

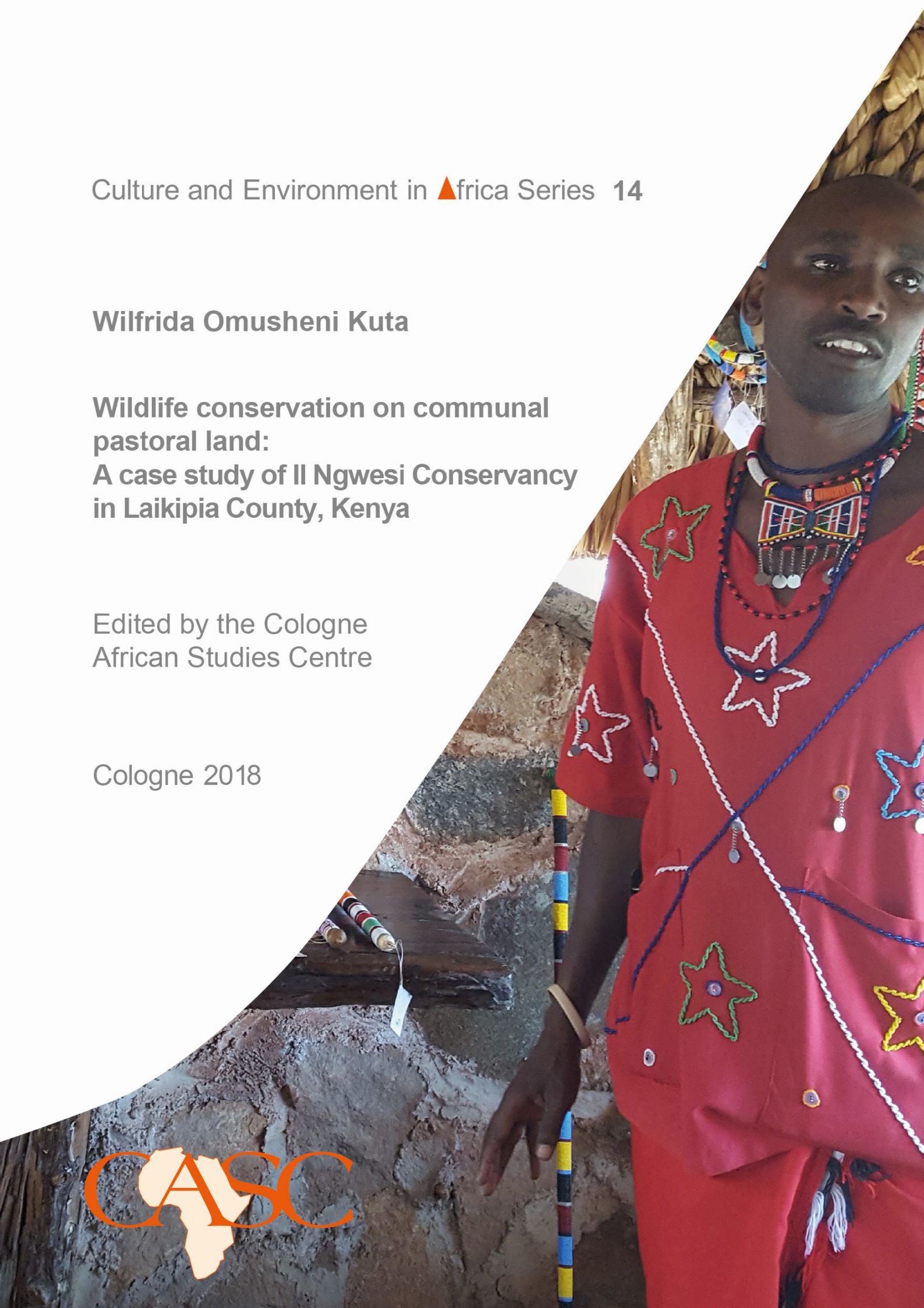
Culture and Environment in Africa Series 14

Wilfrida Omusheni Kuta

**Wildlife conservation on communal
pastoral land:
A case study of Il Ngwesi Conservancy
in Laikipia County, Kenya**

Edited by the Cologne
African Studies Centre

Cologne 2018



Wilfrida Omusheni Kuta

Wildlife conservation on communal pastoral land

A case study of Il Ngwesi Conservancy in Laikipia County, Kenya

CULTURE AND ENVIRONMENT IN AFRICA SERIES

Edited by the Cologne Africa Studies Centre

Issue 14

2018

This publication was funded by the Collaborative Research Center "Future Rural Africa"
(CRC/Transregio 228, funded by DFG).

Preface

Wildlife conservation has a prominent place in state-community relations since decades. The British colonial government enforced a ban on hunting forcefully. It also stipulated that forests have to be safe guarded and in many instances ended the use of forest products by local farmers and hunters. While some of these restrictive rules on game or forest use are still in place, Kenya has seen a communalization of conservation in the past two decades. Local communities are encouraged to conserve and preserve their environment, to protect wildlife and to ensure species diversity. They are nowadays entitled to directly gain from their engagement in conservation. Gains through tourism are meant to directly benefit community development. In Laikipia country, in colonial times mainly settled by white settlers with the exemption of a few “native reserves”, community conservation nowadays is of considerable significance. After independence many white farmers left the Laikipia highlands and made way for resettlement projects. However, some farmers also stayed on and many of these white-owned farms became farms with a conservation-oriented management. It was especially these farmers who inspired adjacent black farmers to invest into conservation. Not without deeper rational behind their activities: of course, they knew that their conservation efforts could only be successful once adjacent farming communities were at least tolerating their efforts, at best they would actively support their activities. In order to do so, they were to be given pieces from the tourism-income-cake. In the case study, Wilfrida Omusheni Kuta deals with the white farmers on adjacent freehold farms who inspired the Il Ngwesi community to set apart parts of their community land for conservation, to establish a core conservation area in which humans would desist from any use and to build a community lodge and establish adequate business organization to run such a lodge. The Il Ngwesi are a Maasai minority splinter. During British times they were settled in the wider Doldol/Mukogodo Reserve. They were regarded as impoverished Maasai who mainly subsisted on small stock rearing. In the early 1990s Suisse anthropologist Urs Herrn described them as a poor faction of the Maasai, internally cohesive and with a substantial internal stratification. The Il Ngwesi in the 1970s formed a group ranch but when group ranches became subdivided in the 1980s and 1990s they desisted from doing so. They retained a group ranch structure which made a transition into a conservation business model easier. Group ranches possess formal land titles which are similar to freehold titles. They also have a formal governance structure. This governance structure was instrumental when a company had to be founded to run the community owned eco-lodge.

Abstract

Over the past two decades, the number of conservancies in Kenya has increased rapidly in the marginal semi-arid and arid areas in the north. Most of those involved in conservation are pastoral communities who give out their pastoral and agricultural land for conservation. A lot has been researched on conservancies particularly in the Southern Africa region. However, there is the need for more data on Community-Based Conservation (CBC) in eastern Africa and particularly in Kenya. The purpose of this study was to provide a detailed understanding of CBC in Kenya taking the case study of Il Ngwesi Conservancy. Therefore, this study aimed at 1) investigating the social, economic and ecological benefits of Il Ngwesi Conservancy to its members; 2) characterising the institutions and the governance structure of the conservancy; 3) assessing the role and participation of women in conservation efforts in a patriarchal society; and 4) identifying the concerned stakeholders and their interests in the management of the conservancy. Both qualitative and quantitative research methods were used comprising: a socio-economic survey of 35 households from the seven villages of Sanga, Lokusero, Leparua, Nandunguro, Ethi, Chumvi, and Ngarendare; 12 key informant interviews with conservancy managers, elders, representatives from key conservation stakeholders and women representatives; and informal interviews with the group ranch members as well as elders. The study found out that most of the group ranch members (approximately 5,000 people) bought land outside the group ranch because of establishing the conservancy. Cultivation is the common land use practice on privately owned land, however, livestock production (95%) is the main source of livelihood among the members of Il Ngwesi group ranch. This study found that CBC contributed profound social-economic and ecological changes that would not have been achieved without the conservation efforts. For example, improved education system, security, health, water availability, access to cattle market and employment. According to Il Ngwesi members, pasture management has improved since the establishment of the grazing plan within the conservancy until its collapse in 2015 because of conflicts over grazing land with the members from the neighbouring Samburu group. Il Ngwesi members also claim that wildlife population has increased since the establishment of the conservancy. This is linked to increased security and reduced poaching. However, despite the benefits they derive from wildlife conservation, there are increased cases of human-wildlife conflicts specifically to those members living close to the conservation area as compared to those settled away. The study also found out that men participate more in conservation activities and major decision making of the group ranch than women. Co-management is a key concept to the management of the group ranch because several stakeholders support them.

Acknowledgements

First, I am grateful to God for his providence and grace throughout my years of study. I am grateful to the University of Cologne and the GoAide Foundation for granting me the opportunity to study in Germany. I acknowledge my supervisor, Prof. Dr. Michael Bollig and the academic fraternity of the master program Culture and Environment in Africa (CEA). Much gratitude to Prof. Dr. Michael Bollig for his wise counsel, patience and thoroughness in reading the draft that I submitted. He consistently allowed this thesis to be my own work but directed me in the right direction whenever he thought I needed it.

I would like to acknowledge the following: Eric Kioko, Willis Okumu, Florent Noulekoun, Peron Sowah, Severin Kaji and Dorcas Murasi for finding time to read through drafts of this thesis and for giving detailed and valuable comments. My sincere gratitude goes to the members of Il Ngwesi group ranch for their time, hospitality and providing the needed information. I acknowledge my research assistant, the group ranch manager, the eco-lodge manager, the grazing coordinator and staff of IMPACT at Nanyuki office who helped and guided me throughout the fieldwork process. This made my data collection process much easier, therefore, enabling me to produce this work.

Finally, I thank my parents, Mr. Morris Kuta and Marisela Kuta, my brothers, sisters and their families for their support throughout my studies that included unconditional love, support, continuous encouragement and endless prayers. I would not have been able to accomplish this without them.

Table of Contents

| | |
|--|-------------|
| List of Acronyms | viii |
| List of Figures | ix |
| List of Tables..... | ix |
| 1. Introduction..... | 1 |
| 1.1 The new commons | 4 |
| 1.1.1 Bottom-up: re-asserting commons/open access | 5 |
| 1.1.2 Top-down: co-managed pastoral commons | 5 |
| 1.2 Co-management..... | 6 |
| 1.2.1 Co-management as power-sharing | 7 |
| 1.2.2 Co-management as institution building | 8 |
| 1.2.3 Co-management as trust and social capital..... | 8 |
| 1.2.4 Co-management as process | 8 |
| 1.2.5 Co-management as problem-solving..... | 8 |
| 1.2.6 Co-management as governance | 8 |
| 2. Methodology | 10 |
| 2.1 The study area | 10 |
| 2.2 Sampling techniques and sample size..... | 11 |
| 2.3 Data collection..... | 12 |
| 2.3.1 Participant observation | 12 |
| 2.3.2 Key informant interviews | 13 |
| 2.3.3 Questionnaire survey | 14 |
| 2.4 Data analysis..... | 14 |
| 2.5 Socio-demographic characteristics | 15 |
| 2.5.1 Age and gender | 15 |
| 2.5.2 Marital status | 15 |
| 2.5.3 Level of education..... | 16 |
| 2.5.4 Number of livestock | 16 |
| 2.5.5 Size of land..... | 17 |
| 2.5.6 Crops cultivated | 17 |
| 2.6 Research limitation..... | 19 |
| 3. History and establishment of a conservancy in Il Ngwesi group ranch | 21 |
| 3.1 Time, space and people: From hunter-gatherers to agro-pastoralists to conservationists in Mukogodo Division | 21 |
| 3.2 Mukogodo forest: “protected area”, grazing blocks, and conflicts over illegal grazing..... | 23 |
| 3.3 Il Ngwesi Conservancy: A borrowed idea | 25 |

| | |
|---|-----------|
| 3.4 Il Ngwesi Eco-lodge..... | 26 |
| 3.5 The Rhino Sanctuary..... | 28 |
| 4. Benefits, trade-offs and Governance | 30 |
| 4.1 Socio-economic benefits | 30 |
| 4.1.1 Employment..... | 30 |
| 4.1.2 Diversification of livelihood..... | 31 |
| 4.1.3 Security of tenure..... | 32 |
| 4.1.4 Access to cattle markets | 33 |
| 4.1.5 Education..... | 34 |
| 4.1.6 Water Availability | 36 |
| 4.1.7 Health facilities..... | 37 |
| 4.2 Ecological benefits | 38 |
| 4.2.1 Wildlife conservation | 38 |
| 4.2.2 Wildlife monitoring..... | 39 |
| 4.2.3 Rangeland management: core conservation area and the buffer zone..... | 40 |
| 4.2.4 Managing grass: grazing blocks..... | 42 |
| 4.2.5 Institutions of grazing | 43 |
| 4.3 Governance structure in Il Ngwesi group ranch | 45 |
| 4.3.1 Il Ngwesi Group Ranch Committee (IGRC) | 46 |
| 4.3.2 Il Ngwesi Community Trust (ICT) | 48 |
| 4.3.3 Il Ngwesi Company Limited (ICL) | 50 |
| 4.4 Stakeholders connected with management in Il Ngwesi group ranch | 51 |
| 4.5 Gender and wildlife conservation..... | 53 |
| 4.6 Women empowerment | 54 |
| 4.6.1 Bead work project | 54 |
| 4.6.2 Micro-finance | 57 |
| 4.6.3 Days for Girls program (DfG) | 57 |
| 5. Conclusion | 60 |
| 6. References | 62 |

List of Acronyms

| | |
|----------|---|
| AGM | Annual General Meeting |
| AWF | African Wildlife Foundation |
| BESP | Borana Education Support Programme |
| CFA | Community Forest Association |
| COBRA | Conservation of Biodiversity Resource Areas |
| DfG | Days for Girls programme |
| ICL | Il Ngwesi Company Limited |
| ICT | Il Ngwesi Community Trust |
| IGRC | Il Ngwesi Group Ranch Committee |
| ILMAMUSI | Il Ngwesi, Makurian, Mukogodo and Sieku group ranches |
| KDA | K-rep Development Authority |
| KHCI | Kenya Health Care Initiative |
| KFS | Kenya Forest Service |
| KWS | Kenya Wildlife Service |
| LWF | Laikipia Wildlife Forum |
| LWC | Lewa Wildlife Conservancy |
| NRT | Northern Rangeland Trust |

List of Figures

| | |
|---|----|
| Figure 1 Map of the villages outside and inside Il Ngwesi group ranch | 3 |
| Figure 2 Map of the study area | 11 |
| Figure 3 Map of Il Ngwesi group ranch: Core area, buffer zone and settlement area | 19 |
| Figure 4 Interior of one of the cottages at Il Ngwesi eco-lodge..... | 28 |
| Figure 5 Hay planted in Nandunguro village (Left) and hay storage facility (Right)..... | 41 |
| Figure 6 Management structure of Il Ngwesi group ranch | 46 |
| Figure 7 Committee attributes of Il Ngwesi group ranch..... | 47 |
| Figure 8 Committee attributes of the Il Ngwesi community trust..... | 49 |
| Figure 9 The lodge manager showing the curio shop at the eco-lodge | 56 |

List of Tables

| | |
|--|----|
| Table 1 Number of cattle purchased from Il Ngwesi (2006-2009)..... | 33 |
| Table 2 Stakeholders connected with Il Ngwesi group ranch | 51 |
| Table 3 DfG kit pricing in Kenya as of May 2015..... | 58 |

1. Introduction

During the past two decades, northern Kenya has seen a rapid increase in the number of community-based conservancies. This is heavily promoted by international and local conservation NGOs and private conservancies such as African Wildlife Foundation (AWF), The Nature Conservancy (TNC), Northern Rangeland Trust (NRT), Laikipia Wildlife Forum (LWF), Lewa Wildlife Conservancy (LWC) and Borana Conservancy. This development is progressively motivating diversification of pastoralists' livelihood, changes in their landscape and management of resources. According to Bollig and Lesorogol (2016:677), the primary interest of these organizations is wildlife conservation which results in the establishment of management techniques that are often at odds with pastoral management including establishing protected areas, buffer zones, and instituting "holistic range management". However, to date, very little is known in Kenya about the implications of these new forms of land management for pastoral livelihoods and their ecosystem.

In Kenya, an estimated 65% of wildlife is found outside protected areas in communal grazing lands and group ranches, where wildlife, people, and livestock co-exist, interact and compete for the same natural resources (Western et al., 2009; Mizutani et al., 2005). The Kenyan government policies and programs encourage these communities to engage in community-based ecotourism ventures, with the Kenya Wildlife Service (KWS) providing funding for local tourism and wildlife enterprises through its Wildlife for Development Fund set up in 1993 (Berger, 1996; Barrow et al., 1998; Reid, 2003). This was after KWS realized that for conservation initiatives to succeed, community involvement and support is important (Okello, et al., 2003). However, because of the rapid increase in human population, agriculture has expanded into marginal areas and formerly open communal grazing lands have been transformed into high-density rural settlements of small-scale farmers engaged in cultivation and livestock grazing (Aligula et al., 1997; Reid et al., 1999). As the pressure on land intensifies, there is increased potential for conflict between people and wildlife over grazing land, water resources, predation of domestic livestock and disease transmission, therefore, posing threat to wildlife populations (Mizutani et al., 2005). For instance, in Il Ngwesi Conservancy, the ongoing land use conflicts between the members of the group ranch (Maasai) and the Samburu (neighbouring community) in the buffer and conservation zones, the human-wildlife conflicts and delayed or lack of compensation for damages caused by wildlife are threats to wildlife conservation.

The rapid increase of community-based conservancies in northern Kenya has been partly successful through the idea of offering locals a stake in wildlife management thus being incentivized to conserve it (Beinart and Hughes, 2007:303). This view is supported by Murphree (1993) who argues that local communities can become effective institutions for

sustainable resource management, only if they are given full access to resources, genuine rights over the use of resources, benefit from their use, and determine the distribution of the benefits.

Community-Based Natural Resource Management (CBNRM) model emerge from the Ostromian assumption (Ostrom, 1990, 2002) that local communities can sustainably manage resources and in an equitable manner if a few well-defined social and political conditions are fulfilled (Jones and Murphree, 2001; Agrawal, 2003). The CBNRM model remains a pillar for rural development and sustainable natural resource management (Blaikie, 2006) despite it being criticized for example, in Zimbabwe (Dzingirai, 2003). However, even with the critiques, there exist several successful examples even though not fully fulfilling the expectations of the model. For example, Il Ngwesi Conservancy is among the success stories of wildlife conservation projects in northern Kenya (Homewood et al., 2012). The main motivation to the establishment of these community-based conservancies is to generate a new form of revenue, employment and other auxiliary benefits from tourism investments (Nelson, 2012). For example, in a study carried out to determine the social-ecological change in northern Kenyan Conservancies by comparing three conservancies in Laikipia with a few non-conservancy communities, Glew et al. (2010) found that social-ecological conditions in general, and specifically grazing, have improved, sources of income at community level increased and that conservancies contributed positively to security and health.

This study looks beyond the social-economic and ecological benefits derived from collective conservation initiatives in northern Kenya and focuses on largely neglected factors that are important in the analysis of CBC: governance structure, gender representation, organization and practice of planned grazing, and stakeholders' roles and interests. Several concerns emerged such as the co-existence of pastoralism and wildlife conservation, the role and involvement of the youth and women in conservation initiatives in the patriarchal pastoralist society, and how to address the continued violent conflicts over grazing land and raiding with the neighbouring communities.

This study, therefore, has four specific objectives:

1. Investigating the social, economic and ecological benefits of Il Ngwesi Conservancy to its members;
2. Characterising the institutions and the governance structure in Il Ngwesi Conservancy;
3. Assessing the role and participation of women in conservation efforts in a patriarchal society; and
4. Identifying the concerned stakeholders and their interests in the management of Il Ngwesi Conservancy.

To achieve these results, both qualitative and quantitative research methods were used. The research was conducted in seven villages in Il Ngwesi group ranch: Sanga, Lokusero, Leparua, and Nandunguro which are within the group ranch, and Ethi, Chumvi, and Ngarendare which are outside the ranch on privately owned lands (Figure 1). Interviews were conducted in Kiswahili with few respondents opting to use their local (Maa¹) language, which was later translated by a research assistant.

