Institutions in public-private partnerships for natural resources conservation, management and use: A case study of the northern rangelands of Kenya

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 3

CHAPTER 4

CHAPTER 5

CHAPTER 7

LIST OF FIGURES

CHAPTER 2

CHAPTER 3

CHAPTER 5

CHAPTER 6

CHAPTER 7

LIST OF ABBREVIATIONS

ACC	African Conservation Centre
ACK	Action for Cheetahs in Kenya
AGM	Annual General Meeting
ASALs	Arid and Semi-Arid Rangelands
CBNRM	Community-Based Natural Resource Management
E.G.	Exempli Gratia
EE	Ecological Economics
EGS	Ecosystem Goods and Services
ES	Ecosystem Services
FGD	Focus Group Discussion
FGM	Female Genital Mutilation
GR	Group Ranch
GZT	Grévy's Zebra Trust
HWC	Human Wildlife Conflict
I-CAN	Institutional Canopy of Conservation
IFRA	French Institute for Research in Africa
INGO	International Non-Governmental Organization
KCWC	Kalama Community Wildlife Conservancy
KFS	Kenya Forest Service
KII	Key Informant Interview
KLMC	Kenya Livestock Marketing Council
KPS	Kenya Police Service

KSH	Kenya Shillings
KWCA	Kenya Wildlife Conservancies Association
KWS	Kenya Wildlife Service
LAPSSET	Lamu Port-South Sudan-Ethiopia-Transport
LCF	Livestock Consolation Fund
MCWC	Meibae Community Wildlife Conservancy
MA	Millennium Ecosystem Assessment
MEWNR	Kenya's Ministry of Environment, Water and Natural Resources
MoU	Memorandum of Understanding
NDMA	National Drought Management Authority
NGO	Non-Governmental Organization
NRT	Northern Rangelands Trust
NWCT	Namunyak Wildlife Conservation Trust
PA	Protected Area
PE	Political Ecology
PES	Payments for Ecosystem Services
PPP	Public-Private Partnership
RoK	Republic of Kenya
SACCO	Savings and Credit Cooperative Organization
SCG	Samburu County Government
SD	Standard Deviation
SLA	Sustainable Livelihoods Approach
SNR	Samburu National Reserve

SPSS	The Statistical Package for the Social Sciences
STE	Save The Elephants
TLU	Tropical Livestock Unit
TNC	The Nature Conservancy
UNESCO	The United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
USD	United States Dollars
WCMA	Kenya's Wildlife Conservation and Management Act
WCWC	Westgate Community Wildlife Conservancy

ABSTRACT

Decisions regarding the management of natural resources in the northern rangelands of Kenya have traditionally been made collectively through leadership offered by customary institutions. However, the evolution of Kenya as a flexible environmental state has had implications for natural resource management and institutions in arid and semi-arid rangeland (ASAL) ecosystems. As a result, the rise of collaborative natural resource management has been characterized by the growth of public-private conservation partnerships (PPPs). Ecotourism and payments for ecosystem services have thus evolved as flexible forms of environmental governance through which challenges in natural resources management can be addressed.

This study was motivated by the lack of documented empirical research on the effects of PPPs as hybridized modes of natural resource management. Specifically, this study aims to characterize the partnerships in terms of their evolution, actors' interactions and power dynamics, as well as examine their efficiency, effectiveness and equity implications of natural resource governance. Four conservancies under the umbrella of the Northern Rangelands Trust (NRT) in the ASALs of Samburu County were purposefully selected for study. Key informant interviews, focus group discussions, household interviews using a semi-structured questionnaire and researcher's observation of field conditions were used to gather data. Data was analysed using the Statistical Package for the Social Sciences (SPSS) software.

The findings show that the existence of wildlife on communal lands outside protected areas is the key condition for creating these partnerships. Furthermore, the partnerships are characterized by various kinds of exchanges between stakeholders, such as the provision of political support, physical security, legitimacy and finances. Additionally, the rolling back of the state under neoliberalism has led to the rise to power of the NRT whose influence has been magnified by ties

with international organizations such as The Nature Conservancy. The results of financial cost-benefit analyses of the conservancies revealed their operational inefficiency. As a result, there exists an over-reliance on donor-funding, rendering the practice of conservation unsustainable in its current form. As support for conservation initiatives strongly hinges on a local community's acceptance and collaboration, the PPPs undertake investments in communal projects, such as the provision of physical security which is critical to conservation initiative's success. Considerable effort is also geared towards shrewd environmental stewardship. However, in working towards their objectives, conservation PPPs are characterized by inequities in access, decision-making and outcomes. This finding, I argue, is a result of the failure to fully acknowledge and incorporate the contextual aspects of equity.

Overall, the implications of this thesis suggest that public-private conservation partnerships have the potential to be effective modes of natural resource governance if: (i) the devolved county system of government takes charge to empower local communities more, and, as a consequence avert tendencies to assert dominance within partnerships by other stakeholders; (ii) a renegotiation of favourable conservancy-investor partnership agreements occurs, as a way of financially empowering conservancies, thereby reducing the donor-dependency tendency; (iii) more effort is geared towards ensuring a fair distribution of benefits to individual households. This can be achieved, for instance, by linking communities directly to local and external markets in the framework of the NRT's BeadWORKS and LivestockWORKS programs, and by shifting the perception of marginalized social groups such as women and *morans*. Based on the findings of this study, it is thus expected that key policy initiatives should become visible in improving the practice of conservation and securing the rights and livelihoods of pastoral communities dependent on conservation as a form of land use in Kenya and beyond.

RESUMÉ

Les décisions concernant la gestion des ressources naturelles dans les pâturages du nord du Kenya ont traditionnellement été prises à travers le leadership offert par les institutions coutumières. Cependant, la croissance du Kenya en tant qu'État environnemental flexible a eu des répercussions sur les institutions en charge des écosystèmes et la gestion des ressources naturelles dans les zones arides et semi-arides (ASAL). De ce fait, la croissance de méthode de gestion collaborative des ressources naturelles s'est caractérisée par le développement des partenariats public-privé (PPP). L'écotourisme et le paiement des services écosystémiques sont devenus des formes flexibles de gouvernance environnementale permettant de relever les défis que pose la gestion des ressources naturelles.

Ce travail a été motivée par le manque d'études empiriques sur les effets des PPP en tant que mode hybride de gestion des ressources naturelles. Plus précisément, il vise non seulement à caractériser les partenariats à travers leur évolution, les interactions entre les divers acteurs et les dynamiques du pouvoir, mais aussi à examiner leur impact sur l'efficacité, l'efficience et l'équité de la gouvernance des ressources naturelles. Quatre zones de conservation, sous la coupe du Northern Rangelands Trust (NRT) dans les zones arides et semi-arides du comté de Samburu, ont été retenues pour ce travail. La collecte des informations a été effectuée à travers des entretiens avec des informateurs clés, des groupes de discussion, des entretiens avec les ménages par le biais d'un questionnaire semi-structuré et l'observation des conditions sur le terrain par le chercheur. Ces informations ont été analysées à l'aide du logiciel SPSS (Statistical Package for Social Sciences).

Les résultats démontrent que la présence de la faune sur les terres communales, en dehors des zones protégées, est la condition essentielle pour la création de ces partenariats. De plus, l'on

remarque également que les PPP se caractérisent par divers types d'échanges entre les parties prenantes, tels que l'apport d'un soutien politique, la sécurité, la légitimité et les finances. A ceci s'ajoute le remaniement de l'État sous le néolibéralisme qui a conduit à la montée au pouvoir du NRT, dont l'influence a été amplifiée par ses liens avec des organisations internationales, tel que « The Nature Conservancy ». Les résultats des analyses coût-bénéfice des méthodes de gestion ont révélé l'inefficacité opérationnelle de ces dernières. En conséquence, il existe une trop forte dépendance vis-à-vis du financement des donateurs, rendant la gestion des ressources non durable sous sa forme actuelle. L'appui aux initiatives de conservation dépend fortement de l'acceptation et de la collaboration des communautés locale. Les PPP investissent donc dans des projets communaux, tel que le renforcement des mesures de sécurité, élément essentiel au succès de ces initiatives. Un effort considérable est également orienté vers une planification plus ingénieuse et une gestion responsable des ressources et de l'environnement. Cependant, dans la poursuite de leurs objectifs, il est à noter que les PPP se caractérisent par des inégalités au niveau de l'accès, de la prise de décision et des résultats. J'argumente ici que ce résultat découle du fait que l'identification et intégration des aspects contextuels de l'équité n'est pas complète.

Globalement, cette thèse suggère que les partenariats de conservation public-privé pourraient être des modes efficaces de gouvernance des ressources naturelles si: (i) le système de gouvernance décentralisé des comtés prenait en charge la responsabilisation des communautés locales, afin d'éviter la tendance de certaines parties prenante à prédominer sur d'autres dans les partenariats; (ii) les accords de partenariat était renégociés de manière plus favorables entre conservateurs et investisseurs, ce qui rendrait les réserves plus autonomes financièrement, réduisant ainsi leur dépendance vis-à-vis des donateur; (iii) plus d'efforts était déployés pour assurer un flux équitable des avantages aux ménages individuels. Ceci pourrait être fait, par

exemple, en reliant directement les communautés aux marchés locaux et externes des programmes BeadWORKS et LivestockWORKS du NRT, et en améliorant la perception des groupes sociaux marginalisés, tels que les femmes et les *morans*. Sur la base des conclusions de cette étude, il est donc attendu que les initiatives clés deviennent plus visibles dans l'amélioration de la pratique de la préservation et la garantie des droits et des moyens de subsistance des communautés pastorales dépendantes de la conservation en tant que forme d'utilisation des terres au Kenya et au-delà.

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DEDICATION

To the Samburu community, and other indigenous populations across the globe who are engaged with socio-ecological struggles in the neoliberal era.

PREFACE AND CONTRIBUTION OF THE AUTHORS

This thesis is composed of a general introduction that includes the overall research objectives, five chapters written in manuscript format according to the guidelines of the Graduate and Postdoctoral Studies Office of McGill University, followed by a general conclusion and a short section on the research's contributions to knowledge.

The following identifies aspects of originality and novelty that characterize the contributions to knowledge stemming from this body of research (further elaborated in Chapter 9):

- The third chapter of the thesis included herein is by: Lugusa, K., Galaty, J., and Kosoy, N. and includes an analysis of stakeholders in public-private conservation partnerships in the lowlands of Samburu County of Kenya.
- The fourth chapter is by: Lugusa, K., Galaty, J., and Kosoy, N. and conceptualizes wildlife conservation as a payment for ecosystem services scheme in the arid and semi-arid rangelands of Samburu County of Kenya.
- The fifth chapter is by: Lugusa, K., Galaty, J., and Kosoy, N. and presents the impacts of public-private conservation partnerships on pastoral livelihood outcomes and biodiversity conservation in Samburu County of Kenya.
- The sixth chapter is by: Lugusa, K., Galaty, J., and Kosoy, N. and examines equity implications of natural resources conservation, management and use in the lowlands of Samburu County of Kenya from a landholders' perspective.
- Chapter seven is by: Lugusa, K. and presents the challenges in conservation partnerships in the arid and semi-arid rangelands of Samburu County.

The author of this thesis was responsible for the conceptual development and, planning of the study, including the choice of sampling methodology used, the gathering and analysis of data

through field research in Samburu County, as well as the organization of the study, and the writing of all manuscripts submitted for publication. Dr. Nicolás Kosoy served as thesis supervisor and provided critical input, reviewing and editing each manuscript. Prof. John Galaty is a supervisory committee member who reviewed and edited each manuscript.

List of publications and scientific presentations of the thesis

A. Thesis components that have been submitted for publication:

Lugusa, K., Galaty, J., and Kosoy, N. A stakeholder analysis of public-private conservation partnerships in the arid and semi-arid rangelands of Samburu County, Kenya. *Geoforum.*

Lugusa, K., Galaty, J., and Kosoy, N. Wildlife conservation as a payment for ecosystem services scheme in the lowlands of Samburu County of Kenya. *Ecosystem services.*

Lugusa, K., Galaty, J., and Kosoy, N. The impact of public-private conservation partnerships on pastoral livelihood outcomes and biodiversity conservation in Samburu County of Kenya. *Journal of Environmental Management.*

Lugusa, K., Galaty, J., and Kosoy, N. Equity implications of natural resources conservation, management and use in the lowlands of Samburu County of Kenya: A landholders' perspective. *Conservation and Society.*

Lugusa, K. Who's in, who's out? Challenges in conservation partnerships in the arid and semi-arid rangelands of Samburu County. *Les Cahiers d'Afrique de l'Est.*

CHAPTER ONE: GENERAL INTRODUCTION

1.1 Background

Pastoralism is a highly flexible system of herding domestic livestock, that has evolved over the years to become the most efficient means of utilizing scarce resources found in ecologically marginal environments characterized by low and unpredictable rainfall (Lelon et al., 2010). Pastoralism evolved as a strategy that allows human populations in medium-scale densities to inhabit extensive and usually arid and semi-arid rangeland (ASAL) regions (Blench, 2001). Pastoralism is defined as a finely-honed symbiotic relationship between local ecology, domesticated livestock species and people in resource-scarce, climatically marginal and highly variable conditions (Nori and Davies, 2007). This definition qualifies pastoralism as a complex form of natural resource that entails continuous ecological balance between foraging resources, animal species and people (ibid.). It entails intensive use of pastoral herding labour and extensive use of vast ASALs, in contrast to intensive land use in mixed peasant farming or capital extensive ranching (Galaty and Johnson, 1990).

Based on mobility, a key feature underpinning pastoral systems, various forms of pastoralism exist (Blench, 2001). The two essential forms are nomadic and transhumant. Nomadic entails the mobility of populations in highly irregular patterns whereas, transhumant involves mobility through regular back-and-forth movements between fixed locations, usually on a seasonal basis (Blench, 2001; O'Neil, 2011; Dong et al., 2016). Mobility permits extensive utilization of ASALs as common pool resources through the utilization of human culture and its associated attributes (Kaye-Zwiebel and King, 2014). Pastoralists also employ mobility in order to avoid pests and diseases, reduce competition over resources, take advantage of markets, avoid would-be

authorities by escaping taxation and conscription, and escape raids from other tribes, or those motivated by social reasons (Dyson-Hudson and Dyson-Hudson, 1980; McCabe et al., 1999).

Pastoralism has been associated with various misconceptions that include the notion that mobility is inherently backward, unnecessary, chaotic and disruptive to ASAL ecosystems; that nomadism is an archaic form of production whose time is long overdue and, has lower levels of productivity compared to sedentary cattle raising; that African pastoralists prefer to hoard, admire and compose poems for their herds rather than sell the livestock; that all pastoralists are rich or, alternatively, poor and food insecure; that ASALs degradation is caused by pastoral herds' overgrazing, and the 'Tragedy of the Commons' is a consequence of pastoralists' inability to take care of their lands; that pastoral communities must settle in order to benefit from services provision such as infrastructure and veterinary services; that pastoral techniques are archaic and thus, should be changed to modern scientific techniques; and that pastoralists contribute little to the national economy (Swift et al., 2003). However, according to Homewood and Randall (2008), curtailing pastoral mobility, privatizing land tenure, regulating herd sizes and introducing more productive livestock species is inconsistent with the ecology of African ASAL societies and do not entirely constitute forms of pastoralist development. The authors further underscore that this realization has come too late to avoid a steady deterioration of ASALs resulting from efforts to eliminate pastoralism as a practice.

Despite the misconceptions about pastoralism, ASALs play an important role in the livelihood of local communities and as a refuge for wildlife species (Gaur and Squires, 2018). ASALs constitute more than 40% of the earth's surface and support about 35% of its human population (Mortimore et al., 2009). On the African continent, the practice of pastoralism is well distributed. For instance, in the north, immense areas of rangelands specifically steppe and arid

Saharan lands facilitate pastoralism (Dutilly-Diane, 2006). In the East African region, pastoral communities inhabit ASAL ecosystems in all the countries (Odhiambo, 2006). In Kenya, ASALs constitute about 84% of the total land area and host about 20% of the country's population (Idris, 2011). Pastoralism and livestock production are significant to the national and local livelihood systems. Livestock forms the backbone of the pastoral economy and represents the indispensable physical, financial and social capital of pastoralists' livelihoods (Pavanello, 2010). ASALs also contribute to society and national economies by supporting agriculture, the harvesting of wild resources and tourism (Nassef et al., 2009).

Livestock production and wildlife conservation[1] characterize the production system in the East African ASALs. This characteristic emphasizes the existence of an important linkage between pastoralism, conservation and biodiversity (Kirkbride and Grahn, 2008). Kenya's ASALs are home to over 90% of the tourism industry's assets, which include game reserves, national parks, authentic cultural practices and The United Nations Educational, Scientific and Cultural Organization's (UNESCO) accredited world heritage sites. The interdependent interaction between wildlife and pastoralism, combined with the rich cultural heritage of pastoral communities are a major tourist attraction (Republic of Kenya (RoK), 2015). Some of the wildlife conservation and tourism outside protected areas (PAs) occurs on community-based conservancies that promote the integration of livestock with wildlife conservation (Aboud et al., 2012; Ogutu et al., 2017). This has the potential of maximizing land productivity and profitability, enhancing local and regional employment for indigenous communities, reducing business risks in seasons of poor tourism, and providing high-quality beef for the Kenyan market (Bell and Prammer, 2012). Due

[1] Conservation is the expression of humans' desire to preserve and protect valuable stocks and flows of nature. Its aim is to save species, habitats and ecosystems for sustainable utilization (Jepson and Ladle, 2012).

to the potential of ASALs, emphasis has been placed on improved rangeland management with a view of maximizing existing opportunities (Neely et al., 2009).

