5 revealed that, infrastructure development and improvement, communication network expansion, civic education, marketing strategies and promotions are some of the challenges to eco-tourism development faced by Biliqo-Bulesa community wildlife conservancy. Others are bushfire, poaching and resource competitions between wildlife and livestock. Application of appropriate remedies to the challenges of ecotourism development can be eradicated and hence the community can enjoy massive income from eco- products offered by the conservancy.

The focus group discussion confirmed that infrastructure development and communication network are some of the bigger obstacles to Biliqo-Bulesa conservancy ecotourism development, the study calls for proper marketing of the destination and provision of required facilities to enhance benefits from the noble wildlife conservation initiative. In the same regard this study confirmed poor honey harvesting skills as major causes of wildfire in the conservancy; it calls for a wider sensitization on the proper honey harvestings techniques and how to handle fire in wildlife habitat.

4.9 Discussion

The study presents in this section a discussion of its finding based on the objectives it had set out to achieve. It begins with the discussion of the first objective, which was to establish the community based factors affecting community wildlife conservancy in achieving ecotourism. The discussions proceed to objective two which examine the cultural factors hindering ecotourism development by community wildlife conservancy in Isiolo County. This section is concluded with a discussion on the remedies to the challenges facing community wildlife conservancy in promoting ecotourism in Isiolo County.

4.9.1 Community based factors affecting community wildlife conservancy in achieving ecotourism

The findings of this study confirmed conclusions made by Isiolo county development profile (2013), on the county poverty level. The study concur that majority of the respondent in the study area lives poverty line, this necessitated locals to target a certain wild herbivorous species some which are rare and endangered as an alternative source of food and poached them for subsistence in Merti wildlife conservation areas. The study also revealed that the culture of subsistence poaching is widely tolerated among locals in Merti sub-county the customs allow consumption of bush meat especially during drought and famine conditions as an alternative to malnourished livestock.

The findings of the study revealed that, locals in the study area have formed a habit of commercializing bush meat to earn cash to be used in purchasing of some other basic necessities. The study urges that uncontrolled subsistence and commercial poaching of wildlife will cause species disturbance and imbalances in the wildlife ecosystem, The study further revealed that a probable decrease of herbivorous in specific ecological area implies the natural predators will suffer and hence obvious catastrophe of death from starvation. The study confirmed poaching is one of the major challenge faced by all wildlife conservation agencies which Biliqo-Bulesa conservancy is not an exception. It's upon all stakeholders to employ urgent measures to control poaching for prosperity of all.

The findings of the current study revealed that lack of infrastructure development was one of the obstacles to achievement of ecotourism goals in Merti Sub-County; The County has a road network of 975.5km, out of which 3% are bituminized. Seventy seven percent of the roads are earth surface which are impassable during rainy seasons. The roads network in the wildlife conservancy areas has remained in pathetic condition for a longtime, there is no routine maintenance and the washed away sections are not reinforced with gabions and other erosion control measures. The communication network is very poor in Biliqo-Bulesa community wildlife conservancy since only 7% of the county has mobile network coverage hence untimely responses during emergencies. To gain maximum benefit from ecotourism the project areas need to be accessible at any given time either by road or air strips to facilitate easy mobility of tourists which is lacking in Merti sub - county community wildlife conservational areas.

The findings of this study are in some respect similar to Kipkeu *et al* (2014) who reported that, human wildlife conflict as one of the major problems in promotion of ecotourism development this was because human activities in Merti Sub-County has lead to widespread habitat destructions, reduction in wildlife dispersal areas and an increased conflicts due to competition for the scarce resources. Human wildlife conflict was observed as a big problem in promotion of ecotourism development in Merti Sub- County. The findings of the current study confirmed that illiteracy rate in the county is too high; this was attributed to nomadic life style, the culture of children labour, where young boys and girls are being trained at a tender age to be herders rather than taking them to the learning institution. Education is essential to poverty eradication and improvement of livelihood that need to be expanded and the illiteracy level gap filled as soon as is applicable.