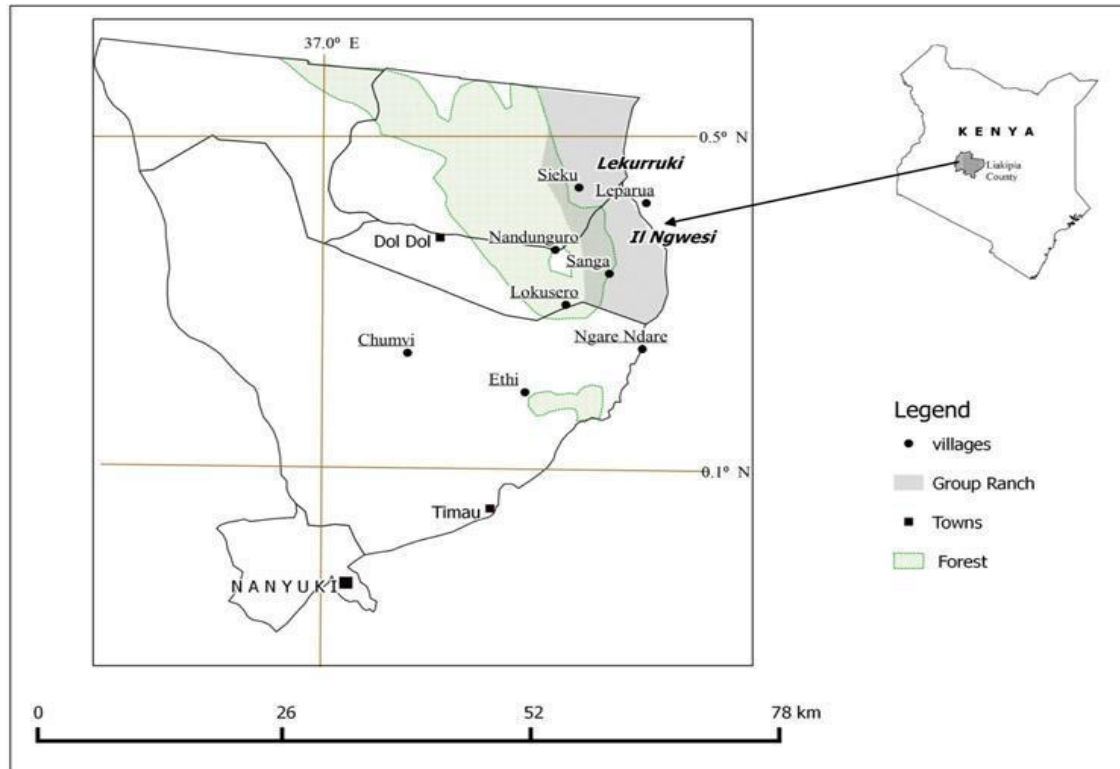


Figure 1 Map of the villages outside and inside Il Ngwesi group ranch (Source: Gaitho, 2004:13)

The overall structure of the study takes the form of four chapters. In this chapter, I have started by establishing the background information of the study by giving a brief synopsis of literature on community-based conservancies in northern Kenya and outlined the study objectives. In the rest of this chapter, I continue by laying out the theoretical dimensions of the research, looking at the concept of the “new commons” and “co-management”. Chapter two presents the study area, a detailed synopsis of the research methods used, the limitations of the research and the demographic characteristics of the households interviewed. The history and establishment of Il Ngwesi Conservancy including the Il Ngwesi eco-lodge and the rhino sanctuary is presented in chapter three. Chapter four presents the social, ecological and economic benefits derived from the conservancy. Additionally, the

¹ Maa is an Eastern Nilotic language spoken in Southern Kenya and Northern Tanzania by the Maasai people, numbering about 800,000 (https://en.wikipedia.org/wiki/Maasai_language).

institutions, the governance structure, and the stakeholders involved in the management in Il Ngwesi Conservancy are presented in chapter four. Finally, the last chapters present the conclusion and references respectively.

The “new commons” and “co-management” approaches mainly guided this study and its methodological design. In the following, I briefly explore into these approaches that relate to the management and governance of natural resources.

1.1 The new commons

Over the past two decades, literature on common pool resources and common property has grown quickly (Ostrom et al., 2002). In her 1990 book, Elinor Ostrom proposed that people or communities can manage common pool resources sustainably under certain circumstances (through, for example, the evolution of institutions), thereby offering an alternative to Garret Hardin’s ‘tragedy of the commons’ theory (Hardin, 1968). Previous empirical research on commons focused on participation, indigenous knowledge, and political ecology has encouraged co-management programs by governments (Ascher, 1995; Bromley, 1992; McCay and Acheson, 1987; Peters, 1994.). Community participation in control over resources and sharing of their benefits led to a resurgence of interest in community and communal management which contributed to the growth of the New Commons (Agrawal, 2003).

According to Agrawal (2003), the new commons are as a result of governments working to decentralise power to the local users. That is, the local communities have partial control over the natural resources and own shares of benefits from state projects through co-management programs. Conversely, Hess (2008:1) defined “new commons” as “various types of shared resources that have recently evolved or have been recognized as commons. They are commons without pre-existing rules or clear institutional arrangements.” In her contribution, she gives examples of new commons as new institutional arrangements within traditional commons which include forests (Ghate, 2000); grazing (Brown, 2003; Williamson, et al., 2003); land tenure and use (Olwig, 2003; Schmitz and Willott, 2003); and wildlife (Popper and Popper, 2006). Some of the new commons have been recreated using new technologies, therefore, a need for the local communities to use renewed processes of participatory self-governance. Additionally, sustainability is necessary when dealing with new commons for sustainable management and preservation of a resource (Hess, 2008:39). According to Bollig and Lesorogol (2016:667),

“these new commons are characterized by the emergent character of institutions. They are shaped by continuous negotiations between state agents and local actors and among local actors fostering new ideas of sharing. New commons also necessitate

negotiations of the relations between older, traditional forms of commons management and more recent forms.”

Based on that, Bollig and Lesorogol (2016) identify two types of new commons in pastoral Africa. These include the bottom-up: re-asserting commons/open access and top-down: co-managed pastoral commons.

1.1.1 Bottom-up: re-asserting commons/open access

Galaty (2016) states that a dynamic model of property is needed to describe the conditions under which land claims and land use are progressively evolving between common, private and public holdings. In his contribution, Galaty reported that pastoralists in many regions of Eastern Africa are increasingly re-asserting informal rights over freehold or state lands, thereby restoring the commons. In his review of re-asserting the commons, Galaty (2016) describes cases where pastoralists have reoccupied privately held or state lands, in some cases their informal initiatives in gaining legal title for their communities, whereas in another case the pastoralists living on privatized land return to the communal use of pasture during drought. For example, Galaty (2016) describes how mobility among pastoralists was important during the major 2008/2009 drought in East Africa. During the dry period, people could not exclude others from their land to access water and pasture. This point was well illustrated by one of Galaty's informants who stated that “without rain, no land is private” (Galaty, 2016:724).

1.1.2 Top-down: co-managed pastoral commons

According to Bollig and Lesorogol (2016), the establishment of co-managed commonages have been a distinct policy choice favoured by governments and international donors alike throughout the 1990s and the 2000s. Communal rights for natural resources such as game, land, water, forests, and pasture were reorganized in the context of extensive governmental legal reforms (Roe et al., 2009). In their review of the new pastoral commons of Eastern and Southern Africa, Bollig and Lesorogol (2016:675) identified four factors that contributed to the re-organization of communal resource management in the Global South. These include: (1) adherents to the new institutional economics and affiliated thinkers alleged that a clearer definition of rules regulating the use of common property resources would contribute to more sustainability; (2) proponents of local knowledge emphasized that rural farmers were more capable of cooperative and sustainable management than the state; (3) conservationists hoped that a valorization and commoditization of natural resources would incentivize rural dwellers to use resources more sustainably; and (4) supporters of rural populations and in some cases of indigenous communities found that the co-management of natural resources opened venues for meaningful participatory development between

state and local community. Additionally, in their contribution, Bollig and Lesorogol (2016) argued that emergent forms of global environmental governance shaped the legal changes related to the management of commons. The global environmental governance comprises of international NGOs (e.g. IUCN, WWF), conferences (e.g. United Nations Conference on Environment and Development in Rio de Janeiro 1992), and donor policies (Schneegg and Linke, 2016). The re-organization of the commons is intended to contribute to poverty reduction, rural development, sustainable use and management of natural resources and participation of the locals.

1.2 Co-management

In recent years, there has been an increasing amount of literature about common-pool resources which has shown the various ways by which humans manage and use them (Feeny et al., 1990; Burger et al., 2001; Ostrom et al., 2002; Dolsak and Ostrom, 2003). For instance, Ostrom (1990) argued that the best solution to problems such as access and utilization of common-pool resources is by use of institutions. Institutions establish certain rights of access to the resources to curb overuse and depletion. However, the rules are likely to contribute to depletion of resources if they are not observed or failure in their enforcement. In recent decades, many conflicts over the control of common-pool resources have been caused by centralised governmental structures. Several studies have shown that many local communities with well-developed local systems of land tenure, ecological knowledge and resource use have lost both land and management rights due to the control stated by centralised governments over their localities (McCay and Acheson, 1987; Freeman and Carbyn, 1988; Berkes, 1989; Bromley, 1992; and Ostrom et al., 2002). For example, the establishment of parks and protected areas in Kenya and Tanzania has caused the displacement of local communities and loss of their main resources (Brockington, 2002; Homewood and Rodgers, 1991; Stevens, 1997; West and Brechin, 1991; and Western, 1994).

In efforts to solve or ease these conflicts and promote sustainable resource management, a series of new co-management regimes has evolved over the past decade and a half in settings where neither local resource control nor state control is possible (Spaeder and Feit, 2005). Co-management exist in different forms from informal consultation to full and equal sharing of authority (Berkes et al., 1991). There is no single universally accepted definition of co-management but many (Armitage et al., 2007). The term shares many features with other kinds of partnerships and co-operative environmental governance arrangements involving multiple actors (Berkes, 2002; Plummer and FitzGibbon, 2004). These arrangements include different degrees of power sharing and combined decision-making by the state and the local users of the resources. Berkes et al. (1991:12) define co-

management as 'the sharing of power and responsibility between the government and local resource users'. Similarly, Singleton (1998:7) defines co-management as 'the term given to governance systems that combine state control with local, decentralized decision making and accountability and which, ideally, combine the strengths and mitigate the weaknesses of each.' Even though the stakeholders might have different interest, the main assumption is that power sharing and joint decision making will improve the process of sustainable resource management, thereby improving the livelihoods of the local users (McCay and Jentoft, 1998). A study carried out to assess the impact of co-management intervention on fisheries department in developing countries presented improved resource management (Evans et al., 2011). For this study, co-management involves sharing responsibilities of the management of resources between the government and members of Il Ngwesi group ranch alongside other stakeholders such as private ranches, NGOs, and corporations.

Previous research has established that co-management is, therefore, serving as means of recruiting marginalised communities and organisations in the conservation of resources, while concurrently and secretly designating them to comply with the state rules and regulations. Therefore, it is the means of empowerment of the marginalised community's rights, thus acting as motivation for continuing socio-political struggles (Pinkerton, 1993; Pinkerton and Weinstein, 1995; Usher, 1995; Hoekema, 1995; Goetze, 1998; and Agrawal and Gibson, 2001). However, a few studies have cautioned against seeing co-management as a solution for legality (Jentoft, 2000; Mikalsen et al., 2007). Similarly, Bene and Neiland (2004) argue that the concept of co-management is weak in poverty reduction and empowerment of the marginalized communities. Generally, co-management and decentralization often lead to strengthening of local elite power or state control. In this regard, the exclusion of marginal stakeholders who are poor and politically weak may have negative impacts on equity and community wellbeing, as seen in fishery cases in Bangladesh, Cambodia, Indonesia, and Philippines (Wilson et al., 2006) and in India's Joint Forest Management (Agarwal, 2001; Nayak and Berkes, 2008). Berkes (2009) discusses different aspects of co-management that has emerged over the last two decades. These include co-management as power-sharing, institution building, trust building, process, problem-solving, and governance.

1.2.1 Co-management as power-sharing

Co-management requires arrangements of power and responsibility sharing between state or central government and resource users (Kruse et al., 1998). However, power sharing often becomes problematic between these partners. For instance, the less influential partners are short-changed by the most powerful partners for various reasons (Nadasdy, 2003), but this can be rectified through state legitimization and formalized arrangements.

Furthermore, the power-sharing problem can be strengthened by institution, capacity building and knowledge sharing.

1.2.2 Co-management as institution building

Co-management happens among individuals who represent institutions, thereby, it often includes capacity and institutional building at both government and local levels (Armitage et al., 2007) as well as networking amongst the parties involved (Mahanty, 2002).

1.2.3 Co-management as trust and social capital

Co-management arrangement is not only successful by building institutions but also involves building capital in general (Pretty and Ward, 2001; Plummer and FitzGibbon, 2007). Trust is an important element of social capital that should be developed among the individuals using co-management to solve a problem. The study by Kruse et al. (1998) in Alaska and northern Canada examined the relationship between user involvement and caribou management effectiveness. Their findings were contrary to expectations in that the probability of cooperation did not increase despite the involvement of the direct user in joint management boards.

1.2.4 Co-management as process

Pinkerton (1992) regards co-management as a process rather than an end-point. That is, the groups involved continuously deliberate and negotiate their positions in sharing management rights and responsibilities. Previous research findings have established that the length of time needed for this development process may be quite extensive, perhaps for a decade, as in the case of salmon of the Pacific Northwest (Singleton, 1998) and several examples from the Canadian North (Kendrick, 2003; Eamer, 2006).

1.2.5 Co-management as problem-solving

Co-management has been evolving over time because of the problem-solving process, in which management alternatives are generated. Nevertheless, adaptive management requires cooperation among the parties to reach an agreement before proceeding to problem-solving. Therefore, co-management and adaptive management complement each other. For example, over the past two decades, case studies from Canada and Sweden indicate that co-management as problem-solving allows parties to transfer learning from one situation to another, and progressively tackle more complex problems (Olsson et al., 2004b).

1.2.6 Co-management as governance

Co-management is regarded as a kind of governance in that there is a diversity of partners that include public and private actors, connected through a variety of relationships. This

involves the active participation of the user and problem-solving at the lowest possible level of organization, sometimes called the subsidiarity principle (Kooiman, 2003). Such coordination contributes to the creation of an institutional dynamic appropriate for adaptive co-management and more broadly, for adaptive governance (Folke et al., 2005).

2. Methodology

This section outlines the research methods and techniques used in the study. It begins with a brief description of the study area and then describes how the study area was chosen, the sampling methods, data collection, and data analysis. Further, the socio-demographic characteristics of the household sampled are presented. The section concludes with a few methodological limitations.

2.1 The study area

Il Ngwesi Group Ranch² is a Maasai-owned and run ranch in Laikipia District covering 8,675 hectares (Il Ngwesi, 2010). It is located in the northern lowlands of Laikipia district. The ranch borders Borana ranch, Lewa wildlife conservancy, and Lekurruki community ranch (Figure 2). Additionally, it is one of the nine locations that make up Mukogodo division. The Maasai who live in Il Ngwesi are predominantly pastoralists, however, they also practice agriculture on the land set aside for settlement and land bought outside the group ranch. The group ranch members, totalling about 8,000, set aside 80% of the land for wildlife conservation and the remaining percentage for settlement (Figure 3). This decision was made in 1996 when the Il Ngwesi eco-lodge was established, and it was a borrowed idea from the neighbouring Lewa Wildlife Conservancy (LWC)³. As one interviewee said: “one of the owners of LWC approached us the elders of Il Ngwesi group ranch and told us to start a tourism business because our area was a tourist attraction centre. The tourists could be taken around the hills and see the wildlife and pay some money which could be of benefit to our members”.

² A group ranch is a livestock production system or enterprise where a group of people jointly own freehold title to land, maintain agreed stocking levels and herd their livestock collectively which they own individually (Ministry of Agriculture, 1968).

³ Interview with the Community Liaison Officer of Laikipia Wildlife Forum on 29th August 2016. He is also a member of Il Ngwesi group ranch and was a board member of the group ranch committee from 2002 to 2010.

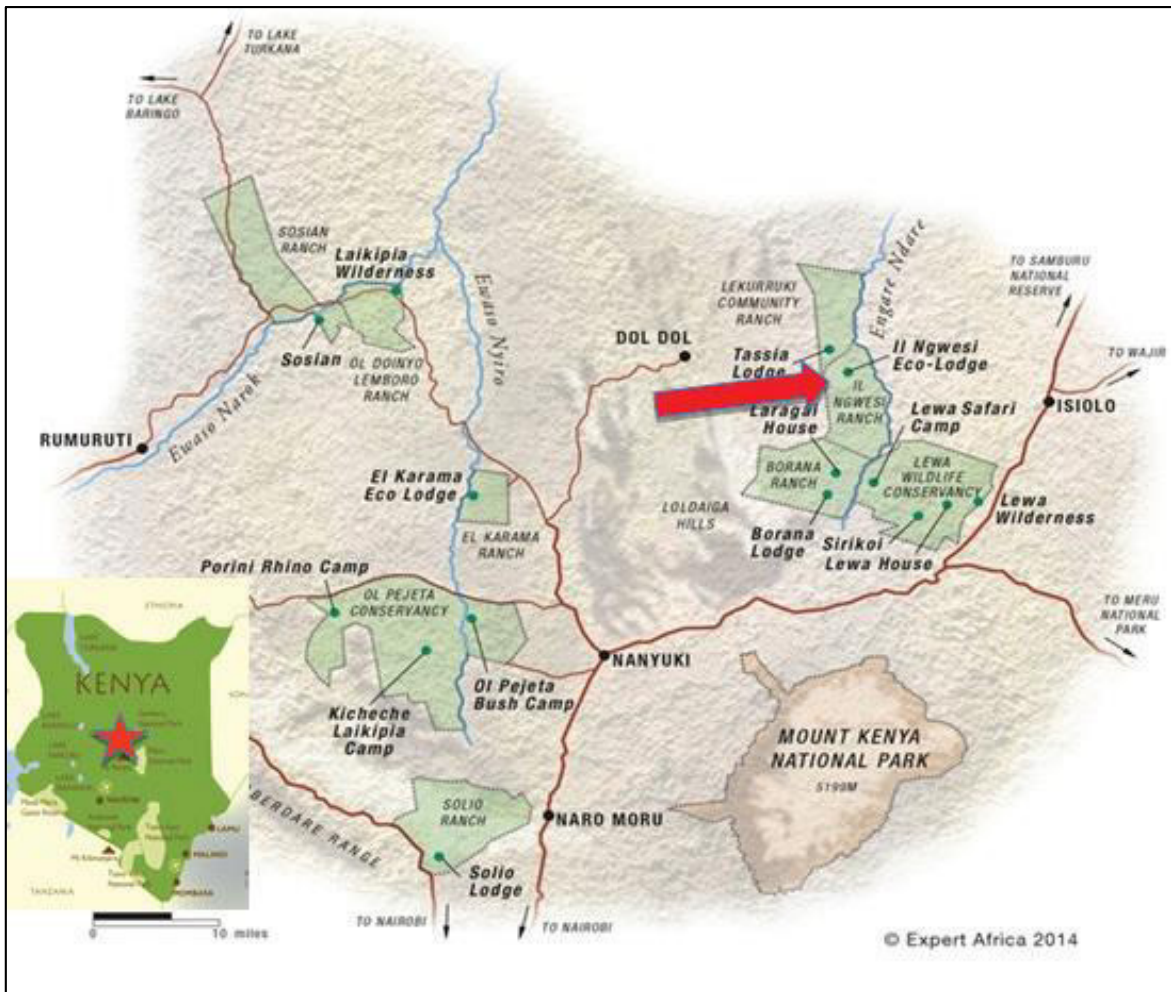


Figure 2 Map of the study area (Source: Expert Africa 2014⁴ cited in Moiko 2015:5)

2.2 Sampling techniques and sample size

The villages within the group ranch are mostly made up of small traditional huts constructed from clay, grass and old iron sheets. These huts accommodate five to ten family members. On the contrary, villages on private land are mostly made up of semi-permanent houses constructed from stones, bricks, cement and iron sheets. The households were randomly selected from a list of 6000 registered members⁵. Random sampling was used because it eliminates bias by giving all individuals an equal chance to be chosen (Bernard, 2006). Thirty-five households were selected from the seven villages for questionnaire interviews at the rate of 5 households per village. A household included the household head, two or more people related by blood or marriage and who eat from the same pot. Most of the informants were male household heads, with few cases of female-headed households, both of whom were widows. In some cases, especially when the male households were out grazing, I

⁴ <https://www.expertafrica.com/kenya/laikipia/reference-map> (accessed September 10, 2018)

⁵ The list of group ranch members was provided by the group ranch manager during a meeting at IMPACT office in Nanyuki on the first day I arrived in the field.

called back to check on their availability for the interview, but due to prolonged absence of some, I decided to interview their wives. The information obtained from the households was obtained by administering questionnaires. Additionally, I interviewed twelve key informants who were mainly the board members, committee chairpersons, secretaries, treasurers, and elders. My assistant informed them prior to our visit through a phone call for their availability when we visited.

2.3 Data collection

This study was conducted for a period of two months between August 2016 and September 2016. To achieve the objectives of the study, a selection of qualitative and quantitative research methods was used to gather the data. These included participant observation, household surveys, key informant interviews, informal interviews and conversations. A desk review of relevant literature was also conducted before starting the fieldwork. Relevant literature on the management of natural resources in Laikipia county in general and on Il Ngwesi was also reviewed. I gathered a lot of information through informal interviews and conversations, like a story of when the neighbouring herders, Samburu, camped in Il Ngwesi group ranch's core conservation area with their livestock, in 2013. This in turn resulted in violent conflicts between the two communities that led to the loss of both human and livestock lives. Informal conversations were mostly with my research assistant as we made transect walks across the villages and some elders whom we met at different shopping centres in the evening while we drank a cup of tea. In one interesting encounter, my assistant and I met an elder who was willing to tell the story of the transformation of Il Ngwesi since the formation of the conservancy. Villagers know him as one of the founders of Il Ngwesi conservancy. I later learned that he was one of the elders who was consulted by one of the founders of LWC (Ian Craig) in the early 1990s to start wildlife conservation on the group ranch land. Similarly, I obtained information from women and girls from my host families on the days that I spent my nights in the village. We were engaged in story telling before we slept, and I collected a lot of information from those informal talks. These included a story of how the family (the one that accommodated me in Ngarendare) had to move away from Nandunguro village to Ngarendare because of insecurity through raids by the Samburu. The family had lost over one hundred goats to the raiders and that prompted them to relocate before any of their family members lost their lives too.

2.3.1 Participant observation

Participant observation involves going out and staying out, learning a new dialect of a language you already know, and experiencing the lives of the people you are studying (Bernard, 2006:344). Participant observation requires an individual to establish rapport so

that they can internalize what they have seen and heard and put it in writing. This approach was applied throughout my study. For instance, I made transect walks and “*boda-boda*”⁶ drives around the conservation area and within the villages. This enabled me to observe the landscape and the land use management of the people of Il Ngwesi and to make notes and recordings during informal interviews and conversations along the way. Furthermore, I could take pictures of the cultural bomas⁷, wildlife and any other interesting features that was relevant to the study. My ability to speak the local language (kiswahili) enhanced my rapport building and helped me to gather more information. Throughout the study, I could greet and thank my respondents in their local language (Maa) with words like *supa* (hello), *Olesere* (goodbye) and *ashe oleng* (thank you very much) and they were thrilled.

2.3.2 Key informant interviews

Semi-structured interviews were conducted with key informants to generate a detailed understanding of the management and governance of natural resources in the group ranch. During the research period, twelve key-informant interviews were conducted. The interviews targeted the leadership of the group ranch, community trust, the grazing program, the business enterprise, the lodge and the Mukogodo forest association. The focus of the interviews was to assess the institutions and governance structure in Il Ngwesi group ranch as well as identify the major stakeholders involved in the co-management of the group ranch. Key issues discussed included the history of the creation of Il Ngwesi conservancy and the eco-lodge, the grazing management plans implemented, the committee attributes, the management of community development projects, the involvement of women in conservation activities, and the challenges encountered. Representatives from immediate stakeholders (NRT, LWF and the county government) were also interviewed. The latter interviews were done to identify their role and interests in the conservation efforts of the group ranch.