Despite the immense potential of Kenya's ASALs to contribute to livelihoods and the national economy, they are the most vulnerable to climate change and other natural hazards (Bobadoye et al., 2016). Other challenges facing Kenya's ASAL ecosystems are manifested in land tenure and land use changes, intensification, sedentarization, institutional changes, wildlife conflicts, and conservation policies (Galvin, 2009; Reid et al., 2014), as well as the diminishing availability of resource, changing social values and governance systems, and the formation of new resource management institutions[2] (Kaye-Zwiebel and King, 2014). Historical neglect and marginalization by the national government occurred during both the colonial and post-colonial eras (Davies et al., 2010). Incitements by wealthy and influential politicians led to human-human and human-wildlife conflicts, particularly during election periods (Pellis et al., 2018), which led to an increase in social stratification and the appropriation of pastoral resources by elites (Galaty, 2013). Aridity, access to markets and rapid human population growth are also amongst some of the challenges facing ASALs ecosystems (Notenbaert et al., 2012). Galvin (2009), however, argues that some of the aforementioned factors can be variously considered as drivers of change, adaptive strategies to cope with change, or consequence of change, depending on one's viewpoint. Galvin's (2009) argument is supported by Feng and Squires' (2018) study that the survival of ASAL ecosystems is dependent on context-specific interrelationships between human beings, vegetation, domesticated and wild ungulates, and the physical environment. In these ecosystems, pastoralists developed various coping and adaptive strategies that are ecologically based and, contingent on socioeconomic relations (Feng and Squires, 2018). According to Rota and Sperandini (2009), these

[2] Institutions are formal and informal structures that entail conventions, norms and formal rules of a society. They can operate as single rules, or in combination for instance resource regimes (Vatn, 2005: 2008).

strategies include; rearing adapted livestock breeds which are mainly indigenous species, diversifying livestock breeds and species, protecting rich-patch vegetation areas such as grass banks for periods of drought, maximizing the stock to ensure the herds' survival in the event of calamities, herd splitting, and the redistribution of assets.

Another strategy is the creation of conservancies and community-based institutions on state, private and common land as new ways to manage ASALs in response to challenges facing pastoral ecosystems (Reid et al., 2014). Due to the existence of viable tourism industry assets coupled with the myriad of challenges ASAL communities and their ecosystems face, Ykhanbai et al. (2014) argue that potential for collaboration between stakeholders (government departments, non-governmental organizations (NGOs) and private entities) exists. Such collaboration can improve the welfare of pastoral communities and their ecosystems, as well as the well-being of other stakeholders and is characterized by schemes targeting ecosystem or biodiversity payments, enhanced stewardship payments, conservation-friendly livestock products, and public-private conservation investment partnerships (Elmi and Birch, 2013; Reid et al., 2014; Ameso et al., 2018)

1.2 Problem statement

Corson (2010) noted a shift towards public-private conservation partnerships (PPPs)[3] though relatively little empirical research has been conducted to investigate the effects of such modes of natural resource governance. Moreover, Levine and Pavanello (2012) acknowledged the creation of new institutions that take away power from customary institutions. The resultant

[3] There exists no precise agreed-upon definition of the term. PPPs are however viewed as a way of managing organizations, a development strategy, and a language game (Khanom, 2010). In this thesis, I define PPPs as arrangements that entail leases whereby tourism investors pay community conservancies an agreed amount, amongst other benefits, to utilize the rented land to provide goods and services to consumers (ecotourists) for a specified number of years.

changes arising from the power dynamics amongst the stakeholders involved are unknown. Furthermore, according to the African Conservation Centre (2014), little documented empirical evidence exists on the new forms of partnership arrangements between pastoral communities and the government, NGOs, and the private sector.

1.3 Justification

This study falls under the 'Institutional Canopy of Conservation' (I-CAN) project. The project aims to address the challenge of combining biodiversity protection with strengthened livelihoods in the East African region. With the promotion of conservancies[4] in the ASALs, Ykhanbai et al. (2014) recommended that attention be given to different models of community conservation, with the goal of gaining a full understanding of context-specificity as well as the extent to which these models achieve conservation and development objectives. Therefore, understanding how conservation practice is influenced by emergent hybrid and network governance arrangements is imperative (Armitage et al., 2012). Furthermore, Rodela (2016) noted the effort being accorded to environmental management and stewardship and acknowledged the need for research to contribute to policy and decision-making processes regarding natural resources. Moreover, understanding the dynamics in hybrid modes of governance encourages reflection on the assumptions and values that frame stakeholders' roles in conservation initiatives (Armitage et al., 2012). There is also a need to strengthen collaborative natural resource conservation and management through partnerships between governmental agencies, conservation organizations, the private sector and pastoral communities (Ogutu et al., 2016). It is out of this recommendation that the current study was conducted.

[4] A conservancy is a collection of lands unified under a singular management plan for the purpose of collectively enhancing conservation and natural resource use (Waterhouse, 1994).

Niamir-Fuller et al. (2012) argued that the integration of wildlife and livestock in the framework of stronger and regulatory co-management has the potential to offer diverse and complementary sources of income for the institutions involved. Therefore, it was important to investigate the validity of this argument under PPP arrangements in conservation. Ykhanbai et al. (2014) underlined that conservation agencies (particularly governments and NGOs) in their attempt to protect ASALs enforce measures that curtail local resource use, management, or tenure rights, thus exacerbating major historic and continued conflicts between pastoral communities and conservation goals. It was therefore important to shed some light on this narrative. Additionally, in formulating conclusions that influence environmental decisions or projects, there is a need to understand and integrate four criteria (efficiency, effectiveness, equity and political legitimacy) which should be studied simultaneously (Adger et al., 2003). Therefore, the integration of these four concepts in studies about PPPs as institutions for natural resources conservation, management and use was warranted.

This study was therefore conducted with the aim of generating empirical evidence for enhancing our understanding of PPPs as institutions for natural resources governance in the ASALs of Samburu County. Stakeholders who are expected to benefit from such information include pastoral communities engaged in natural resource conservation initiatives, NGOs in conservation, scholars studying conservation, national and the devolved county government systems. Kameri-Mbote (2005) underscored the objectives of devolution as embedded in the Constitution of Kenya (2010) and their implications for natural resources management, particularly wildlife. The author documented that ‘it is stressed that devolution recognizes the rights of local communities to manage their own local affairs, form partnerships and ensure equitable sharing of resources.’ This provision has an impact on ASALs ecosystem management.

1.4 Overall objective

The overall objective of this study was to document the role of PPPs in conserving, managing and utilizing natural resources in the ASALs of Samburu County, with the aim of generating empirical understanding of the linkages between partnerships, land uses, provision of ecosystem services and compensatory regimes.

1.5 Specific objectives

The specific objectives of this study were to:

1. Characterize the partnerships in terms of their evolution, as well as the interactions between actors and their power dynamics;
2. Analyze the operational efficiency of the partnerships for the conservancies under study;
3. Establish the effectiveness of the partnerships based on the objectives of enhancing environmental and human well-being;
4. Examine aspects of equity that are demonstrated through partnerships.

1.6 Hypotheses

1. If partnerships exist, then they are characterized by a common evolutionary basis; and are underpinned by various kinds of exchanges;
2. If the partnerships are operationally efficient, then the conservancies under study minimize costs or maximize profits;
3. If the partnerships are effective in achieving their aims, then biodiversity conservation and human well-being is enhanced;
4. If equity is considered and factored in partnerships, then equitable arrangements amongst stakeholders exist.

FORWARD TO CHAPTER TWO

In Chapter 1, I have presented the background of the study, research problem, and justification of the study, as well as the objectives and the hypotheses tested. Providing a background entailed giving an overview of pastoralism as a livelihood strategy, briefly discussing the misconceptions surrounding pastoralism, showing the challenges in pastoral production systems, as well as looking at adaptive and coping strategies applied to counter some of the challenges being experienced. In the next chapter, I will provide an extensive literature review relevant to this study. I will also present theoretical and analytical frameworks that are the premise of this study. Furthermore, research gaps will be identified.

CHAPTER TWO: GENERAL REVIEW OF LITERATURE

2.1 Conceptual framework

This thesis is based on the co-management of natural resources framework[5] (Figure 2.1) proposed by Plummer and Fitzgibbon (2004). The co-management framework allows the identification and evaluation of conservation partnership arrangements in the lowlands of Samburu County. Three components associated with co-management were identified as pre-conditions, characteristics and outcomes that align with the conceptualized framework. According to Plummer and Fitzgibbon (2004), preconditions provide the driving force to partnerships. Characteristics are reliable attributes repeatedly observed in co-management while outcomes are the realized consequences stemming from PPPs.

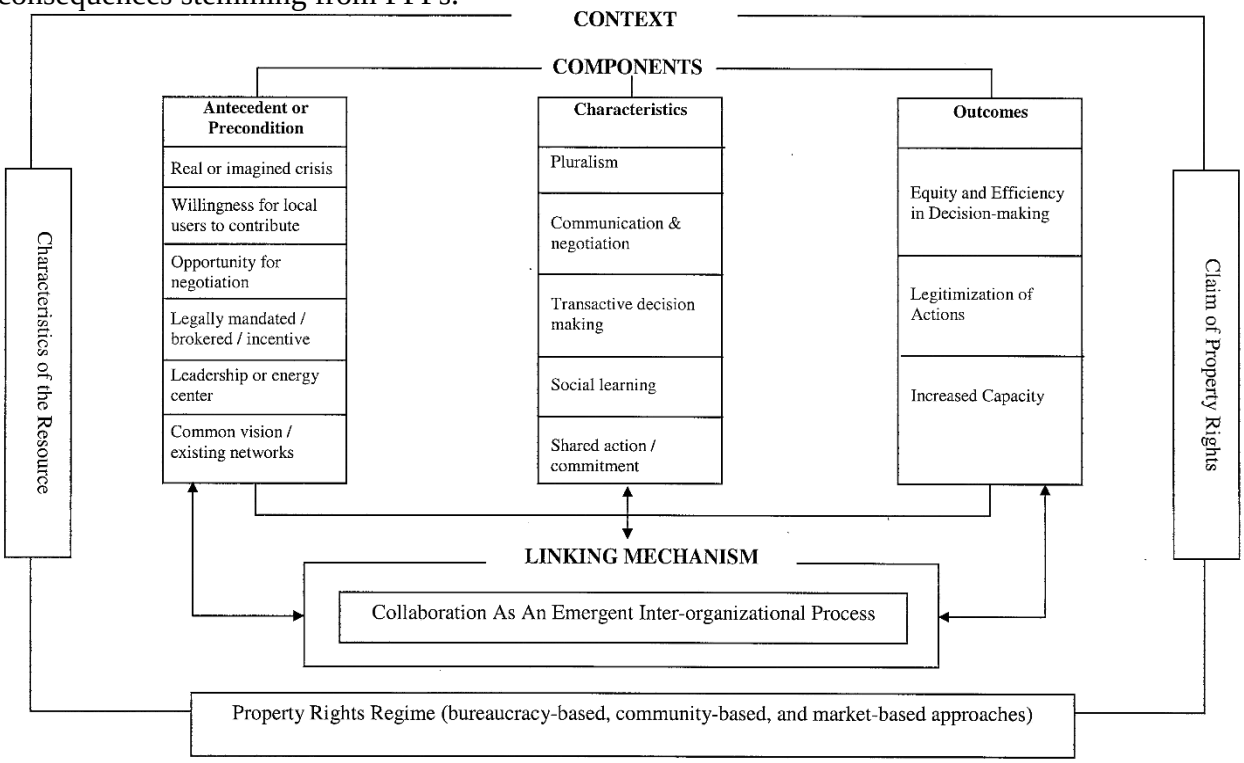


Figure 2. 1: Public-private conservation partnerships framework in the lowlands of Samburu County.

Source: Adapted from Plummer and Fitzgibbon (2004).

[5] A conceptual framework is an organizational device employed to structure a problem and identify its components (Mitchell, 1989).

The specific objectives presented in the previous chapter are identified under this framework, thus highlighting its relevance for grounding the research presented in this thesis.

2.2 Ecological Economics, Political Ecology and Natural Resource Management in ASALs of Kenya

Ecological economics (EE) focusses on the definition and protection of the rights of disempowered groups in society as well as future generations (Howarth and Norgaard, 1990). The discipline's aim is to understand the issues in human-economy-environment interactions in order to redirect economies towards sustainability (Venkatachalam, 2007). Daly and Farley (2011) acknowledge EE as having emerged in response to the failures of microeconomic and macroeconomic measures in addressing unsustainable scale of production and inequitable distribution. The discipline therefore assumes a more inclusive and activist approach. Political ecology (PE), on the other hand, is a multiplicity of theoretical and methodological approaches to socioecological relations that share a common interest in questions pertaining to the politics of natural resource management, access, and control, environmental knowledge, and their consequent effects on environmental change dynamics and livelihoods (Bassett and Peimer, 2015). Simply put, PE analyzes questions of ecosystem management, in the context of global political, cultural and economic factors (Robbins, 2012).

Regarding nature valuation, there is a fundamental difference between both disciplines. Kallis et al. (2013) state that 'the focus of PE is not on particular methods or valuation practices. Rather, it is on understanding how capitalism works and how it affects human-nature relations, and why and how under capitalism there is a drive to reduce all forms of value and valuation into monetary.' EE and PE underpin the analyses presented in this thesis. Therefore, through the lens of Ioris' (2014) work on 'The Basis and the Evolution of Environmental Statehood', the general

objective of this section is to document the shift in approaches to natural resource management in the ASALs of Kenya. Key ideological and theoretical frameworks and research gaps are also identified.

In Kenya, during the colonial era, the British administration viewed pastoralism as a livelihood strategy inherently destructive to the environment, and a hindrance to socio-economic development (Woodhouse et al., 2000). Accordingly, the colonial government created the African Land Development Board (ALDEV) in 1945. Its mandate was to enhance the carrying capacity of the land, improve livestock productivity, and curtail the ecological imbalance associated with the fragile ASAL ecosystems (Mwangi, 2007). In 1954, the colonial government implemented the Swynnerton Plan to intensify and develop African agriculture in non-pastoral areas through land privatization (Swynnerton, 1954; Bradshaw, 1990). Land privatization would then guarantee leaseholders the ability to borrow finances from commercial banks or the government on the security of their titles (Leys, 1975). Even though the implementation of the five-year plan targeted highland areas perceived as non-pastoral by the colonial administration, pastoral communities were also affected by this initiative (Wangui, 2008).

Since the highlands served as grazing areas during the dry season for pastoral communities, land privatization led to the loss of communally utilized land. Land privatization spread to communal ASALs in the 1960s and in the post-independence era. The Kenya Livestock Development Project (KLDP), a ten-year project initiated in 1968, further enhanced land privatization in ASALs (Ayuko, 1981; Evangelou, 1984; Wangui, 2008). Therefore, land adjudication and registration led to the creation of group ranches[6] (GRs), whose aim was to formalize traditional decision-making structures, and the incorporation of these ranches under the

[6] A group ranch is a demarcated area of rangeland to which a group of pastoralists graze individually owned herds possess official land rights (Oxby, 1981). Conservancies are borne out of group ranches.

jurisdiction of the Land Adjudication Act of 1968 (Kameri-Mbote, 2005; Mwangi, 2007). Group ranching was introduced by the government in Maasai land to offer a framework for dismantling communal ownership of land and nomadic pastoralism (Graham, 1989; Galaty and Bonte, 1991). Maasai pastoral groups embraced the GR concept as a way of preventing agricultural communities from holding exclusive land use rights in ASALs. The GR concept, however, came late in the land privatization process, at a point when the Maasai had already lost access to critical dry season grazing reserves (Wangui, 2008). Moreover, GRs supported a destocking policy in order to achieve a 'proper' carrying capacity, a practice that was viewed negatively by pastoral communities. Some GRs subdivided due to disproportionate access of elite individuals to communally owned resources who subsequently benefited from the subdivision, often by combining individual ranches with continuing access to common holdings (Ng'ethe, 1993). Therefore, the GR concept, whose initial purpose was to safeguard the rangelands from the "tragedy of the commons"[7], 'ironically created one because the Kenyan government failed to understand or just ignored how common property works' (Kibugi, 2008).

The realization that the conservation approach had failed to maintain wildlife populations resulted in the creation of the Wildlife Policy of 1975, and the subsequent Wildlife Management Act of 1976 CAP 376 legalizing the policy. Under the policy, the role of communal and private lands in wildlife conservation was recognized. The policy further underscored the need for communities to benefit from wildlife. Compensation for losses incurred from wildlife was also introduced (Cheeseman, 2001; Nyariki, 2007; RoK, 2007). The Kenya Wildlife Service (KWS) was fully established in 1990 to oversee the sustainable utilization of wildlife resources for national development and to benefit the inhabitants of wildlife ecosystems. In 1992, KWS formed a

[7] Garret Hardin's (1968) thesis held that unclear property rights or shared common property resources amongst pastoral communities led to overgrazing and consequently, to environmental degradation.

Community Wildlife Service department with the mandate to explore opportunities for creating partnerships with local communities (Kameri-Mbote, 2005). In 1996, KWS management introduced the concept of 'parks beyond parks' with the aim of fostering partnership with local communities in wildlife management (Honey, 2008). As a result, the Kimana GR in southern Kenya was formed as the first community-owned wildlife sanctuary in Kenya (Wishitemi and Okello, 2003). In Northern Kenya, Lewa Wildlife Conservancy (LWC) formed in the 1980s under the premise of private conservancies. LWC transformed from a cattle ranch to a wildlife conservancy in the mid-1990s. Conflicts with pastoral communities over water and pasture made the management team of LWC realize the importance of incorporating local communities in wildlife conservation. The realization that conservation success was contingent on partnerships with local communities, led to the onset of community conservancies in the region. LWC then formed partnerships with local communities, government and private stakeholders to establish the Northern Rangelands Trust (NRT) in 2004. The NRT then became the umbrella organization for community conservancies in Northern Kenya (Campbell et al., 2009), signalling the onset of an era in the conservation arena characterized by different approaches and aims in conservation.

Birgen (2015) acknowledges that the goals of nature conservation have changed over the last decades, as manifested in the shift to new approaches enabling local communities to own and manage natural resources. Such shifts, according to Mace et al. (2014, are rooted in the intense relationships between human beings and nature thereby impacting the framing and objectives of conservation. In Kenya, Birgen (2015) underscores that 2010 was the benchmark year that saw the promulgation of a new constitution paving the way for significant reforms in land and natural resources management. Pre-2010 was characterized by inadequately secure land tenure and low involvement of local communities in the management of natural resources. Post-2010 indexes an

embrace of contemporary approaches characterized by significant land reforms and increased participation of local communities in natural resource management (ibid.). This is reflected in the enactment of important policies such as the Community Land Act No. 27 of 2016. The Act guarantees security of tenure to pastoral communities owning land communally, thereby enabling them to utilize land and the resources it harbours to their benefit (RoK, 2016).