The findings of the study concurred with Buhali and Costa (2006) who indicated that, people will not travel to areas that they feel unsafe and hence will either cancel their travelling plans or travel to another destination. Merti Sub- County is one of the volatile places when it comes to insecurity and ethnic conflict with the people of the neighboring districts and hence needed to redeem its image to attract tourists. The study argue that security must be guaranteed for both wildlife and visitors for ecotourism projects to prosper by engaging locals in security issues and reconciliation with the neighbors because same kind of community wildlife initiatives are also on

going in the adjacent counties. In this regard the study further urged that security of the tourists and the visitors as a big challenge because ecotourism enterprises cannot thrive in the hostile and conflict prone areas, several factors have been identified as an obstacle to the ecotourism visit this include reputation of a destination, attitudes, behavior of hosts, pricing of the tourism product and political stability.

4.9.2 Socio-ecological factors hindering ecotourism development by community wildlife conservancy

The findings of the current study established that, ecotourism thrives upon the support of the local community tradition and culture, this aspect required to be incorporated into planning and policies. Culture was regarded strongly in much tourist intensive areas in developing countries because it makes the conserving communities consume and utilizes wildlife resources according to their traditional norms and values. African wildlife is facing near extinct situation due to human overpopulation, uncontrolled subsistence hunting and underproductive wildlife management policies adopted and implemented by some countries. The study calls for cultural incorporation in ecotourism marketing and products by Biliqo-Bulesa wildlife conservancy.

The findings of the study confirmed that, wildlife is the traditional source of medicine that has been in use since time immemorial and still practically cures several diseases. Some herbivorous species were poached for cultural uses for example giraffe skins are used for making leather ropes and traditional milking container for its tendered nature and durability, the ostrich oil and Zebra fat are used as a special medical concoction for cure of some tough ailments by traditional medicine men. This mentality prevails among locals in the conservancy area that need to be tamed by providing an alternative to substitute wildlife raw product dependency.

The findings of the current study noted that, protection of forest and grass land is part of wildlife conservation that cannot be ignored because savannah provides conducive and favorable habitat for many forms of wildlife, destruction of the habitat by either charcoal burning, cutting of trees for construction and curving as well as burning of the rangeland will lead to species elimination and loss. Currently clearing of the bushes along river bank for farming is common in the conservancy areas. Unlimited access might be granted to some designated areas in the vast

conservancy to prevent undesirable collective action from the local residence as it in Biliqo-Bulesa conservancy.

The findings of the study concurred with Denman (2001), who suggested that, unreasonable and in proper tourism had contributed to degradation of habitat and landscape and hence defeat the purposes of sustainability, thus the call for new approach which is ecotourism, the study affirmed that ecotourism entailed cultural interaction with the visitors the community attitude toward the tourist and visitors needed to be friendly since interactions with visitors help in cultural transfer and hence promotion of community products abroad. The findings of the current study revealed that, instead of anticipated development tourism can some other time led to resentment, tourist behaviours such as scant dressing, and public display of affection between sexes, prostitution, use of drugs and other negative things that are associated with tourists led to community hostility and hence collapse of the projects .This behaviors need to be tamed and tourist sufficiently guided on the norms of the host community for the locals to accept and appreciate them in Merti Sub- County. The findings also observed that, wildlife livestock competition for scarce resource will always leads to conflicts. Livestock and wildlife are on the same land in Merti community conservancy areas and shared the resources hence challenging ecotourism that is basically wildlife based.

The findings of the study concurred with Nyeki (1992) who disagreed with the integration of livestock with wildlife on the same grazing zone because of many diseases that were likely to be transmitted by wildlife to livestock because of close proximity. The conservancy though widely believed to be vast unfortunately has no designated boundaries and fence. So the challenges of controlling transmission of wildlife diseases to livestock a raise and the argument is that, some of the wildlife diseases are fatal and can cause an outbreak among livestock in Biliqo-Bulesa conservancy. The conservancy does not compensate locals in case of such eventuality in Merti Sub- county and hence resource restriction for the local herders. The findings of the current study revealed that, livestock and farmers compensation programme by KWS did not work well with pastoral community since frequent and consistent attack by wildlife on their livelihood source was a threat to their survival and way of life that was why Maasais have resorted to killing lions

instead of compensations as they claim it's to teach the lion a lesson that feasting on livestock is wrong and punishable by death as culture dictates. This notion can only be corrected by providing awareness campaign on compensation packages offered by KWS and procedures correctly outlined for the locals to claim compensation that needed to be timely to stop such revenge attack beliefs.