For example, the father of my assistant, Mzee Tema, was one of my key informants and a well-known person in Il Ngwesi whom many informants had already referred me to. Mzee Tema chairs the peace committee during conflicts amongst the members and in the case of clashes with other external communities, such as the ongoing conflict over pasture between the neighbouring Samburu community and the Il Ngwesi group ranch members. The conflicts over pasture have developed to violent raids, thereby creating enmity between

⁶ Boda boda are bicycle and motorcycle taxis commonly found in East Africa. They are cheap and efficient means of transport. <https://www.citylab.com/transportation/2016/03/the-love-hate-relationship-between-east-africa-and-its-two-wheeled-taxis-boda-bicycle-motorbikes/472212/> (accessed May 8, 2017).

⁷ Cultural boma is a Maasai settlement or compound, mostly constructed from wood and thatched with a mixture of cow dung and mud for tourist attraction. This is done by the Maasai women through which they can sell their beadwork to the tourists and perform traditional dances.

the two communities. Mzee Tema is married to three wives who live in three different villages within Il Ngwesi conservancy. The number of wives and the spread of geographical coverage spanning several villages within the conservancy adds some symbolic capital to Mzee Tema, which amount to a lot of respect by members of Il Ngwesi and a sign of his wealth. We could not get hold of him over the phone to make a formal appointment, but we were lucky to meet him randomly at the shopping centre during our daily walks. His son (my assistant) introduced me to him in their local language (Maa). Working with his son as my assistant gave me an upper hand to have the chance to interview him at the market. I conducted my interview in his old land rover under a shade at the market. In addition, I also obtained valuable information about the group ranch and conservation initiatives from the group ranch manager (Patrick Leresi) and the lodge manager (James Kasoo). The chief security officer at the lodge in charge of supervision of the rangers also provided information on daily wildlife monitoring reports and records of the human-wildlife conflicts noted by the rangers. The lodge is also involved in various social activities that are meant to boost the welfare of the adjacent community members. An interview with the treasurer revealed several of these activities including a bursary program through which the lodge allocates school funds to needy students.

2.3.3 Questionnaire survey

A questionnaire was used to collect information from the respondents selected from the households. The length of administering the questionnaire varied depending on the amount of information each respondent could offer. A verbal consent was sought first, and the respondent assured that the information they give would be confidential and not shared with anyone. Notes were taken during the interview and most of it was also recorded with the consent by the interviewee. The recordings helped fill the gaps in the notes during data analysis. The questionnaire consisted of various surveys that included the demographic data, the number of livestock owned, acreage of land owned, the length of stay at the current residence, the main source of income, agricultural productions, opinions on the management of the conservancy, socio-economic benefits and losses suffered by the household since the establishment of the conservancy. In addition, the household involvement with conservation activities and decision-making processes during the Annual General Meetings (AGMs) was inquired.

2.4 Data analysis

The results gathered from the questionnaires and interviews developed the basis for the study. Qualitative data from participant observation, interview transcripts and questionnaires were reviewed to find the main themes. The following themes were coded

from the review: 1) History, location, population, and the landmass of the conservancy, 2) Social, economic and ecological benefits, 3) Institutions and governance, 4) Stakeholders and their interests, and 5) Gender and conservation. Descriptive statistics were generated to define the occurrence of various variables analysed. Qualitative data that could not undergo quantitative analysis were presented as narratives to confirm the descriptive analysis. Data that were collected using interviews with key informants and representatives from various partners were also presented as narratives.

2.5 Socio-demographic characteristics

Questionnaires were administered to the household heads of the selected households and they sought to obtain various data, including demography, number of livestock belonging to the interviewed households, household land ownership, the length of stay at the residence (to understand possible migration), the main source of income, agricultural production, opinions on the management of the conservancy, and the benefits households get from the conservancy. Some of the demographic characteristics considered at the household level included age, gender, marital status, occupation and the levels of education.

2.5.1 Age and gender

Age and gender were significant factors considered by the group ranch members to determine the membership to the group ranch. Of the household heads interviewed, the age ranged from 25 to 70 years and the majority were men, who accounted for 71.4% of the total sample. This bias may be due to the patriarchal system of the Maasai people where women are subjected to inadequate and unequal access to resources. However, male domination was mostly because of the objectives of my study, which mainly focused on the management of the group ranch and the conservancy. Thus, the women had limited knowledge of the issues involved because they were underrepresented in major decision making. When asked about their ethnicity, 90% of the respondents reported being Maasai while 10% distinguished themselves as Laikipiak Maasai.

2.5.2 Marital status

From the data collected, 94% of the respondents were married and 6% were widowed. The family size ranged from 1 to 11 people and the average was six. This mostly comprised of two adults and four children per household out of which two were attending school. Most of the households were sedentary, that is, they had lived at their present location for more than 10 years. Amongst those interviewed, 70% indicated that they had lived on their current resident land since they were born, which was common with members who lived on the communal land. However, the minority of the respondents who indicated to have migrated

to their present land included those who bought land away from the group ranch and those married into families of members of the group ranch.

2.5.3 Level of education

Regarding education, 57.1% of the respondents lacked formal education, 28.6% had attained a primary level education, while 14.2% had secondary and college level education. There was lower literacy level among women as compared to men. This is because women in pastoralist communities are often valued in terms of the wealth they bring to their families as dowry and known to stay home to take care of the family. At least, out of the 42.8% literate respondents, the majority were men and young women. This is attributed to the cultural norms, religious beliefs and practices of the Maasai community, which limit the enrolment of women in schools. Such practices include female genital mutilation and forced early marriages. Additionally, inadequate education facilities in Il Ngwesi before the establishment of the conservancy contributed to these low levels of education. However, this has changed and there are at least three to four school-going children in each household sampled. This is because of the establishment of nursery, primary and secondary schools in Il Ngwesi through donor support, the county government programs, neighbouring conservancies support, and the group ranch conservation initiatives. The change of attitude towards education is important for conservation strategies because, with improved literacy levels, the group ranch members will be able to understand ownership rights and understand information on how to diversify their livelihoods as well as embrace tourism opportunities.

2.5.4 Number of livestock

The study sought to find the number of livestock each household owned. Interestingly, most households owned large stock of sheep and goats as compared to cattle. For instance, of the households surveyed, the livestock species kept included cattle (12.6%), sheep and goats (87.2%), and donkeys (0.2%). This is attributed to the significant cattle loss the community suffered during the severe drought in 2009. Most of them did not restock cattle when the drought period ended. The sheep and goats are preferred because they are known to be drought and disease resistant and they consume less pasture during the dry periods. Furthermore, they can be easily sold to generate money to buy food and other basic needs for the herders' household. These results are consistent with those of Opiyo et al. (2015) who did a study among the Turkana pastoralist of Northern Kenya and found that almost 53 % of the households surveyed kept a mix of livestock species that included cattle (51.2 %), shoats (sheep and goats) (88.2 %), camels (22.9 %), and donkeys (12.6 %). Thus, sheep and goats recorded a greater percentage as compared to others. From the survey, about 85.4% of the households with higher numbers of livestock live in Ethi, Chumvi, and

Ngarendare villages, which are located outside Il Ngwesi group ranch. A significant proportion of those interviewed had fewer numbers to fully support the needs of their household members. These results corroborate the ideas of Homewood et al. (2012), who stated that among the Maasai, a significant proportion of households in the sampled sites had few livestock to fully support the members of their household and that most livestock were concentrated in the hands of a few. Most of the livestock graze in the settlement area (Figure 3) during the rainy seasons. During the dry season, they graze in the designated grazing blocks in the group ranch and in the Mukogodo forest. The livestock main products include meat, milk, eggs, skin, and blood. Most of these livestock products are consumed by members of the household while surplus products are sold to earn income. A greater percentage (95%) of respondents mentioned livestock products as their main source of income while 5% suggested employment and sale from farm produce.

2.5.5 Size of land

Findings show that four out of the seven villages in Il Ngwesi live on communal land. This includes the 20% of the group ranch land set for settlement and part of the forest land. Those members living in Ethi, Chumvi, and Ngarendare villages have their private land, which is titled. Out of those interviewed in these villages, 66.7% had between one to five acres of land, 26.6% had between seven to nine acres, and 6.7% had more than 10 acres, with the highest land holding being 17 acres. The size of the land determines the availability of pasture, the number of livestock to stock and the likelihood to practice agriculture. For instance, the smaller the size of land, the fewer the number of livestock and limited pasture availability. Thus, in the situation of small scale-holdings, small herds of livestock are kept, and agricultural practices are limited to subsistence production. The number of small-scale holdings is high because there is a continued sub-division of both small and large-scale parcels of land among households for inheritance purposes. However, due to the patriarchal system among the Maasai, the women lack ownership rights over land. Therefore, they lack control over its use, except for widows because the land is left under their control in situations where they do not have a son to inherit it.

2.5.6 Crops cultivated

Other than being pastoralists, the Il Ngwesi people also practice farming. Despite the area being semi-arid, crops are cultivated during the rainy season but with the irrigation system, farming is also done during the dry season. Water for irrigation is drawn from the pipe water project from Mt. Kenya and Mukogodo escarpments. In almost all the seven villages in Il Ngwesi, more than 75% of the households practice small scale agriculture. However, in areas near the forest and within the group ranch, yields are relatively low, thus contributing to low income. This is attributed to increased cases of crop damage by wildlife reported in

the areas. For example, in Nandunguro and Sanga villages, 90% of the households interviewed reported harvesting less or nothing because of crop damage mostly by elephants and baboons. However, households living outside the group ranch on private farms practice small and large-scale farming. Most farming households (95%) cultivate maize, beans, and vegetables for consumption and a smaller percentage of these (35%) cultivate wheat, French beans, potatoes, and onions on a large scale for sale. One informant reported that wheat is usually grown when there is adequate rainfall and availability of ready market. Additionally, hay is also planted for commercial purposes. Therefore, farming contributes to food security and as a source of income to households to complement livestock products among households that practice agro-pastoralism.

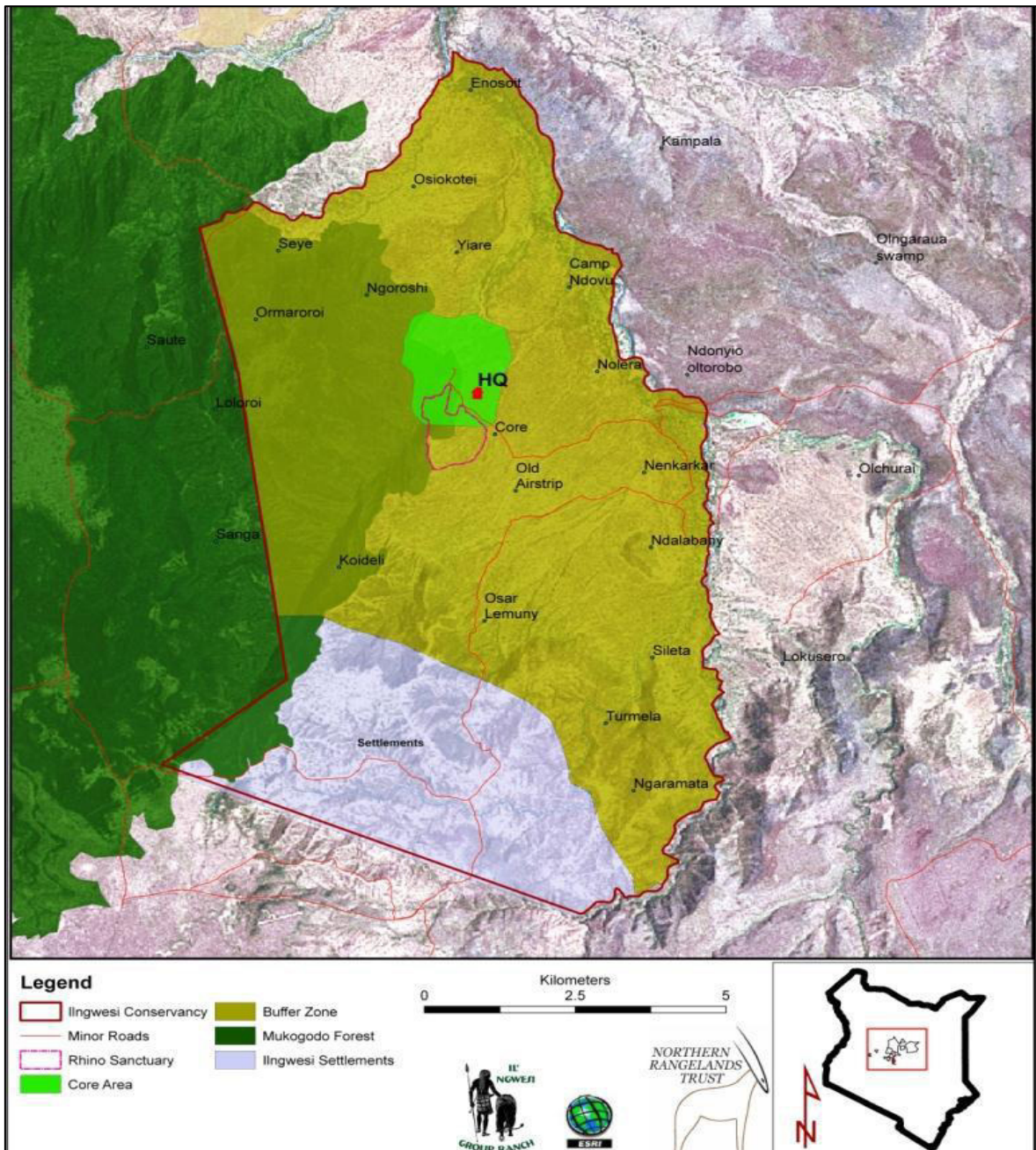


Figure 3 Map of Il Ngwesi group ranch: Core area, buffer zone and settlement area (Source: Shibia, 2011)

2.6 Research limitation

The two-month research period could not allow for a comprehensive data collection on the members' involvement in conservation activities. Because of the short time frame of the fieldwork, I was unable to attend any of the committees' meetings because most of them are held quarterly, and by the time of my study, none of the meetings had been scheduled. Getting hold of all key informants involved in the management of the ranch was not easy because most of them were either out of the country for seminars or within the country but in different regions, some attending various forms of conservation training. Furthermore,

there are gaps to be researched on pasture management (grazing blocks within the conservancy and its relation to the wildlife areas), the role of gender (particularly patriarchy) and conservation, and a comprehensive stakeholder analysis. A comprehensive study entails presence in the study area during both dry and rainy seasons to observe, for instance, how “controlled” grazing is practiced and assess the availability of pasture beyond the protected area. For the case of management within the ranch, more men than women were interviewed. Women are not registered members of the group ranch because they do not have ownership rights to land but acquire the rights from their male relatives as wives, daughters or sisters. Therefore, women are not involved in major decision making during the AGMs, because Il Ngwesi’s constitution stipulates that decision making is done by registered members only. The few women whom we interviewed are the key leaders in the women development projects who have been elected by other women to oversee the projects.

3. History and establishment of a conservancy in Il Ngwesi group ranch

This chapter starts by presenting a brief history of the Laikipiak Maasai and how they transformed from hunter-gatherers to pastoralists and conservationists. Further, this section discusses how the Il Ngwesi Conservancy was formed as well as the establishment of the Rhino sanctuary and the eco-lodge.

3.1 Time, space and people: From hunter-gatherers to agro-pastoralists to conservationists in Mukogodo Division

Written sources about the Mukogodo Maasai (Cronk, 2004:58) indicated that they transformed from being hunters and gatherers to primarily being pastoralists (and agro-pastoralists) between 1925 and 1936. Additionally, Cronk (2004) mentioned that the transformation was linguistic, as the Mukogodo came to speak the Maa language. During the period as hunters and gatherers, they had a totally different lifestyle compared to their current one. For instance, they paid bride-wealth with beehives (Cronk, 2004:15). However, when they became pastoralists, bride-wealth was paid with at least a sheep and a cow. During these customary ceremonies, the mother-in-law was given the sheep while the father-in-law received the cow along with many other goods that were negotiated as settlement for the bride. Colonialism led to the massive displacement of native communities and consequent expropriation of lands, which were then converted into White settler farms (Cronk, 2002; Hughes, n.d., 2-3). In central Kenya, several groups of people were displaced by the creation of the White Highlands. These people included the Maasai, Kikuyu, Embu and Meru (Cronk 2004:59). The White Highlands were the settlement areas where the Europeans occupied after displacing the communities that lived there. The Kenyan highlands was the best place for the Europeans settlement because of the conducive climate that could support agricultural productivity. The invasion by the British played a major role in forcing the Maa-speaking pastoralist (the Digirri and Il Ngwesi) to settle in the Mukogodo area (Carrier, 2011). According to Cronk (2002:35), the pastoralists were moving because of the pressure caused by the creation of the White Highlands, thus displacing them. Regardless of the mixture of diverse ethnicity, they had common characteristics, which included pastoralism, the Maasai culture, and the Maa language. The Europeans owned most of the grazing lands in Mukogodo. To date, some descendants of European settlers still hold these lands, while others have converted them into private ranches for wildlife conservation. Based on observations, large parcels of land in this region are privately owned by foreigners (*mzungu*), including Lewa and Borana group ranches, which

cover approximately 62,000 and 32,000 acres⁸, respectively. There are also other foreigners who own large parcels within Chumvi and Ethi villages where they practice agriculture and sell pasture to Il Ngwesi group ranch members during the dry period. During the dry period, the private ranches in the region tend to have more pasture. This is because they have fewer livestock on their ranches as compared to the communities surrounding them. For example, during the severe drought in 2009, most of the pastoralists in Mukogodo region invaded adjacent private ranches in search of pasture. Although some of them were forced out by private security guards, the owner of one of the ranches (Borana) decided to come to an understanding to cooperate and work with the herders on how to share the pasture. For instance, during this study, the grazing coordinator of Il Ngwesi group ranch informed of a similar cooperative grazing arrangement between them and the Borana group ranch. The agreement allows Il Ngwesi members to graze a limited number of livestock on the ranch throughout the year. These findings compare well to those found by Lesorogol and Boone (2016) who reported that private land owners grant herders access to pasture during times of stress, particularly drought, something that develops a strong moral imperative. Apart from transitioning to pastoralists, the Mukogodo Maasai also switched from speaking Yaaku to Maa language. The Yaaku language was predominantly suitable for hunters and beekeepers. Cronk (2004) stated that Yaaku includes five words for different types of beehives, one which means “a beehive with three openings and long endings” while in contrast Maa just has one word for a beehive. The Maa speakers referred to the group that settled in Mukogodo area as *Il-torrobo* (Dorobo) but not Maasai. “*Il-torrobo*” is a Maa word which refers to poor people who survive by hunting and gathering, rather than domesticating plants and animals (Cronk 2004). In his contribution, Cronk further wrote that in 1971, a petition was submitted to the Kenyan government by members of an advisory board to the Mukogodo Division authorities, which stated:

“The people of Mukogodo County division be called “Mukogodo Maasai” with immediate effect but not “Ndorobo”- which means homeless people, and that the clerk of the council should take the necessary step to ensure that this change of name is legalised by the Kenyan government” (Cronk, 2004:140).

Today, all Maa speakers living in Mukogodo division are referred to as Mukogodo Maasai and labels like Il Ngwesi, Digirri, Mukogodo, and Mumonyot that existed during the colonial period are fading. From my research in the region, most of them identify themselves as just Maasai while a few elders who still remember the history say they are Laikipiak Maasai rather than Mukogodo. They believe that the Dorobo lived in that area in the past but not in

⁸ Retrieved from https://en.wikipedia.org/wiki/Lewa_Wildlife_Conservancy and https://www.savetherhino.org/africa_programmes/borana_ranch_Kenya (accessed January 19, 2017).

the present time. The name Mukogodo Maasai has no recognition among the people living in the division. However, outsiders, mostly European and American researchers, development workers and visitors often refer to the name.

3.2 Mukogodo forest: “protected area”, grazing blocks, and conflicts over illegal grazing

The Mukogodo forest reserve is in the north-eastern part of Laikipia and north-western of Il Ngwesi group ranch (Figure 1). The forest covers over 70,000 acres and is characterised by wild olive trees and cedar (Carrier, 2011). Instead of being hot, humid and rainy like most forests in Kenya, the forest is dry and unexpectedly cool due to the altitude. The forest is owned by the government but managed and conserved by members of four group ranches that include Il Ngwesi, Makurian, Mukogodo (Kurikuri), and Sieku (Lekurruki) that live in it. The four group ranches/conservancies make up the IL-MAMUSI Community Forest Association (CFA). This arrangement is supported by Roe et al. (2009) findings which summarized efforts in community forestry in Kenya where the option to decentralize rights from the government to communities was made possible by the Forest Act in 2005. The Il-mamusi members benefit from the resources obtained from the forest and maintain a good relationship with each other. Some of the resources include water for both livestock and human, pasture, herbal medicine, firewood, poles for construction and honey. The most common tree found in Mukogodo forest is the wild olive tree locally known as *lorien*. During walks within Mukogodo area, I observed many dry logs uncollected within the forest, which prompted me to ask residents the reason(s) for not collecting them. I was told that not all tree species in the forest could be used as firewood. Women specifically look for the *lorien* tree for firewood. “The wood is preferred for firewood because it burns slowly and with a little smoke”, they said. Other than wild olive, there are other dominant tree species in the forest such as cedar (*juniper procera*), candelabra (*Euphorbia lactea*), and acacia (*Acacia reficiens*) (Cronk, 2004:25).

The forest is a habitat for a variety of wildlife which include lions, elephants, leopards, zebras, giraffes, antelopes, cow-like eland, snakes, and dik-diks, birds, baboons, monkeys and butterflies. According to Cronk (2004:26), rhinos lived in the forest, however, more than thirty years ago, most of them were poached and conservationists removed the few that remained for protection. Elephants can sometimes be very aggressive. In one incident, a man from the neighbouring Lokusero village was killed when he encountered one on his way back home in October 2006⁹. Elephants, baboons, and monkeys also destroy crops. Most Mukogodo Maasai do not engage in intensive cultivation but some families plant crops

⁹ Interview with the wife of the victim who died in October 2006 after an attack by an elephant at Ilpoori (area in Mukogodo forest) on his way home (Lokusero village).

for consumption on small scales during the rainy seasons. No fence is strong enough to keep out a hungry elephant and they often destroy the entire gardens.

