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An Assessment of Local Peoples' Opinions of Community Conservation Initiatives in
Relation to Livelihood Strategies, in Kenya.

Jill Mechtenberg

AN UNDERGRADUATE THESIS

Major: Environmental Studies
With the Emphasis of: Anthropology

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August 11, 2008

Abstract

This paper analyzed the changing livelihood strategies in Kenya, and their cultural impacts via a literature review. I then combined this understanding with the data I collected while in Kenya to examine the opinions local people have of community conservation initiatives, based on their changing livelihood strategies.

I expected to find that the following factors would have an affect on the opinions local community members have of community conservation initiatives: livelihood strategy, gender, ethnicity, whether or not they believe the distribution of benefits coming from wildlife conservation is equitable, what issues they would like to see improved within community conservation initiatives, and their overall satisfaction with community conservation initiatives.

Through correlation tests done using SPSS (Statistical Package for Social Scientists) I found that all five of these factors do influence the perceptions local community members have of community conservation initiatives within the Amboseli region in Kenya.

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Acknowledgements

Sara Winn and Bob Kuzelka have been the backbone of my education at UNL. Without their continued support over the last few years, I would not be nearly as sure of myself or the opportunities that lay ahead. Through their organizing and enabling, the two of them have made my time at the University truly personal, enjoyable and extremely advantageous. Thank you so much, both of you.

I would also like to thank Dr. Hames for selflessly offering his time and insight for the betterment of this project. Without his expectations and support this project would not have come this far. I appreciate that he kept this project challenging and helped to make certain that I was doing my best work.

Lastly, I would like to give an affectionate Thank You to my entire research team from the School for Field Studies fall 2006. Salaton Tome for his unending support and patience while gathering research in the field. Without his persistence and humor the workload may have been tremendous rather than continually enjoyable. Also, my fellow researchers deserve sincere gratitude. Their lightheartedness never failed to keep our project moving swiftly. I would like to thank each of them, Zack Bagely, Ann Marie Albright, Anna Breithaupt, Stacy Sass, Abby Taylor, Ashley Allison, Philip Stoker, and Erica Eng for their never-ending willingness to participate in teambuilding events. Our valued translators (Peter, Justice, Jonathan, Antony, Ernst) who were indispensable to this research are also greatly appreciated. And finally, I would like to extend deep gratitude to Fred Rauta for his enthusiasm and humorous imitations, and Suzzane Kosen Kuronoi for her devoted guidance and sense of humor, without these two individuals this research would not have been as triumphant.

Chapter 1: Introduction

During the fall of 2006, I was fortunate enough to spend the semester studying abroad in Kenya with The School for Field Studies (SFS). During my stay, our program objective was to alleviate the increasing conflicts between the indigenous people of Kenya and migrating wildlife. More specifically, SFS-Kenya was designed to show students what lessons can be learned in the Nakuru and Nairobi National Park regions that can serve to assist the Amboseli ecosystem in maintaining its integrity while simultaneously promoting sustainable cohabitation between human communities, wildlife, and other natural resources.

My final month in Kenya was spent doing a directed research project that assessed local people's awareness of community conservation initiatives and evaluated the current community conservation institutions within the Amboseli ecosystem. My research team (consisting of myself and eight other students) designed an interview (Appendix) which aimed to gather data on the priorities and challenges of wildlife conservation among resource-constrained communities. The overarching purpose of the research being conducted at SFS was to assess local peoples' awareness of community conservation initiatives and evaluate the current community conservation institutions within the Amboseli ecosystem. I was strongly influenced by the research which was conducted in Kenya and saw an abundance of room to further develop this research.

This directed research project was led by Salaton Tome who holds a B.S. (Honors) in Agriculture from the University of Nairobi and a Master of Philosophy in Environmental Studies (Human Ecology) specializing in human/wildlife interaction from Moi University. Since graduating from Moi University, Salaton has worked and carried out consultancies for international organizations such as the World Wide Fund For

Nature, Nature Foundation Intermediate Technology Development Group, Environment Liaison Centre International, and Pact/USAID.

Traditionally pastoralism has been a very important livelihood strategy in Kenya, meaning most individuals are dependent on their animals and their days are spent grazing their livestock; however within the past few decades there has been a dramatic increase in the number of people choosing to take on an agricultural lifestyle as opposed to traditional pastoralism.

Kenya is one of many African countries where ecotourism is their main industry, meaning the country receives more annual income from tourists coming to observe its flora, fauna, and natural heritage, than any other industry. Most forms of ecotourism are owned by foreign investors and corporations that provide few benefits to local communities. In these kinds of situations, an overwhelming majority of profits are put into the pockets of investors instead of reinvestment into the local economy or environmental protection. According to ecotourismkenya.org, Kenya has the following ecotourism projects:

“Research and Consultancy program: Ecotourism Kenya undertakes research on ecotourism and sustainable tourism, best practices, policy development and tourism planning and management. It also carries out social evaluation of programs and review of Environmental Impact Assessment reports.

Standards & Best Practices program: Ecotourism Kenya promotes these through Eco-rating Scheme the Members’ Charter Eco-Warrior Awards, Codes of Conduct, publications, seminars and workshops.

Community Outreach program: Ecotourism Kenya reaches out to local communities living in areas with potential for tourism with the aim of sensitizing them on the opportunities available to them through ecotourism. This is done through community mobilization and participatory trainings which may entail dialogue (barazas), focus group discussions, simulations and exposure visits. The project also involves promoting local community/private sector mentorship, whereby private sector operators (like tour operators & hoteliers) offer short-term placements for community representatives in an effort to improve their capacities. Ecotourism Kenya also offers communities assistance and advice in project conceptualization and planning, proposal writing, project implementation and evaluation.

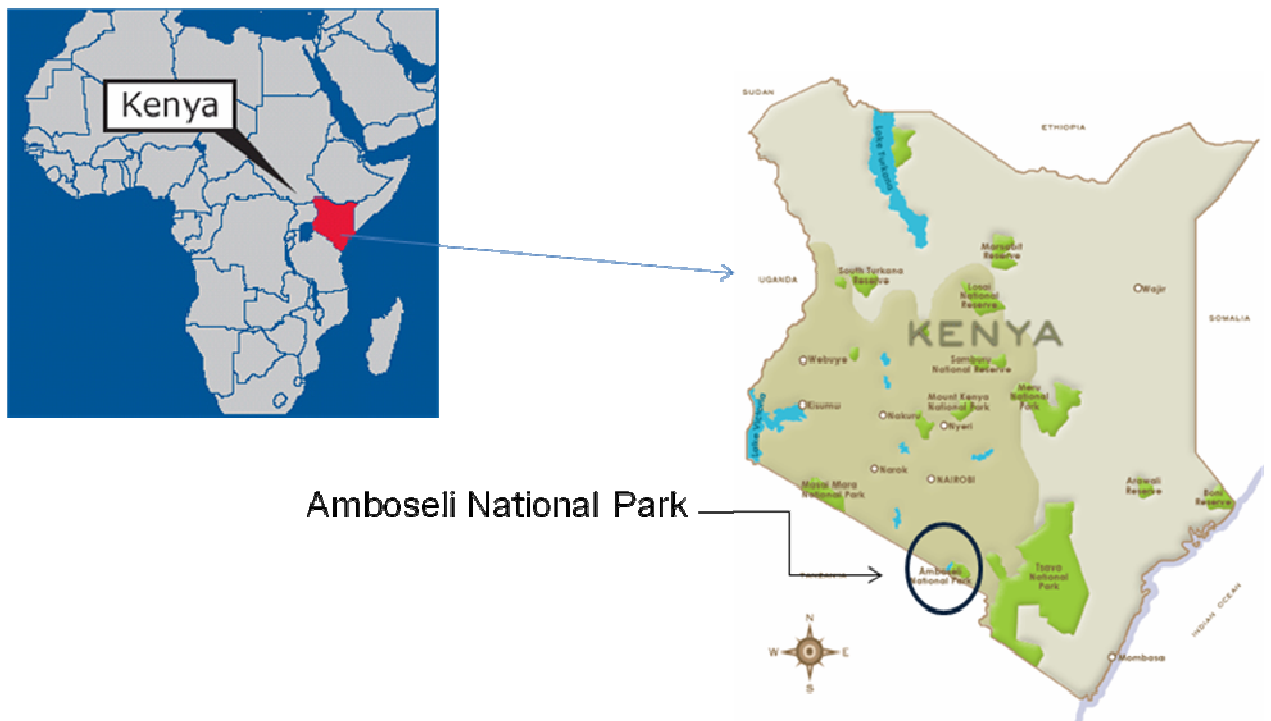
Awareness Creation & Information Sharing program: Ecotourism Kenya shares information with members and the larger tourism industry in an effort to inform and educate all on ecotourism, sustainable tourism, conservation and emerging practices in the tourism industry. This entails maintaining a resource centre at the secretariat, an informative and up-to-date website, publishing a monthly email (e-letter) and a quarterly newsletter and conducting stakeholder meetings and training sessions (including regional workshops and a biennial national conference). Ecotourism Kenya also produces and shares guidelines for best practices in ecotourism (Ecotourism 2008).”