4.9.3 Remedies to the challenges of ecotourism promotion by community wildlife conservancy in Isiolo County

The findings of the current study concurred with Kipkeu et al (2014) who recommended that an extensive public education and awareness programmes was required to be carried out to sensitize community on the benefits of wildlife conservation and ecotourism development, as an alternative livelihood option that can be sustainable to be used by future generations without compromising utilization by them at the moment, and the consequences of hunting and poaching with punitive penalties as proposed in the new wildlife bill. The findings of the study appreciated rural dwellers for their traditional knowledge of wildlife in their narratives, their role and concerns in changing their attitude positively to mutual conservation rather than indiscriminate exploitation of wildlife resources at will.

This study recommended early warning alert be communicated to the community for imminent disease outbreak among wildlife so as either to avoid the affected areas or to give vaccines to the livestock for the purposes of resistance, locals have been accusing a certain wildlife conservation area for spreading certain pest widely resisted by wildlife but untolerated by livestock to compel them migrate away from rich grazing areas at the expenses of the wildlife. The findings of this study calls for formation of an umbrella organization that will advocate for the interest of the CBWC and private wildlife conservation groups, this was necessitated by the fact that unlike stakeholders in other sectors of the economy, those in community wildlife conservation do not have regulatory body for coordination and voicing of their concerns. This state of affairs has led to the raising of concerns to set up an organization for the common benefits and welfare of the conservancies and privately owned ranches, community based wildlife conservancies and the private wildlife groups have been neglected for long and thus initiation of such is timely and long overdue.

The findings of the current study equally calls for capacity building for the community based wildlife conservancies, because according (KWS) wildlife management in private and community conservancies, game reserves, and National Parks do not operate at the same level in terms of standards and managerial expertise. KWS claimed that communities lack capacity to manage animals and their standards are much lower than those in the national parks which are under their authority. The study suggests that locals be enlightened on the proper ways of handling honey harvesting without causing bush fire.

The findings of the study proposed, nature trail and wildlife conservational areas tour for school children; this will develop conservation interests in school children as they appreciate and enjoy the scenery of the county it will motivate the desire to conserve and take care of the same for prosperity. The nature trips inculcate appreciation of wildlife and preservation of the national heritage among the younger people hence developing desires for conservation and protection of wildlife. The study identified insufficient and lenient legislation as a challenge encountered by conservationist in eradicating wildlife threats, these are lack of strict legislation for poaching crimes, because the punishment meted out to the criminals are always too lenient to be a deterrent and hence continuity of the menace.

The study calls for legal reinforcement to control poaching and hunting of wildlife at will in Merti Sub-County. The wildlife conservation and management bill and policy 2013, proposed stiffer penalties for poachers ranging between a fine of Ksh1million and seven years in jail for those found poaching and engaging in trophy business up from previous Ksh 30,000 fine which was seen as lenient by conservationists. The proposed penalties can be a deterrent from anybody who might think of engaging in wildlife disturbance.

The findings of the current study suggest provision of an alternative raw material for construction to eradicate cutting down of indigenous trees in the study area, the findings further recommends inclusion of wildlife conservation and ecotourism in primary and secondary school curriculum to instill protection and preservation of wildlife in the school children from the beginning. This early introduction will motivate love and study of wildlife in the heart of the

learners and hence develop attachment and curiosity to know more about them and also work towards their safety and continuity, children needed to be taught about wildlife as a friend not an enemy and also a source of income and employment that need to be guarded at all time. The study revealed that government input in the community wildlife conservancy is limited only to provision of land and protection of tourist and wildlife, this input needed to be broadened to include provision of finance for operational costs, infrastructure development and also marketing. Most of the community conservation areas belong to marginalized communities who needed to be assisted to achieve desirable goals.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the study findings. It also gives both the empirical and theoretical conclusions of the study. In addition, it presents the recommendations derived from the conclusions drawn on how to eradicate challenges facing community wildlife conservancy in promoting ecotourism in Isiolo County. The recommendations further entail the stake holders and the policy makers' role in amending and adjusting new guidelines to improve destination image and market the product. Finally, it also suggests areas for further studies for scholars who may be interested in this area of specialization.