Before the formation of the CFA, it was the obligation of the neighbouring communities (Il Ngwesi, Makurian, Mukogodo and Lekurruki) to conserve it. However, upon formation, rules and regulations were formulated by the members of the four communities for the conservation and management of the forest. A management plan was formed by the elected leaders of the CFA to guide the communities that had access to the forest. An agreement between Il-mamusi CFA and the Kenya Forest Service (KFS) was signed in December 2014. KFS required two legal documents from the CFA for them to be legally recognised and given the responsibility to manage the forest. These included the management plan and the agreements signed by all the four group ranches. The mandate of the CFA goes up to the boundary of the forest with the four group ranches. Therefore, any activities happening outside the forest area are handled by the management of the group ranches. The KFS had one employee in Mukogodo forest at the time of this study, who is assisted by an elected community member who assists to coordinate cooperation and good forest management among the four group ranches. This is in contrast with many of the forests in Kenya, which are heavily guarded by forest guards and game rangers. During fieldwork, I did not observe any charcoal burning activities or intense logging from the forest. The members of Il-mamusi have taken up the initiative to conserve the forest because other than benefiting from the forest resources, they have land for settlement and small-scale crop production. Despite their efforts to conserve the forest, few cases of logging and poaching have been reported. In addition, there are conflicts over pasture during the dry period (June to November) because the forest area is the only place that has better grazing land and water at that time.

In the CFA management plan, there are rules and regulations on how to use the forest resources. For instance, the members are only allowed to cut dry trees either for construction or for firewood. They are not allowed to cut down growing trees. In addition, harvesting timber for commercial purposes and charcoal burning is not allowed. Community awareness on the conservation of the forest has increased and the members are aware that if it is conserved, most of them will benefit. Each group ranch has their own management plan, which sets aside specific grazing blocks (zones) in the forest. They also have a grazing committee, which manages the grazing patterns (often rotational grazing depending on the availability of pasture). The only overwhelming problem occurs when members of one group ranch move to the others grazing area. To avoid such conflicts among Il-mamusi members, those with less pasture on their ranch must have an agreement with their neighbouring ranch to graze on their blocks. Recently (early 2016), there was a serious conflict between Il Ngwesi and Lekurruki group ranch members due to unauthorized

grazing. In Lekurruki group ranch, the Samburu herders have invaded their conservation area with their livestock. In doing so, they can access the ranch's extension of the forest where they then graze. The coordinator of Il-mamusi, when interviewed about the issue, said that after grazing all the pasture on Lekurruki block during the dry period in the previous year (2015), the Samburu herders forcefully invaded the Il Ngwesi block without any agreement or permission. This led to clashes between members of Il Ngwesi and the Samburu, which resulted to what some describe as a permanent enmity with their neighbouring group ranch. The conflicts have been ongoing and in June 2016, a peace committee was formed to help resolve the issue. Elders and leaders from Il Ngwesi and Lekurruki ranches met to discuss ways to stop the Samburu from invading their grazing lands. At the time of the study, the peace committee meetings were still ongoing because no reasonable agreement had been found.

NRT, LWF, Borana Conservancy, and LWC have partnered with Il-mamusi CFA to strengthen efforts for conservation and management of Mukogodo forest. The partners work together with the members of the four group ranches that access the forest. Regarding the cooperation, the Borana group takes the vice chair of the committee while a representative from Lewa is appointed the treasurer. LWF and LWC work on getting donors to fund the conservation of the forest while NRT supports the capacity building within the group ranches. In addition, NRT attempts to promote peace and whenever cases of conflicts arise, it tries to find an agreeable solution. The main goal of the stakeholders is to help CFA "develop resilient community conservancies to improve people's lives and maintain peace while sharing resources and conserve the forest resources"¹⁰.

3.3 Il Ngwesi Conservancy: A borrowed idea

Il Ngwesi group ranch is one of the several registered communal land holdings in Laikipia county. This land tenure system gives ownership and management rights over designated communal territories to registered group members (Kenya Law, 1968). The idea of wildlife conservation was started by the neighbouring LWC. Before the establishment of the conservancy, Lewa downs was a cattle ranch for over 50 years¹¹. Ian Craig, who was one of the owners of the ranch, had a passion for wildlife conservation and he convinced the other foreign owners and founders to convert the cattle ranch into a conservancy. In 1983, a small sanctuary named Ngare sergoi was established at the western end of Lewa downs by the white settlers who funded the conservation program (LWC, 2003). Therefore, in

¹⁰ Retrieved from <http://www.laikipia.org/il-mamusi-a-forest-board-recommits-to-mukugodo> (accessed April 4, 2017).

¹¹ Retrieved from <http://www.eyesonafrica.net/african-safari-kenya/lewa-wilderness.htm> (accessed January 23, 2017).

1994/1995, Ian Craig approached elders of Il Ngwesi group ranch with the same idea of starting a conservancy on their group ranch. This idea was received with a lot of resistance because members of Il Ngwesi group ranch are pastoralists who entirely use their land for grazing. Additionally, members of the group ranch were suspicious of him, some already started spreading rumours that the *Mzungu* (white man) wanted to grab their land just like the other white settlers during the colonial period. They had such perceptions because history has it that the white colonial settlers or their descendants own all the big ranches surrounding the Maasai community. Consequently, it took Craig close to two years to convince members of Il Ngwesi group ranch to start the conservancy. This included taking few members of the group ranch and elders to Maasai mara national reserve to see how wildlife-based tourism and conservation was generating income for the communities. KWS also added its weight to the idea, seeing it as an important strategy for wildlife conservation. This is because in Kenya, it is estimated that 65% of wildlife is found outside protected areas on land that is either individually or collectively owned through private or group ranches (Western et al., 2009). Eventually, after a lot of meetings and awareness programs, a bigger percentage of the members of Il Ngwesi were convinced to try the idea.

3.4 Il Ngwesi Eco-lodge

The creation of Il Ngwesi eco-lodge was mainly motivated by the tourism market and the large wildlife population found on the group ranch land. Consequently, KWS and LWC were ready to financially support members of the group ranch if they were willing to establish a conservancy. At first, there was resistance from some group members who argued that they would lose their grazing land if a conservancy was to be formed. Additionally, some claimed that the elders from the group ranch who had accepted the idea would at some point sell the groups land to the *wazungu* and use the money for their personal gain. Therefore, several AGMs were held to consult all the members regarding the establishment of the conservancy. Eventually, after much consultation, most members voted for the idea while a handful remained undecided. In 1996, the Il Ngwesi eco-lodge was established as an additional resource for income generation through funding from KWS under a program called Conservation of Biodiversity Resource Areas (COBRA)¹² (Wijk et al., 2015). Additionally, more funds came through USAID and well-wishers with LWC being their main supporter. Out of the 8, 675 hectares of the group ranch, the lodge only occupies 500 hectares. The eco-lodge is located on the edge of the Mararoi hills close to the Ngarendare river thus providing an outstanding touristic view. It is made from local materials and started as a self-catering camp where tourists would get rooms for accommodation and they would

¹² Retrieved from http://pdf.usaid.gov/pdf_docs/PDABR137.pdf (accessed January 25, 2017).

come with their own food to cook in the kitchen. At the initial stages of operation, the eco-lodge had four cottages, a dining area and a kitchen. The eco-lodge was constructed by members of the group ranch, employed as casual labourers. Il Ngwesi group ranch members had little idea of tourism management following the establishment of the lodge. The management team at LWC took the initiative to train a few members as guides and warriors to run the lodge. Furthermore, they helped in the marketing of the lodge by putting it on their website¹³. In 2002, after several workshops and training, the eco-lodge changed into a fully operational facility with six cottages, which can host a maximum capacity of 17 people. Solar systems are used for lighting and water heating. While most lodges in Laikipia County have partnered, or leased their facilities to private sector operators, Il Ngwesi eco-lodge is an exception as it is community-owned.

Il Ngwesi eco-lodge is registered separately from the group ranch because it was created as an enterprise aimed at making profits and it is the main source of income for the community. Therefore, it was registered under Il Ngwesi Company Limited in 1996 with a board of directors to oversee its operation. The tourism activities include game drives, visits to the rhino sanctuary and the cultural boma. For instance, during visits to the cultural bomas, the tourists learn about the history of the Maasai alongside their traditional skills and practices such as hunting and gathering, bee keeping, traditional dance and livestock keeping. Additionally, they learn about the art of beading and they can create their own piece of beaded jewellery. Moreover, they are taken for hiking, camping tours and camel safaris around Il Ngwesi. When tourists are received at the lodge, a conservation fee is charged for any visit to the cultural boma and the rhino sanctuary. This fee is then given to the community trust for conservation and community development projects. For example, \$45 and \$25 conservation fee is charged for every non-resident and resident visitor respectively.

To date, the income generated from tourist related activities at the lodge and funding from donors is used to pay the staff (who are from the Il Ngwesi community), maintenance of the lodge and security operations. At the end of the year, the extra revenue is used to fund a couple of development projects in the community, including bursaries, water projects, and health facilities. The lodge manager receives all the tourists coming to the lodge. Based on observations, during dinner, the manager takes them through all the community development programs to get willing donors to fund them. The programs include the schools, hospitals, Days for Girls (providing sanitary towels to girls and women), maintenance of the lodge and sustainability of the rhino sanctuary. Once donors have been

¹³ Retrieved from http://www.africanspicesafaris.com/il_ngwesi_lodge_lewa_wildlife_conservancy_kenya_safari.html (accessed January 25, 2017).

identified, they are directed to the community trust management. Although foreign donations are welcome and important, the major contributors to the running costs are the NRT and LWC. The group ranch board also ensures that these development projects run effectively by partnering with other stakeholders and individual donors. For example, in the case of setting up a clinic, the conservancy must closely work with the county government for medical supplies and employment of doctors and nurses. The figure below (Figure 4) shows the interior of one of the cottages at Il Ngwesi eco-lodge.



Figure 4 Interior of one of the cottages at Il Ngwesi eco-lodge (Source: fieldwork, 2016)

3.5 The Rhino Sanctuary

In the conservation area, approximately 500 hectares of land was set aside for rhino conservation and a sanctuary was established. A black young rhino was taken away from her blind mother at LWC and hand-reared at Il Ngwesi rhino sanctuary in 1997. She was named “Omni” and she was purchased by a foreign donor who wanted to encourage conservation in Il Ngwesi Conservancy. In 2004, other two white Rhinos were introduced to the sanctuary. Sadly, in 2013, Omni died at the hands of poachers leaving Il Ngwesi Conservancy with the other two that still exist to date. One of the elders narrated how Omni was killed:

“The poachers were not successful because when Omni was shot with an arrow, she ran towards the lodge for security and that is where she died. The poachers, fearing our security guards, did not run after her, so they did not manage to obtain the horns. We conducted a search to find the perpetrators because this incident had a great impact on our conservancy. After the incident, the donor who brought Omni to the sanctuary decided to close the bursary bank account that he had opened for the community, thereby terminating future donations. He was angry with the community whom he accused of not appreciating his effort to encourage conservation” (interview held on 18.08.2016).

When Omni was killed, the government through KWS tried to follow up on the matter, but to no success. Left with no option, the Maasai elders decided to invoke a curse to punish the culprits. Before the curse was sealed, four young men came forward and surrendered fearing the repercussions. Being cursed by the elders among the Maasai community is believed to be effective because when the curse is set, one may lose a close family member, or their lives may be filled with misery. However, once one surrenders, elders may reverse the curse, thereby stopping any possible repercussions. The culprits were later handed over to KWS who took them to court, although they were released after “miraculously” winning the case.

4. Benefits, trade-offs and Governance

This chapter presents the information obtained from the structured interviews, participant observation, and questionnaire surveys. Section one and two presents the social, economic, and ecological benefits of the conservancy to the group ranch members as well as some of the trade-offs because of conservation efforts. Institutions involved in the management of resources and the governance structure of Il Ngwesi group ranch are presented in section three. Section four presents a stakeholder analysis which includes the parties involved, their role and interest in the group ranch's conservation efforts. Finally, this chapter ends with a discussion on the role of women in the conservation activities of the group ranch.

4.1 Socio-economic benefits

The revenues generated from the lodge and other ecotourism activities at the Il Ngwesi eco-lodge have been used to fund various community development projects, as already discussed. For instance, interviews revealed that almost half of the profit from the lodge is set aside for the development projects, while the remaining amount is used for the operation of the lodge and payment of its staff. Revenues generated at the eco-lodge and other tourism related activities are supposed to translate into improvement in health, education, transport and other community facilities however, they may be squandered through poor central, district or community-level governance, elite capture or outright corruption (Thompson and Homewood, 2002; Sachedina, 2008). The Il Ngwesi lodge generates approximately Kenyan Shillings (KES) 9 million equivalent of USD 86,500 gross income annually, with the net profit usually ranging between KES 1.5 to 2 million, which is about USD 14,400 to 19,200 (UNDP, 2012). According to the UNDP report, 40% of the net profit from the eco-lodge is reinvested in community development, while the remaining 60% is used to cover the lodge's operational costs. Other than the revenue from the lodge, partnership with the neighbouring private ranches and other international donor organizations has helped to fund the community development projects. Below are the benefits and trade-offs derived from the establishment of Il Ngwesi conservancy.

4.1.1 Employment

The eco-lodge is the main place that offers employment to the group ranch members. At the time of the study, Il Ngwesi eco-lodge had 38 employees who included rangers, drivers, cooks, guides, an accountant, and the manager. In addition, temporary casual labourers are occasionally hired because of continuing infrastructural projects in the community. These findings are consistent with findings in Botswana and Namibia where it was observed

that 'casual earnings, often match wage income and can in principle benefit most residents' and are important for communities with less options for collective income' (Ashley, 2000; Sebele, 2010). All permanent and casual employees are from the community. However, the accountant is a qualified professional and not a member of Il Ngwesi group ranch. The lodge has a staff welfare committee which addresses employees' issues and they meet monthly to raise their concerns and problems. Interestingly, when I first visited the lodge, on a Sunday, I found all the staff gathered in the common room for a prayer service. I joined them, and we worshiped and prayed together. Thereafter, I got a chance to talk to them. The manager informed me that it was their tradition to meet for at least 30 minutes every Sunday for prayers because "everybody cannot get time to go to their own church outside the lodge". This is because of the unique location of the lodge which is far away from settlement areas or town centres. There are also employment opportunities for the group ranch members at the neighbouring conservancies. For instance, some of those interviewed had jobs at either LWC, Borana ranch or Tassia lodge as tour guides, cooks, drivers or rangers. These employment opportunities are alternative source of income for most households of the group ranch members, thereby reducing the overreliance on livestock.

4.1.2 Diversification of livelihood

Depending entirely on livestock products to support pastoralist livelihood is a great risk. According to Lesorogol and Boone (2016), diversification may be a risk coping strategy for pastoralists' households as they pursue alternative ways to make a living in an increasingly challenging environment. Studies show that pastoralists are diversifying into livestock trade, wages and labour, crop cultivation, conservation and tourism, and commodity trade (Little et al., 2001; Lesorogol, 2008a; Homewood et al., 2009; McCabe et al., 2014). Conservation efforts in Il Ngwesi community motivated members to buy land outside the group ranch as both private and group holdings. Those who managed to purchase their private land can practice agriculture to generate an alternative source of income besides depending on livestock. Most of the members with large parcels of land can cultivate wheat, hay and French beans for sale. During the dry period, they maintain their crops through irrigation because of the availability of water through the community development projects. However, members living in the group ranch land can only cultivate maize, beans, and vegetables on small scale for consumption. They are at a disadvantage to practice large-scale agriculture due to constant crop damage by the wildlife, as well as a limited land mass. Most of them, therefore, seek alternative sources of income like employment in the neighbouring conservancies or nearby towns. Some group ranch members derive income from tourist-related activities such as performances at cultural bomas, sales of beadwork, jewellery, honey and other craftwork (Homewood et al., 2012). However, honey and beadwork

products are not the most sustainable sources of income because they face the challenge of marketing. The market is crowded with similar products because most of the communities in Laikipia County engage in the same activities as an alternative source of income.

4.1.3 Security of tenure

Land is an important asset to any pastoral community; therefore, its security is more critical to their future well-being. This is associated with easy accessibility of grazing land and water for their livestock during the dry period. In the mid-1960s and 1970s, the group ranch concept was implemented in various districts in Kenya and aimed at addressing problems related to sharing land resources¹⁴. Group ranches were the key means through which trust lands in the Maasai areas were transformed to deed holdings with rights and responsibilities of land ownership invested in the members (IBRD, 1977). Therefore, non-Maasai could not be members and it helped prevent encroachment of other ethnic groups on Maasai land. Additionally, the group ranch approach helped prevent allocation of land to elite Maasai or any other group or individual. However, there were conflicts among members regarding stock quotas and sharing of grazing land. This resulted to the subdivision of many group ranches with all registered members receiving equal shares of land and this was achieved with help and approval of the Kenyan government. To date, only a few group ranches exist after the subdivision and Il Ngwesi group ranch is one of them. Therefore, giving part of the group ranch land for conservation and the rest for settlement has helped ensure the security of tenure. Additionally, the members have increased the landscape size by purchasing more land outside the group ranch to reduce the pressure on the conservation area and to increase the grazing space during extremely dry periods. As the former treasurer of the group ranch committee put it:

“To date, the conservancy has bought land outside the group ranch which is communal, and it will benefit the entire community in future. For example, in Chumvi, 100 acres have been bought, in Ethi there are three parcels of land that have currently been put on wheat production and the revenue generated goes to the conservation kitty. Similarly, money from conservation has been used to purchase two parcels of land, one in Mt. Kenya and the other in Aberdare ranges” (interview at Ethi shopping centre, 22.08.2016).

However, the major challenge that the members face is the ownership of the newly acquired land. Most of those interviewed expressed enthusiasm towards the effort to purchase more land for the community outside the group ranch but questions exist over the ownership structure of these parcels of land. There is fear that only a few individuals (mostly those in

¹⁴ Retrieved from <http://www.fao.org/Wairdocs/ILRI/x5485E/x5485e0t.htm> (accessed July 20, 2017).

management and local elites) might benefit from the scheme while the rest of the members gain less. This is because the title deeds of all the parcels of land bought are under the group ranch committee supervision which is entirely comprised of elders.

4.1.4 Access to cattle markets

NRT is working with OI Pejeta Conservancy (OPC) on a livestock program that is focused on improving access to cattle markets for communities engaged in conservation efforts. In this regard, “Linking Livestock Markets to Wildlife Conservation” project was established, and its main aim was to support integrated management of livestock and wildlife in Northern Kenya’s pastoral communities (NRT, 2008). NRT mentions that the project received support from the Globe Foundation¹⁵ and the St. Louis Zoo Friends Association¹⁶. The pilot project was started with members from II Ngwesi group ranch before being introduced to other NRT-member community conservancies (NRT, 2008:6). The project has been successful in II Ngwesi community and other participating communities, therefore, by the time of this study it was still an ongoing project. The members have had increased access to markets and better returns from the sale of cattle through OPC. Additionally, through the project, the cattle can access pasture and treatment of livestock diseases through the quarantine system on LWC. The sales from community cattle are directed into supporting community development projects after individual owners have received their pay (NRT, 2008). The table 1 below shows the number of cattle purchased from II Ngwesi group ranch from 2006 to 2009.

Table 1 Number of cattle purchased from II Ngwesi (2006-2009)¹⁷

| Year | Purchases per year | Cattle purchased | Purchase value (KES) | Average per head (KES) |
|--------------|---------------------------|-------------------------|-----------------------------|-------------------------------|
| 2006 | 2 | 481 | 5,414,617 | 11,257 |
| 2007 | 4 | 321 | 5,445,123 | 16,963 |
| 2008 | 3 | 167 | 3,143,775 | 18,825 |
| 2009 | 1 | 200 | 3,211,200 | 16,056 |
| Total | | 1,169 | 17,214,715 | 63,101 |

¹⁵ The Globe Foundation is a Vancouver-based, non-profit organization dedicated to finding practical business-oriented solutions to the world’s environmental problems. Retrieved from <http://2012.globeseries.com/about/the-globe-foundation.html> (accessed June 12, 2017).

¹⁶ St. Louis Zoo Friends Association operates as a non-profit organization. The Organization offers animal management, wildlife conservation, research, and educational programs. Retrieved from <https://www.bloomberg.com/profiles/companies/0351053D:US-st-louis-zoo-friends-association> (accessed June 12, 2017).

¹⁷ Retrieved from http://global-growing.org/sites/default/files/GGC_Lewa.pdf (accessed July 18, 2017).

Regarding the project, the grazing coordinator gave an example of how the process of selling the cattle is carried out in Il Ngwesi group ranch. He stated:

“What NRT does is that they buy cattle from the members. For example, NRT may send an order to purchase 700 cattle from Il Ngwesi group ranch. After the order is received, members of Il Ngwesi organize an open market day where approximately 2000 cattle are brought and then NRT representatives select the 700 cattle in a random manner without any biases. The cattle are allocated into 15 different grades depending on weight, age and health condition. For example, grades 1-9 refer to cows, bulls and steers while grades 10-15 refer to weaners and calves. For a fact, right now, NRT have the best prices for cattle and all Il Ngwesi members are willing to sell to them. For example, when one sells their cow, KES 1,000(10€) is deducted from the total sum, and this goes to the conservancy. Similarly, NRT gives KES 2,000(20€) for every purchase of a cow or bull, which is taken to the conservancy. Therefore, in total, one cow contributes KES 3,000(30€) to the conservancy, which is channelled to the bursary kitty or to support the community development projects. There is a signed agreement between Lewa and all the NRT-member community conservancies to provide for market for livestock every year. The best incentive is that the best-ranked conservancy in conservation efforts is given more entries of the number of cattle to be bought. For example, in Il Ngwesi group ranch, NRT bought 400 cattle in 2015 and 700 cattle in 2016. The money helps individual herders and contributes to the conservation kitty. It is also an incentive for members to appreciate the importance of conservation. NRT does not fix livestock prices; herders set their prices subject to negotiations while conscious of the fact that the money paid will be less KES 1,000(10€) for each animal sold and aware that NRT will give KES 2,000(20€) into the conservation kitty for each animal purchased”. (Interview on 26.08.2016, at the grazing coordinators compound).