In Kenya, a great proportion of wildlife lives outside PAs either on a permanent or seasonal basis. The wildlife population faces threats due to various factors such as poaching, high conservation costs, weak legislation and human-wildlife conflicts (Kamande, 2008; KWS, 2009; Wanyonyi, 2011; Karanja, 2012). Wildlife resources are the property of the state irrespective of wherever they may be located, and private and communal landowners can claim no ownership or use rights over wildlife on their property (Kameri-Mbote, 2005; RoK, 2007). Munyasi et al. (2011) reported that pastoral communities inhabiting wildlife dispersal areas are impacted negatively by wildlife conservation policies. For instance, such communities reap few direct benefits associated with wildlife (such as income generated from tourism and selling of jewelry and artworks, as well as employment opportunities to community members from touristic enterprises and conservancies), which are incommensurate with costs of co-habiting with wildlife. Since biodiversity conservation and pastoralism are recognized as complementary forms of land use in the ASALs of Kenya (Reda, 2015; Bersaglio and Cleaver, 2018), landowners in wildlife ecosystems are often motivated by incentives to implement measures enhancing sustainable wildlife conservation (RoK, 2011). Frank (2016) underscored the need to encourage coexistence between human beings and wildlife, as well as positive interactions between them and, tolerant attitudes towards wildlife, in order to, maximize the success of wildlife conservation. Therefore, the Kenyan government had provisions for compensation of losses resulting from wildlife in its

policy documents. Such documents include the Wildlife Conservation and Management Act (WCMA) of 1976 and 1989, the Draft Wildlife Policy of 2007, and WCMA of 2013 (RoK, 1989; 2007; 2013). Compensation amounts offered to individuals for losses incurred through property destruction, livestock depredation and human deaths or bodily injuries has been the contentious issue cutting across these Acts and Policies. Compensation amounts from the government-led scheme and the perception of the local communities cohabiting with wildlife undoubtedly has an impact on wildlife and natural resource conservation in general.

2.3 Governance modes in natural resources conservation

Environmental governance is an expanding area in applied human-nature scholarship with implications for conservation practice (Armitage et al., 2012). Armitage et al. (2012) define governance as processes and institutions through which societies make decisions that affect the environment. Key concepts in environmental governance include; the recognition of the importance of fit and scale, fostering adaptiveness, flexibility and learning, knowledge co-production, comprehension of new actors' emergence and their roles in governance, and changing expectations regarding legitimacy and accountability (ibid.). Governance is a central aspect of natural resource management initiatives (Scherl, 2012), and modes of governance imply looking at how society organizes itself, how problems are addressed and by whom (Glasbergen, 1998). Associated trends in environmental governance (e.g. decentralization, privatization and commodification), are informed by a neoliberal logic that has penetrated remote frontiers of the globe, where human-nature relations were socially embedded in nature rather than monetary exchanges (Polanyi, 2001).

Idealized forms of governance include those that are: market-based, according to which a key role is assigned to the pricing mechanism and where governments facilitate market processes;

cooperative models that assign a key role to collaborative interactions between governments, mediating NGOs, and private interests; civil society where key roles are assigned to citizens and the social ties they spontaneously create; self-mobilization where roles are assigned based on the capacity for self-reflection in sub-systems within society, and collective problem-solving is feasible if governments create a conducive environment; and regulatory, where key roles rest with governments that regulate the processes of change (Glasbergen, 1998). Other forms of natural resources governance include hybridized modes that combine the State, markets and civil society (Armitage et al., 2012). Examples include co-management (e.g. shared power to make decisions regarding resource use (CBNRM), public-private partnerships (e.g. concessionary arrangements, logging, mining) and private-social partnerships (e.g. PES, carbon sequestration and ecotourism). These various modes can possibly coexist, and at times be combined in different ways to influence conservation outcomes (Lemos and Agrawal, 2006; Duit and Galaz, 2008).

Landscape approaches to management (Ontiri and Robinson, 2015) is another mode which is promoted in ecosystems where borders of natural resources do not correspond to those of either individual communities or administrative units. Landscapes in this case may be defined according to watersheds or other biophysical criteria, follow pre-existing administrative or customary boundaries, or result from negotiations among participating stakeholders (ibid.). Other modes of conservation governance include the 'fortress' strategy, which is basically a command and control model in which capitalist markets have long influenced the disciplining of people through law enforcement, livelihood and landscape, and market-oriented conservation governance (Roth and Dressler, 2012). In East Africa, between 1940 and 1970, States created protected areas (PAs) under the fortress strategy by expelling indigenous populations from their landscapes. Monetary fines in conjunction with physical and legislative punishments, were levied to offenders who encroached

on PAs. The Kenyan State heavily invested in militarizing PAs, using money appropriated from international conservation efforts, by establishing anti-poaching and ranger patrols and forming a military hierarchy of command and control. There was little judicial oversight, and 'shoot-to-kill' orders were evoked to ensure the protection of biodiversity (Homewood and Rodgers, 1984; Peluso, 1993; Duffy, 1999; Neumann, 2001; Brockington, 2002; Shetler, 2007).

2.4 Rangeland values and neoliberal conservation in the ASALs of Kenya

Rangeland values span beyond grazing to include food, water, recreation, home to ethnic minorities and repositories of ancient systems of gene pool conservation (Gaur and Squires, 2018). The values are termed as ecosystem goods and services (EGS) that are critical for satisfying human needs and can be categorized as tangible goods as well as intangible services (Maczko et al., 2011). Rangeland EGS can also be classified into provisioning, regulating, and cultural goods and services (Millennium Ecosystem Assessment, 2005; Havstad et al., 2007). Cultural services (e.g. scenery, wildlife) provided by the ecosystem, are the premise of tourism in the ASALs of Kenya (Mortimore et al., 2009). Overvaluing of non-rangeland services in monetary terms whilst undervaluing rangeland EGS incentivizes people to convert ASALs to higher monetary value uses, such as settlement or cropping (Daily et al., 2009; Dougill et al., 2012; Reid et al., 2014). Following this observation, Bersaglio and Cleaver (2018), argue that the creation of community conservancies in the ASALs of Kenya is supposed to offer local populations greater control over how their communal lands and natural resources are managed for conservation, including control over revenues accruing from market-based approaches to conservation.

Embracing market-based approaches to conservation is a consequence of the reconfiguration of the relationship between the State, market, and civil society, a phenomenon that has shifted the environmental governance landscape in the twenty-first century under

neoliberalism, creating room for private actors to influence state policy (Corson, 2010). Holmes and Cavanagh (2016) conceptualize neoliberalism as 'a complex and variable assemblage of ideologies, institutions, discourses, stakeholders, and related practices that endeavour to advance processes of financialization, privatization, marketization, decentralization and/or commodification in society.' The neoliberal nature of CBNRM is often characterized as using economic incentives (e.g. jointly-owned tourism ventures and payment for ecosystem services (PES)[8]) to condition ASAL communities to uphold environmentally-friendly actions/activities in their ecosystems (Dressler and Büscher, 2008; Fletcher, 2010; Roth and Dressler, 2012; Reid et al., 2014).

Across the globe, PES is a popular approach to neoliberalized biodiversity conservation (Higgins et al., 2014; Fletcher and Büscher, 2017). Büscher et al. (2012) define neoliberal conservation as 'the combination of ideology and techniques whose logic is that natures can only be saved through their submission to capital and its subsequent revaluation in capitalistic terms'. Most schemes in PES are hybrid constructions characterized by a mix of market and non-market policy instruments, as well as the collaboration of state and non-state actors to effect practical environmental changes (Higgins et al., 2014). The application of these policy instruments, according to Higgins et al. (2014), contributes to and reinforces the construction of neoliberal landholder subjectivities. Brockington et al. (2012) underscore that emphasis has been placed on market mechanism and logics as the sole avenue to implement effective conservation. Neoliberalization of nature, however, varies across scales and between places (Holmes, 2011), indicating context-specificity in locations where neoliberal conservation initiatives occur.

[8] PES is '(i) a voluntary transaction in which (ii) a well-defined environmental service (or land use likely to generate that service) (iii) is 'bought' by a (minimum of one) buyer (iv) from a (minimum of one) provider (v) if and only if the provider continuously secures the provision of the service (conditionality)' (Wunder, 2005:3).

Emphasis should then be on PES functions within a broader neoliberal political economy (Fletcher and Büscher, 2017). PES acknowledges neoliberal capitalism as both the problem and solution to the ecological crisis of diminishing and degradation of biodiversity (ibid.), and in PES arrangements, conservation NGOs can use market forces to save nature from markets (Holmes, 2018).

In Africa, conservation partnerships between multinational NGOs and governments foster ecotourism development as a strategy for pursuing natural resource management in order to achieve economic gains and enhance the quality of life (Kline and Slocum, 2015). However, does direct foreign investment in such partnerships lead to the reinforcement of the neoliberal concept, where multinational NGOs control local power structures as stated by Kline and Slocum (2015)? Humphreys (2009) states that the rolling back of the state facilitated the rise to prominence of two categories of stakeholders in environmental governance: the for-profit sector (business and corporations); and the not-for-profit sector (civil society, community-based organizations and NGOs). The validity of Humphreys' (2009) assertion remains to be seen. Furthermore, do partnerships in community-based ecotourism enterprises in the Kenyan ASALs fail to adequately address community priorities, as stated by Manyara and Jones (2007)? Since the success of conservation partnerships is still highly contested (Kline and Slocum, 2015), a critical appraisal of issues central to stakeholders' operations in partnerships is crucial to understanding their activities in order to propose new strategies of stakeholders' engagement in conservation partnerships (Bawa, 2013). This observation justifies the current study.

Furthermore, research has been conducted by various researchers and scholars on pastoral resource governance institutions as well as on collaborative wildlife management in the ASALs of Kenya. Such studies include: Mburu and Birner (2002; 2007); Mburu et al. (2003); Hazzah (2006);

Maclennan et al. (2009); Komu (2013); Lamers et al. (2014); and Kanyuuru (2015). Mburu and Birner (2002) analyzed the efficiency of collaborative wildlife management using two community wildlife sanctuaries as case studies in Kenya. The authors conducted cost-benefit analyses from a financial and economic standpoint. Valuation problems are brought to light in the process. Their 2007 study documented the emergence, adoption and implementation of collaborative wildlife management in Kenya and highlighted the conditions for ensuring successful collaborations. They identified enabling policies, the existence of organizational capacity in conservancies, and local communities' access to reap the benefits from conservation, as enabling factors for successful partnerships. Furthermore, an empirical analysis of the relative importance and determinants of landowners' transaction costs in collaborative wildlife management in Kenya was documented by Mburu et al. (2003). According to research findings, landowners incurred low transaction costs, with the costs being influenced by the attributes of transactions.

The study by Hazzah (2006) explored community attitudes towards conservation initiatives and motivations behind the killing of lions in Kenyan Maasailand. (ibid.) Research findings indicate that households that lost a greater percentage of their herds through depredation, belonged to the evangelical church, relied on livestock sales for subsistence, and had a higher propensity to kill predator species. Maclennan et al. (2009) evaluated an existing compensation scheme which was meant to bring about pastoral communities' tolerance to lions using Mbirikani GR as a case study in the Amboseli-Tsavo ecosystem in Kajiado County of Kenya. The study found that attacks on livestock were prevalent during dry periods. No correlation was found between attack rates and livestock density on the GR, the ratio of wild ungulates and livestock, and local market prices and the number of claims made per month. Komu (2013) used Il Ng'wesi conservancy in Laikipia County of Kenya as a case study to document pastoral communities' learning experiences on

natural resource conservation and governance. The study found most members of the conservancy to be illiterate, pursuing livestock production as the main livelihood source with a mean household Animal Equivalents of 5.2. The conservancy was associated with enhanced physical security, decreased poaching levels and holistic grazing management. Lamers et al. (2014) adopted a Policy Arrangements Approach to study how the stability of conservation tourism partnerships is governed using two private-community partnerships in Laikipia County of Kenya. The study concludes that partnerships are adaptive entities that require active governance to ensure effective long-term outcomes. The dynamics of institutional arrangements and their adaptation to socio-economic and ecological challenges in ASALs of Northern Kenya were studied by Kanyuuru (2015). According to the study, institutional arrangements are dynamic, and they influence economic values of ecosystem services (ES), and external actors were drawn to community institutional arrangements that had a semi-formal structure (GR committee and conservancy board). Although these studies exist, none of them employed the approach I use for studying PPPs as institutions for natural resource conservation, management and use in the ASALs of northern Kenya.

Some studies (e.g. Komu, 2013) have reported inequity in benefit sharing in community conservancies and have recommended financial cost-benefit analyses to be conducted on community conservancies to determine their economic viability. Additionally, the author recommended the partnership of community conservancies with the private sector to benefit from marketing expertise, cost minimization and increased revenue generation. Currently, there lacks empirical studies to test such a recommendation. There is a lacuna (e.g. in Lamers et al., 2014) in the documentation pertaining to communities' level of understanding of evolving partnership arrangements, and the extent to which they feel represented by their leaders in the partnerships.

Some researchers (e.g. Mburu and Birner, 2007) reported distributional and representational shortcomings in collaborative wildlife management in some ASAL counties of Kenya. It is yet to be seen if this holds true for conservation PPPs under different settings. Partnerships in natural resources conservation, management and use, are expected to require high transaction costs for the participating stakeholders. However, empirical studies relating to the quantification of these costs are few (Mburu et al., 2003). Some studies (e.g. Hazzah, 2006; Maclennan et al., 2009) have documented compensation schemes in natural resource management institutions in the Maasai Mara Triangle and Amboseli-Tsavo ecosystems. Yet, such documentation has not been reported under institutions in PPPs for natural resources conservation, management and use.

In presenting the literature in this chapter, I have employed Ioris' (2014) environmental statehood concept to illustrate how the Kenyan government has become flexible and adaptable to conditions of ecological crisis and the growing needs and demands of capital as applied in the conservation arena. Kenya as a 'flexible' environmental State, was 'rolled back' to allow for regulation to occur through the market in the form of neoliberal policies of sustainable development and wider participation in environmental regulation and management. This observation is underscored by Büscher (2010) who documents neoliberalism as entailing the incorporation of marginalized communities into the global economic system, and where conservation multinational agencies enhance neoliberalist agendas through ecotourism development. There undoubtedly exists a flexible form of environmental governance characterized by institutional arrangements between the state, nature and society (Ioris, 2014). Such institutional arrangements underpin conservation PPPs, with emergent issues explored in subsequent chapters.

FORWARD TO CHAPTER THREE

The literature presented in the previous chapter highlighted the evolution of Kenya as a flexible environmental state grounded in two disciplines: ecological economics and political ecology. The rolling back of the state and the subsequent commodification of nature through ecotourism facilitated the growth of public-private conservation partnerships. In the first two chapters ideologies and theoretical frameworks as well as research gaps have been identified.

In the following chapter, I use the concept of socionature in political ecology to investigate the emergence of PPPs in the lowlands of Samburu County using the stakeholder salience model. I suggest that the devolved county government system should take prominence in the conservation initiative to avert dominance tendencies by other stakeholders.

The chapter has been submitted as a manuscript for publication (Authors: Lugusa, K., Galaty, J., and Kosoy, N.).

CHAPTER THREE

A stakeholder analysis of public-private conservation partnerships in the arid and semi-arid rangelands of Samburu County, Kenya

Abstract

Decentralization of natural resources management in the arid and semi-arid rangelands provides local communities with the ability to oversee their landscapes in partnership with private and non-governmental organizations. The evolution and growth of conservation partnerships in recent years warrants research. In Samburu County, there is a lacuna in literature regarding the evolution of conservation partnerships, the kinds of exchanges underpinning them, and how power is exercised in the conservation landscape. Therefore, four conservancies in Samburu East sub-county were purposefully selected for study. The stakeholder salience model which incorporates three factors (power, legitimacy and urgency) for classifying stakeholders was used in the analysis. Findings show the existence of the Samburu National Reserve and the presence of wildlife on adjacent communal lands as the premise of the conservation partnerships. Furthermore, Furthermore, the involvement of multiple stakeholders in the partnerships is characterized by various kinds of exchanges such as the provision of funding, physical security, formulation of laws and policies, advocacy platforms and capacity development amongst others. Under the concept of socionature (referring to humanity and nature as one), wildlife and the Northern Rangelands Trust (NRT) were found to be the definitive stakeholders possessing all three attributes of power, legitimacy and urgency. In this chapter we argue that in the phase of a devolved government system in Kenya, county governments should take charge in wildlife management to empower the local communities and concurrently avert dominance tendencies by the other stakeholders in the human category.

Key words: Partnerships; Stakeholder salience; Socionature; Conservation; Samburu

3.1 Introduction

3.1.1 Community-based natural resource management

In the Global South, policies and legislation intended to make local communities the focal point of natural resources management, thereby deviating from the fortress conservation model is in place (Roe et al., 2009). Community-based conservation schemes across the African continent such as Tanzania's Wildlife Management Areas represent such policy (Brockington, 2002). The devolution of rights and power in the management of natural resources from state authorities to local communities was the primary goal of community-based natural resource management (CBNRM) during its inception (Western, 1994). CBNRM is defined as a local governance institution whose aim is to deliver locally adapted sustainable and equitable rural development (Dressler et al., 2010; Gomes, 2014). Under CBNRM, stakeholders develop plans with management objectives and conservation aims for their specific localities (Mountjoy et al., 2016). The implementation of CBNRM projects is meant to facilitate value extraction by rural populations from managing and conserving natural resources in their ecosystems (Zunza, 2012). Since the evolution of CBNRM in response to the limitations of the fortress conservation model, it has been implemented in many developing economies (Gruber, 2010). The implementation of CBRNM in various countries has had mixed outcomes. As a result, Dressler et al. (2010) document CBNRM as experiencing a crisis related to its identity and purpose. The authors document CBRNM as having started from a point of hope and then shifting to a crisis mode but emphasize that scope exists for refocussing the original ideals of CBNRM.