About 70% of national parks and game reserves in East Africa are on Maasai land. One of the first undesirable impacts of tourism was the immense amount of land lost from the Maasai people. In the past, local and national governments have taken advantage of the Maasai’s ignorance on the situation and robbed them of vast amounts of grazing land, putting their pastoralist livelihood at risk.

In this thesis I hypothesize the following: In Kenya there is a strong association between the opinions local community members have of community conservation and their livelihood strategies. This hypothesis was tested via a standard questionnaire, where I assess how individuals who practice different livelihood strategies are affected by wildlife, and in turn what their opinion of wildlife is.

Through this correlation tests using SPSS (Statistical Package for Social Scientists) I have concluded that the following factors have an effect on the opinions local community members have of community conservation initiatives within the Amboseli region in Kenya: livelihood strategy, gender, whether or not they believe the distribution of benefits coming from wildlife conservation is equitable, what issues they would like to see improved within community conservation initiatives, and their overall satisfaction with community conservation initiatives.

Figure 1: Maps of Africa, Kenya, and Amboseli Ecosystem



Sources: www.catalysttravels.com; www.state.gov/cms_images/kenya_map.jpg

Chapter 2: Background

Effects of Colonialism

In Kenya, previous to the British arrival in the late 19th century, wildlife was utilized for survival purposes by local communities. In other words, the natural resources were used on a subsistence level with the local people using the wildlife as they needed it. This allowed for coexistence between humans and wildlife through sustainable off take and low human populations. In many ways agriculture is not compatible with conservation/ecotourism due to wildlife migrational patterns, crops damage, and land degradation caused by intense farming. Also, with increased food production, population density increases and negative, anthropogenic effects on the resources become increasingly evident. Resource shortages create a problem due to the fact that exploited resources are often necessary for both economic and domestic benefits. In response to resource over-exploitation and depletion, the conservation effort was founded.

The relationship which existed between the indigenous people and wildlife was still in effect when the first British settlers began to colonize Kenya in the late 19th century (Kameri, Mbote 2003). With British occupation came the European ideology that humans and wildlife could not coexist and therefore must be separated (Cronon 1996).

Colonization brought with it western ideologies of land ownership which promoted private property rights on lands which were formerly viewed as communal. These ideologies would have serious implications regarding the way wildlife was to be conserved, the methods used to conserve it, and who would reap the benefits of its conservation (Berger 1993). Not surprisingly, the implementation of methods used to conserve wildlife in Kenya was often done without regard to the opinions and needs of

the local communities who had successfully managed this resource long before the European ideas of conservation were forced upon the country. The policies adopted by the British alienated native Kenyans from accessing natural resources as they were now considered a ward of the state (Kameri, Mbote 2003).

The people hit hardest who still feel the effects of colonial conservation policies are those who occupied land in and around the newly formed protected areas. Their land was and continues to be severely reduced due to the gazettement of protected areas such as National Parks and National Reserves. The first three protected areas, Nairobi National Park (1946), Tsavo West National Park (1948) and Amboseli Game Reserve (1948) all bordered Maasailand (Berger 1993). These wildlife conservation areas were established under colonial rule for non-indigenous travelers and left the native peoples little room to access the resources found within (Berger 1993). In addition, these peoples received no compensation under this system. Policies such as those introduced under colonial rule damaged local communities' opinions on wildlife and its conservation and widened the gap between the people and their resources (Berger 1993). Throughout Kenya, the opinion of local communities was that conservation areas were established by the government, who gave them little stake in the benefits which were offered. The actions of the government therefore fostered an indifference towards the protection of these areas by the people who were most adept at doing so (Berger 1993).

In an effort to establish the support of local communities and provide them with economic returns from wildlife, models of conservation in which the community directly participates and benefits have been promoted throughout Kenya. The rationale for this thinking is based on the notion that by allowing economic benefits gained through

wildlife conservation to flow back into the community in the form of development projects such as schools, clinics, wells, etc. as well as in the form of employment and small business ventures, members of the local community will perceive wildlife as a valuable asset and be more likely to promote its conservation (Infield 2001).

Kenya's first attempts at combining the needs of local communities, which rely on resources found within protected areas with wildlife came in the 1940's with the creation of a series of game reserves. These conservation areas were to be places where indigenous human use, other than subsistence hunting, could be continued alongside wildlife conservation (Berger 1993). These early attempts at community conservation were visionary, but lacked institutional commitment and were soon replaced in the 1970s by a series of protected area outreach programs such as World Wildlife Federation (WWF), African Wildlife Federation (AWF), and the International Union on the Conservation of Nature (IUCN), whose primary goal was to conserve nature (Barrow et al. 2001). Prime examples of projects undertaken by these include several community conservation programs in the communities around Amboseli and Tsavo West National Parks in Kenya, and similar programs in areas surrounding additional protected areas within Uganda and Tanzania (Barrow et al 2001).

Despite the localized impact of these programs, they paved the way for other conservation initiatives within Kenya and other East African countries (Barrow et al. 2001). Kenyan national policy was changed to reflect this new found approach to conservation in 1976 with the establishment of The Wildlife Conservation and Management Act (WCMA) operationalized by the Wildlife Conservation and Management Department (WCMD) whose goal was to effectively manage wildlife

outside protected areas and ensure that wildlife resources provided the best possible returns to the community in regards to cultural, aesthetic, and economic benefits.

Due to various reasons revolving around performance, WCMD was replaced in 1989 by Kenya Wildlife Services (KWS), whose goal was to ensure that wildlife resources were sustainably used for national and local development (Kameri & Mbote 2003). These policies were implemented around Masai Mara National Reserve and Amboseli National Park to allow local communities the opportunity to gain economic benefits from ecotourism. Unfortunately, the institutions which this program has established to distribute revenue earned through wildlife equally throughout the community have been dominated by local elites who monopolize the revenues accrued through this program (Kameri & Mbote 2003).