Nevertheless, there may be cases of theft of cattle during sales in open markets, driven largely by the lucrative market. To reduce cattle theft, once NRT makes their purchase, they settle the payment after two weeks, thereby providing a window of time for any emerging cases of theft. If cases of theft are reported, the cattle in question are returned and the owner advised to settle the matter with the complainant. To assure the members of their payments, a card is issued to sellers indicating the number of cattle sold and the amount to be paid. Once bought, the cattle are taken to LWC where they are quarantined for 21 days before being taken to OPC for slaughter. During the quarantine period in LWC, the cattle are grazed and treated against any livestock diseases. This strategy by OPC is a way of reducing rampant cases of cattle raids meant for markets outside the area.

4.1.5 Education

The level of education among the pastoral communities is low compared to other communities in Kenya. The cultural practices among the Maasai such as pastoralism, early

marriages, and moranism¹⁸ have greatly impacted on how the pastoralists embrace education. However, this lack of insight on education is changing among the Laikipiak Maasai in Il Ngwesi community because the members can see the value of taking their children to school. To date, there are ten nursery schools, eight primary and two secondary schools in the community. These include three primary schools and one secondary school in Chumvi village, one primary and one secondary school (form one and two only) in Ethi village and a primary school each in Sanga, Leparua, Lokusero, and Ngarendare. Before the establishment of the Il Ngwesi conservancy, there was no school in Sanga village and the children had to walk to Lokusero primary to attend school. The construction of the primary school at Sanga was a relief to both the parents and the pupils because they would not have to walk more than 10 kilometres through Mukogodo forest to get to Lokusero primary. Furthermore, the long journey through the forest posed a risk due to possible encounters with wildlife such as elephants. For example, an informant told me that at times many children missed school when the only route connecting Sanga and Lokusero was blocked by the elephants.

Access to both secondary and university/college education in Il Ngwesi has become significantly easier because of the provision of bursaries and scholarships. The bursaries and scholarships are funded by the profits from the lodge, support from donors, partners, and the government. The bursaries are for secondary and tertiary education levels with girls being the major targets. This helps to reduce the rate of early marriages in the community. There are leaders selected from each village to keep a record of all students from Il Ngwesi who are enrolled in secondary schools and universities/colleges. From the conservancy's bursary kitty, each student going to secondary school is allocated KES 3,000(30€) and KES 5,000(50€) for each university/college student per year¹⁹. Amongst those interviewed, 70% indicated that the bursary allocation had improved access to secondary and tertiary education for their household. The other 30% reported that such access brought improvement in the education system in the whole community. This was the most important indirect monetary benefit for the households. For example, in 2015 there was a total of 149 bursary beneficiaries for both secondary school and the university/college. This bursary was from the conservancy bursary kitty and it was evenly distributed across all the seven villages with Sanga having the least number of students (15) while Ngarendare had the highest

¹⁸ Moran is a Maa word meaning warrior. Also, called *Il murani* by the Samburu, *muron* by the Pokot and *Ngimurani* or *Ngithorok* among the Turkana (Okumu, 2013). Therefore, moranism is cultural practice where young boys spend most of their time in camps being trained to be warriors.

¹⁹ Interview with the group ranch manager and this information was supported by records from the accountant's office at the Il Ngwesi eco-lodge on 11.09.2016 which showed the amount of money allocated to each student at secondary and university/college level.

number (28)²⁰. However, a small percentage of the members with no children felt that they barely benefited from the program and suggested to be given some of the money directly. Similarly, those with no children in secondary schools or university had the same opinion because some of their children drop out while in primary schools. These findings further support the idea of Castillo (2004) in Homewood et al. (2012:18) that even relatively successful schemes produce thoroughly dissatisfied groups marginalised from lucrative revenue streams flowing past them.

Different stakeholders have supported Il Ngwesi's education program. These include LWC with the Lewa Education Programme (LEP), Borana ranch with the Borana Education Support Programme (BESP) and Laikipia Wildlife Forum (LWF). These stakeholders partner with Il Ngwesi group ranch to support the schools in the community, thereby providing a better future for the youth. For example, Lewa and Borana group ranches offer full scholarships for secondary schools to the three top candidates in the Kenya Certificate of Primary Education (KCPE) from the region. Similarly, in the year 2015, LWF awarded full secondary scholarships to the two top candidates in the 2014 KCPE from Chumvi and Lokusero primary schools²¹. Borana and Lewa conservancies have financed construction of more classrooms, staff houses, toilets and administration offices in Ethi and Lokusero primary schools. Additionally, they also offer support by paying salaries to a few teachers and fencing of the school grounds. Notably, the engagement in conservation has direct educational benefits to the communities involved.

4.1.6 Water Availability

Water is a scarce resource in the semi-arid region of Kenya and a small percentage of the households have access to clean and safe water. In Il Ngwesi, Ngarendare river is the main source of water alongside other seasonal rivers. Since the establishment of the lodge and the conservancy, there has been a notable improvement in water supply in the area. The group ranch partnered with NRT and Kenya's Water Resource Management Authority (WRMA) to set up a water pipe project from Ngarendare river to supply water to the lodge and the neighbouring villages. The NRT financed the project and WRMA carried out water allocation surveys, while members of the group ranch provided the workforce. Throughout the study period, I noted more piped water supply to households, schools, and farms. For instance, there is the Sanga water project located at Sanga primary school. This was a project initiated by the Lewa Foundation Trust and a water tank was constructed to supply water to the school and households. Nevertheless, one resident of Sanga stated that they

²⁰ Data of transaction detail by account for September through October 2015 obtained at the accountant's office at Il Ngwesi eco-lodge on 11.09.2016.

²¹ Archival records from the accountant's office at Il Ngwesi eco-lodge on 27.08.2016.

experienced problems with breakage of the taps by elephants. Despite their efforts to repair the pipes, elephants would still break them. Sometimes their tank is filled with water, but residents cannot access it. Similarly, there is piped water in Lokusero village. The water is drawn from a borehole that was constructed from earnings of the group's conservation efforts. Furthermore, Ngarendare, Ethi, and Chumvi villages have a pipe water project from Mt. Kenya and Mukogodo escarpments. These acts as an alternative water supply to Ngarendare river during the dry period because the water is used for irrigation.

4.1.7 Health facilities

Access to medical care services for the members of Il Ngwesi group ranch is still limited. The members must walk long distances to access a hospital. Malaria, typhoid, diarrhoea, as well as HIV and AIDS are some of the common diseases affecting the members (Il Ngwesi, 2010). Although there is a government health facility in Lokusero, with a nurse and public health officer, accessing treatment is still very difficult for many people within the group ranch. This is because of the poor state of roads and the long distances between the villages. For example, one informant stated that he had a hard time getting medical help when he was involved in an accident with his motorbike. First, it was very hard to get the means of transport to Lokusero dispensary and when he did, the facility did not have the equipment and supplies to treat him. Therefore, he was referred to Nanyuki for further treatment, which he could not afford. Hence, he opted to seek for well-wishers to help raise the money for the treatment. A common view among the key informants was that conservancy vehicles act as ambulances for those unable to afford transportation to the hospital. However, that is not reliable as the few conservancy vehicles available are always busy at the lodge either taking tourists around or doing follow up on livestock lost during a raid.

The group ranch is working closely with LWC and Borana ranch in their mobile health project to improve access to medical care. The project ensures that members from the seven villages are visited by the health workers. They offer health education, family planning, HIV and AIDS counselling, anti-natal care, and immunisation. A malaria awareness program in Il Ngwesi was initiated by the AIDs, Population, and Health Integrated Assistance (APHIA II) program which was funded by USAID and monitored by Family Health International (FHI) (Il Ngwesi, 2010). Through this initiative, awareness, testing, and counselling for HIV and AIDs has increased, as well as reduction of malaria. Additionally, there is the training of community volunteers and planning of outreach events to raise awareness of hygiene and disease transmission. However, there is the need to put up more health facilities and medical staff in the area, and the Il Ngwesi community is seeking the local government's support.

4.2 Ecological benefits

4.2.1 Wildlife conservation

According to the 2013 NRT report, there were over 160,000 elephants in Kenya in 1973 but in less than 20 years, poaching had reduced the population to just 20,000. In 1989, a vigorous anti-poaching campaign was launched and Richard Leakey²² was appointed to head the KWS. Overall, ivory poaching continues to threaten the population of the African elephants. The black rhinos are also being pushed to extinction due to the illegal trade of their horns. According to the 2014 data from the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), elephant poaching across Africa is still at a high rate, with the Proportion of Illegally Killed Elephants (PIKE) at approximately 60%. However, this trend contradicts the situation in northern Kenya because in two years between 2012 and 2014, the PIKE rate has dropped from 81% to 43% (NRT, 2016²³). This significant decrease in poaching is because of the effectiveness of community conservancy rangers, the increased penalties under the new Wildlife Conservation and Management Act (2013) and the ban on ivory trade at the national level²⁴.

Competition over pasture between the livestock and the wildlife is also one of the biggest challenges to the pastoralist communities who share the land with wildlife. However, with the emergence of community conservancies, proper rangeland management practices have been introduced to address the problem. NRT supports about 33 conservancies and each of them supports a range of biodiversity. These community conservancies are changing the perception towards wildlife as wildlife conservation is now viewed as a source of sustainable income. Il Ngwesi is one of the community conservancies, which has placed value on wildlife because their conservation efforts have significantly improved local livelihoods. Historically, Il Ngwesi was the habitat of a variety of species before poaching in the 1970s and 1980s that severely reduced their numbers (UNDP, 2012). Those adversely affected were the black rhinos and the elephants. However, the group ranch manager reported that wildlife species were conserved, and three black rhinos were re-introduced into the group ranch when the conservancy was established in 1996. Il Ngwesi is potentially able to support a much larger rhino population after the establishment of a rhino sanctuary in the conservation area. This has directly contributed to promoting the KWS goal of improving the conservation of the rhino species in Kenya. The group ranch also provides extra security which ensures the survival of the endangered Grevy's zebra that migrates

²² Richard Leakey, is a Kenyan anthropologist, conservationist, and political figure who was responsible for extensive fossil finds related to human evolution and who campaigned publicly for responsible management of the environment in East Africa (see <https://www.britannica.com/biography/Richard-Leakey>).

²³ NRT, 2016. Retrieved from <http://www.nrt-kenya.org/wildlife> (accessed January 19, 2017).

²⁴ Retrieved from <http://www.nrt-kenya.org/wildlife> (accessed January 23, 2017).

through the region from Lewa to the government-run national reserves of Samburu, Buffalo springs and Shaba to the north. The area set for conservation in Il Ngwesi group ranch continues to be a home to other wildlife species such as elephants, giraffes, impalas, and zebras. Predators include lions, leopards, cheetahs, hyenas, wild dogs, and jackal, all of which are central to the ranch for tourism.

NRT introduced the monitoring program in which the rangers are provided with global positioning system (GPS) devices to record the exact location of the sighting of wildlife daily. During their daily monitoring, the rangers can record any cases of human-wildlife conflict which are later reported to KWS. For instance, in Il Ngwesi, there are 18 rangers who have been trained by KWS with the support from NRT. Eight of them have been trained to use firearms and they are backed-up by the mobile rapid-response teams employed by NRT. They provide security for both human and wildlife, patrol and provide information on suspected poachers, do follow-ups on cattle raids and report cases of human-wildlife conflicts. A common view about the rangers amongst informants was that they quickly respond when called upon to help drive elephants away from farms to prevent crop damage. On one occasion during the fieldwork, there was a raid in one of the villages (Nandunguro) and a herd of livestock was stolen. The rangers did a follow-up with the conservancy vehicles for almost a week and successfully recovered the stolen livestock.

4.2.2 Wildlife monitoring

NRT has trained Il Ngwesi conservancy rangers on how to conduct wildlife monitoring. This involves identifying the key species to be monitored and their exact location, the description of which is marked using GPS. Rangers are also provided with a wildlife observation datasheet, which records the exact coordinates and name of the location where the species are found each day. Additionally, any information that might be of interest about the animal is recorded. For example, the health of the animal based on observation, injury or pregnancy, and any other unusual observations. This information collected by rangers is important to show changes in wildlife over time, identify key areas for different species and to help make important decisions regarding wildlife conservation. However, the information might not give an accurate number of wildlife species at a place because of various reasons. These may include a human error in counting, repeat in the count of the same species at different places due to uncontrolled movement, some species hiding during the count, and wildlife migration to and from the conservancy. Some of the key species monitored in Il Ngwesi include giraffes, gerenuks, warthogs, impalas, waterbucks, elephants, lesser kudu, greater kudu, gray's zebra, common zebra, spotted hyena, rhinos, cheetah, elands, wild dogs, leopards, and buffalo.

In all cases, the informants reported that the increase in the number of wildlife in their region, specifically, elephants, was because of improved security and the increase in availability of water and pasture. Indication of increased number of elephants in the conservancy is also illustrated by the increased cases of crop damage reported by members, although this might also be related to the expansion of cultivation, which provides additional sweet fodder for them. However, there are fewer lions in the area because they are frequently poisoned by angry herders for killing their livestock. From the daily monitoring sheets collected for the months of April to August 2016, cases of crop damage, livestock death and injury and human injury were recorded. However, no compensation had been made to the affected households at the time of the study. The rangers also collect information on illegal activities like poaching and raiding as a measure to enhance security within the group ranch.

4.2.3 Rangeland management: core conservation area and the buffer zone

In recent decades, rangelands in northern Kenya have significantly reduced their productivity. This is because of the increase in both human and livestock populations, effects of climate change, and change in settlement and grazing patterns (NRT, 2015). The increase in human and livestock population have increased pressure on the grazing land thus reducing its productivity. This creates a threat to sustainable livelihoods of the pastoral communities as well as wildlife existence. Most of the group ranch members interviewed during this study mentioned livestock as the main source of income for their household. Therefore, it is important to address the needs of both livestock and wildlife for conservation to coexist successfully on the same landscape. NRT with support from USAID implemented a rangeland management program for community conservancies. Il Ngwesi group ranch was one of those incorporated in the plan. The main aim of the program was to improve the traditional methods of rangeland management through rotational grazing, bunched grazing²⁵, land use planning, land rehabilitation and establishing community institutions (NRT, 2015:32). Il Ngwesi group ranch managed to actualize their program, and this helped them to secure a grass bank, which rescues them during the dry periods. Grazing management is practiced in the conservation area and part of the Mukogodo forest (Figure 3).

As the grazing coordinator of Il Ngwesi group ranch explained:

"We always have two seasons, the wet and dry season. We advise members to graze within the settlement areas during the rainy season so that pastures can recover in the remaining area after it has been exhausted of its grass during the dry season. We are

²⁵ Bunched grazing is where livestock are highly concentrated in a designated area for a set period. They are then moved on and the land left to recover. The hooves of the cattle break up the hard pan soil, which helps restore soil nutrients and improve soil structure. This technique is improving the impact of livestock on rangeland health (retrieved from <http://www.nrt-kenya.org/rangelands/>).

now in the dry season, and there is no grass in the settlement area. Most of the livestock are grazing in the conservation area. In the conservation area, there is the buffer and the core zone. The core area is strictly a livestock free zone and it is set aside for the eco-lodge and tourism. It covers 500 hectares which is a small portion (8%) of the conservation area. The buffer zone area is approximately 6,000 hectares and it serves as the grass bank, which is divided into six grazing blocks ranging from 402 to 1,337 hectares. Livestock can graze in this zone in the dry season only after the grass has been depleted in the settlement area. In Il Ngwesi we always have the long rain season, that is November to January, and the short rain season, which is between April and May. Therefore, we “close” the buffer zone, say on 1st December, and possibly open it either in June or July depending on pasture that is still available for grazing in the settlement area. Each block runs towards the bank of the only permanent river (Ngarendare river) within Il Ngwesi, so there is water availability”. (Grazing coordinator, 26.08.2016).

Group ranch members living on forest land have grazing blocks in the forest and additional blocks in the buffer zone, which are utilized during the dry season. For instance, Nandunguro village has ten grazing blocks surrounding the forest and the hills. These blocks are divided as, eight in the forest and two in the conservation area. The village has also set aside 33 hectares of land for planting grass, which is stocked and sold to members during dry periods. The income generated from the sale of grass is given to the community trust to support development projects in the community. Once grown, hay is harvested five times before replanting. Similarly, Sanga village has six grazing blocks in the forest and two in the conservation area. The Photographs below (Figure 5) shows the grass plantation and hay storage in Nandunguro village.



Figure 5 Hay planted in Nandunguro village (Left) and hay storage facility (Right), (Source: fieldwork, 2016)

4.2.4 Managing grass: grazing blocks

Each village within Il Ngwesi has a grazing committee that guides and advice the members on the appropriate time to use the grazing blocks. NRT trains committee members on pasture management practices and how to determine the best time to “open” the grazing blocks. The grazing management component is managed by the Il Ngwesi Community Trust. The grazing committee has five officials and it is headed by a grazing coordinator. The committee often meets on a quarterly basis. During the meetings, the representatives from all the villages report any grazing issues and problems encountered. Before a grazing block is opened, the grazing committee ensures that they have paddocked enough grass to last throughout the dry season (June to November). Therefore, they must come up with a mechanism so that the available grass can last for the six months. For example, the grazing coordinator explained how they go about it:

“We do forage assessment to establish the carrying capacity; we then determine the size of livestock that can graze in that block. For example, if it is 3,000 cattle and perhaps the block has 20% of forage out of the 500 acres of land set for the block, then roughly the cattle can graze for 15 days in that block. After that, they can then move to the next block. This is because we do not allow a block to be completely grazed by livestock but rather a certain percentage of grass is left for wildlife and as land cover. The land cover helps to trap water during rainy seasons and to avoid the top soil being eroded away”. (Grazing coordinator, 26.08.2016).

Block grazing has proven to be a successful land use management practice in Il Ngwesi. It helps in the efficient utilization of grass and livestock can graze for a longer period in the conservation area during the dry periods. It also aids to limit human-wildlife conflict as herders compete with wildlife for pasture and water. When the rainy season begins, livestock is immediately removed and allowed to graze in the settlement area and the cycle continues. Controlled grazing has led to the availability of more pasture for both wildlife and livestock. From the surveys carried out during this study, most informants were familiar with the block grazing practice and they reported to having been informed on when to graze in the blocks and for how long. For instance, one informant stated that they did not have to move their livestock over long distances in search of pasture during the dry periods. This is because they are given a chance to graze in the conservation area which has plenty grass. Block grazing has been practised in the group ranch since 2010 and has been successful until 2014. In 2015, their grazing pattern was disrupted because of conflicts over pasture with the neighbouring Samburu community from Isiolo, who lack a grazing plan. When the dry period started, in 2015, their pasture was depleted, and they illegally grazed their livestock in Il Ngwesi’s conservation area. The grazing blocks at Il Ngwesi provided much grass and the grazing committee had not yet opened the blocks for their members to start

grazing. This resulted in violent conflicts between the two communities, which resulted in the use of firearms. Many people from both communities lost their lives and livestock and a lot of property was lost. To date, there is a form of enmity between the neighbouring Samburu and members of Il Ngwesi. Conflicts over pasture have since escalated to raids between the two communities because the Samburu believe that stealing livestock is the best way to revenge against the people of Il Ngwesi for killing their people and livestock²⁶.

4.2.5 Institutions of grazing

As per the interview with the grazing coordinator, he stated that the grazing committee agreed to put the grazing plan on hold for some time until a lasting solution was reached to stop the Samburu invasions. Part of the solution included talking to the Samburu elders to advise them to initiate a grazing plan on their group ranch. At the time of this study, plans to initiate the peace talks were underway between the two conflicting communities. In such cases where conflicts involve the use of guns, the government is involved in finding a lasting solution. However, if conflicts over use of pasture arise among the group ranch members, they are solved by the grazing committee. Il Ngwesi group ranch has its own grazing bylaws, which were made and approved by the members in 2008 with assistance from NRT (see textbox below).

Il Ngwesi group ranch by-laws 2008²⁷

In these by-laws, “grazing reserve” means any grazing ground which has been established in the Group Ranch as a conservation area (core and buffer conservation areas). The boundaries of the buffer and core conservation areas are cited below;

- a) Buffer conservation area-Nesoit, Ngarendare river, Normaalo foot path, old saekwa manyisho, Murnguti at kolua home, foot path to Ntantariani, top of meneera, ntanatriani, ololotuka, oltamam river to nchoroi, olorkinye small foot path, top of ololdonyio, and rimpe.
- b) Core conservation area-5 square km around the lodge and at no time should cattle graze there unless otherwise decided; it is strictly reserved for wildlife.

Members of the Group Ranch at neighbourhood forum will elect representatives to the grazing committee/Natural Resource and Community Development committee (NRCDC) as cited in article 7.1 of the Group Ranch constitution, who shall be responsible for the management of the grazing reserve. Responsibilities of the grazing committee/NRCDC are as listed below;

²⁶ Interview with the grazing coordinator, who is also one of the members of the peace committee aimed at restoring peace between Il Ngwesi group ranch members and the neighbouring Samburu community members.

²⁷ Retrieved from NRT report (2008:18-21).

- a) Defining sound policies and guidelines in realization of the grazing management objectives.
- b) Facilitate the sustainable use of rangelands so that the functions and values derived from the rangelands resource are maintained for the present and future generations.
- c) Sensitizing and creating awareness of the importance of range management.
- d) Implement grazing bylaws in consultation with the conservancy management and group ranch members and reinforcing the rules set using the penalties established.
- e) Planning the settlement, conservation area and establishing the different grazing blocks. They will make decisions on periods when to open and close grazing blocks, at the same time help in reseeding conservation areas that are infested by *Acacia reficiens* leaving bare land.
- f) Serve as a liaison body between the community and its neighbours in cases when conflicts arise from the utilization of natural resources in the rangelands.