Dressler and Büscher (2008) underscore current conservation practices as attempting to bridge conservation and management using CBNRM. It is out of this observation that CBNRM

promotes intense relationships between local communities, conservationists and donors (Dressler et al., 2010). Between the years 2000 and 2002, after the launch of the Millennium Development Goals and the Johannesburg World Summit on Sustainable Development respectively, partnerships between diverse actors were encouraged as the most viable institutional arrangements for overseeing conservation and sustainable development (Igoe and Brockington, 2007; Glasbergen, 2007; Van Huijstee et al., 2007; Forsyth, 2010). Partnerships as a concept, as applied in conservation, is the focus of the current study.

Wildlife partnerships are a management approach based on the concept of collaborative management (Mburu and Birner, 2007). Partnerships have the potential to enhance governance by constituting diverse partners, enhancing inclusivity, transparency, equity and at the same time power redistribution (Bovaird, 2004; Bramwell, 2004; Edgar et al., 2006; Brinkerhoff, 2007). Lubell (2015) asserts that collaborative partnerships exist in the context of complex institutional systems featuring multiple institutions and actors interacting in the larger sphere of interconnected collective-action problems within ecosystems. In the conservation arena, there currently lacks an understanding of the implications of public-private sector entanglement, transboundary transactions and the choices behind them (Larsen and Brockington, 2018). In Samburu County of Kenya there has been the creation of partnerships without an empirical understanding of the premise of their creation. Furthermore, little is known regarding the kind of exchanges underpinning the partnerships, as well as their power dynamics. It is against this backdrop that the current study is conducted with the following aims: (i) to analyze the evolution of public-private conservation partnerships (PPPs)[9] and the kind of exchanges underpinning them, and (ii) to explore

[9] There exists no precise agreed-upon definition of the term. PPPs are however viewed as a way of managing organizations, a development strategy, and a language game (Khanom, 2010). In the current study we define PPPs as arrangements that entail leases whereby tourism investors pay community conservancies an agreed amount, amongst

how power is exercised within the conservation sector in the lowlands of Samburu County. To achieve the objectives, we employ a stakeholder analysis approach using the stakeholder salience model (by Mitchell et al., 1997) which is described under the methodology section. The current study is imperative as PPPs are an important and growing area of conservation, and our analysis has the potential to influence both conservation practice and the study of conservation.

3.1.2 Stakeholder theory

In the literature, stakeholder theory is documented as a pluralist approach that captures the idea that the purpose of the organization (hereafter, conservancy[10]) is to act as a vehicle for coordinating multiple and often non-congruent stakeholder interests (Evan and Freeman, 1993; Donaldson and Preston, 1995). Freeman (1984) describes those who affect and are affected by a decision or action taken by the conservancy as the stakeholders. Reed et al. (2009) define stakeholder analysis as a process that: (i) defines aspects of a social and natural phenomenon affected by a decision or action; (ii) identifies individuals, groups and organizations who are affected by or can affect parts of the phenomenon (entailing non-human and non-living entities and future generations); and (iii) prioritizes the individuals and groups for involvement in the decision-making process. Various stakeholder analysis models exist but the stakeholder salience model proposed by Mitchell et al. (1997) is the most discussed and deployed. Across sub-Saharan Africa, partnerships in wildlife conservation have been subject to extensive research in Namibia (e.g. Jones, 1999; 2004), Zimbabwe (e.g. Child 1996; Frost and Bond, 2008), Tanzania (e.g. Nelson and Agrawal, 2008; Benjaminsen et al., 2013) and Kenya (e.g. Mburu and Birner, 2007;

other benefits, to utilize the rented land to provide goods and services to consumers (ecotourists) for a specified number of years.

[10] A conservancy is a collection of lands unified under a singular management plan for the purpose of collectively enhancing conservation and natural resource use (Waterhouse, 1994).

Sumbwa et al., 2007; Nthiga, 2014; Lamers et al., 2014; and Lesorogol, 2017). None of these studies has employed the approach taken by the current research. This empirical gap reinforces the novelty of our study.

In the introduction section CBNRM was evoked to introduce the concept of partnerships in conservation. The section also presented the aims and research gap to be addressed. The rest of this chapter is arranged as follows: section 3.2 is material and methods; 3.3 presents a combined results and discussion section and; section 3.4 is the conclusion.

3.2 Material and Methods

3.2.1 Study area

Samburu County has an area of about 21,022 Km^2 and is bordered by Turkana County to the Northwest, Baringo County to the Southwest, Marsabit County to the Northeast, Isiolo County to the East and Laikipia County to the South. The county lies between latitudes 0°30´ and 2°45´ north of the equator between longitudes 36°15´ and 38°10´ east of the Prime Meridian. It is divided into three administrative units namely; Samburu Central, East and North (RoK, 2018). Climatically, the county is hot and dry with cool nights. It averages annual maximum temperature of 30°C and annual minimum temperature of 20°C. It has two rainy seasons, one from March to May and the other from September to November. The highland areas receive additional rainfall in July and August (Shaabani, 1992). The primary land use practices are pastoralism and wildlife conservation. The county has the largest number of wildlife outside the game reserve that serves as a major tourist attraction. The private sector plays a crucial role in the socio-economic development of the county, with a focus on health, education, water, recreation and culture, and environmental protection (RoK, 2018).

3.2.2 Research design

Samburu East sub-county in the northern Kenya arid and semi-arid rangelands (ASALs) was purposefully chosen for study as northern Kenya is one of the study sites under the 'Institutional Canopy of Conservation (I-CAN) project. The project aims to address the challenge of combining biodiversity protection with strengthened livelihoods in the East African region. Purposive sampling (as described by Etikan et al., 2016; Bernard, 2017) was used to select four out of six conservancies under the Northern Rangelands Trust (NRT) umbrella in the study area. This technique is the deliberate choice of research participants due to the qualities they possess and is typically used in qualitative research to identify and select the information-rich cases for the most proper utilization of available resources (Patton, 2002; Bernard, 2002). A pre-study was conducted on two of the four conservancies prior to the actual study for a month. The same period was used to test the data collection tools and approaches, which were then adjusted accordingly from the field experience. Figure 3.1 shows the map of the study area.

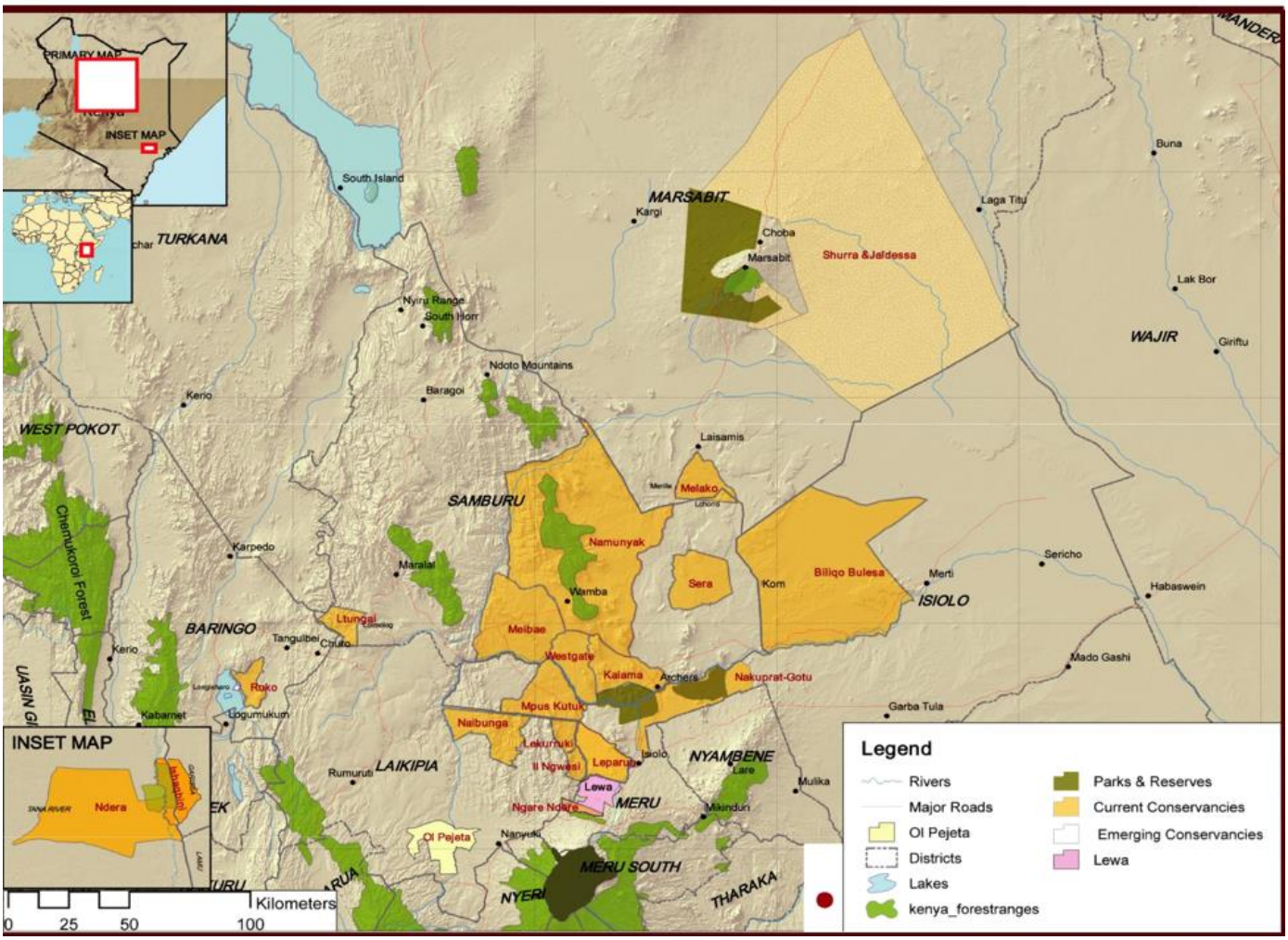


Figure 3. 1: A map of the study area.

Source: Kenya Wildlife Conservancies Association (2016).

3.2.3 Data collection and analysis

Data was collected over a period of six months spanning from February to August of 2018. Methods employed in data collection comprised the use of key informant interviews (KIIs), a standard data collection tool that entailed interviewing a select group of individuals who provided needed information, ideas, and insights on the subject under study. KIIs provided flexibility to explore new ideas and issues unanticipated during the planning phase of the study. According to Kumar (1989) and Barker et al. (2005), KIIs are commonly used in anthropological and economic

studies as well as in social sciences, among other fields. We conducted twenty-two KIIs with people who were conversant with the topic under study. The criterion for sampling key interviewees was as follows: first, interviewees were categorized to represent the multiple stakeholders in the conservation PPPs. The categories included private investors, community members, national and local conservation stakeholders such as the KFS, KWS, NRT, and conservancies under study. Second, interviewees were selected from these organizations based on the nature of the knowledge they possessed regarding the partnerships, the role they had in the partnerships as well as through snowball sampling. Interviewees therefore included NRT, KFS, KWS, Ewaso Lions, SNR, ACK, and STE personnel, private investors, community leaders and representatives (managers and rangeland coordinators) of the community conservancies under study. Contact with the interviewees was made prior to the interviews and informed consent was sought before the start of the interviews by informing the respondents that the information was for academic purposes. For those informants who agreed to be identified by their actual names and position in their organizations in write ups, consent was given. Interviews were conducted until no new information emerged. The key interviewees comprised seven from private organizations, five from tiers of government, one investor, three chiefs, and two conservancy managers and four rangeland coordinators. All interviews were later transcribed for analysis.

We also used focus group discussions (FGDs) to gather data. They are a research methodology where a small group of participants gather to discuss a specified topic or issue to generate data. Our discussions were limited to ten individuals in a group of mixed genders and ages, and women only. There was a moderator and a note taker during the discussions. The moderator made effort to ensure that each person was accorded the chance to provide their views without others dominating the process (Merton et al., 1990; Kitzinger, 1995; Wong, 2008; Krueger

and Casey, 2014). In the end seven FGDs were conducted. We also used observations and informal discussions to gather data. An observer-as-participant manner of observation was employed (Meyer, 2001). As observers-as-participants, we attended an elders' meeting at the NRT headquarters, annual general meetings of two conservancies, SCG public participation forum on budget allocation, and peace awareness meetings in the conservancies under study. Moreover, several informal discussions were conducted mainly with the community members such as women, morans and men. We also used secondary data sources (conservancies' partnership agreements, annual reports, registers, and meetings' minutes) to collect data. The stakeholder salience model was used in the analysis. Data analysis included the following stages: transcribing, organization of data, familiarization and incorporation of pre-existing knowledge (Yin, 2003).

Reed et al. (2009) differentiate between two levels of stakeholders' participation in the analysis. The authors assert that where considerable documented evidence exists or where research analysts have an intimate knowledge of the individuals and groups with a stake in the phenomenon under investigation, stakeholder analysis can be conducted without the active participation of the stakeholders themselves. The authors of this study are well versed with the conservation landscape in the study area, as well as other ASALs of Kenya. We conduct the analysis from the perspective of the conservancies being focal to the process.

3.2.4 Stakeholder salience model

The model incorporates three factors (power, legitimacy and urgency) for classifying stakeholders. Power is the extent a stakeholder has or can gain access to coercive, utilitarian, or normative means, to impose their will. Legitimacy is a generalized assumption that the actions of an actor are desirable and appropriate. Urgency is the degree to which stakeholder claims require immediate attention. Table 3.1 shows a detailed stakeholder classification by Mitchell et al. (1997).

The authors argue that there is a degree to which conservancies give priority to their stakeholders, defined as stakeholder salience. Furthermore, stakeholders are prioritized by the level of influence they have on the conservancies, determined by the number of attributes they possess. In understanding power as an attribute, we also consider Lukes' third dimension of power where people are subject to domination and comply in that domination (Lukes, 2005).

Table 3. 1: Stakeholder classification

Stakeholder type	Classification options
Latent (possess only one attribute, so usually receive little attention from the conservancy)	**Dormant**: Individuals and groups that possess power to impose their wills on the conservancy but lack either legitimacy or urgency. This stakeholder(s) needs to be monitored by the conservancy's management and evaluate their potential to take on a second factor.
	Discretionary: Possess legitimacy but lack the power and urgency to influence the conservancy management activities. Under the framework of corporate social responsibility, attention must be paid to this stakeholder(s) as they tend to be more receptive.
	Demanding: Does not possess power or legitimacy but urgency. Thus, they do not demand greatly of the conservancy, although they must be monitored as they have the potential to take on a second attribute.
Expectant (two attributes resulting in a more active posture from both the conservancy and the stakeholder)	**Dominant:** Have influence over the conservancy augmented by power and legitimacy. Receives and expects a lot of attention from the conservancy.
	Dangerous: Possess power and urgency but lack legitimacy. Termed as coercive and may represent a threat to the conservancy.
	Dependent: Holds attributes of legitimacy and urgency but must depend on another stakeholder for their claims to be considered.
Definitive (holds power, legitimacy and urgency thereby are paid attention to and prioritized by the manager/conservancy board)	

Source: Adapted from Mitchell et al. (1997)

3.3 Results and Discussion

Table 3.2 presents a stakeholders' matrix based on our findings. We employ a public-private[11] dichotomy in the categorization. This categorization serves to differentiate the stakeholder based on whether they are from the public sector or tiers of the Kenyan government. In PPPs arrangements, Miraftab (2004) emphasized the need for clarity in the categorization of stakeholders. Following this emphasis, the Samburu community constitutes those who practice pastoralism and conservation through community conservancies. The public sector comprise tiers of the Kenyan government involved in rangeland management, wildlife conservation, and the local county government. The private sector comprises for-profit tourism investors, research organizations, community-based organizations and, local and international conservation non-governmental organizations (NGOs). Brockington and Scholfield (2010) highlighted that the term 'NGO' lacks an agreed-upon definition. Therefore, NGOs as entities have been categorized as neither being state nor private-sector institutions. However, they work for the public good in environmental conservation and/or the social development sector. Nuesiri (2018) acknowledges NGO's as having become key stakeholders in the design and implementation of environmental initiatives at a global scale. In the next section a discussion on the evolution of the identified partnerships in our case study is provided.

[11] The categorization of who or what is public in our study follows Nshimbi and Vinya's (2014) model, who categorized agencies tied to the state as public, and those operating under a free market economic system being independent of the state as the private actors.