5.2 Summary of the Results

The concept community wildlife conservation and ecotourism development is intertwined. Since the two are inseparable, that is the relationship between community and conservation of wildlife is symbiotic for mutual interest of both. However, the conserving community of Biliqo-Bulesa wildlife conservancy attested to several factors which undermine both promotion and development of ecotourism in the conservancy. These factors have been divided into, the community based factors hindering promotion of ecotourism, which included poverty, insecurity, human wildlife conflict and resource competitions. While cultural factors identified was diseases transmission by wildlife to the livestock, poaching, bushfire, medical concoctions from wildlife body and building materials. Scholars have written considerable volumes of literature on the topic. An analysis of this literature pointed to the knowledge gaps that this study sought to bridge. This section therefore presents the key findings of this study with regards to the specific objectives of the study.

5.2.1 Background characteristics of the respondents

The background characteristics of the respondents considered were nature of household head, age, educational attainment, location, occupations and marital status of the respondents, in Merti Sub- County. This study consisted of 50.4% male headed and 49.6% female headed respondents (Table 4.1). The results revealed that 20.8% of the respondents were aged between 25-31. This

was followed by age bracket of 32-38 which consisted of 18.3 % (Table 4.1). Furthermore, about 40.8% of the populations were illiterate as they do not possess any academic qualifications. Most of those without any academic qualifications are female (Table 4.2). Marriage is an important institution in human society. The study confirmed that 79.8% are married this include divorced and widows while single respondents made up to 20.2% (Figure 4.3).

5.2.2 Community based factors hindering eco-tourism promotion by conservancy

Community centered factors are the day to day livelihood activities that affect wildlife existence poverty has been singled out as one of the greatest challenges to promotion of ecotourism. 97.5% of the respondents attested that poverty in the community is too high that others resort to wild animals for food and substance (Table 4.2). While 87.5% of the respondents confirmed that some species of wild herbivorous are targeted for food (Table 4.3). While wild carnivores enjoy freedom from hunting for food, others like elephants and rhinos are poached for their ivory and horns which are much valued in black market. Infrastructure development also become challenge since all roads leading to conservation areas are in bad shape and impassable during rainy seasons hence stop free movement of visitors to and from conservation area (Table 4.4).

On human wildlife conflict, 99.2% of the respondents confirmed it as a challenge and be handled by compensation (Table 4.6). Security of the visitors was also an obstacle as attested by 71.7% of the respondents (Table 4.7). This was suggested to be solved by putting several critical security measures to be put in place by conservancy. Majority of the respondents claimed that bigger threat to visitors is bandit attack at 58.3% (Table 4.8). Wildlife livestock resource competition was also cited as an obstacle 99.2% (Table 4.9) while 60% said that there was no grazing plan that resulting in competitions (Table 4.10).

5.2.3 Socio-ecological factors influencing promotion of eco-tourism by conservancy

Cultural factors are occasional community habit of targeting specific species of plant and wild animals for the purposes of either medication or festival requirements. Culture dictate that a certain tree be used for preservation of milk guards and hence overuse of the same species of plant overtime without sorting for an alternative. This habit can led to extinction of a plant bearing in mind those are indigenous trees. The use of firewood and forests raw material for

building leads to habitat destructions and hence endangering wildlife existence. Some wild animal's body organs are harvested for preparation of traditional medicinal concoctions (Table 4.11). Most of the respondents 35.8% claimed ostrich and Zebra are the most targeted animals for medicinal purposes (Table 4.11).