No person shall;

- a) Enter a grazing reserve in possession of a weapon. There is no penalty established however a warning will be given.
- b) Take dogs into a grazing reserve. The agreed penalty is KES. 500(5€).
- c) Start a grass or bush fire in a grazing reserve without the permission of the grazing committee. The agreed penalty is KES. 10,000(100€).
- d) Graze cattle in the grazing reserve before the authorized time by the grazing committee, usually the dry spell. The agreed penalties are; - 1st offense-1 goat/KES. 3,000(30€), 2nd time offense-10 cows/goats, and 3rd time offense-court.
- e) Cut trees in the conservation area or collect firewood/dead trees/Loirugi. The agreed penalty is a goat or KES. 2,000 (20€).
- f) Put up settlements in the conservation area. The grazing committee/NRCDC has the mandate to plan settlements in the Group Ranch. The agreed penalty is KES. 10,000(10€).
- g) Poach or intent to poach in the conservancy. The agreed penalty is KES. 10,000(100€)-50,000(500€) after notifying KWS.
- h) The grazing committee of any grazing reserve may order the owner of any cattle therein who refuses to comply with instructions or these by-laws to remove such cattle from such grazing reserve.

4.3 Governance structure in Il Ngwesi group ranch

The group ranch concept was implemented through Kenya Livestock Development Policy (KLDP) I and II (Kenya Government, 1980). This involved a shift in land tenure from traditional common ownership of the ranch to subdivided holdings each owned collectively by a group of registered members and managed by an elected committee (Galaty 1981, 1994; Rutten 1992; Mwangi 2007a, 2007b). According to Galaty (1994:190), the group ranch concept was established on the assumption that common property led to overgrazing, inefficient use of resources, low levels of investment, and inadequate levels of herd offtake by pastoralists. Il Ngwesi group ranch has used this concept for the governance and management of their natural resources. The group ranch developed a constitution which was adapted at the 2005 AGM of the group ranch (Il Ngwesi, 2005). The constitution was used as a governing document to help in decision-making and implementation processes. The Il Ngwesi constitution specify the structure, membership, legal competence, vision, mission and goals of the group ranch; organs of the group ranch and their functions; funding and financial management; rights, duties, and limitations of members; rules and regulations for governance of resources; and lastly terms and condition in case of dissolution of the group ranch. The constitution also provides details on benefit sharing and gives power of decision-making to the members of the group ranch. The group ranch has provisions for a salaried secretariat including a program manager and support staff who are responsible for carrying out the operations of the Group Ranch (UNDP, 2012).

Il Ngwesi Group Ranch Committee (IGRC) is considered as the supreme governing body that has authority over all activities run in the group ranch. Separately, there is the Il Ngwesi Community Trust (ICT) which oversees security, natural resource management, wildlife conservation and community development projects while, Il Ngwesi Company Limited (ICL) is responsible for the management of the lodge and all tourism-related activities (Il Ngwesi, 2010). The AGM is mandatory, and it creates a forum where the group ranch members interact with the governing institutions. Major decision-making regarding landscape planning, governance, and management of resources in the group ranch are made during these meetings. The process of decision-making in Il Ngwesi group ranch is negotiated and bottom-up thus designed to create as little conflict as possible among its members (Moiko, 2015). An interview with a member of the group ranch committee stated:

“When there is an issue in the group ranch where decisions are to be made, first, it is raised at the village forum level with coordination of a representative from the group ranch committee. In the case where the issue is not resolved, it is taken to the group ranch committee and if not solved, the issue is taken to the joint committee meeting comprising of the three governing bodies (IGRC, ICT, and ICL). This is the final level where the joint committee members make an agreeable decision which is presented to

all group ranch members during the AGM for discussion and approval. However, issues that do not have clear resolutions are not tabled at the AGM to avoid fights among the group ranch members during discussions.”

Figure 6 below illustrates the organizational structure of Il Ngwesi group ranch.

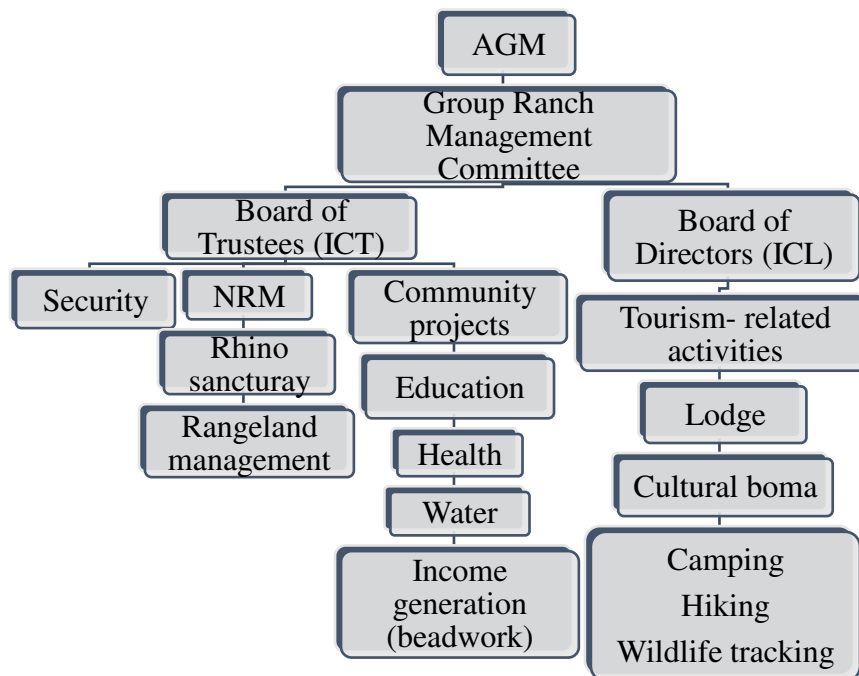


Figure 6 Management structure of Il Ngwesi group ranch (Source: Il Ngwesi, 2010)

4.3.1 Il Ngwesi Group Ranch Committee (IGRC)

The group ranch committee derives its authority from the Group Ranches Representative Act

Cap 276 of the laws of Kenya, which stipulates it as the formal legal organ for group ranch management (Il Ngwesi, 2015). The committee members are elected at the AGM based on an arrangement of at least a representation from each of the seven villages. The Group Ranch Committee (GRC) consists of 10 to 12 people who include a chair, a vice-chair, a treasurer, a secretary, an assistant secretary and five other members to serve for a period of five years and eligible for re-election once (Il Ngwesi, 2005). In the constitution, there is a clause that states: “there shall be gender balance to ensure that women are adequately represented at all levels starting from the village”²⁸, but at the time of this study, there was no representation of a woman on the committee. The GRC is considered the uppermost governing organ which oversee the overall running of the group ranch activities. According to the Il Ngwesi constitution (2005:7), these activities include:

- 1) Serve as the advisory for the other two sub-committees;

²⁸ Unpublished Il Ngwesi group ranch constitution (2005:6).

- 2) Make decisions as will be guided by the two relevant subcommittees;
- 3) The other two subcommittees will report to it;
- 4) Signing of legal documents such as leases and contracts; and
- 5) The custodian of the group ranch assets and properties.

The figure below shows the Il Ngwesi group ranch committee attributes.

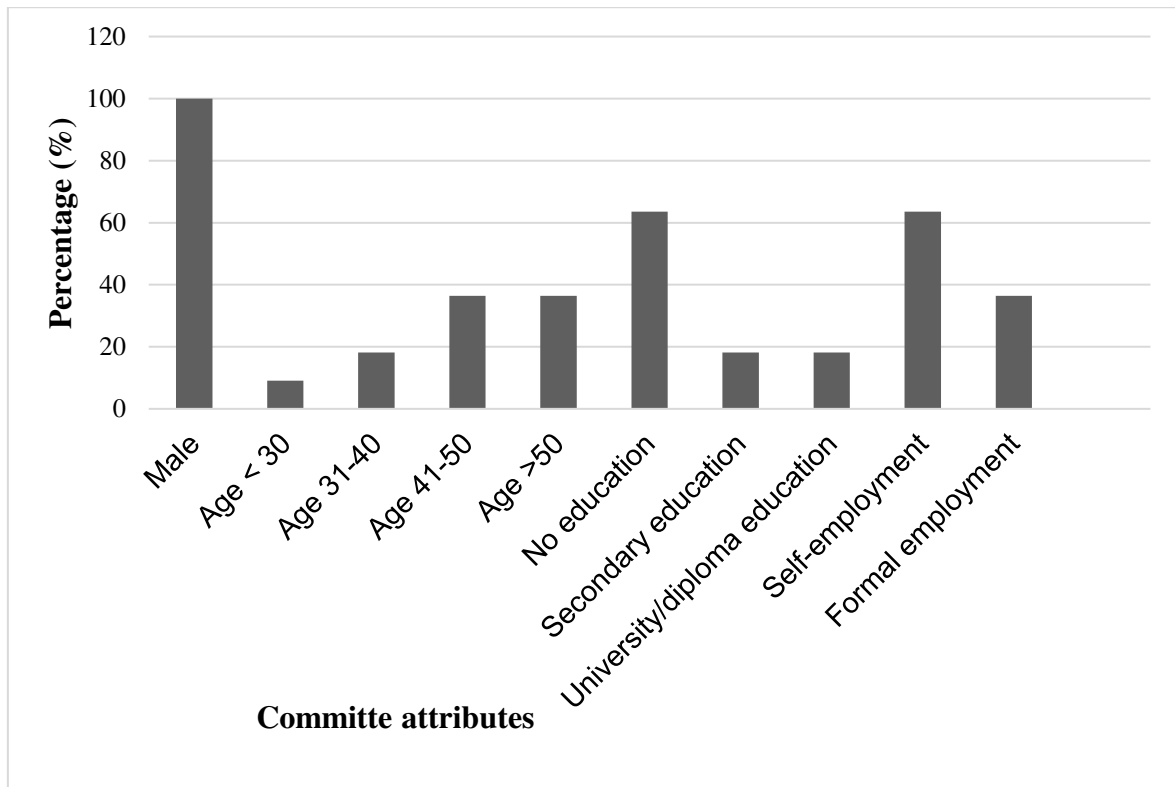


Figure 7 Committee attributes of Il Ngwesi group ranch (Source: author)

These findings compare well to those found by Southgate and Hulme (2000) who did a study in Kimana group ranch in Kenya and described gender inequality among Maasai as closely associated with resource ownership with a large proportion of Maasai women denied group ranch membership and with it the opportunity to acquire property rights. However, the Il Ngwesi committee attributes contrast with the findings of Bollig (2016), which showed that most Namibia’s conservancies committee members are male, but women make up roughly a quarter of all committee members. In Il Ngwesi group ranch, most of the committee members (72.7%) are older than 40 years and only 9.1% are younger than 30 years. Most of the committee members are aged between 40 and 70 years thus the group ranch committee is constituted by elders. A similar study by Southgate and Hulme (2000) indicate that among pastoralist societies in Kenya, the age group system historically played an important role in the ownership and management of natural resources, where customarily, elders remain leaders, with the youth having little independent authority until they inherit power and influence with maturity. However, this could also be related to the

fact that most youth are in pursuit of higher education and formal employment in the city. Additionally, in Il Ngwesi, the group ranch committee is the supreme body of governance therefore possess the title for the land and the elders feel it is safer if land issues are handled by the elders rather than the youth. When asked why the group ranch committee had fewer young people, one of the elders said:

“Issues of land are so sensitive to be handled only by the elders because we only have one title for it. The young educated members of our community would rather be involved in the business enterprise and community trust committees because their expertise will be required to market our conservancy and get funding. Our fears are that if the young people have access to the land title of the group ranch, they might lease or sell to investors to get loans or for their personal gain without the knowledge of other group ranch members”. (Interview at Ngarendare shopping centre, under a tree, on 15.09.2016).

At the time of this study, most of the committee members (63.6%) did not have any school education, while 18.2% had secondary education and 18.2% had diploma and university education. One of the committee members who had a diploma was the secretary of the committee and an employee of NRT thus well equipped to keep a clear record of all meetings held by the group ranch. The few committee members with secondary, diploma and university school education were employed outside the conservancy. Most (63.6%) of the committee members are agro-pastoralist and businessmen, therefore, self-employed. Most of the group ranch committee members interviewed owned large stocks of livestock as compared to other members of the group ranch. An interview with a former treasurer of the group ranch committee revealed that there was mismanagement of funds at some point but there was nothing done to address the problem because the funds were being handled by elders. He blamed this to the high level of illiteracy among the group ranch committee members and slightly younger committee members cannot question their seniors on the issue as it was considered as lack of respect.

4.3.2 Il Ngwesi Community Trust (ICT)

The community trust committee is the other governance institution in Il Ngwesi group ranch that oversees the management and governance of natural resources and supervises all community development projects. The community trust committee is made up of nine board of trustees who are elected at the AGM and are a representation of the seven villages. This includes a chair, a secretary, and a treasurer and it is mostly seven men and at least two women as it is constituted in the Il Ngwesi constitution (Il Ngwesi, 2005). At the time of this study, there were nine board of trustees with one woman instead of two as per the constitution regulations. The board of trustees serves for a minimum of three years and are

eligible for re-election once. According to the Il Ngwesi constitution (2005:8-9), the community trust performs the following functions:

- 1) Overseeing all strategies of wildlife management and community development;
- 2) Planning and overseeing of the implementation of all activities related to ecosystem and environment-related management in the group ranch;
- 3) Overseeing and approving all livestock and farming activities in the group ranch;
- 4) Planning and supervising all security issues and the security team;
- 5) Overseeing all logistics plans e.g. buildings, roads, fences;
- 6) Raising funds for the programme (write, forward and follow up all funding proposals to possible donors);
- 7) Managing grants secured from donors, ensuring contract compliance;
- 8) Relationship Management with friends and donors; and
- 9) Monitoring and evaluation of the Security programme, both for wildlife and members of the group ranch.

The figure below indicates the committee attributes of the community trust.

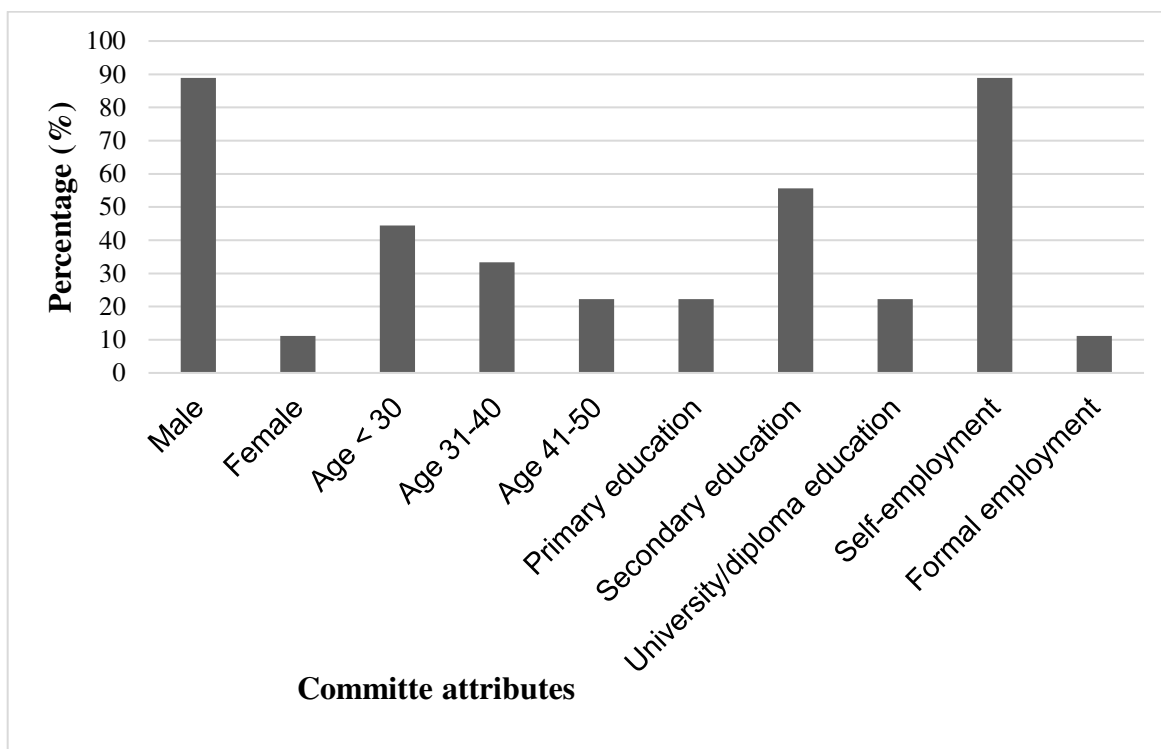


Figure 8 Committee attributes of the Il Ngwesi community trust (Source: author)

A greater percentage of the committee members (77.7%) are younger than 40 years, while 22.2% aged between 41 to 50 and none are older than 50 years. This contrasts with the committee attributes of the group ranch because the community trust committee is constituted by youth rather than elders. However, these findings compare well to those found by Bollig (2016) who reported that most Namibia’s conservancies committee

members (70.7%) are younger than 40 years, and only 4% are older than 50 years thus committees are not constituted by seniors but rather by “senior youth”. The female representative on the community trust committee was 30 years old thus termed as a youth according to the locals. All members of the community trust committee are well educated. That is, 22.2% had primary level education, 55.6% had secondary level education and 22.2% had a tertiary level education (polytechnic). The employment status compares well to the education status among the community trust committee members because a greater percentage (88.9%) were self-employed (businessmen and agro-pastoralists). Only one of the committee member was employed by the government as an area chief. A common view amongst committee members’ interviewees was that the community trust was where most development projects were managed, therefore, the committee members must be skilled and well educated. Therefore, the community trust is composed of young, skilled and educated members so that they can negotiate and find funding from NGOs, donors, and other well-financed partners. This is necessary for the continued development and success of the conservancy and the community development projects.

4.3.3 II Ngwesi Company Limited (ICL)

The II Ngwesi Company Limited is a registered company which is fully owned by the group ranch members. The ICL is governed by a Board of Directors (BOD), who are elected by the group ranch members at the AGM and serve for a term of two years and eligible for re-election (II Ngwesi, 2005:9). The BOD is made up of four community members, representatives from Lewa and Borana conservancies, and a local Member of Parliament (UNDP, 2012). The Company Limited is registered with a share capital of 10,000 of which the II Ngwesi group ranch is the major shareholder with 9,993 shares and the remaining seven shares each belonging to the seven BOD (II Ngwesi, 2005:10). According to II Ngwesi group ranch report (2015:31), the BOD performs the following functions:

- 1) Initiating, managing and overseeing all the income generating projects;
- 2) Guiding the GRC on all issues concerning income generating projects;
- 3) Managing the eco-lodge, cultural boma, camp sites and other tourism income generating projects;
- 4) Recruiting, remunerating and managing staff who will work on the above projects;
- 5) Ensuring that accounts records of the income generating projects are kept as required, audited and the report given to the group ranch members at the AGM; and
- 6) Monitoring and evaluation of the Tourism-related projects, and reporting to the GRC.

4.4 Stakeholders connected with management in II Ngwesi group ranch

As discussed earlier, co-management involves a network of large number of support organizations who work with the locals to achieve several functions. Some of these functions may include fund raising, institution building, business networking, marketing, technology transfer, knowledge co-production, legal support, infrastructure development, and community health and social services (Berkes, 2007). In II Ngwesi group ranch, conservation initiatives and resource management does not only involve the members but also institutional linkages and several levels of organization that influence and form institutions at the local level (Carlsson and Berkes, 2005). The members of II Ngwesi group ranch are the main stakeholders as they are the major decision makers and the key recipients of decisions made by the three governing bodies (GRC, ICT, and ICL). Other stakeholders include the USAID, African Wildlife Foundation (AWF), The Nature Conservancy (TNC), KWS and KFS, Laikipia Wildlife Forum (LWF), LWC, Borana conservancy, NRT, and other local NGOs. The main aim of most of these stakeholders is to encourage wildlife conservation. The table below illustrates the stakeholders involved, their interest and the potential strategy used.