Table 3. 2: Stakeholders' matrix

Stakeholder	Key issue	Categorization
Wildlife (fauna) species	Natural resource utilized for non-consumptive purposes	Toll good
Ecosystem	Provision of essential ecosystem goods and services	Public good
Kenya Wildlife Service (KWS)	Custodian of wildlife, legislation, government support.	Public
Kenya Wildlife Conservancies Association (KWCA)	Policy advocacy, networking and communication, capacity building.	Private
Northern Rangelands Trust (NRT)	Donor funding, conservation and technical issues.	Private
Samburu National Reserve (SNR)	Wildlife conservation under protected area	Public
Investors (Tourism operators)	Ecotourism	Private
Kenya Police Service (KPS)	Security, training and arming of rangers, government support.	Public
Local community conservancies	Conservation, grazing management, community support.	Private
Samburu community (women, men, elders and morans)	Traditional knowledge on conservation, support institutions	Community
Researchers/scholars	Scientific knowledge generation	Private/public
Samburu County government (SCG)	Conservation, revenue sharing, policies	Public
Kenya Forest Service (KFS)	Environmental conservation, law enforcement.	Public
Ewaso Lions	Lions' conservation, environmental conservation.	Private
Grévy's Zebra Trust (GZT)	Capacity building, conservation of Grévy's zebras.	Private
Action for Cheetahs in Kenya (ACK)	Conservation of cheetahs	Private
Save the Elephants (STE)	Elephants' conservation	Private

National Drought Management Authority (NDMA)	Early warning systems, drought management	Public
Department of water, environment and natural resources (WENR)	Rangeland management	Public
The Nature Conservancy (TNC)	Donor funding	Private
San Diego Zoo	Donor funding	Private
SAFE-Samburu	HIV/AIDS and female genital mutilation (FGM) awareness.	Private
Conservationists/activists	Conservation, pastoral communities' rights to resources advocacy	Public
The Indigenous Movement for Peace Advancement and Conflict Transformation (IMPACT)	Human rights, lobby and advocacy; land rights and natural resource governance; institutional capacity development; and conflict transformation.	Private
Politicians/Political climate	Public/their private interests in conservation	Public

3.3.1 Partnerships' evolution and kinds of exchanges involved

Table 3. 3: A description of conservancies under study

Conservancy	Formation year	Area (hectares)	Group ranches[12]	Investors
Namunyak (Nalowuon, Kalepo & Ngilai units)	1995	383,804	Sarara, Sabache, Ngilai west, Ngilai central, Ngare-Narok, Ndonyowasin	Sarara and Kitich camps.
Kalama	2002	49,660	GirGir	Old Boma Limited (Saruni lodge)
Westgate	2004	36,230	Ngutuk Ongiron	Tamimi Company Limited (Sasaab lodge)
Meibae	2006	101,517	Sesia, Ltirimin, Lpus, Ngaroni	None

Table 3.3 offers a background on the conservancies under study. Most of the other stakeholders not listed in this Table, but rather in Table 3.2, are partners for all the conservancies under study. The first of such is the Samburu National Reserve which is the premise of the conservancies' creation. SNR is one of the 56 protected areas (PAs) in Kenya. It was established in 1948 under the national park ordinance. In 1963, it was open for public utilization. SCG manages SNR, and the revenue generated is used for livelihoods improvement in the county (KII, SNR 2018). The existence of wildlife on communal lands in Samburu County and the consequent creation of conservancies, were facilitated by the adjacency of communal lands to PAs. Such areas act as dispersal areas and wildlife migratory corridors, and as Mburu and Birner (2007)

[12] A group ranch is a demarcated area of rangeland to which a group of pastoralists graze individually owned herds possess official land rights (Oxby, 1981). Conservancies are borne out of group ranches.

underscored, such areas are critical to the enhancement of the partnership approach to conservation. Barrow and Mogaka (2007) acknowledge the importance of wildlife conservation in Kenya and account for the shifting of wildlife conservation as a land use towards communal rangelands. Community-based conservation in Kenya's ASALs emerged as a development focus of these regions with the twin goal of sustainable wildlife conservation and pastoral communities' wellbeing enhancement (Burnsilver, 2009). SNR serves to buffer the local community against dry periods and drought where arrangements are made for livestock grazing in the PA. Livestock influx increases with every dry season, and at times becomes uncontrollable leading to complaints from tourists visiting the Reserve (KII, SNR 2018). The arrangements between the community and SNR is negotiated by the conservancies. The creation of some conservancies in our case study was facilitated by the exposure tours to other ASALs that had embraced the community conservation model. The Samburu community (comprises cultural leaders, clan leaders, morans and men and women in general) wanted to reap benefits that others were enjoying. Thus, the communities embraced the community conservation model (FGDs, fieldwork 2018). In an interview with *Mzee* Thangaine Lenges, he states that: "Conservancies in this area 'started' in the same direction you came from. First, we had Namunyak, then Sera, Kalama, Westgate, Meibae and the rest followed. At first people resisted but accepted the idea once they started seeing the benefits." The studied conservancies serve as models to others, e.g. WCWC, when it comes to rangeland reseeding practices. They share resources such as forage on a reciprocal basis during dry periods and droughts (KII, fieldwork 2018). The first point of partnership for the conservancies under study is their respective group ranches. The community is represented by elected individuals from the community who sit on the conservancies' and group ranches' boards. A conservancy board comprise other members from the private and public sector.

Kenya Wildlife Service is the governmental body responsible for Kenya's wildlife protection and management (KWS, 2013). Our study found KWS as the body that facilitates the government-based compensation scheme as stipulated under the Wildlife Management and Coordination Act of 2013. KWS, in conjunction with the NRT, also trains rangers working in conservancies. Through the Conservation of Biodiverse Resource Areas (COBRA) (1992-1998) and Conservation of Resource Areas through Enterprise (CORE) (1999-2005) projects, KWS is committed to private-sector partnerships (e.g. with USAID) and pro-business approaches to wildlife conservation. Such partnerships were the basis for the training of community members in wildlife ecosystems to serve as game rangers (Kahata and Imbanga, 2002; Lent et al., 2002; Little, 2013). We discovered that fees charged to tourists by the investors were based on KWS' premium park fees. This clause in the conservancy-investor agreements influences the amount of revenue the conservancies receive. For instance, when KWS increases their premium park fees, community fees from investors to conservancies are also increased accordingly. KWS, alongside other stakeholders such as the NRT, TNC among others, led to the formation of KWCA in 2013. KWCA works with landowners and communities to sustainably conserve wildlife and their ecosystems outside PAs. KWCA provides communities with a platform through which better conservation laws and incentives are advocated for. Conservancies are also provided with resources and linkages to better their management and service delivery (KII, fieldwork 2018).

The Ministry of Environment, Water and Natural Resources is another stakeholder. In conjunction with partners such as The United Nations Food and Agriculture Organization, MEWNR undertakes reseeding initiatives in some of the conservancies. Its previous partner on the same initiative was World Vision. MEWNR is also involved in controlling invasive species such as *Acacia reficiens* and *Prosopis juliflora* around Archer's Post in the study area (KII, MEWNR

Maralal 2018). The KFS is another stakeholder in the conservation initiative. KFS was established under the Forest Conservation and Management Act no. 34 (2016) to provide for the development and management, including conservation and rationalization, of all forest resources for socio-economic development of the country and for associated purposes. The KFS Wamba office and the Samburu community through community forest associations oversee the management and utilization of The Matthew Ranges in the study area (Gideon Ruto, personal communication, KFS Wamba, May 2018).

The promulgation of Kenya's new constitution in 2010 had various implications, including those for natural resources management. County governments, a devolved system of government, are a consequence of the promulgation of the 2010 constitution. Kameri-Mbote (2005) stressed that devolution recognizes the right of local communities to manage their own local affairs, form partnerships and ensure equitable sharing of resources. Samburu County government is involved in the conservation initiative in the study area in various ways. In 2017 for instance, it provided USD 60,000 to WCWC to assist in the management of human-wildlife conflicts (Oundoh, 2017). In a meeting we attended, that was meant to provide public participation and budget awareness in Wamba town in April 2018 for the financial year 2018-2019, the county had proposed a sum of approximately USD 1,170,000. This was allocated to support development projects in existing conservancies in the study area and in six new conservancies, to formulate a Community Conservancy Fund, and to develop a tourism marketing plan and the profiling of tourism-related products at county level. When it comes to livestock production and management, the county supports apiculture through the provision of modern beehives and provides breeding stock (Somali breed camels). On the 12th of September 2018, the county passed the County Community Wildlife Conservancies Fund Bill 2018, which has implications for wildlife management in the study area.

Samburu County political leaders (e.g. the governor and the deputy, Members of Parliament and members of county assembly) influence the political climate of the area, which in turn impacts conservation initiatives. Some of the leaders as well as local government leaders such as chiefs and ward administrators are members in the conservancies under study. According to one of our study's key informant, political leaders are in support of the community-conservation model. They, however, at times make inciteful remarks that often put the community in conflict with other stakeholders, particularly regarding resource use. During general elections, politicians depend on the community for votes as they are part of the electorate. In the neighbouring county of Laikipia, Fox (2018) documents the effects that the prevailing political climate has on conservation. Political climate has the potential to enhance peace or exacerbate conflicts. The partnership between the KPS and the conservancies, according to our key interviewees, entails the provision of licenced guns and ammunition to the conservancies' scouts. The KPS also train scouts working in conservancies who become police reservists. Furthermore, the police share intelligence with the conservancies' security departments, thereby coordinating their efforts concerning security matters. Through our informal conversations with some of the key informants, this study established that some individuals from the police intensify conflicts by the illegal selling of firearms and ammunition to individuals in the community. Usually, conflicts in the study area often stem from cattle rustling or resource use.

Conservationists/activists are concerned with Samburu community's rights and access to resources and their historical marginalization. We established that activists are involved in grassroots mobilization, education and interpretation of important policy documents such as the Community Lands Act of 2016. One example of an activist organization is the Indigenous Movement for Peace Advancement and Conflict Transformation (IMPACT) which is based in

Nanyuki in Laikipia County, but its operations extend to Marsabit, Turkana, Isiolo and Samburu Counties. Individuals in this category of stakeholders use social, print and electronic media to raise their voice against the injustices that pastoral communities in Samburu and in, northern Kenya are faced with. To demonstrate the effect of this category of stakeholders on the management of the conservancies, we present the sentiments of one of the conservancy managers on activists: "I cannot share with you such information as someone or a group of people out there are circulating information on social media trying to witch-hunt the NRT. As a result, the conservancy board has been on my neck wanting to know how such information got out. Therefore, you can contact the NRT for this particular information you are seeking for!"

The statement by the conservancy manager points to some of the challenges that researchers/scholars face when conducting fieldwork. Researchers, from both private and public spheres have been conducting research in ASAL ecosystems for decades. In our case study for instance, the Samburu community together with their conservancies and other stakeholders welcomed us and freely shared information on the subject under study. This process augmented our stake in the conservation initiative. The gathered data was analyzed, and the findings synthesized in reports and research articles. Research, amongst other reasons, serves to identify interventions needed thereby impacting pastoral livelihoods and conservation policy formulation by the relevant stakeholders. Resultant community feedback forums also serve as a platform for sharing the findings with other stakeholders. Besides independent scholars/researchers, our study found research organizations collaborating with the conservancies through memoranda of understanding (MoU). These organizations include Ewaso Lions, GZT, STE, and ACK (Table 3.2). The MoU between the organizations and conservancies do not involve financial obligations. They entail specific wildlife species monitoring, conflict management and capacity development.

Ewaso Lions and GZT are headquartered at WCWC, ACK is headquarter at MCWC (paying an annual rental fee of USD 250) whereas STE is headquartered at SNR. Other stakeholders such as the San Diego Zoo support the conservation of reticulated giraffes as well as elephants through the Reteti Elephant Sanctuary in NWCT. The San Diego Zoo was also involved in creation of WCWC in 2004. TNC supports the conservancies under study by offsetting some of their operational costs. TNC funding occurs through the NRT.

We determined that the Northern Rangelands Trust was formed in 2004 as an initiative to improve the livelihood of local communities through conservancies by engaging in wildlife conservation and natural resource-based enterprises. Direct funding from the USAID enabled new group ranch communities to be targeted with the conservation model purposefully embedded into the community. The Trust supports conservancies under its umbrella by developing infrastructure, income generation and income security, resource use planning, conflict resolution, and brokering of investment in tourism facilities in the conservancies. Table 3.3 shows the investors for the conservancies under study. In the context of neoliberal conservation, defined by Igoe and Brockington (2007) as the commodification and control of nature through regulation and the collaboration of state, NGOs and for-profit organizations often work to exclude local populations or greatly alter their normal livelihood practices. The conservancies that participated in this study have formed contractual partnerships with foreign tourism investors. Under these arrangements, conservancies offer land to investors, and in return investors offer financial incentives to the community to uphold wildlife conservation as a land use. The commodification of nature as manifested through such community-investors contracts creates new types of value (Arsel and Büscher, 2012). It also promotes new platforms for capital accumulation (Schurman et al., 2003; Harvey, 2006). Bond and Mutuku (2018) pinpoint the neoliberal agenda as having promoted

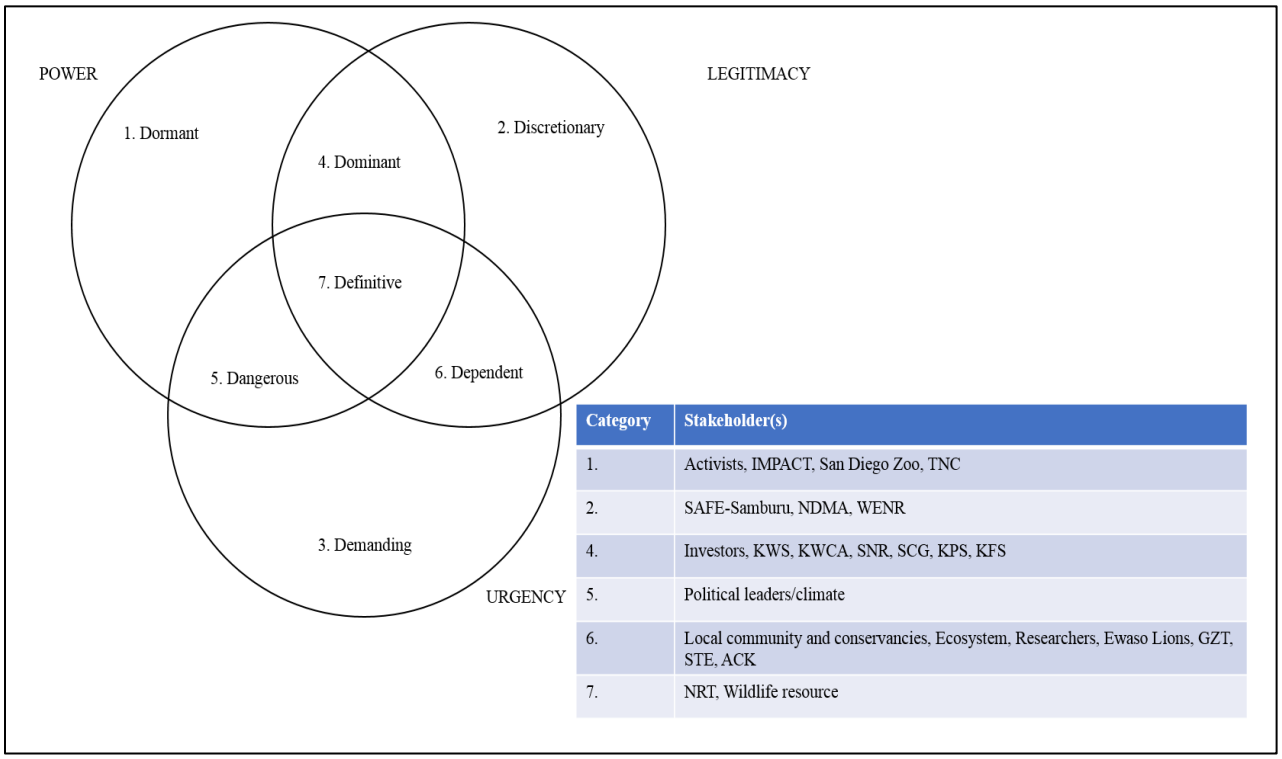
economic pathways to conservation for instance ecotourism and payment for ecosystem services, operationalized in community-based conservation.

The purpose of this section was to present the evolution of the stakeholder partnerships found in the study area, highlighting the kind of exchanges underpinning them. We now proceed to analyze power dynamics and their implications in the next section.

3.3.2 Power dynamics in socionature

Hare and Pahl-Wostl (2002) state analytical categorizations to be a set of methods where stakeholder classification is conducted by those carrying out the analysis based on their observations of the study and grounded in some theoretical perspective on how a system operates. Figure 3.2 presents the stakeholder classification. Studying power relations is imperative since public-private conservation partnerships can easily be dominated by powerful stakeholders leading to inequitable outcomes, or the reinforcement of dominant narratives whilst overlooking other weaker perspectives (Wollenberg et al., 2001; Cornwall, 2004; Barnaud and Van Paassen, 2013). Power relation analyses is the concern of political ecology, a field that works to elucidate the driving forces of dominant environmental discourses and governance (Robbins, 2011). The co-production of socionature is an approach that studies the interplay between socioecological interactions (Bassett and Peimer, 2015). In this approach, nonhumans and biophysical processes actively partake in interactions (Latour, 2005); therefore, human-nonhuman relations are characterized as being ‘open-ended’ and ‘becoming’ (Pickering, 2010). The implication of this understanding is that changes in the character of the human-nonhuman relationship are influenced by behaviour changes of entities in an assemblage (ibid.). In our case study, conservation and management strategies as well as policies and laws implemented are influenced by wildlife dynamics. Following Robbins (2012) conceptualization of nonhuman entities as a sociotechnical

system, wildlife in our case study represents a political and economic subject whose life is disciplined by material demands they inherit, create and manage. Simply, wildlife makes the other stakeholders who they are. We therefore categorize wildlife as a definitive stakeholder as it is the basis of the conservation initiative and partnerships' formation. The ecosystem is the study area is categorized as a dependent stakeholder since it depends on other stakeholders for its protection and conservation. For instance, in the case of overexploitation of important flora species for fuelwood, medicine or forage, or in cases of severe land degradation in the community conservancies, other stakeholders raise their voices against such trends and measures are often taken to address the issues.



Category	Stakeholder(s)
1.	Activists, IMPACT, San Diego Zoo, TNC
2.	SAFE-Samburu, NDMA, WENR
4.	Investors, KWS, KWCA, SNR, SCG, KPS, KFS
5.	Political leaders/climate
6.	Local community and conservancies, Ecosystem, Researchers, Ewaso Lions, GZT, STE, ACK
7.	NRT, Wildlife resource

Figure 3. 2: Stakeholder classification

We categorize activists as dormant stakeholders since they consist of individuals or organizations who use social, print and electronic media to raise their voice against the injustices that pastoral communities in northern Kenya region face. Mitchell et al. (1997) termed such

stakeholders as symbolic as they command the attention of the news media. INGOs are the other stakeholders under this category. They include TNC, the San Diego Zoo and USAID. Such organizations are termed utilitarian since they spend a lot of money on conservation but have little or no direct interaction with the conservancies, because they offer funding through the NRT (ibid.). Holmes (2011) defines such organizations as being 'elite, bigger, more diverse, more powerful, more effectively structured and more influential than elites of the past. Such stakeholders have global-scale goals, and can move influence, money, discourses and other resources of power around the world with relative ease'.