Changing Livelihoods

Intensive agricultural practices remained undeveloped throughout southern Kenya up until the 1970s. Previous to the 1970s, the prevailing livelihood strategy throughout the region had been livestock herding by pastoralists. It should be noted that among groups who are principally dependent on livestock, there is much variability in herd management strategies, in social organization, in land tenure, degree of dependence on agricultural products, interactions with outside groups, differentiation of tasks by sex and age, etc. In other words, not all pastoralists live in one common way; rather they sustain themselves through different levels of dependence on each of their resources. With that said, attempting to make generalizations on pastoralists is rather complicated (Dyson-Hudson 1980). However we do know that throughout history agriculture has not been nearly as extensive throughout Kenya as it is today and traditionally the people of Kenya

have been dependent on their livestock not only for food and resources, but also as a means of displaying wealth.

Group ranches first appeared in Kenya in the 1960s when the Kenyan Government sought to address overgrazing and land degradation in the pastoral and semi-arid areas. A group ranch consists of 10 elected officials who are meant to represent the people within the local community. These elected officials make overarching decisions for community members (i.e. how to appropriate community funds) and serve as a local authority. No government regulation presides over group ranches officials and they are free to be re-elected any number of times. The goal of group ranches was originally to convert to communal land tenure and in the process reduce livestock density (Kimani and Pickard 1998). As noted by Kimani and Pickard (1998) the transition to subdivision posed an imminent threat to the traditional pastoralist livelihood, as communities now had decreased mobility and a much smaller livestock carrying capacity due caused by group ranch subdivision. An additional stress ignited by the transition to group ranches was the interference of wildlife migration patterns and an increase in human-elephant conflict. This occurs wherever the two species coexisted, however the impact is greatly exaggerated when elephants raid settlements that are highly developed and depended upon for survival (Sitati, Walpole, Leader-Williams and Leader-Williams 2003).

Homewood (1995) points out how policy makers originally feared that the traditional pastoralist lifestyle would lead to a 'tragedy of the commons' scenario where pastoralist land use caused desertification and overgrazing. Contrary to this belief, work done by Peter and Philip Woodhouse (1997) has shown that the transition to group ranches has likely increased the amount of environmental degradation.

The soils within the region (the area surrounding Amboseli National Park) vary throughout according to the parent material, vegetation, climate and human activity. Soils found in the lowlands, such as the lacustrine plains lakebed in Amboseli National Park and nearby Kimana Swamp, are typically low fertility. Such low fertility is because the soils were derived mainly from volcanic ash. Amboseli Plain's soils predominantly consist of clay loams and flat sedimentary plains with cotton soils. Swamps are typically made up of saline, andosols, luvisols, and haplic soils (Worden et al. 2003).

Since independence in 1963, the Kenyan government has shown unending interest in the development of arid and semiarid land (ASAL). ASAL is not suited to farming, therefore agriculture increases the risk of land degradation and extensive livestock production may be the most appropriate agricultural activity. As noted by Campbell (1986) and Sindiga (1984), desertification results from extensive interaction between society and its environment, and is often a direct result of the imbalance between the demands of a growing population and the capacity of land resources to meet them.

Community Conservation

Due to population growth, loss of herding lands to farmers, and game parks, and increased commoditization of livestock, pastoralists now face more strains on their way of life than ever before (Fratkin 2001). As a solution to problems that arose with the development of group ranches, community-based conservation was developed. According to Hulme and Murphree (2001), community conservation "should be pursued by strategies that emphasize the role of local residents in decision-making about natural-resources". The goal of community conservation is to empower local people through its

principles and practices, promote sustainable utilization of resources, and equitably distribute the benefits.

This concept was embraced globally under the belief that it would ease the sufferings of rural poor community members who bear the burdens of conservation. The empowerment of local people was intended to be a method of eradicating poverty. The conceptual framework of community involvement focuses on gaining and sharing benefits from wildlife utilization. The foundation is built on the devolution of authority to local people. This is achieved through management and maintenance of conservation structures by the local community. With local people performing the majority of managerial and financial tasks within these institutions they will be capable of assuring that the benefits will reach areas where it is most needed and deserved. Therefore, the benefits of conservation will trickle down to all levels of the community, and specifically to those who suffer the consequences of cohabitating with wildlife (Hulme and Murphree 2001). According to Hackel (1999), successful community-conservation exists when the local communities are active in resources planning and management and as a community they grow economically from wildlife utilization.

Since the first conservation attempts, a struggle has persisted between protecting natural resources and benefiting those who utilize such resources. Competition between nature and humankind indicates that human population cannot grow exponentially and at the same time be equipped with abundant resources for future generations, if the current rate of resource exploitation continues. Not surprisingly, research done by Infield and Agrippinah (2001) shows those communities who benefit from community conservation efforts often times had a “significantly more positive” view of wildlife conservation parks

than communities that did not benefit. However, Kiss (2004) noted a potentially harmful effect of community conservation in his study where, in some cases, community members who had seen benefits of community conservation later invested their income in projects such as expansive agriculture which in many areas is a substantial threat to biodiversity or both flora and fauna.

Amboseli National Park

This study focuses on the region surrounding Amboseli National Park which is a crucial dispersal zone for wildlife, making it of great interest for community conservation initiatives. Approximately 70% of the region's wildlife live outside the park and use the area for migration between Amboseli, Chyulu Hills, and Tsavo West National Parks (Mburu 2003). The type of tenure largely determines the land uses, which in turn influence the ecosystem's flora and fauna.

The prevailing forms of land tenure linking these parks are the group ranch system and private ownership. As previously mentioned, the communally owned system of group ranches involves members sharing access to resources and land, with an elected committee to handle the lands title and finances (Berger 1993). This system could be favorable for initiating community conservation projects due to the established committee of elected community members managing affairs. However, as I observed while living in near Amboseli, the management of the group ranches possesses structural flaws which foster corruption. Consequently, bribing and unequal benefit sharing is common due to a lack of transparency in accounting. The unchecked authority results in an obstruction of revenue distribution to the lower levels of the community (Munei 1999).

Unfortunately, corruption has also occurred throughout the process of subdivision. The government and the elite members of society began demarcating land in an attempt to gain political support. Currently the demand for private ownership and accelerated subdivision is on the rise, although varied sectors of the community are receiving land titles on an unjust basis. The members of society who may not have direct political involvement are often those who receive land titles last (Munei 1999). The challenges of management within the group ranch system have initiated setbacks to conservation in the Amboseli area.

The increase in subdivision has accelerated the drive to maximize land outputs through cultivation, causing further challenges for conservation (Emerton 2001). Simultaneously, several group ranches and individual land owners have realized the economic potential of their wildlife resources, and community conservation institutions have slowly begun to develop in the Amboseli area. The current community conservation initiatives include: ecotourism through lodges and campsites, cultural centers, KWS partnerships and benefit sharing projects, leasing land for conservation areas like the Selengei Conservation Area, and community sanctuaries like the Kimana Group Ranch Conservancy and the current construction of the wildlife sanctuary in Kuku Group Ranch (Mburu 2003, Ogutu 2002).

While many of the projects have had significant institutional flaws, the local communities have received some benefits through employment, revenues, and infrastructure development projects. For example, the Eselenkei Group Ranch committee leased 16 hectares of land to the private developer, Porini Ecotourism, for the establishment of the joint venture Porini Ecotourism Project (PEP). The community has

benefited from this initiative through revenues from lease payments, tourist-paid gate fees and bed charges, the employment of 26 community staff members, the support of community projects, and the improvement of infrastructures such as roads and boreholes (Ogutu 2002).