Table 2 Stakeholders connected with II Ngwesi group ranch

| Stakeholder | Stakeholder interest | Potential strategy |
|-----------------------------------|---|--|
| Members of II Ngwesi group ranch | Wildlife conservation Preserve the culture and traditions Receive the benefits | Set aside land for wildlife conservation Equal distribution of benefits Observe traditional laws and customs Partner with other stakeholders to promote conservation and livelihood improvement |
| USAID | Wildlife conservation and management Livelihood improvement | Fund projects geared towards conservation e.g. COBRA and CORE (Wijk et al., 2015) Partner with other private sectors for community development (Watson, 1999) Donor funding to community development projects (II Ngwesi, 2010) |
| African Wildlife Foundation (AWF) | Wildlife conservation and management Livelihood improvement Sustainable tourism | Organise outreach activities and benefit sharing programmes (see Wijk et al., 2015) Education and capacity building Partner with USAID and other local stakeholders to promote conservation initiatives Community mobilization and raising capital (AWF, 2011) |

| | | |
|---|--|--|
| | | Support the enforcement of contracts and encourage accountability and good governance |
| The Nature Conservancy | Build resilient human and a natural community Improve natural resource management Diversify economies Strengthen governance Build peace and security | Support NRTs efforts with funding, conservation planning, rangeland monitoring, geospatial and climate change technical support Promote sustainable businesses such as livestock to market and beadwork programs Partner with other stakeholders (e.g. NRT, KWS, LWC) to support community conservation efforts Partner with Save the Elephants to improve wildlife security |
| Laikipia County Government | Promote self-governance and community development Conservation Human and wildlife security | Support training of rangers Support establishment and operation of community development projects |
| KWS and KFS | Wildlife and forest conservation Human and wildlife security Sustainable tourism Livelihood improvement Strengthen institutional capacity | Enforce legal measures to be followed Allocation and distribution of funds for conservation Training of community rangers and CFA representatives Support regular wildlife monitoring |
| Laikipia Wildlife Forum (LWF) ²⁹ | Wildlife and forest conservation Water resources management Peace and security Sustainable tourism Environmental education Rangeland management | Employ the Holistic Management approach Partner with other local stakeholders and conservation NGOs to promote conservation Support conservation campaigns and activities Support wildlife monitoring |

²⁹ Retrieved from <http://www.laikipia.org/about-us/> (accessed 06 June 2017).

| | | |
|--|---|--|
| LWC and Borana Conservancy | <p>Protection and conservation of wildlife</p> <p>Livelihood improvement</p> <p>Human and wildlife security</p> <p>Sustainable tourism</p> <p>Strengthen locals in conservation initiatives</p> | <p>Support and market ecotourism business</p> <p>Capacity building in community development projects e.g. training</p> <p>Deploy security guards to Il Ngwesi to minimize poaching and cattle rustling</p> <p>Support community development programs such as education, health, infrastructure development, and water infrastructure</p> <p>Partner with other private, local and international stakeholders to promote wildlife conservation</p> <p>Creation of employment</p> <p>Support wildlife monitoring</p> |
| NRT ³⁰ | <p>Wildlife and natural resources conservation</p> <p>Human and wildlife security</p> <p>Livelihood improvement</p> <p>Sustainable tourism</p> | <p>Provide financial support to community development projects</p> <p>Introduce investors for partnership</p> <p>Capacity building for group ranch members</p> <p>Support training and salary payment of the rangers</p> <p>Support wildlife monitoring</p> <p>Marketing of ecotourism business</p> <p>Partnership with other stakeholders for development and conservation</p> <p>Employment to the group ranch members</p> |
| Kenya Health Care Initiative (KHCI) | <p>Improve healthcare</p> <p>Improve education and productivity</p> | <p>Partner with Il Ngwesi and Days for Girls program to provide hygiene kits</p> <p>Support training of nurses</p> <p>Facilitate health teaching programs in schools</p> <p>Assist in marketing of the hygiene kits</p> |
| VSO jitolee and Krep Development Authority (KDA) | <p>Empower women financially</p> <p>Support and finance women's projects</p> | <p>Train women with business skills</p> <p>Assist in marketing of their beadwork products</p> <p>Provide loans to women groups</p> <p>Provide financial training on savings</p> <p>Monitor progress of credit provided to each individual in the women's group</p> |

4.5 Gender and wildlife conservation

Ogra (2008) points out the lack of relevant empirical research and uncertainties regarding the concept of gender which have contributed to an apparent disconnection between international policies and practice on the ground with respect to gender and community-oriented wildlife conservation. In her empirical research conducted in India, Ogra (2008)

³⁰ Retrieved from Retrieved from <http://www.nrt-kenya.org> (accessed 20 February 2017).

found that women typically bear a disproportionate burden of the social and economic opportunity costs which arise because of crop raiding and attacks by wild animals, both of which can undermine local support for conservation resulting in revenge killings and habitat degradation. This view is supported by Gnyawali (2011) whose case-study research in the Khata Community has demonstrated the advantages of working with communities in a gender inclusive way to merge the needs of both humans and wildlife within a conservation setting. These findings seem to be consistent with research in Il Ngwesi group ranch conservancy in Kenya which demonstrated that women are not registered members of the group ranch. Therefore, they are not involved in major decision making and rarely participate in most conservation activities. The Maasai women, like women in other patriarchal societies, are actively engaged in small-scale farming and responsible for taking care of the children, household maintenance, and food preparation. Furthermore, they bear these heavy loads with inadequate and unequal access to resources, to opportunities and possibilities for developing their own capabilities, and often in the face of inequitable restrictions, social controls and violence (Sen and Ostlin, 2007).

4.6 Women empowerment

As the saying goes: “When you empower a woman you empower the whole community”. This is true and the focus on women empowerment has increased because women have been overpowered by men in the patriarchal societies. The case study of Il Ngwesi group ranch conservancy shows that women projects can empower them by introducing alternative sources of income and increase access to loans for development. Such empowerment projects include bead work, micro-finance, and Days for Girls (DfG) program.

4.6.1 Bead work project

The women groups in Il Ngwesi initially received training on group dynamics, savings and credit accessibility, quality enhancement of the products, and more from local and international volunteers through VSO Jitolee³¹. An interview with an elderly bead-maker and a resident of Ethi village clearly informed on how beading had transformed to a beneficial activity to the women in the community. She said that she had done beadwork for over a long period of time and that she was among the first few women who introduced the others to the practice. She was well known by others to make quality beadwork products; therefore, she was highly recommended if anyone needed any product for traditional ceremonies such as weddings, circumcision, and graduation. At

³¹ Retrieved from http://www.ivoindia.org/Images/vso-jitolee-kenya-annual-country-report-2011-2012_tcm78-38434.pdf (accessed March 23, 2017).

the time of the interview, she was making a beaded neck-piece. She had been paid to make the piece for a girl who was having her graduation ceremony abroad. She continued by stating that the beadwork became more popular practice and generated income to women in Il Ngwesi when VSO jitolee partnered with Il Ngwesi group ranch. The women were advised to form groups across the seven villages. Members of each group were trained by VSO jitolee representatives on new techniques of beading that involved mixing different colours of beads unlike before where the red colour was preferred. The beadwork products made include jewellery, belts, interior house decoration items, and bags.

Through VSO jitolee, a project funded by the European Union known as Improved Sustainable Livelihood (ISL) was introduced in Il Ngwesi. According to the 2011 VSO-jitolee report, the ISL project aims at enabling low-income and marginalized women to access enterprise development services for increased incomes and improved livelihoods. The project assisted in marketing and sale of the women's beadwork products in Nanyuki, Nairobi, Mombasa and sometimes outside the country (e.g. Swaziland). Additionally, there is a curio shop at Il Ngwesi eco-lodge (Figure 9) where their beadwork products are marketed and sold to the tourists. Other women have been able to put up their own curio shops in Il Ngwesi where they market and sell their own beadwork products. The proceeds from the group sales are given to each individual owner of the product that was sold and the women use it to either buy food, buy more beads, invest in agriculture, pay school fees or upgrade the state of their households. However, at the time of the study, marketing of the beadwork products was a major challenge because it has become a common practice among women in Laikipia county, therefore, creating a stiff competition.



Figure 9 The lodge manager showing the curio shop at the eco-lodge (Source: fieldwork, 2016)

The beading work has empowered the women in Il Ngwesi group ranch to develop livelihood strategies that preserve their cultural and traditional practice while improving their livelihood. When the respondents were asked whether they faced any resistance from their husbands to engage in the beading activities because it is known to be time-consuming, the majority commented that it was a challenge at the beginning but after some time their husbands embraced the idea because they saw improvement in their households. As one interviewee said:

“Our men have been complaining because of our busy schedule with the project as you know a Maasai woman is meant to stay home to cook and take care of the children. But when they saw some good results by us earning some money and improving the state of the households, they were happy, and they started supporting our project. Among the women groups in each village, they organize merry-go-rounds to help each member to buy furniture, utensils, and electronics (rechargeable torches and lamps) for their households. For example, you can see in my house, I could afford to buy a solar panel, a good set of sofa seats, a television and new utensils through the money I received from the merry-go-round. So, when I serve my husband food on a new plate and tea in a new thermos flask, he is happy and allows me to attend any bead work training or workshop. The merry-go-round group is made up of thirty women who each contribute KES. 200(2€) per month and handed over to the respective recipient on monthly basis. For our Ethi group, I am the chair lady, but we also have a treasurer and a secretary. The treasurer has a special box where after she receives everybody’s contribution, she locks the money inside. The secretary keeps a monthly record of the contributions and

every payment is accounted for". (Interview with Jasmin Karnushu, in her house, on 20 August 2016).

4.6.2 Micro-finance

According to the VSO jitolee annual report of 2011-2012, KDA offered training to the women groups in Il Ngwesi on how they could save the money earned from the beading work. Additionally, they were trained on how to keep records of savings and loans at group levels. Each group can access loans at discounted interest rates of 5% and later lend each member of the group at an interest of 10%. Each group member can take a loan depending on their ability to repay. These business development services have made women to earn income and improve their livelihoods. For example, an interview with a resident of Ngarendare who was a beneficiary of the VSO jitolee loaning system reported how she could earn high income from the farm produce. She stated that she cultivates onions, tomatoes, and hay for sale on the seven-acre land which belongs to her husband. For example, she earned KES. 80,000(800€) from her last harvest of onions (year 2015) which helped her repay the loan she had acquired and could take another loan. One common view raised by most of the respondents was the mismanagement of the women funds by those in charge. They claimed that money is deposited into the group ranch's account which is under the management of the elders and the group ranch committee that is male dominated. Therefore, there are some disparities when the money is channelled to the women groups, but they have nobody to report such issues.

4.6.3 Days for Girls program (DfG)

In some communities, there is the stereotype that menstruation is a curse and by experiencing it some women are embarrassed. DfG is a reminder to such women that it is normal to have menstruation and during that period they can still maintain their dignity and be in good health. Without a solution to manage their monthly menstruation, many girls around the globe are ashamed to attend school leading to many absentee days and school drop outs. For example, according to the 2014 UNESCO report, in Kenya, 5 out of 10 school girls go without access to pads³². However, the availability of DfG kits has shown to increase the rate of school attendance. This is supported by the DfG international report of 2014-2015 which indicated that in Kenya, absenteeism rates went from 25% before kit distribution to 3% after distribution in one school.

In Il Ngwesi group ranch, DfG program was introduced by KHCI in 2014. The program is run by the members of the group ranch but under the management of DfG Uganda which is the main centre of the enterprise for East Africa. However, the program faced challenges

³² Retrieved from <https://www.daysforgirls.org/annual-report-2014-2015> (accessed March 23, 2017).

because of poor management and misappropriation of funds³³. The coordinator of the project during that time was not efficient as reported by most members of the group ranch who were interviewed as they claimed that he was always drunk, not available in the office and that he squandered their money. As a result, there was no money to sustain the program hence its failure and closure of the office in Nanyuki town in 2015. This had a negative impact on the women enterprise projects because they had no office to report their issues or submit loan repayment receipts. The situation was solved when a new coordinator was employed in May 2016 and he is currently working on restoring the women enterprise projects. At the time of this study, construction of a new office was ongoing in Chumvi village and this was confirmed by the new coordinator during an interview. Table 4 shows the DfG kit pricing used in Kenya as adopted from KHCI since May 2015.

Table 3 DfG kit pricing in Kenya as of May 2015 (Source: author)

| Package | Description | Price (KES) |
|---------------------------|---|--------------------|
| Supreme kit | <ul style="list-style-type: none"> • 2 Shields • 8 Liners • 1 Plastic bag • 1 Cloth bag • 2 panties • 1 Bar soap • 1 Washcloth | 750(7.5€) |
| Deluxe kit | <ul style="list-style-type: none"> • 2 Shields • 8 Liners • 1 Plastic bag • 1 Cloth bag • 1 pant | 710(7.1€) |
| Full kit | <ul style="list-style-type: none"> • 2 Shields • 8 Liners • 1 Plastic bag • 1 Cloth bag | 700(7€) |
| Half kit, with bag | <ul style="list-style-type: none"> • 1 Shield • 4 Liners • 1 Plastic bag • 1 Cloth bag | 300(3€) |
| Pod | <ul style="list-style-type: none"> • 1 Shield • 2 Liners | 160(1.6€) |
| Shield only | <ul style="list-style-type: none"> • 1 Shield | 80 |
| Liner only | <ul style="list-style-type: none"> • 2 Liners | 50 |

³³ Interview with the coordinator for women enterprise initiative in Il Ngwesi group ranch. This includes the DfG program, beadwork enterprise and oversees micro-finance loans. He took over management in May 2016 and he was highly preferred because he is a member of the group ranch, young and skilled with commerce and accounting skills which he acquired as a graduate from the University of Nairobi.

The DfG kit is an innovative tool as compared to the disposable sanitary towels because it is culturally appropriate to be used by both women and girls, it is easy to dry out in the sun, it is environmentally friendly, and durable because it is expected to last for 3 years³⁴. Referring to the interview with the coordinator of the women enterprise initiative, at the time of this study, the Il Ngwesi DfG program was working with a staff of twenty women employed from Il Ngwesi community. These women are trained by DfG Uganda enterprise in sewing and packing the kits. The training is important because it gives uneducated women an opportunity to earn income and gain financial freedom. Thereafter, the kits are marketed by the coordinator and his assistant in schools and the seven villages within the group ranch. During school visits, the Il Ngwesi DfG program team creates awareness and teach the students how to use the kits, hygiene, and reproductive health. After the training, the DfG kits are left with the school administration so that it is accessible to any student who wants to purchase them. When the coordinator was asked how the school going girls could afford to buy the kit, he commented that the KHCI had subsidized the price of each kit for all schools in Il Ngwesi therefore making it affordable. Additionally, he reported that the partnership with the neighbouring private conservancies and NGOs had increased the availability of the kits to school girls. For example, Borana group ranch as mentioned earlier support education in most schools in Il Ngwesi, therefore, they buy the kits from the program then donate them to the schools that they support. In Laikipia county, Chumvi is the main centre for the DfG program.

³⁴ Retrieved from <https://www.daysforgirls.org/> (accessed 21, April 2017).

5. Conclusion

This study set out to investigate the social, economic and ecological benefits of Il Ngwesi Conservancy to its members. The second aim of this study was to characterise the institutions and the governance structure of the group ranch. Thirdly, the study sought to assess the role and participation of women in the conservation activities and finally to understand the concerned stakeholders and their interests in the management of Il Ngwesi conservancy. The results of this study show that there has been a significant improvement in the livelihood status of the group ranch members and improvement in the community's economy since the establishment of the conservancy in 1996. Some of the major benefits to the community include construction and renovation of schools, availability of school bursaries, improved health facilities, water availability, creation of employment opportunities, easy access to cattle market, diversification of livelihood, and empowerment of group ranch members. Cultivation is the common land use practice in the privately-owned lands. However, livestock products remain the main source of income to most of the group ranch members living within and outside the group ranch. Additionally, the state of those members living in villages within the group ranch is still low compared to those living in villages outside the group ranch. This could be associated with the high cost resulting from human-wildlife conflicts unlike those living away. This research has also shown that the establishment of a conservancy in the group ranch motivated wildlife conservation and restoration of degraded rangeland. Wildlife monitoring and grazing plans have been introduced and adopted by the group ranch members to encourage co-existence of wildlife conservation and livestock keeping. However, the Il Ngwesi group ranch's grazing plan was disrupted in 2015 by the forced invasion of the neighbouring Samburu community which led to violent conflicts between the two communities.

Il Ngwesi group ranch has adopted the bottom-up management plan (Bollig and Lesorogol, 2016) in their governance structure. Co-management is the key concept because several stakeholders are involved in the management of the group ranch and the conservancy. This has resulted in the empowerment of the group ranch members as they are considered the major decision makers and are in control of how benefits are shared among its members. Most members were satisfied with the benefit sharing model but a few stated that the distribution of the benefits was uneven. This is partly because only a few individuals get direct financial benefits either through employment at the eco-lodge, school bursary or sales from beadwork. One of the more significant findings that emerged from this study is that men participate more in the group ranch's conservation activities than women. This is because the women are not included in any decision-making process given that they have no rights over land ownership.

The findings of this study complement those of earlier studies that suggest that community-based conservation may provide an outline for integrating conservation and development at the local and national level if done appropriately (Kieti et al., 2013). According to Ashley and Garland (1994), these developments include faster economic growth in rural areas, improved livelihood status, empowerment of the local people, conservation of natural resources and diversification of the country's tourism industry. This study has confirmed these findings by demonstrating that establishing a conservancy within a community brings significant socio-economic and ecological benefits to the community, therefore, promoting rural development. However, the future of wildlife conservation in Kenya is currently under threat because of the recent (early 2017) attacks on conservancies in the Northern part of the country. The government should collaborate with the affected communities, the conservancies and the attackers to find a long-lasting solution to stop the attacks and invasions. Further studies regarding the role of women participation in conservation activities would be worthwhile. Additionally, it would be interesting to compare the situations of controlled grazing during the dry and wet season.

6. References

- African Wildlife Foundation. 2011. *Conservation Enterprise: A Decision Support Toolkit*. Nairobi/Washington, DC: African Wildlife Foundation.
- Agarwal, B. 2001. Participatory Exclusions, Community Forestry, and Gender: An Analysis for South Asia and a Conceptual Framework. *World Development* 29(10): 1623-1648.
- Agrawal, A. and C. C. Gibson (eds.) 2001. *Communities and the Environment: Ethnicity, Gender, and the State in Community-Based Conservation*. New Brunswick, N J: Rutgers University Press.
- Agrawal, A. 2003. Sustainable Governance of Common-Pool Resources: Context, Methods and Politics. *Annual Review of Anthropology* 32(1): 243-262.
- Aligula, H. M.; Said, M. Y.; Njuguna, E. C.; de Leeuw, J.; and A. K. Skidmore 1997. *Geo-Information for Sustainable Rangeland Management*. Paper presented at the International Conference on Geo-Information for Sustainable Land Management (SLM). Enschede, The Netherlands, August 17-21.
- Armitage, D.; Berkes, F.; and N. Doubleday 2007. *Adaptive Co-Management: Collaboration, Learning and Multi-Level Governance*. Vancouver: University of British Columbia Press.
- Ascher, W. 1995. *Communities and Sustainable Forestry in Developing Countries*. San Francisco: Institute for Contemporary Studies Press.
- Ashley, C. and E. Garland 1994. Promoting Community Based Tourism Development (Why, What, How). Research Discussion Paper no.4. Windhoek: Ministry of Environment and Tourism, Namibia.
- Ashley, C. 2000. Pro-Poor Tourism: Putting Poverty at the Heart of the Tourism Agenda. Natural Resource Perspectives Series no.51. London: ODI (Overseas Development Institute).
- Barrow, E.; Gichoi, H.; and M. Infield 1998. Summary and Key Lessons from a Comparative Review and Analysis of Community Conservation in East Africa. IUCN, East Africa Regional Office.
- Beinart, W. and L. Hughes 2007. *Environment and Empire*. Oxford: Oxford University Press.
- Bene, C. and A. E. Neiland 2004. Empowerment Reform, Yes. But Empowerment of Whom? Fisheries Decentralization Reforms in Developing Countries: A Critical Assessment with Specific Reference to Poverty Reduction. *Aquatic Resources, Culture and Development* 1 (1): 35-49.
- Berger, D. J. 1996. The Challenge of Integrating Maasai Tradition with Tourism. In: Price, M. F. (ed.). *People and Tourism in Fragile Environments*. Chichester, UK: John Wiley. pp. 175-197.
- Berkes, F. 1989. Co-Management and the James Bay Agreement. In: Pinkerton, E. (ed.). *Co-Operative Management of Local Fisheries: New Directions for Improved Management and Community Development*. Vancouver, BC: University of British Columbia Press. pp. 189-208.
- Berkes, F.; George, P.; and R. Preston 1991. Co-management: The Evolution of the Theory and Practice of Joint Administration of Living Resources. *Alternatives* 18 (2): 12-18.

- Berkes, F. 2002. Cross-Scale Institutional Linkages: Perspective from the Bottom up. In: Ostrom, E.; Dietz, T.; Dolsak, N.; Stern, P. C.; Stonich, S.; and E. U. Weber (eds.). *The Drama of the Commons*. Washington, DC: National Academy Press. pp. 293-321.
- Berkes, F. 2007. Community-Based Conservation in a Globalized World. *PNAS* 104(39): 15188-15193.
- Berkes, F. 2009. Evolution of Co-management: Role of Knowledge Generation, Bridging Organization and Social Learning. *Journal of Environmental Management* 90(5): 1692-1702.
- Bernard, H. R. 2006. *Research Methods in Anthropology. Qualitative and Quantitative Approaches*. 4th ed. Lanham: Altamira Press.
- Blaikie, P. 2006. Is Small Really Beautiful? Community-Based Natural Resource Management in Malawi and Botswana. *World Development* 34(11): 1942-1957.
- Bollig, M. 2016. Towards an Arid Eden? Boundary-Making, Governance and Benefit-Sharing and the Political Ecology of the New Commons of Kunene Region, Northern Namibia. *International Journal of the Commons* 10(2):771-799.
- Bollig, M. and C. Lesorogol 2016. The “New Pastoral Commons” of Eastern and Southern Africa. *International Journal of the Commons* 10(2): 665-687.
- Brockington, D. 2002. *Fortress Conservation: The Preservation of the Mkomazi Game Reserve, Tanzania*. Bloomington: International African Institute and Indiana University Press.
- Bromley, D. W. 1992. *Making the Commons Work: Theory, Practice and Policy*. San Francisco: Institute for Contemporary Studies.
- Brown, M. F. 2003. *Who Owns Native Culture?* Cambridge, MA: Harvard University Press.
- Burger, J.; Ostrom, E.; Norgaard, R. B.; Policansky, D.; and B. D. Goldstein 2001. *Protecting the Commons. A Framework for Resource Management in the Americas*. Washington, DC: Island Press.
- Carlsson, L. and F. Berkes 2005. Co-Management: Concepts and Methodological Implications. *Journal of Environmental Management* 75: 65-76.
- Carrier, N. 2011. “Reviving Yaaku: Identity and Indigeneity in Northern Kenya.” *African Studies* 70(2): 246-263.
- Castillo, A. R. 2004. *Sustainable Inequalities? Community-Based Conservation in an Inequitable Society’. The Case of Il Ngwesi Group Ranch, Kenya*. M.A. thesis. University of Oxford, UK.
- Cronk, L. 2002. ‘From True Dorobo to Mukogodo Maasai: Contested Ethnicity in Kenya’. *Ethnology* 41(1):27-49.
- Cronk, L. 2004. *From Mukogodo to Maasai: Ethnicity and Cultural Change in Kenya*. Boulder, CO: Westview Press.
- Dolsak, N. and E. Ostrom (eds.) 2003. *The Commons in the New Millennium, Challenges and Adaptations*. Cambridge, MA: MIT Press.
- Dzingirai, V. 2003. “CAMPFIRE is not for Ndebele Migrants”: The Impact of Excluding Outsiders from CAMPFIRE in the Zambezi Valley, Zimbabwe’. *Journal of Southern African Studies* 29(2): 445-459.
- Eamer, J. 2006. Keep it Simple and be Relevant: The First Ten Years of the Arctic Borderlands Ecological Knowledge Co-op. In: Reid, W. V.; Berkes, F.; Wilbanks, T.; and D. Capistrano (eds.). *Bridging Scales and Knowledge Systems*.