The Nature Conservancy, USAID, Fauna and Flora International, Tusk Trust, UKaid, and DANIDA among others are partners funding the NRT. We found the NRT to be supporting conservancies under study by developing infrastructure, generating income and providing income security, resource use planning, conflict resolution and brokering of investment in tourism facilities in the conservancies. The KWS, a body tasked with the responsibility of overseeing wildlife management in Kenya, has according to Rutten (2004) often relied on the private sector for implementing wildlife-tourism contracts. The failure by a state agency in executing its mandate raises concerns in the general public. Private sector's role in fulfilling the KWS' mandate is controversial since organizations in the private sector are funded by donations from wealthy wildlife enthusiasts (e.g. philanthropy's effect in biodiversity conservation, Holmes (2012). In our case study, the NRT acts as an oversight organization where it supports, mediates and facilitates the relationship between investors and conservancies. The NRT does so to the best of its ability and provides guidance and clarification in accordance with the appropriate provisions of the agreements. In this case, the NRT has assumed roles that were initially for a public body, the KWS. According to Southgate (2006), enterprises in communal areas, for instance Samburu in our case,

have been and are brokered by conservation NGOs with private sector parties and communities that have created conservation areas. Without these third-party interventions, tourism development in Kenya's ASALs would have been impossible. This finding augments Holmes' (2011) observation about the roles of NGOs, corporations, and the state as actors in public-private conservation partnerships becoming increasingly indistinguishable.

Samburu community members hose conservancies are under the NRT receive one of four levels of technical support ranging from technical advice and capacity building to enterprise development. For the conservancies to receive support from the NRT, they must undertake a proactive program of improving their ecosystems and, undergoing independent financial audits, if not this support may be suspended. These are some of clauses in the MoU between the NRT and the conservancies under its umbrella. Lamers et al. (2014) term MoUs as the new rules of the game. The MoU between the NRT and conservancies has seen conservancies that can achieve self-sustaining status for instance NWCT, WCWC and KCWC still being held back and not autonomous in their management. When approached about this, a key informant at the NRT, responded that the Trust was working towards making five conservancies autonomous in the next three years. The blueprint for achieving this objective was not revealed to us. Three of the conservancies under study have investors, and the tourism earned is contributed to a common pool fund managed by the NRT, which then redistributes the income to all the conservancies under its umbrella.

The redistribution of wealth has seen conservancies that do not have investors such as MCWC (Table 3.3) benefit from the presence of the common pool fund. We established that MCWC was established in mid-June 2006 to counter high levels of poaching, cattle rustling, habitat degradation due to poor management, and high-profile road banditry on the Wamba-

Maralal highway. What would motivate NRT to get MCWC under its umbrella and offer it support for over 12 years since its formation? We argue that since peace is imperative to conservation, without which conservancies neighbouring MCWC would be affected, then the incorporation of MCWC under the NRT umbrella of conservancies is warranted. Insecurity can incapacitate conservancies under the NRT's umbrella leading to various consequences for the Trust. The NRT has lately come under scrutiny regarding its operations and the mode of achieving security and conservation goals in northern Kenya (Greiner, 2012; Bersaglio, 2017; Fox, 2018), and concurrently received enormous grants from organizations like the USAID and TNC, considering the substantial power and influence increasing funds and geographical scope brings to the Trust (USAID, 2015; Cockerill, 2018). Furthermore, Pellis et al. (2015) found the NRT as securing land for conservation through geographically stretched conservancies, a process that Bersaglio and Cleaver (2018) argue as being a 'green grab'. We established that in 2014, the NRT operationalized the NRT-Trading (with funding from USAID), a for-profit social enterprise whose aim is to grow sustainable businesses (LivestockWORKS and BeadWORKS) within its conservancies. The business-minded characteristic of conservation NGOs places these organizations in both social science and public discourse narratives (Larsen and Brockington, 2018). Therefore, such tendencies have led to the questioning of the NRT's legitimacy, operations and motives (e.g. Mbaria and Ogada, 2016).

The NRT (2017) reports a growing trust, understanding and working relations between the Trust and SCG. The result is financial and political support for conservancies, both county government-initiated conservancies and the existing NRT conservancies. In this partnership, SCG seeks for investment in governance and training from the NRT. The NRT in return advocates for conservancy specific policies and legislation at the county level. This interaction portrays the

power dynamics whereby the NRT is the definitive stakeholder (Figure 3.2), possessing all three attributes (power, urgency and legitimacy). In general, collaborations and their subsequent tri-sector partnerships are potentially bewildering for pastoral communities in the East African region (Carter et al., 2008).

3.3.3. Partnerships and conservation politics

Holmes (2018) notes that conservation NGOs are highly influential in countries where the state has substantially rolled back. The rolling back of states does not imply the absence of their sovereignty, as seen in their ability to formulate, and enforce laws and policies, including those from international institutions (Mbembe, 2001). The rolling back of the state provides a channel for engagement through which stakeholders such as conservation NGOs can bring in funds, expertise and technology utilized by the state. The participation of the state in turn serves to legitimize the activities being undertaken, as well as portray the power of state sovereignty (Mbembe, 2001; Igoe et al., 2010). The provision of platforms such as favourable laws and policies is the 'rolling out' of new mechanisms and structures that allow markets to take a key role in saving biodiversity (Peck and Tickell 2002; Castree, 2008). The rolling back and rolling out of new mechanisms by the Kenyan government saw the massive influence the USAID had in the conservation arena. Corson (2010) describes how the USAID attracted political and corporate support in the United States of America, shaped public policy and consequently created new spaces for capital expansion in global biodiversity conservation. The USAID, TNC and other organizations work with and empower the NRT leading to its dominance in conservation in Samburu as we have illustrated. Parkinson (2012) acknowledges that stakeholders in wildlife conservation are motivated by unique and differentiated motives. In his study titled 'Becoming Enduimet and the precariousness of living with elephants' in northern Tanzania, Wright (2019)

documents the dynamics involved in managing a Wildlife Management Area. He also illustrates how certain stakeholders, such as the state, powerful NGOs and local leaders, accumulate capital and reinforce the notion of a wilderness devoid of people in the name of creating and maintain space for elephants. As a result, Nthiga (2014) documents the engagement of NGOs such as the NRT in our case study in community conservation and argues that they give rise to policy calls with a view of regulating these organizations as they apply different institutional arrangements for conservation leading to different impacts on local communities and conservation in general. The findings of our study portray the conservation dynamics as having the characteristics of the fortress conservation approach. NRT exercises power and its presence is manifested like that of the state under the PA model.

Attitudes, agency, emotions, social norms, environmental contexts and the framework in which decisions are made are areas of influence that provide stakeholders in conservation with opportunities for promoting environmental behaviour (Akerlof and Kennedy, 2013). Challenges in conservation such as resource overharvesting, poaching, degradation, among others, can be defined as a behaviour change problem. Meaning that such challenges persists due to the failure of people to adjust their behaviour. Therefore, the need to understand behavioural mechanisms in humans and consequently to identify behavioural change approaches such as awareness creation, use of incentives and nudges (Reddy et al., 2017). Nudges have a marginal effect on the context in which decisions are made, by targeting intuitive thinking in a way that does not, place barriers to economic incentives, and thereby advancing pro-conservation behaviour (Thaler and Sunstein, 2008). Leonard (2008), however, argues that nudging is all about manipulating decisions about conservation. The consequence of manipulation is contingent on the nudger's intent, which might be exploitation rather than advancement of conservation, and upon the effectiveness of the nudge

in question. The NRT advances conservation by influencing conservation practices in northern Kenya through awareness, incentives and nudges by offering field exposure tours to other ASAL areas of Kenya to members of community conservancies, by giving awards to the best performing conservancies and to individuals under microfinance schemes. Other ways are manifested in the NRT's ability to link investors with the community conservancies under its umbrella and buying of cattle under the LivestockWORKS program from conservancies that adhere to grazing management plans.

During our community feedback fora in late April and early May 2019, we established that the NRT has come under scrutiny from the Borana Council of Elders and the Waso Professionals Forum, with the Biliqo-Bulesa community conservancy central to the controversy for its operation in Isiolo County. The Borana community claims that the NRT fuels inter-ethnic violence by arming the Samburu morans against the Borana and, disrupting community meetings, among other tactics. The NRT responded to these concerns in a document published on its website. Furthermore, Isiolo County governor Dr. Mohammed Kuti publicly criticized the NRT and Ian Craig and called for the Trust to cease its operations in the county. A key informant who was interviewed during our initial fieldwork explained that "As it is, the NRT is likely to pull out of Isiolo County. The pastoral community in Isiolo County has failed to capitalize on the Trust's presence and operation in their county. They feel that the NRT favours the Samburu community, since most of community conservancies in Samburu are proliferating. The truth is, community conservancies in Samburu County are doing well and attract investors since the group ranches hold titles to land, and those that lack are in the process of formalizing. With Isiolo County, it is almost impossible to convince an investor to invest in a conservancy due to the lack of security to land. Furthermore, the matter

of fact is that, Dr. Kuti supports the NRT's conservation efforts in the county, but he must support the community against the Trust's operations for political reasons."

This section highlighted the conservation politics in our study area, and beyond. The mobilization of the Borana community through its council of elders in Biliqo Bulesa community conservancy in Isiolo County to rally against the NRT's power and influence in conservation in northern Kenya shows how the community as a stakeholder can employ the use of collective action to counter dominance tendencies by other stakeholders in partnerships. Furthermore, the partnership between Isiolo County and the NRT is in jeopardy due to the governor's stand on the organization's in the county. It is interesting how conservation politics play out, leading one community (Samburu) to welcome the NRT as a stakeholder while another community (Borana) resists them. Malicha (2019) underscores the provisions of Kenya's 2010 constitution in which the county and national government as well as the Lewa wildlife conservancy and the NRT are obliged to provide information to the public pertaining to the operations of the NRT in Isiolo County and northern Kenya ASALs at large.

Power is a complex concept as elaborated by Foucault (1982), and we acknowledge Mitchell's et al. (1997) definition of power. Therefore, we define power in our study as the definitive stakeholder's (the NRT) control of the decisions, actions, environment (use of incentives and MoUs) and thought processes of others (specifically, the Samburu conservation community through their conservancies by use of nudges such as field exposure tours), and the inability of the Samburu conservation community (conservancies) to rally up, through collective action, against being dominated (acquiescence).

3.4 Conclusion

This study examined PPPs in natural resources conservation, management and use in the ASALs of Samburu County. We have illustrated that partnerships and networking are undoubtedly existent in the conservation arena (Perez et al., 2015). We found various actors present and as stakeholder status is impermanent (Mitchell et al., 1997), some partnerships have dissolved, and others are likely to form. The nature of existing partnerships when defined in contractual terms can be said to be complementary, as stakeholders undertake economic roles under contract to each other as is the case with investors and the conservancies. The communities would not have tourist lodges without investors, and investors need the community for their land and labour. The partnerships can also be said to be shared in that stakeholders undertake overlapping roles such as providing funds for conservancy initiatives and training community members on issues surrounding conservation (capacity development). Other kinds of exchanges underpinning partnerships entail provision of political support, physical security, advocacy platforms, and legal policies and formulation of laws. The kinds of exchanges reported in our study pinpoint the advantages associated with partnership arrangements in the conservation arena. Furthermore, our findings corroborate Larsen and Brockington's (2018) observation of the existence of blurred boundaries between the state and non-governmental bodies' actions in public-private conservation partnerships. Under such arrangements, there exists winners and losers as conservation and capitalism combines under neoliberal approaches (Brockington and Scholfield, 2010; Brockington and Duffy, 2010).

Based on the attributes of power, legitimacy and urgency, the NRT is defined, for the purpose of this research, as a definitive stakeholder. The Trust's operations render the conservation dynamics in the study area as having the characteristics of the fortress conservation approach. The

ability of the NRT to reinforce power asymmetries, by using incentives and nudges for instance, between stakeholders in our case study is one of the disadvantages associated with partnership arrangements. To counter tendencies where certain stakeholders dominate others in PPP arrangements as this case study, power needs to be redistributed and the devolved county system in Kenya offers this platform for government to actively be involved in the conservation arena outside protected areas so that local communities living with wildlife do not feel that certain actors have monopoly on how community conservancies and their respective lands are managed . Otherwise, as Bedelian (2014) warns, the powerful will become more powerful while the marginalized will continually feel more marginalized.

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FORWARD TO CHAPTER FOUR

The literature in Chapter 2 introduced the concept of payments for ecosystem services as one of the characteristics of neoliberal conservation. Chapter 3 portrayed the evolution of the partnerships, the kind of exchanges underpinning the interactions amongst the stakeholders. Power dynamics were also highlighted. In the next chapter, I employ the use of a framework proposed by Vatn (2005) within the discipline of ecological economics to study the design of PES scheme arrangements in the study area.

The chapter has been submitted as a manuscript for publication (Authors: Lugusa, K., Galaty, J., and Kosoy, N.).

CHAPTER FOUR

Payments for ecosystem services in wildlife conservation in the lowlands of Samburu County of Kenya

Abstract

Payments for ecosystem services (PES) schemes are meant to provide incentives to stewards of natural resources to maintain a specific land use for the purposes of services provision. This is the case with the lowlands of Samburu County where institutions govern natural resource use. However, there currently exists an empirical gap in literature on the conceptualization of wildlife conservation on community lands and their subsequent contractual agreements with tourism investors as a PES scheme. The institutions operational, transactional/productional costs involved, and the motivations of stakeholders for participating in the scheme also remains to be seen. Therefore, using four conservancies, this article employs a framework of systematic evaluation of PES to study the current Coasean-based PES scheme. To calculate operational efficiency, financial cost-benefit analyses of the conservancies were conducted. We found both formal and informal institutions operationalized through conservancy boards and management teams present. The Northern Rangelands Trust, intermediary, was found to take on other responsibilities besides the offsetting transaction costs. Furthermore, in pursuit of permanence, we found the conservancies to be operationally inefficient, as a result of low commercial income generation, rather than their inability to minimize costs, culminating in a donor-dependency tendency. The investors are motivated by profits, whereas the Samburu community are motivated by the augmentation of their rights of claim to land, as well as the financial and non-financial benefits from the scheme. We conclude that the intermediary's motive in the PES scheme remains to be seen. If implemented by relevant stakeholders, recommendations arising from this study may

help better the performance of the institutional arrangements. Furthermore, our conceptualization of the Samburu case study and, findings offer an avenue for rethinking the definition of PES.

Keywords: Ecosystem services; Coase; Institutions; Conservancy; Efficiency; Cost-benefit analysis

4.1 Introduction

Payments for ecosystem services (PES) are advocated for as a novel approach for biodiversity and ecosystem management in developing economies as it attempts to address the issue of externalities (Wunder, 2007; Frost and Bond, 2008; Engel et al., 2008; Brink et al., 2009). PES is a multi-faceted term with diverse definitions (Schomers and Matzdorf, 2013). Wunder (2005:3) focuses on market transactions and defines PES as '(i) a voluntary transaction in which (ii) a well-defined environmental service (or land use likely to generate that service) (iii) is 'bought' by a (minimum of one) buyer (iv) from a (minimum of one) provider (v) if and only if the provider continuously secures the provision of the service (conditionality[13]).'

Wunder's (2005:3) definition of PES is considered too narrow since very few programs meet all five listed criteria (Engel et al., 2008; Muradian et al., 2010). Those programs that do not are thus termed "PES-like" rather than pure PES programs (Wunder et al., 2008). Muradian et al. (2010) provide a basis for critiquing Wunder's (2005:3) definition of PES on grounds that it is based on an 'environmental economics' conceptualization that advocates for the integration of ecosystem services into markets. Another critique is made on the grounds that the definition prioritizes economic efficiency over poverty alleviation concerns (Farley and Constanza, 2010; Pascual et al., 2010; Muradian et al., 2010). Despite the divergent views on the definition of PES,

[13] Conditionality, the principle by which incentives are contingent upon the provision of services, is considered the most innovative aspect of PES. Conditionality's link with efficiency is the basis of promotion of PES (Ferraro, 2002; Wunder, 2007; Sommerville et al., 2009; McAfee and Shapiro, 2010; Wunder, 2015).

most operational PES programs entail payments for four kinds of ecosystem services (Wunder et al., 2008): payments for watershed services (Porras et al., 2008); payments for carbon sequestration especially on forest ecosystems (Jindal et al., 2008); payments for landscape beauty; and payments for biodiversity conservation (OECD, 2010).

The current study focuses on payments for biodiversity conservation that directly target wildlife resources and their ecosystems in the arid and semi-arid rangelands (ASALs) of Kenya. The PES mechanism aims to strike a compromise between social conservation and private land user returns by devolving the governance of natural resources from national authority to decentralized stakeholders who individually respond to monetary incentives (Pagiola et al., 2005; McAfee and Shapiro, 2008). PES as an incentive or reward for landowners' provision of ecosystem services (ES) that complement wildlife tourism is being incorporated in commercial tourism enterprises in savannahs on the African continent (Greiner et al., 2009; Goldstein et al., 2011). Dougill et al. (2012), however, point to a gap in empirical knowledge on established PES programs in African ASALs where extensive pastoralism is the predominant form of land use. This implies that there is very little documented in terms of the experiences of the participation of pastoral and agro-pastoral communities in PES programs (Silvestri et al., 2012). Therefore, despite the proliferation of PES schemes run by funds generated from tourism (Nelson et al., 2009; Osano et al., 2013; Dinerstein et al., 2013), there is a dearth of literature on the practicality of the nexus between PES and tourism (De Groot, 2011). Furthermore, no evaluation has been conducted to assess if, and to what extent such PES scheme arrangements involving pastoral landowners and commercial tour operators are being operationalized (see Calvet-Mir et al., 2015). Specifically, no study has ever conceptualized wildlife conservation in community conservancies and their

subsequent agreement with tourism investors as a PES scheme and brought to light the dynamics involved in the lowlands of Samburu County of Kenya.