The Kimana sanctuary, started by the Kimana Group Ranch committee in 1997, is another community-based conservation project that has brought a number of positive changes to the area. Following the establishment of the sanctuary, landowners' attitudes towards wildlife have changed from negative to positive. It has helped that some members of the community have received revenues and wildlife numbers have increased as well (Mburu 2003). Overall, these community conservation projects have benefited community members in the areas surrounding Amboseli National Park, but these benefits are largely overshadowed by the greater implications and effects of the area's institutional failure. Poor institutional framework and lack of strong compensation programs for crop damage were two major failures that may have been preventable had the objectives of the institutions been thoroughly thought-out before implementation of these conservation programs.

The first major community conservation initiatives started by KWS set the standard of poor institutional framework and ended up contradicting their original goals of providing the community incentive to conserve (Ogutu 2002). WCMS (Workers Compensation Management System), in previous years, had been involved in a compensation scheme to cover crop damage, but problems with the administration of claims caused the Kenyan parliament to drop the scheme in 1991 (Ogutu 2002). KWS's problems with installing successful institutions has resulted in more broken promises and

local frustration has emerged with the discontent over receiving little or nothing of the originally promised 25% of Amboseli National Park revenue (Ogutu 2002). The mistakes made by KWS have been repeated in the Amboseli area's other community conservation projects; these failures have occurred as a result of several significant mistakes.

Faults of institutions in the Amboseli area have both previously and currently caused local animosity towards conservation, which in turn affects the long-term potential of community conservation initiatives. More often than not, promised funds do not make it back to local communities. This is a result of mismanagement of funds within the tourism lodges and corrupt group ranch officials who do not fairly appropriate the revenue received from lodge officials.

The current institutions are yet to convince local people to conserve wildlife. This is partly due to landowners' doubtfulness on conservation as a sustainable, beneficial livelihood option. This doubt is a byproduct of the complexities and uncertainties of wildlife management which cause more costs to the community than overriding benefits (Mburu 2003). As wildlife becomes more of a cost than a benefit to the local community, conservation becomes less popular and rather seen as a competition to local livelihoods (Emerton 2001). This threatens the viability of ecotourism projects since the local community believes there is not enough reason to continue wildlife conservation as a competitive land use. However the projects have achieved relative success in that wildlife numbers have risen and within some areas community members are gaining benefits from revenues or employment.

A fundamental goal of community conservation, where benefits are shared with all sectors of the community and wildlife is protected, has not yet been met. The

effectiveness of community conservation initiatives is determined by actual community perceptions of these institutions and where they have gone wrong. Pinpointing definite weaknesses of community conservation institutions is essential for their advancement in community conservation.

The most prominent economic activities in the Amboseli Ecosystem are the rearing of livestock (pastoralism) and subsistence agricultural production (Reid 2004). Due to high populations of Maasai and their traditional pastoral livelihoods, rearing of livestock is still a popular economic activity. Livestock populations are varied and composed of cattle, sheep, goats, poultry, donkeys (for transportation), and less commonly camels and pigs. In terms of national economy wildlife-based tourism is the most important and lucrative activity in the region (Reid 2004).

The current utilization of natural resources within the area is not in favor of traditional usage and management because of issues such as group ranch subdivision, immigration and population growth. These issues have caused pastoralists to be driven to arid parts of the region where they are more vulnerable to prolonged dry seasons. Severe droughts were reported in the district in 1984, 1994-1995 and 1998-2000. Up to 50% of livestock was wiped out and there was widespread crop failure. Furthermore, human population pressure and environmentally damaging land use have led to water pollution and the loss of dry season grazing land for both pastoralists and wildlife (Reid 2004). Conflict has ensued among pastoralists and farmers in response to fences fragmenting the land and limiting pastoralists' ability to graze their livestock. As previously mentioned, intensive agriculture in arid and semi-arid regions also poses the threat of desertification which may further reduce usable land.

Chapter 3: Materials and Methods

As previously mentioned, my final month in Kenya was spent doing a directed research project (under the supervision of Salaton Tome) that assessed local people's awareness of community conservation initiatives and evaluated the current community conservation institutions within the Amboseli ecosystem. Along with eight other researchers, I designed an interview (Appendix) which aimed to gather data on the priorities and challenges of wildlife conservation among resource-constrained communities. The overarching purpose of the interview was to assess local peoples' awareness of community conservation initiatives and evaluate the current community conservation institutions within the Amboseli ecosystem.

To begin the field research we conducted a standard interview (Appendix) with residents from the study sites. This was done with the help of research assistants/translators and local guides. We used a cluster sampling method to obtain a representative sample of the population. The sample locations were selected to obtain a proportionate representation of the different land use practices and ethnicities; different land uses included agriculture, pastoralism and agro-pastoralism. Interview sites were chosen close to conservation areas, as well as far from conservation areas. A standard questionnaire was used for all interviews to ensure that the interviews were conducted in the same way. Each interview began with the collection of demographic information (including age, sex, tribe, livelihood strategy and membership status in the group ranch in which they live). Researchers went on to gather data that would provide insight on the perceptions and attitudes of the sample population towards community conservation institutions in the Amboseli Ecosystem.

For the most part I felt that our translators were very effective in relaying our questions, as there appeared to be little confusion for the most part. The biggest hindrance we encountered was fury coming from local community members when their crops had recently been destroyed by migrating wildlife. It was often the case that local people viewed us as researchers sent to evaluate the damage and perhaps offer compensation. As this was not the case, we were sometimes greeted with hostility and annoyance due to what little was being done to solve their problems.

After an extensive literature review it appears as though the opinions local community members have of community conservation may be strongly correlated with their opinions of wildlife conservation. For that reason I plan on using the data obtained through my directed research project and narrowing in on the following ten questions (from the survey) to better understanding of the opinions local Kenyans have a community conservation initiatives and find if there is in fact an association. The focus of this assessment will be on the following survey questions:

1. General Area a) Pastoral b) Agricultural c) Agro-Pastoral
2. Group Ranch a) Private Ownership b) Kuku c) Kimana d) Mbirikani
e) Olgulului/ Ololanashi
4. Sex M/ F
5. Ethnicity a) Maasai b) Kikuyu c) Kamba d) Tanzanian e) Other
9. What is your primary livelihood strategy? a) Agriculture b) Pastoralism
c) Agro-Pastoralism d) Wildlife Conservation e) Other
10. In what ways does wildlife affect you? (personally) a) positively b) negatively c) neutral d) other

18. In your opinion, is the distribution of resources from wildlife and community conservation equitably done?

22. What are the objectives of institutions in regards to community conservation?

Have they been met? (Y/N) Please explain.