Honey harvesters have been claimed to be a major cause of wildfire (Table 4.12). While bandits and charcoal burners are also cited to contribute much to wildfire (Table 4.13). On the disease transmitted by wildlife to livestock 98% of the respondent confirmed transmission (Table 4.14). Rabies was cited as most dangerous disease spread by wild carnivores to livestock (Table 4.15). The culture of poaching is deep-rooted in the community where 98.3% of respondents claimed to be prevalent (Table 4.16). On how poaching cases are solve 67.5% of the respondents said arrest by authority (Table 4.17).

5.2.4 Technical factors hindering ecotourism development by community wildlife conservancy

Wildlife livestock competition for scarce resource was cited as one of the major obstacle to the achievement of ecotourism by community wildlife conservancy wildlife conservation 99.2% (Table 4.9) that was in absence of grazing management policy 60% of the respondent said, that there was no grazing plan in the conservancy that resulting in competitions (Table 4.10). On wildlife diseases transmitted by wildlife to livestock, 98% of the respondent confirmed transmission of deadly and fatal diseases which can be pandemic in absence of outbreak management policy by the conservancy (Table 4.14).

Compensation claim procedure for wildlife damages and destruction of farm crops was said to be tedious although majority of the respondent preferred compensation to revenge attack 99.2% of the respondents, confirmed it as a challenge and be handled by compensation (Table 4.6). The problem of insecurity is widespread in all community based wildlife conservancies, modern technologies have been employed to help in maintaining security in some protected parks and reserves. Security of the visitors was also cited as an obstacle unless effective protective measures are put in place as attested by 71.7% of the respondents (Table 4.7).

5.2.5 Challenges to eco-tourism promotion by Biliqo-Bulesa community wildlife conservancy

Respondents cited several obstacles to promotion of ecotourism poaching was the biggest challenge at 32.5%, followed by poaching and poor roads 16.7%, bushfire and bandit attacks 15.8%, and poaching and habitat destructions 8.3%, bushfire and habitat destructions 2.5% inadequate resources and bushfire 1.7% (Table 4.21). All cited obstacles are either avoidable or manageable with right policies and suitable approaches that will lead to eradication of the challenges for the community to enjoy much expected benefits from Biliqo-Bulesa wildlife conservancy.

5.2.6 Remedies to challenges facing conservancy in promoting eco-tourism

From the sample population 23.3% of respondents cited improved security, education and roads as a solution to the eradication of the challenges affecting promotion of ecotourism by Biliqo-Bulesa wildlife conservancy. Eighteen point three percent claimed improved security and roads. While 17.5% said improved education and roads. Seventeen point five percent of the respondent cited that, Improving education, roads and medical care. Eight point three percent of the respondents indicated, improving security, education, roads and medical care (Table 4.22).

5.3 Conclusions

This section presents conclusions of the study based on theoretical and empirical findings of the factors affecting community wildlife conservancy in development of ecotourism in Isiolo County.

5.3.1 Theoretical Conclusion

Structural functionalism theory is one of the major theoretical perspectives in sociology. It has its origins in the works of Emile Durkheim, Herbert Spencer, Merton and Talcott Parsons who were especially interested in social order grounded in the action frame of reference in the social system to achieve stability and solidarity (Merton 1957; Gross *et al.*1958). Structural functionalism theory are guided by the assumption that each part of society contributes to the stability and harmony of the whole society and every parts of society produce order, stability,

and productivity. When one part of the system is not working or is dysfunctional, it affects all other parts and creates social problems.

Every action taken by the community is committed to the collective adoption and coordination by all parts of the social setup for success and prosperity and mutual communal interest. This explains the relationship between community wildlife conservancy initiative in Merti Sub-county and the desired anticipated ecotourism benefits that would ultimately come with such an effort when collective societal effort are directed toward eradicating obstacles on the way of accruing maximum benefit for the development of ecotourism by the community, society depends on reaching the equilibrium by being rational and basing their actions on what they perceive to be the most effective means of attaining their goal. The assumption is that if any of the community parts tends to be dysfunctional the negative effects will be felt through the community body that is why equilibrium has to be maintained through the structure for the stability and continuous harmony to prevail (Scott, 1995).