To help fill this gap, this study aims to address the following three questions: (i) what are the formal and informal institutions operational in PES scheme in Samburu East sub-county?; (ii) what are the transactional and/ production costs involved?; (iii) what are the motivations of stakeholders participating in the PES scheme? To achieve this, the current study adapts Vatn's (2010) framework of systematic evaluation of PES in reconnecting decisions. This approach is advocated for by other researchers (e.g. Kosoy et al., 2007), who recommended that the future scope of research span beyond economic valuations, and pay attention to social relations, property rights and institutional aspects when studying the design of PES schemes. PES in the context of the current study refers to initiatives that involve:

- Contracts between the Samburu pastoral community through their respective community conservancies and commercial tourism investors and non-governmental conservation organizations;
- Explicit payments to landowners for maintaining a stipulated land use that augments wildlife conservation and ecotourism;
- Payments through communal institutions (community conservancies) in that the structure of conservancies affords potential buyers of ES the luxury of dealing with a governing body with management functions and financial systems in place (Naidoo et al., 2011; Kanyuuru, 2015).
- On-site utilization of the services generated on the community conservancies.

Payments for ecosystem services as a market-based instrument is a relatively new addition to the mosaic of conservation approaches in Kenya, and there is much interest in their potential for

overcoming the biases of earlier coercive conservation approaches (Kariuki et al., 2018). Therefore, findings from the current study are important for providing empirical evidence and drawing lessons on PES schemes performance. The remainder of this chapter is organized as follows. In section 4.2, the methodology of the research is discussed; 4.3 presents findings from this study and a discussion; and section 4.4 provides the conclusion.

4.2 Methodology

4.2.1 Study area

Samburu County is one of Kenya's forty-seven counties and is bordered to the East and North East borders by Marsabit County, to the Southeast by Isiolo County, to the South by Laikipia County, to the Southwest by Baringo County and to the West and Northwest by Turkana County. It is divided into three sub-counties namely Samburu West, Samburu North, and, Samburu East, the area within which this study falls. The dominant land uses include nomadic pastoralism, urban development, crop farming and wildlife conservation. Abundant and highly diverse wildlife is considered a critical resource for the county, lending the area a high potential for tourism development and contributing to sustainable livelihood options for the Samburu community (RoK, 2018).

4.2.2 Research design

The Samburu East sub-county in the northern Kenyan arid and semi-arid rangelands (ASALs) was purposefully chosen for study because it is one of the study sites under the 'Institutional Canopy of Conservation (I-CAN) project. The project aims to address the challenge of combining biodiversity protection with strengthened livelihoods in the East African region. Purposive sampling (as described by Etikan et al., 2016; Bernard, 2017) was used to select four out of six conservancies under the Northern Rangelands Trust (NRT) umbrella in the study area.

These were (Table 4.1) Namunyak Wildlife Conservation Trust (NWCT), Meibae Community Wildlife Conservancy[14] (MCWC), Westgate Community Wildlife Conservancy (WCWC) and Kalama Community Wildlife Conservancy (KCWC).

Table 4. 1: A description of the conservancies under study

Conservancy	**Formation year**	**Area (hectares)**	**Group ranches[15]**	**Investors**
Namunyak (Nalowuon, Kalepo & Ngilai units)	1995	383,804	Sarara, Sabache, Ngilai west, Ngilai central, Ngare-Narok, Ndonyowasin	Sarara and Kitich camps.
Kalama	2002	49,660	GirGir	Old Boma Limited (Saruni lodge)
Westgate	2004	36,230	Ngutuk Ongiron	Tamimi Company Limited (Sasaab lodge)
Meibae	2006	101,517	Sesia, Ltirimin, Lpus, Ngaroni	None

4.2.3 Data collection and analysis

Data was collected over a period of seven months from February to August 2018. Key informant interviews (KIIs) and secondary data sources (such as conservancies' annual general meetings' reports, partnership agreements, and financial records) were used to collect data. Key informant interviews are standard data collection tools that entailed interviewing a select group of

[14]A conservancy is a collection of lands unified under a singular management plan for the purpose of collectively enhancing conservation and natural resource use (Waterhouse, 1994).

[15] A group ranch is a demarcated area of rangeland to which a group of pastoralists graze individually owned herds possess official land rights (Oxby, 1981). Conservancies are borne out of group ranches (GRs). We found some GRs having a harmonized management board with their respective conservancies. In some contractual agreements, the two terms (conservancy and GR) are used synonymously.

individuals who were likely to provide relevant information, ideas, and insights on the subject under study. KIIs provided flexibility to explore new ideas and issues unanticipated during the planning phase of the study. This method is commonly used in anthropological and economic studies as well as social sciences among others (Kumar, 1989; Barker et al., 2005). We conducted 22 KIIs with people who were conversant with the topic under study. The criterion for sampling key interviewees was as follows: first, interviewees were categorized to represent the multiple stakeholders in the conservation PPPs. The categories included private investors, community members, national and local conservation stakeholders such as the KFS, KWS, NRT, and conservancies under study. Second, interviewees were selected from these organizations based on the nature of the knowledge they possessed regarding the partnerships, the role they had in the partnerships as well as through snowball sampling. Interviewees therefore included NRT, KFS, KWS, Ewaso Lions, SNR, ACK, and STE personnel, private investors, community leaders and representatives of the community conservancies (managers and rangeland coordinators) under study. Contact with the interviewees was made prior to the interviews and informed consent was sought before the start of the interviews by informing the respondents that the information was for academic purposes. For those informants who agreed to be identified by their actual names and position in their organizations in write ups, consent was given. Interviews were conducted until no new information emerged. The key interviewees comprised seven from private organizations, five from tiers of government, one investor, three chiefs, and two conservancy managers and four rangeland coordinators. All interviews were later transcribed for analysis. Secondary data sources were reviewed and included in the analysis and discussion of the results. The Statistical Package for Social Sciences (SPSS) version 23.0 was used to analyze the data. Qualitative data analysis

entailed transcribing, organization, building of overarching themes, and ensuring reliability and validity.

4.2.4 Research framework

Wunder's (2005:3) definition of PES necessitates a framework with which to critically analyze and assess our case study. Vatn (2010) provides one for conducting an institutional analysis of PES with the aim of reconnecting decisions. Vatn's (2010) framework for the systematic evaluation of PES schemes consists of three components: rights and rules, transaction costs, and motivational aspects. We adapted this framework and employed it in the following way: (i) by studying the institutions[16] governing the community itself and the, contractual agreements between the community and investors in tourism; (ii) by documenting the production and transaction costs accruing to the conservancies in the schemes; and (iii) by presenting the motivations behind stakeholders' involvement in the schemes. The next section presents the results and offers a discussion based on this framework.

4.3 Results and discussion

4.3.1 Institutions in the PES schemes

Institutions play an important role in achieving stable large-scale cooperation in common pool resource management. Human behaviour, in the absence of arrangements of access, might render most natural resources vulnerable to exploitation (Ntuli and Muchapondwa, 2018). The conservancies under study are in partnership with various stakeholders over a defined land area that is traditionally owned, or utilized, by their constituent communities. This finding supports Vatn's (2010) assertion that PES schemes serve to enhance the will for cooperation amongst stakeholders involved in addition to addressing environmental problems. Land in Samburu County

[16] Institutions are formal and informal structures that entail conventions, norms and formal rules of a society. They can operate as single rules, or in combination for instance resource regimes (Vatn, 2005; 2008).

is not only used as an economic resource but as a socio-cultural tool for supporting the *Maa*-speaking communities' cultural practices. It is held either as a registered and titled community land, an unregistered community land, a public land, or a private land as leasehold or freehold (KII, fieldwork 2018). We found the conservancies under study to be operating on land owned communally by the Samburu community with group ranches (Table 4.1) holding the title deed. Our finding is corroborated by Scherl (2005) who emphasizes that local communities in areas in which wildlife tourism occurs possess customary rights to land and other resources. Pellis et al. (2014) underscored that in determining who the conservancy community is, care is taken to ensure that neighbouring communities are made aware that membership encompasses all communities and sub-groups that have customary rights to the land, some of whom are not necessarily legal owners, unlike communities that occasionally utilize the land during seasonal migrations but reside elsewhere. We found that members of other conservancies, including those not under study, can utilize forage resources in other conservancies under locally negotiated arrangements between the conservancies' management. This finding is underscored by Naidoo et al. (2011) who note that the production of wildlife can occur on one conservancy, but the benefits accrued can be enjoyed within the same conservancy, or other conservancies, or in adjacent state game reserves or national parks, due to externalities. We also established that during extreme dry periods, the management of conservancies can negotiate with investors in tourism to allow community members to graze specified numbers of livestock in areas demarcated for eco-touristic purposes. The negotiation is an exception as per the clauses in the conservancy-investor agreements.

Table 4.2 details some clauses in the conservancy-investor agreements. The operationalization of these agreements has seen Samburu community members being excluded from settling and grazing their livestock in certain parts of the conservancies. This finding

corroborates findings by Bedelian and Ogutu (2017) who acknowledge that the creation of conservancies has reduced pastoral communities' access to former grazing land, thus imposing restrictions on livestock mobility. Consequently, the ability of pastoral communities to remain flexible is affected, leading to heighted conflicts between grazing activities and the conservancies during dry seasons or in times of drought. Such occurrences are pinpointed by Kosoy et al. (2007) who state that even though property rights might in theory be clearly defined, environmental conflicts are about who enjoys and who bears the costs or the negative externalities of managing the resource in question. It is following this understanding that at times *morans* (warriors) from within the community as well as other neighbouring communities invade the conservancies illegally, accessing core conservation areas, in search of pasture for their livestock during dry periods, even though institutions regarding resource use exist. The conservancies in our case study have grazing committees that oversee the planning and execution of grazing during dry and wet seasons. Community members who are found to violate the stipulated rules regarding grazing are usually fined. Resident communities are also entitled to resource usage within the conservancies, and end-year payouts, among other benefits.

Table 4. 2: Clauses in conservancy-investor partnership agreements

Items	**Sessia Limited**	**Kitich Camp Limited**	**Old Boma Limited**
Lodges	Sarara; Reteti	Kitich camp	Saruni
Start period	October 2013	August 2016	October 2014
Duration	30 years, renewable	20 years, renewable	15 years, renewable
Overseer	NRT	NRT	NRT
Minimum fee payable to conservancy	Ksh 7,500,000	Ksh 300,000	USD 6,500,000
Rates per night	Ksh 9,000 for non-resident adults; Ksh	Ksh 6000 per non-resident adult; Ksh 3,000 per non-	Ksh 7,000 for non-resident adult; Ksh

	4,500 for non-resident children; Ksh 2,500 for resident adults; Ksh 1,200 for resident children.	resident child; Ksh 1,500 per resident adult; Ksh 750 per resident child; Ksh 750 per resident and non-resident students on organized trip.	4,000 for non-resident child; Ksh 1,500 for resident adult; Ksh 750 for resident children.
Employment in the lodges	75% local population	75% local population	75% local population
Bed capacity	16 current beds in main Sarara valley, 22 more beds will be added by the end of the lease. 12 beds to be constructed in the Reteti area.	Currently 12 beds.	Currently 20 beds.

For conversion purposes **I USD = Ksh 100**

Conservancy-investor agreements have other various clauses besides those shown in Table 4.2. For instance, investors are granted the right to construct tourism facilities at their own costs. The fixed assets necessary for the successful commercial operation of tourism ventures are to be transferred to the community at the end of the lease agreement. The investors are also obliged to provide the respective conservancies and the NRT with an exact record of tourist bookings on a regular basis. We established that all conservancies, except for the KCWC do not have monitoring systems they can use to ascertain the actual number of visitors/guests arriving at the various eco-lodges. KCWC has a revenue collection point at the airstrip and at the main gate to the conservancy, which serves to verify records provided by their investor (Saruni lodge) on bookings and the total revenue generated. Regarding revenue disbursement, we found that the amount payable by the investors is distributed to the conservancies on a sixty-forty percent basis. Sixty percent is allocated for community projects, whereas forty is for conservation management activities. Eco-lodges are also expected to promote the sale of community goods such as artworks

and jewelry by women's groups in the conservancies of the community. Another clause stipulates that both the NRT and the investors are expected to promote conservation activities within the conservancies through the distribution of literature and wider promotional material. We established that as part of the conditionality in the PES schemes, conservancies are expected to ensure that their boundaries are adequately secured by armed rangers who should keep out trespassers and poachers. Using NWCT for instance, the conservancy is mandated to pay a fine of Ksh 15,000 (USD 150) per case, payable to the tour operator if livestock belonging to the community or outsiders of the community encroaches on the tour operators' private area in any given period.

Pellis et al. (2014) argue that conservancies are unable to attain their conservation and livelihood objectives without partnerships because the success of conservancies is linked to their ability to convince partners to invest in their priorities. We established that conservancies are often legally obligated to report to their donors on both technical and financial progress, and guidelines for grant reporting are usually set out in the respective grant agreements. Each conservancy has a memorandum of understanding (MoU) with the NRT that is renewable after a specified period. Initially, conservancies apply to be part of the Trust's umbrella of conservancies and the Trust's council of elders either declines or accepts a conservancy's request after an evaluation of the applying conservancy's suitability. Furthermore, the conservancies are expected to adhere to conditions laid out and in turn receive support after successfully reporting progress to the NRT. The institutions through which interactions with other relevant stakeholders occur are outlined in their specific partnership agreements or memoranda of association.

4.3.2 Production and transaction costs

Generally, conservation initiatives require substantial investment (Jepson and Ladle, 2012) and growth in PES schemes. This is propagated by the reduction in transaction costs (Bishop and Pagiola, 2012). Table 4.3 presents the financial analysis for NWCT. For the conservancies under study, NWCT is the longest existing conservancy (Table 4.1). As shown, the NRT contributes a large portion of income. Over the course of three years, staff costs have been on the rise, and operational costs relatively steady. Kitich Camp, an investor with NWCT, does not appear in Table 4.3 since the agreement became operational on the 1st July 2017 and we did not secure data for 2017.

Table 4. 3: NWCT's financial analysis for the respective years ending on 31st December

	Item	Year		
		2014	**2015**	**2016**
INCOME	NRT funds transfer	31,667,630	24,328,512	21,406,685
	Rhino Charge	-	1,676,058	-
	Sarara Camp	-	6,492,825	7,344,789
	NRT expenditure support	2,415,684	4,638,290	4,447,537
	Conservation fees	426,577	-	1,094,448
	Camping fees	-	-	378,186
	San Diego Zoo	-	-	183,000
	Amortised capital reserve fund	-	812,451	654,375
	Other income	210,913	2,013,314	-
	Total (Ksh)	**34,720,804**	**39,961,450**	**35,509,020**
EXPENDITURE	Operational costs	12,947,407	12,577,429	11,341,715

	Staff costs	16,850,529	17,560,854	21,386,979
	Administration costs	5,286,649	7,204,806	2,955,776
	Finance costs	21,430	33,662	30,224
	Capital expense	37,000	1,784,556	-
	Total (Ksh)	**35,143,015**	**39,161,307**	**35,714,694**
	Surplus/(Deficit) for the year (Ksh)	**(422,211)**	**800,143**	**(205,674)**

Table 4.4 presents the financial details of KCWC for the two years as shown. Just as with NWCT, the NRT constitutes a large share of income for the conservancy. Samburu County government also appears as source of income. This is due to the county's effort to support conservation through community conservancies. Just as with NWCT, staff and operational costs contribute a large portion to the expenditure of the conservancy.

Table 4. 4: KCWC financial analysis for the respective years ending on the 31st December

		Year	
	Item	**2016**	**2017**
INCOME	Royal Safaris camping fee	-	46,000
	French Films	-	63,854
	Four by Four camping fee	1,122,673	530,959
	NRT grants	6,942,347	9,580,906
	NRT *Acacia reficiens* clearing support	511,000	-
	Saruni Lodge income (40%)	3,773,641	3,911,623
	NRT-Trading Moran loan fund	405,000	-
	Samburu county government	-	2,000,000
	GirGir GR bursary funds	-	670,000

	Amortisation of capital reserve	491,573	400,150
	Other income	245,619	2,800
	Total (Ksh)	**14,744,096**	**18,239,616**
EXPENDITURE	Motor vehicle costs	1,708,294	1,651,569
	Travel and meetings costs	264,250	366,500
	Staff costs	10,063,605	10,063,348
	Operations costs	2,350,006	4,931,000
	Professional fees	80,000	123,200
	Capital costs	344,289	-
	Un-categorized payments	-	620,295
	Total (Ksh)	**14,810,444**	**17,755,912**
	Surplus/(Deficit) for the year (Ksh)	**(66,348)**	**483,704**

Westgate conservancy homes two research organizations, Ewaso Lions and Grévy's Zebra Trust, which pay annual fees contributing to the income of the conservancy as shown in Table 4.5. Again, the NRT is the major source of income for Westgate. Its costs regarding staff and operations have increased over the two-year period.

Table 4. 5: WCWC financial analysis for the respective years ending on 31st December

	Item	**Year**	
		2016	**2017**
INCOME	NRT grants and support	11,111,342	11,116,537
	Saasab Lodge (40%)	3,427,626	4,399,946

	Grévy's Zebra Trust (GZT)	-	100,000
	Ewaso Lions project	-	182,000
	Samburu County government	600,000	800,000
	Camping fee	150,288	64,205
	Filming fee	30,300	-
	Total (Ksh)	**15,319,556**	**16,662,688**
EXPENDITURE (Ksh)	Staff and benefits costs	8,539,925	9,042,830
	Operating costs	6,444,895	6,518,848
	Meetings costs	508,460	533,810
	Capital assets and equipment	849,258	65,000
	Finance charges	36,596	42,001
	Total (Ksh)	**16,379,134**	**16,202,489**
	Surplus/(Deficit) for the year (Ksh)	**(1,059,578)**	**460,199**

Meibae conservancy, unlike others being studied, has the NRT as its sole source of income (Table 4.6). It has not had an investor since its establishment. MCWC provides a unique case which qualifies our definition of PES since it has a MoU with the NRT. The Trust supports the conservancy to operate just like other conservancies under its umbrella, thereby observing stipulated clauses such as adherence to land use zoning plans. Much of the income from the NRT goes to security. Investment in security shows the importance of peace or reduction of conflicts to conservation. The prevalence of peace is paramount to ensuring the success of the PES arrangements in other conservancies under study and the conservation initiative in general. Members of Meibae therefore do not receive end-year payouts nor do they have investment

projects like bursary schemes amongst others, like the rest of the conservancies considered in this research.