36. What are some of the issues that you would like to see improved? How?

37. What is your overall opinion of wildlife conservation in this area?

Chapter 4: Data/Analysis

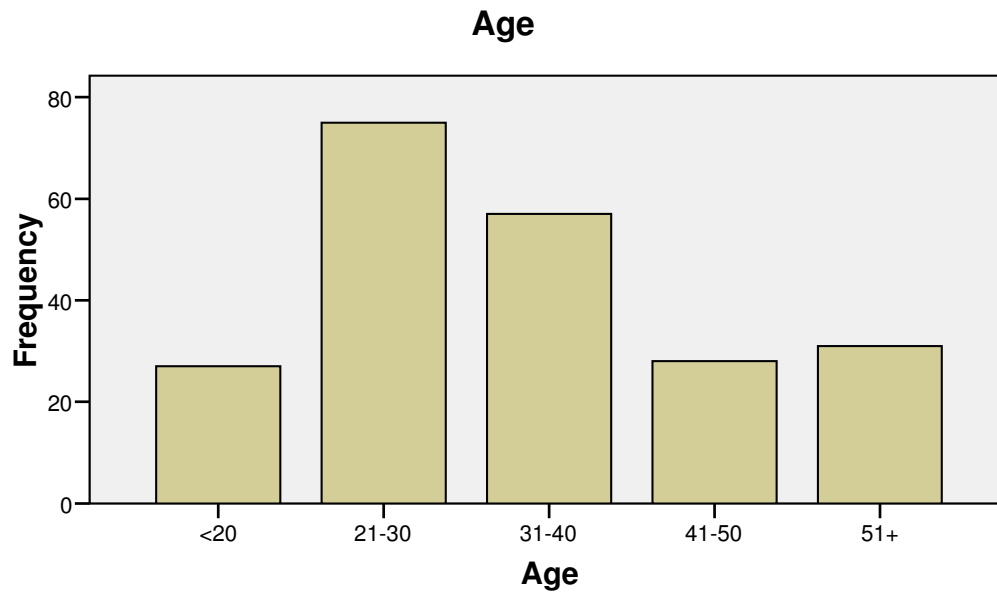
As researchers we worked to gather data that would provide insight on the perceptions and attitudes of the sample population towards community conservation institutions in the Amboseli Ecosystem. This was done by using questions which focused on equity, empowerment, conflict resolution processes implemented by the institution, and overall opinions. Researchers then coded the gathered field data and entered it into the Statistical Package for Social Scientists (SPSS) software. It was analyzed using the inferential and descriptive statistical methods including, chi-squared goodness of fit tests and chi-square contingency tables. These methods tested for potential associations within the data and further established whether or not the data's observed differences were statistically significant and if so, to what degree.

I expected to find that the following factors would have an affect on the opinions local community members have of community conservation initiatives: livelihood strategy, gender, ethnicity, whether or not they believe the distribution of benefits coming from wildlife conservation is equitable, what issues they would like to see improved within community conservation initiatives, and their overall satisfaction with community conservation initiatives.

Table 1: Gender

	Frequency	Valid Percent	Cumulative Percent
Female	103	44.4	47.0
Male	123	53.0	100.0
Missing	2		
Total	228		

Of the total survey respondents, 44% were female while 53% were male (Table 1).

Figure 2: Age distribution

As shown in Figure 2, majority of the respondents were between the ages 21-31.

From the chart we can see that within all five age groups there were approximately 30 individuals represented. This confirms that a good representation of different ages is present in the data.

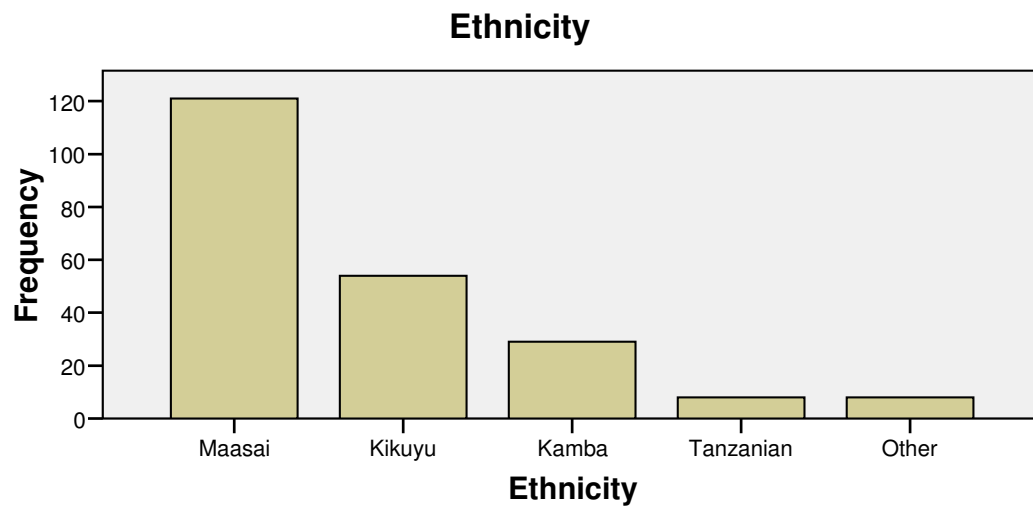
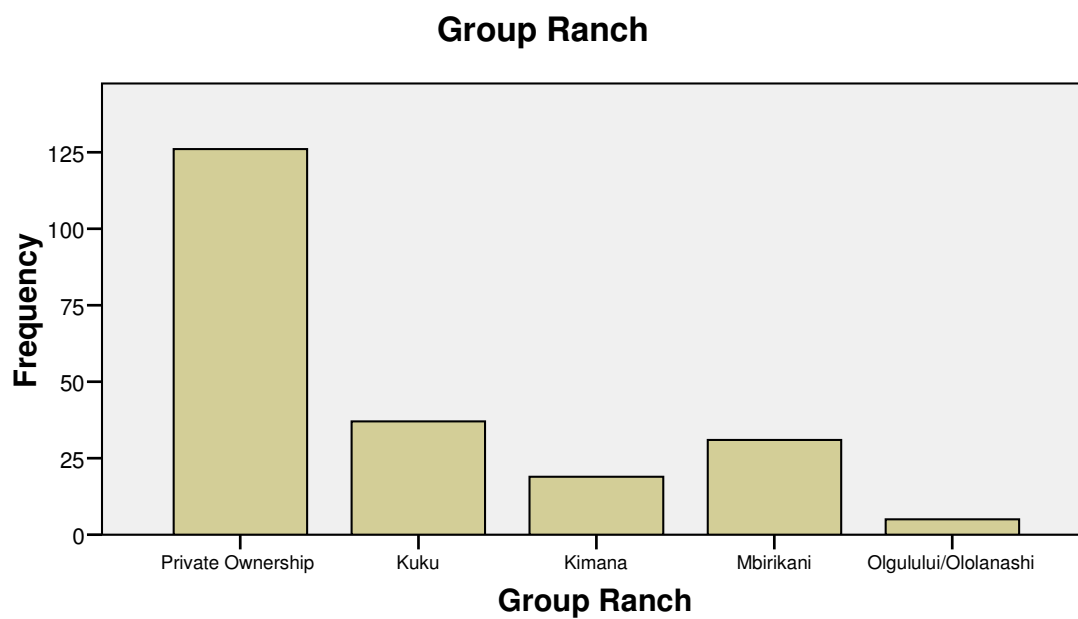
Figure 3: Ethnicity

Figure 3 shows that clear majority of survey respondents were Maasai, while Kikuyu, Kamba, Tanzanian, and other ethnicities were also surveyed.

Figure 4: Group Ranch Membership

In Figure 4 we can see that majority of survey respondents lived on privately owned land, while others respondents were members of the Kuku, Kimana, Mbirikani, and Olgulului/Ololanashi group ranches.

Table 2: Livelihood Strategies

		Frequency	Percent
Valid	Agriculture	117	53.2
	Pastoralism	41	18.6
	Agro-Pastoralism	62	28.2
	Total	220	100.0

The primary livelihood strategy in the sample population is agriculture (52%), while other practices include pastoralism (18%) or a combination of both agriculture and pastoralism (Table 2).