One of the major weaknesses of functionalism perspective is it does not encourage people to take an active role in changing their social environment, even when doing so may benefit them. This will encourage social stagnation and dysfunction of the social structures hence invalidity. The call for status quo will render most of the social structures null and void hence unbalance, social change are to be incorporated and adopted as part of the social structure to maintain the equilibrium.

5.3.2 Political Ecology Theory

Political ecology is the study of the relationships between political, economic and social factors with environmental issues. Its discipline offers wide-ranging studies integrating ecological social sciences in topics such as degradation and marginalization, environmental conflict, conservation and control, and environmental identities and social movements. The theory assumes that Indigenous people have important environmental knowledge which could contribute to conservation of environment.

This implies that selective cultural or traditional protection of specific flora and fauna are deeply rooted in the culture of the Merti sub-county indigenous population. The society exploits available flora and fauna on need bases and at economical rate. Local consumption of both flora

and fauna are natural and it has never altered normal food chain in any given ecosystem in specific traditional setup. Sutton and Anderson refer to Dobzhansky (1972), Cohen (1974) and Kirch (1980) points out that the primary mechanism by which humans adapt to their environment is by cultural interaction. Each culture has a distinct ecological adaptation which will allow integrations to achieve desired goals.

Sutton and Anderson (2010) acknowledges Steward (1955) who points out that cultures in similar environments may have similar adaptations; all adaptations are short live and are constantly adjusting to changing environments. Ecotourism thrives upon the support of the local communities. Culture can be incorporated into planning and implementation of policies. Wildlife provides the community with basic needs unregulated cultural consumption of wildlife products will risk life of endangered species and wildlife in general. The tragedy of common perception needed to be change to common mutual benefits. Chhetri (1986) maintain that adaptation is a two way process, it involves an interaction between the tourist and the host community and localization of tourist product offered by the community based wildlife conservancy. The objections by political ecologists is that land use regulations are made by third party and the government, denying access and ability of local people to conserve species in areas under their jurisdiction this policies will render indigenous people more vulnerable and at risk of vengeance against wildlife. The relationship between community and environment is symbiotic however environmental destruction and ecological disturbances will automatically lead to human displacement and livelihood disruption. Thus equilibrium must be maintained at all time.

5.3.3 Empirical conclusions

In light of the study findings and observations, it was concluded that factors affecting Isiolo County community wildlife conservancy in reference to ecotourism development are both community based and socio-ecological. Bush meat consumption was encouraged by the community belief that there is an alternative subsistence to livestock. Poverty played a big role in accelerating the rate of subsistence poaching. Specific species are hunted making them endangered. Gravy Zebra a rare species was targeted for long for subsistence leading to the decline in their numbers.

It was observed that habitat destruction was going on at an alarming rate; this is by unsustainable use of firewood, building materials and charcoal burning. This needed to be checked by providing alternative. Bush fire consumes large chunk of the grazing lands displacing and affecting millions of wildlife. This is commonly caused by honey harvesters, charcoal burners and the bandits from rival communities. The study also reveals that, security threat to the life of the visitors in Biliqo-Bulesa comes from bandits from rival communities. Rangers have taken control of the roads leading to and from the conservancy.

Wildlife livestock resources competition and human wildlife conflict were discovered to be a bigger challenge which required urgent attention. The study revealed that, there was no proper grazing control plans by both community and wildlife conservancy management, thus concern to be put in place such arrangement to contain conflicts in future. It was discovered that the outlined challenges to ecotourism development in Biliqo-Bulesa wildlife conservancy can be remedied with suitable solution to gain maximum benefits from conservation.

5.4 Recommendations

This study makes a number of recommendations for policy that need to be put in place to eradicate challenges to ecotourism promotions and hence make community wildlife conservation an alternative avenue for sustainable livelihood. The findings also present recommendations on areas that more research need to be undertaken.

5.4.1 Recommendation for policy

The following are recommendations for policy. Firstly, this study found that challenges to ecotourism promotion and development are either community centered or cultural base which can be solved with appropriate policies and measures adopted by all stakeholders. That subsistence poaching and trophy hunting can be controlled by having community escort and volunteers who can monitor wildlife in a given area. National and county government need to play a major role in giving community wildlife benefits and peaceful co-existences with them for prosperity.