- Washington, DC: Millennium Ecosystem Assessment and Island Press. pp. 185-206.
- Evans, L.; Cherrett, N.; and D. Pemsil 2011. Assessing the Impact of Fisheries Co-Management Interventions in Developing Countries: A Meta-Analysis. *Journal of Environmental Management* 92(8): 1938-1949.
- Feeny, D.; Berkes, F.; McCay, B. J.; and J. M. Acheson 1990. The Tragedy of the Commons: Twenty-Two Years Later. *Human Ecology* 18(1): 1-19.
- Folke, C.; Hahn, T.; Olsson, P.; and J. Norberg 2005. Adaptive Governance of Social-Ecological Systems. *Annual Review of Environment and Resources* 30: 441-473.
- Freeman, M. and L. N. Carbyn (eds.) 1988. *Traditional Knowledge and Renewable Resource Management in Northern Regions*. Edmonton: Boreal Institute for Northern Studies, University of Alberta.
- Gaitho, V. G. 2004. *Impact of Community Based Ecotourism on Households' Livelihoods and Environmental Management in Il Ngwesi and Lekurruki Group Ranches, Laikipia County, Kenya*. PhD thesis. Kenyatta University, Nairobi, Kenya.
- Galaty, J. G. 1981. 'Land and Livestock among Kenyan Maasai'. In: Galaty, J. and C. Salzman (eds.). *Change and Development in Nomadic and Pastoral Societies*. Leiden: Brill. pp. 68-88.
- Galaty, J. G. 1994. Rangeland Tenure and Pastoralism in Africa. In: Fratkin, E.; Galvin, K.; and E. A. Roth (eds.). *African Pastoralist Systems*. Boulder and London: Lynne Rienner Publishers. pp. 185-204.
- Galaty, J. G. 2016. Reasserting the Commons: Pastoral Contestations of Private and State Lands in East Africa. *International Journal of the Commons* 10(2): 709-727.
- Ghate, R. 2000. "Joint Forest Management: Constituting New Commons." Presented at the Eighth Conference of the International Association for the Study of Common Property, Bloomington, Indiana, USA, May 31-June 4, 2000. <http://dlc.dlib.indiana.edu/archive/00000264/00/ghater041500.pdf> (accessed March 24, 2017).
- Glew, L.; Hudson, M.; and P. Osborne 2010. Evaluating the Effectiveness of Community-Based Conservation in Northern Kenya. A Report to the Nature Conservancy. University of Southampton, School of Civil Engineering and the Environment. Manuscript.
- Gnyawali, T. P. 2011. *Putting the Issues Together: A case Study Analysis on Conservation-Livelihoods Linkages in Khata Corridor*. Bardia, Nepal: WWF Nepal Office.
- Goetze, T. 1998. *Reaching for New Perspectives on Co-Management with First Nations: Exploring the Possibilities for Conflict Management, Indigenous Rights, and Systemic Change under the Interim Measures Agreement in Clayoquot Sound, BC*. M.A. thesis, Department of Anthropology, McMaster University, Canada.
- Hardin, G. 1968. The Tragedy of the Commons. *Science* 162:1243-1248. <http://dx.doi.org/10.1126/science.162.3859.1243>.
- Hess, C. 2008. Mapping the New Commons. Presented at the twelfth Biennial Conference of the International Association for the Study of the Commons, Cheltenham, UK, July, 14-18. <http://dx.doi.org/10.2139/ssrn.1356835>.
- Hoekema, A. 1995. Do Joint Decision-Making Boards Enhance Chances for a New Partnership between the State and Indigenous Peoples? *Indigenous Affairs* 1: 4-10.

- Homewood, K. M. and W. A. Rodgers 1991. *Maasailand Ecology: Pastoralist Development and Wildlife Conservation in Ngorongoro, Tanzania*. Cambridge: Cambridge University Press.
- Homewood, K.; Trench, P. C.; and P. Kristjanson 2009. *Staying Maasai? Livelihoods, Conservation and Development in East African Rangelands*. New York: Springer.
- Homewood, K.; Chenevix, T. P.; and D. Brockington 2012. Pastoralist Livelihoods and Wildlife Revenues in East Africa: A Case for coexistence? *Pastoralism: Research, Policy, Practice* 2:19. <https://doi.org/10.1186/2041-7136-2-19>.
- Hughes L. (n.d.). "Land Alienation and Contestation in Kenyan Maasailand." Digital Library of the Commons. http://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/8915/HUGHES_0880.pdf?sequence=1 (Accessed November 30, 2016).
- IBRD (International Bank for Reconstruction and Development). 1977. Kenya Second Livestock Development Project: World Bank Report no. 10. <http://documents.worldbank.org/curated/en/190281468046862668/text/multi0page.txt> (accessed September, 10, 2018).
- Il Ngwesi Group Ranch. 2005. Amended Constitution. Nanyuki, Kenya.
- Il Ngwesi Group Ranch. 2010. Il Ngwesi Group Ranch Strategic Plan 2010-2014: Integrating Community Development and Sustainable Environmental Management. Nanyuki, Kenya.
- Il Ngwesi Group Ranch. 2015. Il Ngwesi Group Ranch Strategic Plan 2015-2019: Integrating Community Development and Sustainable Environmental Management. Nanyuki, Kenya.
- Jentoft, S. 2000. Legitimacy and Disappointment in Fisheries Management-Prospects of User Participation. *Marine Policy* 24(2), 141-148.
- Jones, B. and M. Murphree 2001. The Evolution of Policy on Community Conservation in Namibia and Zimbabwe. In: Hulme, D. and M. Murphree. (eds.). *African Wildlife and Livelihoods: The Promise and Performance of Community Conservation*. Oxford: James Currey. pp. 38-58.
- Kendrick, A. 2003. Caribou Co-Management in Northern Canada: Fostering Multiple Ways of Knowing. In: Berkes, F.; Colding, J.; and C. Folke (eds.). *Navigating Social-Ecological Systems. Building resilience for complexity and change*. Cambridge: Cambridge University Press. pp. 241-267.
- Kenya Government. 1980. National Livestock Development Policy. Ministry of Livestock Development, Nairobi, Kenya.
- Kieti, D.; Manono, G.; and S. Momanyi 2013. Community Conservation Paradigm: The Case Studies of Mwaluganje Elephant Sanctuary and Il Ngwesi Community. *Research on Humanities and Social Sciences* 3(1): 206-217.
- Kooiman, J. 2003. *Governing as Governance*. London: Sage.
- Kruse, J.; Klein, D.; Braund, S.; Moorehead, L.; and B. Simeone 1998. Co-Management of Natural Resources: A Comparison of Two Caribou Management Systems. *Human Organization* 57(4): 447-458.
- Lesorogol, C. 2008a. Land Privatization and Pastoralist Well-being in Kenya. *Development and Change* 39(2):309-331. <http://dx.doi.org/10.1111/j.1467-7660.2007.00481.x>.
- Lesorogol, C. K. and R. B. Boone 2016. Which Way Forward? Using Simulation Models and Ethnography to Understand Changing Livelihoods Among Kenyan Pastoralists

- in a "New Commons." *International Journal of the Commons* 10(2): 747-770, <http://doi.org/10.18352/ijc.656>.
- Lewa Wildlife Conservancy. 2003. Lewa Wildlife Conservancy (LWC)- Kenya- GEF. Isiolo, Kenya: Lewa Wildlife Conservancy. https://www.thegef.org/sites/default/files/project_documents/18%2520Kenya%25200-%2520LEWA%2520Output0review0October02003.pdf (accessed June 6, 2017).
- Little, P. D.; Smith, K.; Cellarius, B.; Coppock, D. L.; and C. Barrett 2001. Avoiding Disaster: Diversification and Risk Management Among East African Herders. *Development and Change* 32(3): 401-433. <http://dx.doi.org/10.1111/1467-7660.00211>.
- Mahanty, S. 2002. Conservation and Development Interventions as Networks: The Case of the India Ecodevelopment Project. *World Development* 30(8): 1369-1386.
- McCabe, J.; Smith, N.; Leslie, P.; and A. Telligman 2014. Livelihood Diversification Through Migration Among a Pastoral People: Contrasting Case Studies of Maasai in Northern Tanzania. *Human Organization* 73(4): 389-400.
- McCay, B. and J. Acheson (eds.) 1987. *The Question of the Commons: The Culture and Ecology of Communal Resources*. Tucson: University of Arizona Press.
- McCay, B. J. and S. Jentoft 1998. Market or Community Failure? Critical Perspectives on Common Property Research. *Human Organization* 57(1): 21-29.
- Mikalsen, K. H.; Hernes, H. K.; and S. Jentoft 2007. Leaning on User-Groups: The Role of Civil Society in Fisheries Governance. *Marine Policy* 31: 201-209.
- Ministry of Agriculture, Kenya. 1968. *Annual Report*.
- Mizutani, F.; Muthiani, E.; Kristjanson, P.; and H. Recke 2005. Impact and Value of Wildlife in Pastoral Livestock Production Systems in Kenya: Possibilities for Healthy Ecosystem Conservation and Livestock Development for the Poor. In: Osofsky, S.; Cleaveland, S.; Karesh, W.; Kock, M.; Nyhus, P.; Starr, L.; and A. Yang (eds.). *Conservation and Development Interventions at the Wildlife/livestock Interface: Implications for Wildlife, Livestock and Human Health*. Gland, Switzerland and Cambridge, UK: IUCN. pp. 121-132.
- Moiko, S. S. 2015. Landscape Management and Governance, Il Ngwesi Group Ranch-Laikipia, Kenya. International Livestock Research Institute (ILRI) project report. Nairobi, Kenya: ILRI.
- Murphree, M. W. 1993. Communities as Resource Management Institutions. Gatekeeper Series no. 36, IIED (International Institute for Environment and Development).
- Mwangi, E. 2007a. The Puzzle of Group Ranch Sub-division in Kenya's Maasailand. *Development and Change* 38(5): 889-910.
- Mwangi, E. 2007b. Subdividing the Commons: Distributional Conflict in the Transition from Collective to Individual Property Rights in Kenya's Maasailand. *World Development* 35(5): 815-834.
- Nadasdy, P. 2003. Reevaluating the Co-Management Success Story. *Arctic* 56(4): 367-380.
- Nayak, P. and F. Berkes 2008. Politics of Co-Optation: Community Forest Management vs. Joint Forest Management in Orissa, India. *Environmental Management* 41(5): 707-718.
- Nelson, F. 2012. Natural Conservationists? Evaluating the Impact of Pastoralist Land Use Practices on Tanzania's Wildlife Economy Pastoralism: *Research, Policy and Practice* 2:15. <https://doi.org/10.1186/2041-7136-2-15>.

- Northern Rangeland Trust, 2008. Northern Rangelands Trust Strategic Plan 2008-2012. Northern Rangelands Trust, Isiolo, Kenya.
- Northern Rangelands Trust, 2013. The Story of the Northern Rangelands Trust: Conserving Wildlife, Transforming Lives, Bringing Peace. Isiolo, Kenya: Northern Rangeland Trust.
- Northern Rangeland Trust. 2015. NRT State of Conservancies. Isiolo, Kenya: Northern Rangeland Trust.
https://static1.squarespace.com/static/5653e896e4b0a689b3afd97/t/57cff831ebbd1adbaf21edd6/1473247301208/SocReport_2015_Final_Spreads_LowRes.pdf
 (accessed January 19, 2017).
- Ogra, M. V. 2008. Human-Wildlife Conflict and Gender in Protected Area Borderlands: A Case-Study of Costs, Perceptions, and Vulnerabilities from Uttarakhand (uttaranchal), India. *Geoforum* 39: 1408-1422.
- Okello, M.; Seno, S. O.; and B. Wishitemi 2003. Maasai Community Wildlife Sanctuaries in Tsavo-Amboseli, Kenya. *Parks* 13(1): 62-75.
- Okumu, W. 2012. *Trans-local Peace Building among Pastoralist Communities in Kenya: The Case of Laikipi Peace Caravan*. Culture and Environment in Africa Series, vol. 3. Cologne: Cologne African Studies Centre.
- Olsson, O.; Folke, C.; and F. Berkes 2004b. Adaptive Co-Management for Building Resilience in Social-Ecological Systems. *Environmental Management* 34(1): 75-90.
- Olwig, K. R. 2003. Commons and Landscape. In: Berge, E. and L. Carlsson (eds.). *Commons: Old and New*. Trondheim, Norway: Norwegian University of Science and Technology. (ISS Rapport, no, 70). pp. 21-28.
- Opiyo, F.; Wasonga, O.; Nyangito, M.; Schilling, J.; and R. Munang 2015. Drought Adaptation and Coping Strategies among the Turkana Pastoralists of Northern Kenya. *International Journal of Disaster Risk* 6(3): 295-309.
- Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. New York: Cambridge University Press.
- Ostrom, E. 2002. Managing Resources in the Global Commons. *Journal of Business Administration and Policy Analysis* 30-31: 401-413.
- Ostrom, E.; Dietz, T.; Dolsak, N.; Stern, E.; Stonich, S.; and E. U. Weber (eds.) 2002. *The Drama of the Commons*. Washington, DC: National Academy Press.
- Peters, P. 1994. *Dividing the Commons: Politics, Policy and Culture in Botswana*. Charlottesville: University of Virginia Press.
- Pinkerton, E. 1992. Translating Legal Rights into Management Practice: Overcoming Barriers to the Exercise of Co-Management. *Human Organization* 51(4): 330-341.
- Pinkerton, E. (ed.) 1993. Co-Management Efforts as Social Movements. *Alternatives* 19(3): 33-38.
- Pinkerton, E. and M. Weinstein 1995. *Fisheries that Work: Sustainability through Community-Based Management*. Vancouver, BC: The Suzuki Foundation.
- Plummer, R. and J. FitzGibbon 2004. Some Observations on the Terminology in Co-Operative Environmental Management. *Journal of Environmental Management* 70(1): 63-72.
- Plummer, R. and J. FitzGibbon 2007. Connecting Adaptive Co-Management, Social Learning, and Social Capital through Theory and Practice. In: Armitage, D.; Berkes, F.; and N. Doubleday (eds.). *Adaptive Co-Management: Collaboration,*

- Learning, and Multi-Level Governance*. Vancouver: University of British Columbia Press. pp. 38-61.
- Popper, D. E. and F. J. Popper 2006. The Onset of the Buffalo Commons. *Journal of the West* 45(2): 29-34.
- Pretty, J. and H. Ward 2001. Social Capital and the Environment. *World Development* 29: 209-227.
- Reid, D. G.; Sindiga, I.; Evans, N.; and S. Ongaro 1999. Tourism, Biodiversity and Community Development in Kenya. In: Reid, D. G. (ed.). *Ecotourism Development in Eastern and Southern Africa*. Weaver Press. pp. 59-82.
- Reid, D. G. 2003. *Tourism, Globalization and Development: Responsible Tourism Planning*. London: Pluto Press.
- Republic of Kenya, 1968. Group (Land) Representatives Act. Chapter 287 of the Laws of Kenya. Nairobi, Kenya.
- Roe D.; Nelson, F.; and C. Sandbrook (eds.) 2009. Community Management of Natural Resources in Africa: Impacts, Experiences and Future Directions. *Natural Resource Issues* No. 18. International Institute for Environment and Development.
- Rutten, M. 1992. *Selling Wealth to Buy Poverty: The Process of the Individualization of Landownership Among the Maasai Pastoralists of Kajiado District, Kenya, 1890-1990*. Saabrücken, Germany: Verlag Breitenbach.
- Sachedina, H. T. 2008. *Wildlife is our Oil: Conservation, Livelihoods and NGOs in the Tarangire Ecosystem, Tanzania*. PhD thesis, University of Oxford, UK.
- Savory, A. 1983. The Savory Grazing Method or Holistic Resource Management. *Rangelands* 5(4): 155-159.
- Schmidtz, D. and E. Willott 2003. "Reinventing the Commons: An African Case Study." *UC Davis Law Review* 37(1): 203-232.
- Schnegg, M. and T. Linke 2016. Travelling Models of Participation: Global Ideas and Local Translations of Water Management in Namibia. *International Journal of the Commons* 10(2): 800-820. <http://doi.org/10.18352/ijc.705>.
- Sebele, L. S. 2010. Community-Based Tourism Ventures, Benefits and Challenges: Khama Rhino Sanctuary Trust, Central District, Botswana. *Tourism Management* 31(1): 136-146. <http://dx.doi.org/10.1016/j.tourman.2009.01.005>.
- Sen, G. and P. Ostlin 2007. "Unequal, Unfair, Ineffective and Inefficient Gender Inequality in Health: Why it Exists and How we can change it". WHO Commission on Social Determinants of Health, Women and Gender Equity Knowledge Network. Karolinska Institute.
- Shibia, M. G. 2011. *Effects of Grazing Management on Forage Production and Rangeland Condition in Il Ngwesi Group Ranch of Laikipia North District, Kenya*. M.A. thesis, Egerton University, Kenya.
- Singleton, S. 1998. *Constructing Cooperation: The Evolution of Institutions of Co-management*. Ann Arbor: University of Michigan Press
- Southgate, C. and D. Hulme 2000. Uncommon Property: The Scramble for Wetland in Southern Kenya. In: Woodhouse, P.; Bernstein, H.; and D. Hulme (eds.). *African Enclosures: Social Dynamics of Wetlands in Drylands*. Oxford: James Currey. pp. 73-118.
- Spaeder, J. J. and H. A. Feit 2005. Co-management and Indigenous Communities: Barriers and Bridges to Decentralized Resource Management. *Canadian Anthropology Society* 47(2): 147-154.

- Stevens, S. (ed.) 1997. *Conservation through Cultural Survival: Indigenous Peoples and Protected Areas*. Washington, DC: Island Press.
- Thompson, M. and K. Homewood 2002. Entrepreneurs, Elites and Exclusion in Maasailand: Trends in Wildlife Conservation and Pastoralist Development. *Human Ecology* 30(1): 107-138.
- United Nations Development Programme 2012. Il Ngwesi Group Ranch, Kenya. Equator Initiative Case Study Series. New York, NY.
- Usher, P. J. 1995. Co-management of Natural Resources: Some Aspects of Canadian Experience. In: Peterson, D. L. and D. R. Johnson (eds.). *Human Ecology and Climate Change: People and Resources in the Far North*. Washington: Taylor and Francis. pp. 197-206.
- Watson, A. 1999. Conservation of Biodiverse Resources Areas (COBRA) Project: Kenya (1992-1998). Summary report. Bethesda, MD: Development Alternatives Inc. http://pdf.usaid.gov/pdf_docs/PDABR137.pdf (accessed January 25, 2017).
- West, P. and S. Brechin (eds.) 1991. *Resident Peoples and National Parks: Social Dilemmas and Strategies in International Conservation*. Tucson: University of Arizona Press.
- Western, D. 1994. Ecosystem Conservation and Rural Development: The Case of Amboseli. In: Western, D.; Wright, R. M.; and S. C. Strum (eds.). *Natural Connections: Perspectives on Community-Based Conservation*. Washington, DC: Island Press. pp. 15-52.
- Western, D.; Russell S.; and I. Cuthill 2009. The Status of Wildlife in Protected Areas Compared to Non-Protected Areas of Kenya. *PLoS ONE* 4(7): e6140. doi: 0.1371/journal.pone.0006140
- Wijk, J.; Lamers, M.; and R. Van der Duim 2015. Promoting Conservation Tourism: The Case of the African Wildlife Foundation's Tourism Conservation Enterprises. In: Van der Duim, R.; Lamers, M.; and J. Wijk (eds.). *Institutional Arrangements for Conservation, Development and Tourism in Eastern and Southern Africa: A Dynamic Perspective*. New York: Springer. pp. 203-218.
- Williamson, S.; Brunckhorst, D.; and G. Kelly 2003. *Reinventing the Common: Cross-Boundary Farming for a Sustainable Future*. Sydney: Federation Press.
- Wilson, D. C.; Ahmed, M.; Siar, S.V.; and U. Kanagaratnam 2006. Cross-scale linkages and adaptive management: fisheries co-management in Asia. *Marine Policy* 30: 523-533.

Culture and Environment in Africa Series

Edited by the Cologne African Studies Centre

- Issue 1** **Goodman Gwasira 2011**
A Rare Combination of Engravings and Paintings in the Dome Gorge, Daureb/Brandberg. A potential core element for World Heritage Status.
- Issue 2** **Eric Mutisya Kioko 2012**
Poverty and Livelihood Strategies at Lake Naivasha, Kenya. A case study of Kasarani Village.
- Issue 3** **Willis Okumu 2013**
Trans-local Peace Building among Pastoralist Communities in Kenya. The Case of Laikipi Peace Caravan
- Issue 4** **Innocent Mwaka 2014**
Bee-keeping and honey production as alternative livelihood strategies among the Pokot of Baringo County, Kenya
- Issue 5** **Florian Chisawani Silangwa 2014**
Migration and demographic changes. Its implications on land transformation and changing socio-economic development in the Lake Eyasi Basin in Karatu District, Tanzania
- Issue 6** **Leonardo Lembcke 2015**
Socio-Ecological Change and Migration in South-East Lake Naivasha, Kenya
- Issue 7** **Elsemi Olwage 2015**
“Growing together”: the politics of knowing and creating an urban commons in Cape Town, South Africa
- Issue 8** **Jonathan H.M. Kempen 2016**
“Sharing is over!” – A Case Study on Sharing Norms in the Namibian Resettlement Projects of Skoonheid and Drimiopsis
- Issue 9** **Joel Kigenyi 2016**
Coping with resource extinction: the case of medicinal plants in Kawete village, Iganga district, Uganda
- Issue 10** **Katrin Sowa 2017**
Street-Level Bureaucrats and Passport Networking: Practices of Immigration Law Enforcement in Northern Uganda
- Issue 11** **Tanyaradzwa Edith Whande 2018**
Energy Sources, Access and Women’s Livelihood Strategies:
A Case Study of Micro- Hydroelectricity Access in Chipendeke Village, Zimbabwe
- Issue 12** **Adelina Matinca 2018**
Human-Wildlife Conflict in Northeastern Namibia: CITES, Elephant Conservation and Local Livelihoods

Issue 13

Emily Mika Thuening 2018

Causes of Expansion of Urban and Peri-Urban Crop Cultivation in Northwest Namibia

Issue 14

Wilfrida Omusheni Kuta 2018

Wildlife conservation on communal pastoral land:

A case study of Il Ngwesi Conservancy in Laikipia County, Kenya