Table 3: How wildlife affects individuals based on their livelihood strategy

		Wildlife Affect You?				Total
		Positive	Negative	Neutral	Missing Data	Positive
Livelihood Strategy	Agriculture	2	107	8	0	117
	Pastoralism	10	25	6	0	41
	Agro-Pastoralism	5	51	3	3	62
Total		17	183	17	3	220

Based on the literature review and research, it becomes apparent that an individual's livelihood strategy does strong often influence their views and opinions of wildlife conservation, for this reason the livelihood strategy of individuals from the sample population is an important variable when assessing their views on wildlife ($X^2=2.709$, $df=20$, $p<0.001$). The entirety of the sample population resides in an area where they live in proximity to wildlife, of the 228 individuals sampled an overwhelming 83% report that wildlife affects them negatively. Interestingly, less than 1% of agriculturalists are affected positively by wildlife, while 24% of pastoralists say wildlife affects them positively (Table 3).

Table 4: Whether interviewees believed distribution of benefits is equitable based on their primary livelihood strategy (N=218)

		Is distribution of benefits equitable				Total
		Yes	No	Don't Know	No benefits	Yes
Livelihood Strategy	Agriculture	14	67	26	8	115
	Pastoralism	12	18	3	8	41
	Agro-Pastoralism	13	42	5	2	62
Total		39	127	34	18	218

As a whole, a majority of interviewees do not believe that distribution of wildlife benefits is equitable (58%). The responses were differed with interviewees' livelihoods with well over half of those practicing agriculture and agro-pastoralism responding that benefit distribution is inequitable ($X^2=23.913$, $df=6$, $p=0.001$). Further, as for the pastoralists, a lower percentage of participants (44%) believed that the distribution of benefits is not done equitably (Table 3).

Table 5: Influence of perception of benefit distribution on interviewees' satisfaction with management of community conservation (N=216)

		Are you satisfied with CC in your area			Total
		Yes	No	Don't Know	Yes
Is distribution of benefits equitable	Yes	26	13	0	39
	No	43	81	3	127
	Don't Know	12	19	1	32
	No benefits	6	12	0	18
Total		87	125	4	216

Interviewees' satisfaction of community conservation does depend ($X^2=14.910$, $df=6$, $p=0.021$) on their opinion of whether benefit distribution is equitable (Table 4). Majority of individuals who said distribution of benefits is equitable were satisfied with community conservation (68%), while individuals who said distribution of benefits is not equitable were not satisfied with community conservation (63%).

Table 6: Relationship between livelihood strategy & issues that need to be improved**Livelihood Strategy * Issues you would like improved Crosstabulation**

Count	Issues you would like improved								Total
	None	Management	Electric Fence	Direct benefits from wildlife	Protection from wildlife	Compensation	Protection of Wildlife	Increase Community Involvement	
Livelihood Strategy									
Agriculture	14	4	53	5	17	9	3	6	111
Pastoralism	5	3	3	9	5	10	4	2	41
Agro-Pastorals	10	4	14	5	5	6	2	11	57
Total	29	11	70	19	27	25	9	19	209

Issues that need to be improved are dependent on the livelihood system of the participant, for example, 48% of agriculturalists want an electric fence, while only 7% of pastoralists wish to have an electric fence ($X^2=49.126$, $df=14$, $p<0.001$). The greatest portion of pastoralists would like to see direct benefits from wildlife (Table 5).

Table 7: Relationship between gender & distribution of benefits coming from wildlife

		Is distribution of benefits equitable				Total
		Yes	No	Don't Know	No benefits	
Sex	Female	23	46	20	11	100
	Male	16	80	14	7	117
Total		39	126	34	18	217

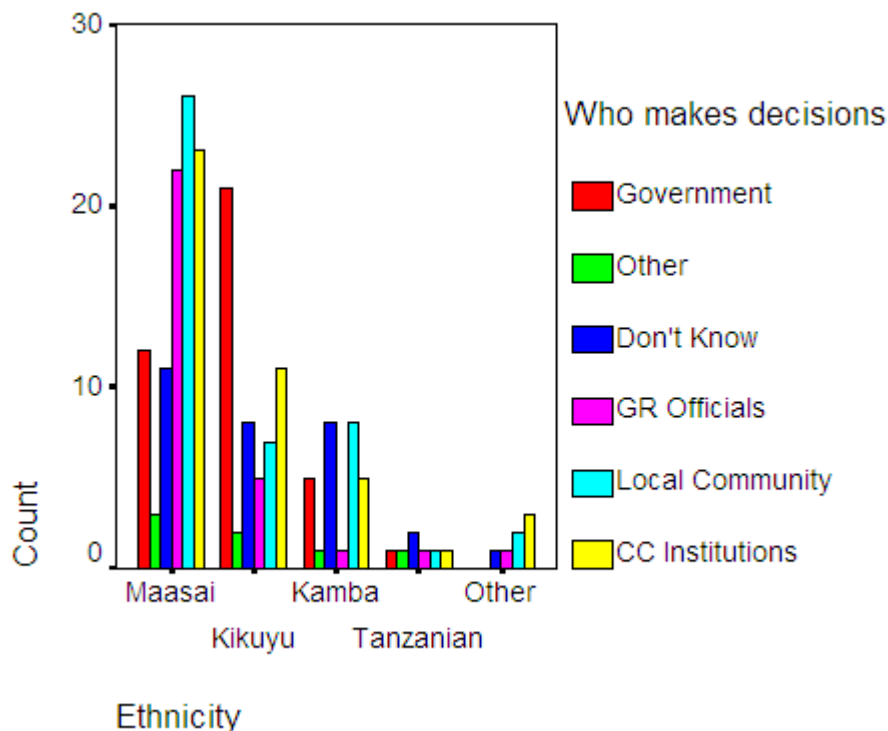
Furthermore, a significant difference is present when assessing whether or not people of different genders feel that distribution of benefits is done equitably as represented, majority of females feel that distribution is not done equitably (46%), whereas a significantly higher percentage of males (80%) also believe benefits are not equitably distributed (Table 7). One explanation for this discrepancy could be the fact that men spend more time outside of the home and therefore they may have more knowledge on issues such as the distribution of benefits coming from wildlife ($X^2=11.115$, $df=3$, $p=0.011$).

Table 8: Relationship between ethnicity and opinions on the distribution of benefits coming from wildlife

		Is distribution of benefits equitable				Total
		Yes	No	Don't Know	No benefits	
Ethnicity	Maasai	30	65	12	13	120
	Kikuyu	4	35	12	2	53
	Kamba	3	18	6	2	29
	Tanzanian	1	5	1	1	8
	Other	1	4	3	0	8
Total		39	127	34	18	218