Secondly, the study urges for incorporation of wildlife conservation in the school syllabus, such that children learn to appreciate wildlife from onset and develop an urge of conserving the same.

Wildlife need to be given priority over livestock in conserving areas, because they cannot be moved from destination to destination searching for pasture and water like livestock. As such, their habitat should be protected from intruders and herders who always cross over to parks and protected areas when the grass from their grazing areas are exhausted resulting in human wildlife conflicts.

Thirdly, community wildlife conservancies need to have an umbrella body which will look after their concerns and wellbeing. This arises as a result of lack of proper organization with common goals and management structures that can be reviewed to suit all conservation area as they have their niche. The proposed organization will include all community based wildlife conservancies and a common approach to challenges, help in marketing and security arrangements.

5.4.2 Areas for Future Research

The following are recommendations for further research. Firstly, Community members need to be given an extensive civic education on the benefits of wildlife conservation and on how to handle human wildlife conflicts. This will reduce cases of revenge attacks and habitat destructions. KWS has devolved its compensation services to the county level. There is need to give awareness to the community in the event of wild animal attack and injuries be reported for compensations rather than either killing or poisoning wild animals which add no value to the affected community member. Secondly, all stakeholders should be involved in deliberations to eradicate challenges to ecotourism development as outlined by the study. As identified by the study, community based factors are preventable when all parties work hand in hand in monitoring activities that might endanger wildlife and their habitat and to report any cases to the relevant authorities for timely responses. Cultural factors can be controlled by provision of an alternative to the requirement of the cultural functions.

Thirdly, for further research, there is a need for a study to explore possible alternatives to traditional indiscriminate killing of wild animals for their organs and body parts for medication, such that no killings of wildlife for medical purposes happen anymore. Therefore a further more detailed research can be conducted in the area of wildlife disease transmission to livestock in the community conservation areas.

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APPENDICES
APPENDIX I
INTERVIEW SCHEDULE

Respondent Code: -----

Interview schedule serial: -----

Date: -----

Address: -----

Date: -----

Time: -----

Comments-----

Section A: Personal Characteristics

1. Gender of household headed by: Male/Female-----

2. Age (Years)-----

3. level of education-----

4. Occupation-----

5. Marital status-----

6. location -----

Section B: Biliqo-Bulesa conservancy

7. For how long have you been a member of this community-----

8. Does community wildlife conservancy exist in your District? -----

9. If Yes, Does your community wildlife conservancy engage in ecotourism activities?-----

- 10. If Yes, Kindly state some of ecotourism activities it undertakes-----
- 11. Does your community wildlife conservancy have challenges in promoting ecotourism-----
- 12. If any, kindly mention -----

Section C: Community based factors influencing promotion of eco-tourism

- 13. In your opinion is poverty level in the community a challenge to ecotourism development-----
- 14. If Yes, Kindly explain how -----
- 15. Does the road network well developed in the conservancy ecotourism areas-----
- 16. If No, kindly explain state of roads-----
- 17. Are there cases of human wildlife conflict in the conservancy area-----
- 18. If yes, kindly explain how those cases are handled-----
- 19. In your opinion, does educational level influence promotion of ecotourism activities in your community wildlife conservancy-----
- 20. If Yes, kindly explain-----
- 21. Do you think tourist feel safe while travelling and spending holidays in the conservancy area-----
- 22. If No, Kindly explain why-----

Section D: Cultural factors hindering eco-tourism promotion

- 23. Does community kill wild animals to harvest some organs as medical concoctions for some tough illness? If yes kindly name those wild animals and the organs harvested -----
- 24. What is the most commonly used fuel for cooking in the community-----
- 25. What are the raw materials used by the community in conservancy areas in building their house-----
- 26. Where is the community getting traditional medical herbs-----
- 27. Do you think the community allows consumption of bush meat? If yes, kindly explain under what circumstances-----