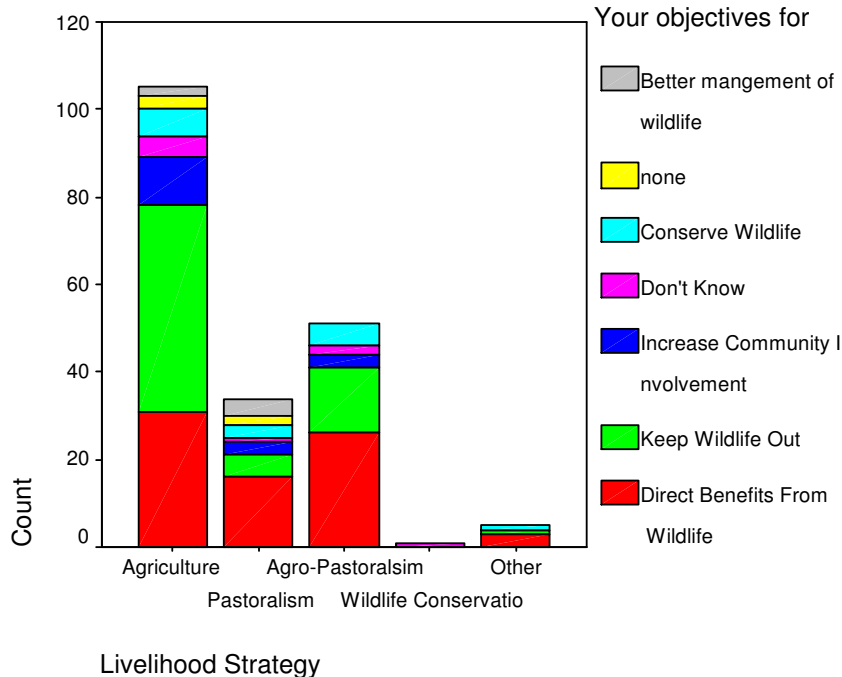
The responses also showed a non-significant difference between interviewees of different ethnicities ($X^2 = 19.073$, $df=12$, $p=0.087$). No less than 55% of the individuals from each of the represented ethnicities (Maasai, Kikuyu, Kamba, and Tanzanian) felt that distribution of benefits is inequitable (Table 8).

Figure 5: Ethnicity and primary decision makers



Within the Maasai the local community is viewed as the primary decision maker (27%), whereas the Kikuyu feel the Government makes majority of the decisions (39%). A significant difference is present in who is viewed as the primary decision-makers throughout the different ethnicities, ($X^2=34.035$, $df=20$, $p=0.026$) this proves that who individuals feel make decisions is dependent on the individual's ethnicity (Figure 5).

Figure 6: Objectives for community conservation/ livelihood strategy



When comparing the individuals' objectives for community conservation based upon their livelihood strategy it was observed that the relationship is statistically significant, although it is shown that people of all kinds of livelihood strategies want to receive benefits from wildlife ($X^2=26.934, df=12, p=0.008$). Pastoralists are the most content with having wildlife on their properties while agriculturalists are strongly opposed to this.

Chapter 5: The Discussion

The sample population was comprised of 54% males and 46% females (Table 1), and was primarily Maasai, Kikuyu, Kamba and Tanzanian (Figure 3). The primary livelihood strategy in the sample population was agriculture (52%), while other practices include pastoralism (18%) or a combination of both agriculture and pastoralism (Table 2). Often times the general area of the participant will influence their livelihood strategy, which in turn will influence their opinions of wildlife and community conservation initiatives.

The entirety of the sample population resides in an area where they live in close proximity to wildlife, and of the 228 individuals sampled an overwhelming 83% report that wildlife affects them negatively (Table 3) Also, interviewees' satisfaction of community conservation does depend on their opinion of whether benefit distribution is equitable. Majority of individuals (68%) who said distribution of benefits is equitable were also satisfied with community conservation while 63% individuals who said distribution of benefits is not equitable were not satisfied with community conservation (Table 5).

Livelihood strategy also has an impact on the perceptions individuals have on distribution of benefits. On average 62% of participants, from each of the three livelihood strategies, do not believe distribution of benefits is done equitably (Table 4). The responses were significantly different between individuals of different livelihood strategies. On average, 63% of individuals who practice some form of agriculture feel that the distribution of benefits is not equitable (Table 4). This is likely due to the fact that wildlife is solely viewed as a burden as it poses a great threat to their way of life.

Additionally agriculture is mostly practiced in areas with minimal presence of conservation initiatives as a result of private ownership, and therefore the people do not receive any benefits. The perceived benefits coming from wildlife conservation will vary considerably with change in livelihood strategies, with more agriculturalists feeling that the distribution of benefits from wildlife conservation is not done equitably (Table 4).

The greatest majority of participants (33%) would like to see an electric fence put-up to improve community conservation in their area. Protection from wildlife and compensation are the subsequent improvements individuals would like to see (Table 6). Issues that need to be improved are dependent on the livelihood system of the participant. For example, 48% of agriculturalists want an electric fence, while only 7% of pastoralists wish to have an electric fence (Table 6). This was anticipated, and is reasonable when considering the destructive nature of wildlife. Agriculturalists want an electric fence put-up merely to protect their livelihood. The greatest portion of pastoralists would like to see direct benefits from wildlife (Figure 6) since wildlife are not posing a threat to pastoralists, their needs are not as demanding, however an equal share in the benefit is naturally desired by all. It is useful to determine how people of varying livelihoods perceive impending improvements. Once it has been recognized which livelihood strategy will benefit the most from specific improvements has been pinpointed, it can be used to further determine which areas are the most practical and beneficial to make improvements in.

As shown by the data, within the Maasai the local community is viewed as the primary decision maker (27%), whereas the Kikuyu feel the Government makes majority of the decisions (39%). A significant difference is present in who is viewed as the

primary decision-makers throughout the different ethnicities, this proves that who individuals feel make decisions is dependent on the individual's ethnicity (Figure 5). The responses also showed a significant difference between interviewees of different ethnicities. No less than 55% of the individuals from each of the represented ethnicities (Maasai, Kikuyu, Kamba, and Tanzanian) felt that distribution of benefits is inequitable (Table 8). The members of the Maasai community represented the highest showing of people (25%) who felt the distribution of benefits was in fact equitable (Table 8). One explanation may be that when a specific ethnicity holds more political power, the people of this ethnicity observe more benefits coming from conservation initiatives. This could be a direct result of corruption within the system and may be solved by using a method of checks and balances within the system, perhaps in the form of an auditor.

Furthermore, a significant difference is again present when assessing whether or not people of different genders feel that distribution of benefits is done equitably (Table 7). Within the sample population a higher number of male respondents felt that distribution is not done equitably (80%), whereas a significantly lower percentage of females (46%) also believe benefits are not equitably distributed. A possible explanation for this disparity could be that the benefits from wildlife are in no way passed on to the women of society. Because it is known that women are often the most marginalized and least involved, it is highly likely that any benefits which do come into a family are merely not seen or know of by the women of the household which may cause them to be unaware of benefit distribution.

The most significant threat to community conservation within the Amboseli region is the likelihood that local communities are not seeing any benefits derived from wildlife

conservation. Regardless of how many land-use restrictions the government may impose on the local people, in the end wildlife conservation depends on their willingness to participate. Since the local people have not yet seen direct benefits coming from wildlife, it is critical that a new approach is taken where communication is a priority. With a new found association will come awareness, benefits, and willingness to participate.

The people living with the animals provide crucial insight and understanding to the balance or lack of, within the system. Without their knowledge and support community conservation initiatives are doomed for failure. Solutions to this disparity include having community conservation institutions in place that benefit and empower both the stakeholders and the local community members.

Chapter 6: Conclusions

In conclusion, this study sought to assess the changing livelihood strategies in Kenya, and their cultural impacts, via a literature review. This knowledge was then combined with the data I collected while in Kenya to examine the opinions local people have of community conservation initiatives, based on their changing livelihood strategies.

The recent trend in livelihood strategies of local people has been a rapid transition from pastoralism to agriculture. A people's livelihood strategy has a great impact on the perceptions individuals have on distribution of community conservation benefits. The perceived benefits coming from wildlife conservation will vary considerably with change in livelihood strategies. Therefore I can reject my null hypothesis that in Kenya there is no association between the perceptions local community members have of community conservation and their livelihood strategies.