28. Are there any cases where wild animals spread disease to the livestock in the conservancy-----
29. If Yes, Please explain-----
30. Are there cases of human wildlife conflict in the conservancy area-----
31. If yes, kindly explain how those cases are handled-----
32. Are there cases of poaching in the conservancy-----
33. If yes, kindly explain how there handled-----
34. Do you think honey harvesting contribute to wildfire in the conservancy? If No, What is the cause of the wildfire in the conservancy areas-----
35. In your opinion in cases of Human wildlife conflict does community prefers compensation or revenge attacks-----
36. Are there competition for pasture between wild herbivorous and livestock in the conservancy area? Kindly explain how it's managed-----
37. Suggest other ways of generating revenues for community conservancy other than ecotourism enterprises-----
38. In your opinion, can community wildlife ecotourism be a suitable livelihood alternative---
39. If No, explain why-----
40. Suggest ways of eradicating challenges affecting community wildlife conservancy in Isiolo County in developing ecotourism-----

APPENDIX II

FOCUS GROUP DISCUSSION (FGD)

The focus group discussion was based on the themes developed from the research objectives. These are as follows.

1. What are measures put in place to educate community members on the benefits of wildlife conservancy?
2. How does infrastructure development challenge promotion of ecotourism by community wildlife conservancy?
3. What are the security arrangements put in place to guarantee the visitors and wildlife safety?
4. How does conservancy manage issues of resource competition between wild animals and livestock's?
5. What are the challenges to ecotourism development in your opinion?

APPENDIX III

LETTER OF RESEARCH AUTHORISATION



**NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION**

Telephone: +254-20-2213471,
2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.

Date:

14th April, 2015

NACOSTI/P/15/2521/5697


Abduba Dida Ade
Egerton University
P.O. Box 536- 20115
EGERTON.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Challenges faced by community wildlife conservancy in promoting ecotourism In Isiolo County, Kenya”* I am pleased to inform you that you have been authorized to undertake research in **Isiolo County** for a period ending **31st December, 2015.**

You are advised to report to **the County Commissioner and the County Director of Education, Isiolo County** before embarking on the research project.

On completion of the research, you are required to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.


DR. M. K. RUGUTT, PhD, HSC.
DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Isiolo County.

The County Director of Education
Isiolo County.

National Commission for Science, Technology and Innovation is ISO 9001: 2008 Certified

APPENDIX IV

RESEARCH PERMIT

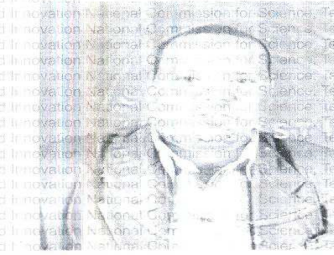
THIS IS TO CERTIFY THAT:
MR. ABDUBA DIDA ADE
of EGERTON UNIVERSITY, 536-20115
Egerton, has been permitted to conduct
research in Isiolo County

Permit No : NACOSTI/P/15/2521/5697
Date Of Issue : 14th April, 2015
Fee Received :Ksh 1,000

on the topic: CHALLENGES FACED BY
COMMUNITY WILDLIFE CONSERVANCY
IN PROMOTING ECOTOURISM IN ISILOLO
COUNTY, KENYA.

for the period ending:
31st December, 2015

Applicant's
Signature



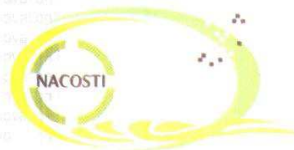
Director General
National Commission for Science,
Technology & Innovation

CONDITIONS

- 1. You must report to the County Commissioner and
the County Education Officer of the area before
embarking on your research. Failure to do that
may lead to the cancellation of your permit
2. Government Officers will not be interviewed
without prior appointment.
3. No questionnaire will be used unless it has been
approved.
4. Excavation, filming and collection of biological
specimens are subject to further permission from
the relevant Government Ministries.
5. You are required to submit at least two(2) hard
copies and one(1) soft copy of your final report.
6. The Government of Kenya reserves the right to
modify the conditions of this permit including
its cancellation without notice



REPUBLIC OF KENYA



National Commission for Science,
Technology and Innovation

RESEARCH CLEARANCE
PERMIT

Serial No. A 4868

CONDITIONS: see back page