I deduce that livelihood strategy has a great impact on the perceptions individuals have on distribution of benefits. On average 62% of participants, from each of the three livelihood strategies, do not believe distribution of benefits is done equitably (Table 4). The responses were significantly different between individuals of different livelihood strategies. On average, 63% of individuals who practice some form of agriculture feel that the distribution of benefits is not equitable (Table 4). This is likely due to the fact that wildlife is solely viewed as a burden as it poses a great threat to their crop production and ultimately threatens their way of life.

Additionally, agriculture is mostly practiced in areas with minimal presence of conservation initiatives as a result of private ownership, this is evident on the foot slopes of Mt. Kilimanjaro and therefore the people of this region do not receive any benefits from conservation initiatives. The perceived benefits coming from wildlife conservation

will vary considerably with change in livelihood strategies. For pastoralist people who traditionally co-existed with wildlife, they may now view wild animals purely as a liability due to their grazing lands being fragmented for wildlife protection, and the threat of wildlife killing their livestock. When there are not sufficient mechanisms (i.e. fences) in place to protect people from wildlife there is little chance that they are going to see any benefit coming to them from wildlife.

The most significant threat to community conservation within Kenya is the likelihood that local communities are not seeing any benefits derived from wildlife conservation. Regardless of how many land-use restrictions the government may impose on the local people, in the end wildlife conservation depends on their willingness to participate. As we have observed, local people have not yet seen direct benefits coming from wildlife (which may be a result of corruption), and therefore it is critical that a new approach is taken where communication is a priority. With a newfound association will come awareness, benefits, and willingness to participate.

The people living with the animals provide crucial insight and understanding to the balance or lack of, within the system. Without their knowledge and support community conservation initiatives are doomed for failure. Solutions to this disparity include having community conservation institutions in place that benefit and empower both the stakeholders and the local community members.

Limitations

One limitation to the research was the communication barrier between study surveyors and interviewees. Surveys were done with the help of research assistants/ translators and local guides. It can be assumed that without direct communication with the individuals being interviewed elements of the data and opinions may have been lost

through translation. At times survey respondents were unclear as to what was being asked, and it was up to the translators to clarify. As researchers we were dependent on the translators to have a clear understanding of the purpose of each survey question.

Unequal representation of all members of the community was the other limitation to this project. Because women in many of the cultures being assessed are often marginalized it has been found that they are frequently timid and hesitant in offering their opinions. At times we found it difficult to communicate with women as men would often interrupt a survey and insist their responses were recorded rather than the women's. Further, the opinion of women throughout various cultures is often greatly influenced by the men. Through data collection it was evident that women were unwilling to express their thoughts, and often changed their demeanor when a man was present. Due to the oppression of female members of society, lack of equal representation was an impediment to this project.

Recommendations

In my opinion, the development of community education programs is the most pertinent matter to be addressed within community conservation institutions. Because the perceptions of conservation are greatly dependent upon awareness, understanding, and level of involvement, it is clear that each community conservation institution must make a conscious effort to keep the perceptions of individual community members positive. This can be done through engaging the community in events, and including them in all though processes which will also eliminate any confusion about what community members should expect from local community conservation initiatives.

Within community conservation institutions, all administrative figures should be made aware of the importance of community involvement within their institution. This

will help to assure that the institutions are working as a unit and towards a common goal of community empowerment.

KWS officials should hold workshops to educate local people on management techniques of protected areas. These seminars should also include lessons on how to effectively minimize human-wildlife conflict within specific areas.

An assessment should also be done to establish which areas throughout the community are most in need of structures (i.e. fences) to be put up which will help to minimize conflict. After the assessment appropriate funding should be granted by institutions (possible compensation funds) to cover construction expenses.

All financial documents must be made public. This is necessary in order to gain public support and understanding of community conservation, and further to ensure equitable distribution of funds. Currently, very few community members are aware of any benefits coming from wildlife conservation in their area, let alone are they receiving any of these benefits. We know that support is dependent on the perceived effectiveness of community conservation institutions, therefore it is critical that management member are transparent in dealing with finances to assure community members are in agreement with how funds are allocated.

Further research should be conducted which actively seeks out members from each sector of the community. This is necessary to assure that all opinions given are those of the individual and not influenced by an outside source. One recommendation for future research would be having researchers seek out women at times when men are seldom present. This could be done by visiting homes early in the morning when women are often awake and beginning chores much earlier than the men.

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Appendix I: Survey

Date _____ Interviewer's Name _____

1. General Area **a) Pastoral b) Agricultural c) Agro-Pastoral**

2. Group Ranch **a) Private Ownership b) Kuku c) Kimana d) Mbirikani
e) Olgulului/ Ololanashi**

3. Location _____

4. Sex **F M**

5. Ethnicity **a) Maasai b) Kikuyu c) Kamba d) Tanzanian e) Other**

6. Level of Education **a) No Education b) Primary c) Secondary d) University**

7. Age **< 20 21-30 31-40 41-50 50+**

8. Style of Proprietorship **a) Owner b) Tenant c) GR Member**

9. What is your primary livelihood strategy? **a) Agriculture b) Pastoralism
c) Agro-Pastoralism d) Wildlife Conservation e) Other**

10. In what ways does wildlife affect you? (personally) **a) positively b) negatively c) neutral d) other -**

11. In what ways would you like to see wildlife utilized **a) Ecotourism lodges b) Hunting c)
Community Sanctuary d) Revenue Sharing from Government- controlled parks e) Traditional
Uses f) Other** _____

12. Are you aware of any measures in place to involve local people in the management of wildlife conservation? (Y / N)

13. Are these mechanisms effective in meeting their objectives? Y/N

14. Have you ever been involved in the process of implementing these mechanisms? (Y / N) If yes, please explain.

15. In your opinion, what has been the biggest challenge for wildlife in your region?

16. Do you have any suggestions on how those problems can be resolved?

17. Are you satisfied with the management of community conservation in this area? (Y / N)
Please explain?

18. In your opinion, is the distribution of resources from wildlife and community conservation equitably done?

19. Is there a section of the society which is benefiting more than others? Y/N
If yes, which part(s) of society benefit?

What circumstances result in this unequal distribution?

20. Has anything been done to resolve the inequity?

21. What are your objectives in regards to community conservation?

Have they been met? (Y / N) Please explain.

22. What are the objectives of institutions in regards to community conservation?

Have they been met? (Y/N) Please explain.

23. In your opinion who influences the community conservation agenda in this region?

24. Are the management members approachable (people friendly), or is management approachable as a whole?

25. Are the community conservation institutions transparent in dealing with their affairs?

26. Is the management process participatory or elitist?

27. Who makes more decisions and who makes fewer decisions?

What has led to the above situation?

28. Are there mechanisms to resolve conflicts?

Between Members Y/N

Between members and outsiders Y/N

29. Are these conflict resolution mechanisms effective?

30. In cases where you may not be satisfied with the performance of institutions, are there ways in which you can seek for redress? (Y/N)

Are these ways effective? Y/N

How is it operationalized?

31. How would you rate the effectiveness of the current community conservation institutions?

32. Are the weak members of the society included in the management process? (Y / N)
33. What are the strengths of the institutions?
34. What are the weaknesses of the institutions?
35. What are the consequences of the ineffectiveness of the management process?
36. What are some of the issues that you would like to see improved? How?
37. What is your overall opinion of wildlife conservation in this area?