Table 4. 6: MCWC financial analysis for the year ending on 31st December 2017

	Item	Year 2017
INCOME	NRT support	9,379,510
	Total (Ksh)	**9,379,510**
EXPENDITURE	**Staff and benefits costs**	
	Headquarters	870,703
	Security	5,359,657
	Statutory	560,100
	Sub-total (Ksh)	**6,790,460**
	Operating costs	
	Rations	1,188,000
	Office and administration	252,000
	Board and sub- committees' allowances and expenses	231,050
	Sub-total (Ksh)	**1,671,050**
	Capital assets	
	Vehicle running costs	660,000
	Field equipment	26,000
	Motorbike running costs	232,000
	Sub-total (Ksh)	**918,000**

	Surplus (Deficit) for the year (Ksh)	**0**

The specifics of the financial cost-benefit analyses are depicted in Tables 4.3-4.6. Stakeholders in wildlife management are increasingly using economic analyses with a view of improving the efficiency of management policies (Rashford and Adams, 2005). Billyard and Donohue (2016) underscored that the overall aim for both private and public entities is to optimize the production of specified outputs with respect to the resources being utilized. In our study, the conservancies not necessarily produce wildlife *per se*, but incur costs in maintaining and availing the wildlife to tour operators (ensuring conditionality). This leads to the concept of operational efficiency. In order to avoid ambiguity in its usage (Jollands, 2006), operational efficiency implies that the conservancies' execution of their management objectives is attained at the possible least cost.

The NRT (2015) states that it typically costs a community conservancy between 50,000 USD to 70,000 USD to operate annually. As shown in Tables 4.3-4.6, a large proportion of the conservancies' costs are staff and operational costs. The staff costs mostly comprise of staff salaries and allowances. The operational costs comprise of bank charges, depreciation expenses, communication expenses, repairs and maintenance, board meetings expenses, grass seeds purchases, grazing and tourism committees' expenses, fuel costs and security operations among others. It is acknowledged that conservation costs are ever on the rise due to the increasing threats to wildlife and the huge salary bills of organizations (Jepson and Ladle, 2012). Table 4.6 shows that MCWC breaks even for the accounting period of 2017 since it can only spend the money it received from the NRT, considering its lack of an investor. NWCT (Table 4.3) has the highest expenditure on operational and staff costs amongst the four conservancies as it has the largest area under its domain (Table 4.1). Galaty (2016) asserts that boundaries in many ASALs are porous,

monitoring of frontiers seasonal, and exclusion a matter of negotiation rather than force thus making fencing costs unwarranted. This observation is supported by the NRT (2015) who state that conservancies do not create hard boundaries that separate people from wildlife nor are other people excluded from using the land. Managing wildlife at larger scales, according to Noss and Daly (2006), has the added advantage of facilitating connectivity for species with higher cruising ability such as elephants, thereby enhancing their resilience to threats such as land use changes and climate change. These observations justify the reason why a large portion of the conservancies' costs are constituted by staff and operational costs. They are necessary in order to manage and conserve the land that is vital for the ecosystem services it provides which are not only critical to the community itself but to the investors who are a key partner. Such costs, according to Karousakis and Perry (2013), are necessary as they entail measures that address permanence and risky events such as poaching or illegal invasions that may undermine landholders' ability to provide an ecosystem service for the length of time stipulated in the PES agreements.

Based on the financial cost-benefit analyses presented in Tables 4.3-4.6, no conservancy has been capable of making consistent surplus (profit). Pellis et al. (2014) documented that high potential conservancies could break even within eight years, depending on return on investments from tourism fees, levies on livestock, carbon sequestration, levies on oil exploitation and other small-scale enterprises, based on the NRT's community conservancy financing strategy. Our results show that the studied conservancies are far from achieving self-sustenance[17] as they still have deficits in their budgets and are heavily reliant on grants. Commercial income from tourism and other ventures is insufficient to cover the costs incurred. According to the NRT (2017),

[17] If we extrapolate the results of our financial analyses (Tables 4.3-4.6) (with an assumption that all the commercial income earned from tour operators is allocated to conservancy management rather than the current allocation of 40%) the outcome would not have much of a deviation.

between 2011 and 2016 donors covered about 85% of the conservancies' operation costs who worked under their umbrella, while commercial income from tour operators averaged at 14%, with the remainder coming from government. Asaka (2018) who worked in the Samburu heartland reports similar findings and asserts that the conservancies' over-reliance on donor support contributes to a rise in dependency syndrome in an ecosystem that was over the years marginalized by the Kenyan government and the ever-present effects of climate change.

Transaction costs analysis entails how well various kinds of transactions are governed. Costs associated with a governance structure are related to the effort required to establish perceptions of equity in the parties involved and an efficient transaction is one that is governed with the least possible cost (Ouchi, 1980; Walker, 1982). Transaction costs are context-specific thereby dependent on the system under study. In PES, transaction costs are related to the definition of the ecosystem services to be maintained, the identification of potential sellers and buyers, the development of mutual trust between them, the bargaining of the service's price, the transfer of payments, the monitoring of contractual obligations and conservation outcomes, and the enforcement of contracts (Vatn, 2010) We found the NRT (intermediary) to be offsetting part of transaction costs to conservancies by overseeing the conservancy-investor contractual negotiations.

4.3.3 Motivational aspects for the stakeholders

Generally, stakeholders in PES schemes include providers, intermediaries and users. Providers are agents participating in PES schemes through contractual relation regulating land use. Intermediaries are agents who mediate the transfer of resources between users and providers. Users are the beneficiaries of the ecosystem services rendered by the providers (Kosoy et al., 2005). In our case study, the providers are the Samburu community acting through their respective

conservancies to make land with wildlife resources available to investors. The intermediary is the NRT and the users are tour operators/investors who attract clients at both the local and high-end tourism market. We therefore discuss the motivational aspects of these three key stakeholders.

4.3.3.1 The community

Vatn (2010) noted that rights from the onset are granted to owners of resources under the presumption that no harm will be inflicted on the resource, and PES schemes are motivated by the fact that the providers in most cases are the poorer party. Ecosystem services providers usually possess rights of access to, and/or use of, their ecosystems (Barnaud et al., 2018). This observation is augmented by Bulte et al. (2003) who documented that where wildlife exists on private property, the owner(s) may conserve and utilize it. This is the case with the Samburu community who conserve and manage wildlife on their communal land with a view of enhancing their wellbeing. Our finding is corroborated by Kemkes et al. (2010) who underscored that most ecosystem services are public goods, but that the physical structures providing them are often privately-owned (in our case, communally owned).

In PES projects, Corbera et al. (2007) documented how people holding land in common do so as a way of strengthening their rights to the land. This in turn leads to increased security to the land for those involved. Vatn (2010) explains that titling may enhance the value of the land and as the value increases, so do the incentives to land-grab. The author further acknowledges that the successful implementation of PES is contingent on well-functioning communities. We established that land tenure security is another reason for the participation of the Samburu community in wildlife conservation, asides from the diversification of their livelihood portfolios. We found that some of the group ranches had recently acquired titles to their land. Cases of land grabbing by elites did occur, for instance, in MCWC. The PES community participants in our case study inevitably face the challenge of making a trade-off regarding the size of the area available for

livestock grazing, in order to conform to the conservancies' land use regulations. They, however, participate in the PES schemes since pastoralism and wildlife conservation are complementary forms of land use. Nevertheless, trade-offs exist where pastoralism and wildlife occur that include increasing human wildlife conflicts.They are also motivated by the prospect of the financial and non-financial benefits that outweigh the opportunity costs involved (KIIs, fieldwork 2018). Tour operators pay the community as a stakeholder in the PES scheme to protect wildlife and maintain land uses consistent with eco-tourism. This has also been reported in other countries such as Zimbabwe under CAMPFIRE and in northern Tanzania (Frost and Bond, 2008; Nelson et al., 2010).

4.3.3.2 The Northern Rangelands Trust

We found the NRT to be an intermediary and, as underscored by Vatn (2010), an intermediary in PES schemes is often the dominant agent be they the state, firms or non-governmental organizations of various kinds. According to Kemkes et al. (2010), the existence of skilled intermediaries minimizes costs in PES schemes. The NRT was established in 2004 as an umbrella organization to initiate community conservancies in northern Kenya. Its mission is to develop resilient community conservancies that transform lives, secure peace, and conserve natural resources. It does this through the establishment of conservancies and; reliable communication networks between communities as well as, the government and the private sector, and by enabling dialogue between historically conflicted communities, raising funds for the conservancies, and providing advice and mentorship on management and a wide range of training. It monitors performance, provides donors and partners with a degree of feedback and quality assurance. It also contributes to and brokers partnerships between community landowners and private investors who since 2004 have contributed to the conservancy model of conservation in northern Kenya. By the

year 2014, the NRT membership had grown to 27 conservancies in nine counties covering three million hectares in northern Kenya representing more than 250,000 people (NRT, 2015). By 2016, membership stood at 35 conservancies covering an area of 4.48 million hectares in the northern and coastal regions of Kenya with a population of 630,000 people (NRT, 2017). The NRT now secures approximately 10% of Kenya's landmass that hosts a large proportion of the country's wildlife resources (Pellis et al., 2014). It is worth noting that conservancies are not portions of community land. They are the community land entirely; the whole group ranches that comprise human settlement areas, buffer zones and core conservation areas.

Direct funding from organizations such as the United States Agency for International Development (USAID) enabled the NRT to target new group ranch communities and purposefully embed them into the fold of community conservation (Parkinson, 2012). We found the NRT's other partners to include The Nature Conservancy, Lewa Wildlife Conservancy, Ol Pejeta Conservancy, Fauna and Flora International, the San Diego Zoo, and the Embassy of the Kingdom of Netherlands, among others. The funds received from some of these donor organizations are often unrestricted in their usage, implying that they are not earmarked for specific NRT projects or programs. According to Jepson and Ladle (2012), they are used to fund core operations such as salaries and overheads. Conservation organizations aim to maximize unrestricted funds whilst reducing the perceived costs of core operations. We established that the NRT does not invest in material assets that benefit conservancies at large (such as roads, water facilities), including services delivered by or for tourism. The Trust's major investments in tourism development are manifested in brokering deals and mediating the staff's activities in the conservancies between the private entrepreneurs, group ranches and neighbouring rivalry groups. According to Pellis et al., (2014), in 2013 these costs were estimated at Ksh 4.8 million (USD 48,000).

In the ASALs of Kenya such as Laikipia County, organizations like the African Wildlife Foundation (AWF) have played a similar role to the NRT where AWF acted as a broker for joint venture partnership for the development of eco-lodges and helped to offset some of the costs (Sumba et al., 2007). We established that members of the Samburu community have mixed perceptions of the NRT. Some individuals laud its efforts in the conservation arena, whereas others see the NRT as a massive land grab whose aims are masked under the guise of conservation. The role of this category of stakeholders on tourism has been explored (see Forstner, 2004). We characterized the role of KWS in Chapter 3. As a state body, it is supposed to oversee the brokering of tourism investment partnerships in Kenya's ASALs. Its failure to execute some of its mandated functions such as training of police reserves for community conservancies and brokering of tourism investment agreements has led to the prominence of the NRT's role in conservation as elaborated by our findings.

4.3.3.3 Investors

Investors in the tourism industry are the main direct beneficiaries of wildlife-based recreational services (Wegner, 2014), and they in turn pay landowners for ceasing activities that clash with wildlife conservation (Schomers and Matzdorf, 2013). McFarland (2018) underscores that tourism investors, (except for those involved with private reserves or concession holders), often do not own land, and are thus engaged in various legal arrangements through which clients have access to wildlife-rich territories. Such arrangements could involve mutually exclusive deals between landholders and an ecotourism operator leading to lodges being set up to house tourists, students and/or researchers. To promote PES, users pay fee to individuals or communities whose management decisions influence the provision of services (Karousakis and Perry, 2013). We found that investors in our case study bought rights to bring eco-tourists to their concession areas to

observe and photograph wildlife. The visitors enjoyed an experience characterized by information sessions about the wildlife species and the Samburu landscape, and high-quality accommodation, cuisine and companionship. Similar arrangements are experienced in Zimbabwe (Frost and Bond, 2008) and Namibia (Naidoo et al., 2011). Figure 4.2 shows a picture of a plaque with the name of the investor with KCWC. In partnering with conservancies, they bring funds, information, and access to networks, and consequently they can be a tool for improving the governance of conservancies, if their interests span beyond profit-making to include nature protection and the improvement of local community livelihoods (Juma et al., 2018). Investor-local community partnerships fail when profit is the only motive and the partnership is ungoverned by a negotiated agreement and is defined by inadequate communication and accountability (ibid.). Colwell (2014) underscores that private entities such as tour operators' investment in wildlife-based tourism is motivated by the promising financial returns from the venture.

Kemkes et al. (2010) argue that monopsony power in a PES scheme is desirable since it lowers transaction costs since no coordination or agreement amongst buyers is required. Tourism investors in our case study enjoy monopsony power with their respective conservancies. However, this does not skew the market for the ecosystem services (ES) being provided since the community conservancies are not forced to sell the ES to the tourism investors because they have the option to use their communal land for the next best alternative. Furthermore, the rates charged to tourists at their facilities are based on Kenya Wildlife Service (KWS) premium park fees, which impacts community fees received by the conservancies. In Doller's (2019) study on livelihoods and conservancies in the ASALs of northern Kenya, she argues that high-end tourism facilitated by tourism investors focuses on a limited market of high-end tourists, thus excluding those with limited budgets. She recommends the need to promote low-budget tourism that has the advantages

of; attracting more people, low investment costs, and promoting Kenya's domestic tourism industry. Three out of four conservancies under study have investors, all of whom are international (Table 4.2), except for MCWC (Table 4.1). They enjoy the luxury of having contractual agreements with any group ranch, particularly in conservancies comprised of several group ranches like NWCT, thus rendering the PES market dynamics monopsonistic. Based on data gathered from interviews, the reasons cited for MCWC's inability to obtain an investor include a high extent of land degradation coupled with low wildlife populations, poor land use planning in regards to settlement patterns, and the location which is known to be a corridor for cattle rustling and individual ownership of land by elite individuals in the conservancy. It therefore seems that promising financial returns is the motivation for tourism operators' investment in tourism facilities.

Figure 4. 1: Saruni lodge, an investor with Kalama conservancy.

Source: Lugusa, fieldwork (2018).

4.3.4 Summary of the elements to the Samburu PES programme case study

Ecosystem service being bought/sold

The ES being purchased by tourism investors is wildlife and its associated scenery, used for eco-touristic purposes. This falls under the cultural services of the Millennium Ecosystem Assessment (MA, 2005) classification, according to which cultural services are 'non-material benefits individuals obtain from ecosystems through spiritual enrichment, cognitive enhancement, reflection, recreation, and aesthetic experience'. Pagiola et al. (2002) underscore that ES are either public or club goods. In our case study, in principle, wildlife is the property of the state and thus, considered a public good. According to Derissen and Latacz-Lohmann (2013), public goods are often an externality of primary production activities. The response of this market failure has been the implementation of policies and incentives that reward landholders to maintain or enhance the provision of such goods. Wildlife in Samburu is a Toll good (e.g. recreational services that are considered non-rival but congestible and excludable (Yashiro et al., 2013)) since it is found on communal land, thus property rights are enforced. Furthermore, fixed beds at tourism investors' facilities regulate congestion. Kemkes et al. (2010) underscore that ES that have the characteristic of a toll good may be provided by the public, private or civil sector through entrance fees.

Voluntary transactions

In our case study, which aligns with Wunder's (2005:3) definition of PES, neither the sellers (Samburu conservation community through their conservancies) nor the buyers (tourism investors) are obliged to enter a transaction with each other. However, at the household level participation has not always been voluntary for some conservancy members, although a majority agree with the scheme, since communities are heterogeneous entities. Since individuals in households are members of conservancies that transact on the community's behalf due to

communal land ownership, this makes conservancies *de facto* instruments for ecosystem service delivery. Similar findings are reported by Naidoo et al. (2011) in Namibia's community-based natural resource management (CBNRM) programme. Furthermore, community conservancies in Samburu County and their subsequent investor agreements are viewed as a form of risk diversification, where households gain monetary and non-monetary benefits, in an environment that experiences frequent and recurrent droughts amongst other challenges.

Conditionality

The criterion of conditionality is typically the most difficult to satisfy (Wunder, 2007; Wunder et al., 2008) and is quintessential to PES (Wunder, 2015). In this research, conditionality relates to the effort invested in adhering to the conservancy land use zoning and the enforcement of security. Clauses in the conservancy-investor agreements must be observed, resulting in the exclusion of livestock from grazing in core conservation zones of the conservancies. Community conservancies under study see tourism eco-lodges as a solution to their growing financial needs, and so oscillate between urging the Samburu community to adhere to the provisions of conservancy-investor agreements and being responsive to the needs and concerns of the community, for instance during dry periods. Therefore, in ensuring conditionality, livestock is pitted against wildlife, despite this ecosystem service being coproduced (Villamor et al., 2014) in a landscape that supports their coexistence (Doller, 2019). Furthermore, we established that the investor-conservancy agreements do not specify the threshold of wildlife populations that must be maintained or else the contract is nullified. One can consider that the Samburu community can add an ecosystem service (wildlife conservation) to their production portfolio as a joint product of their mainstay (pastoralism) (Van Hecken and Bastiaensen, 2010). This finding is like many PES

schemes where main land use activities proxy for actual ecosystem service quantities (Wunder et al., 2008; Engel et al., 2008).

Additionality

The Samburu conservation community is focal to the PES scheme. National and county government is also crucial for providing favourable laws and policies, as well as funds to augment wildlife conservation. Our findings are corroborated by Sommerville et al. (2010), who state that in developing economies, PES schemes are strongly dependent on community and state involvement. The current PES schemes in Samburu are Coasean-based, leading to the prominence of the NRT and its roles in the schemes, as highlighted. The Coase Theorem stipulates that, given that there are low to no transaction costs and clearly defined property rights, no governmental authority is required to overcome the problem of internalizing external effects. Rather, private 'market negotiations' amongst stakeholders lead to an optimal allocation of resources regardless of initial allocation, as the beneficiary will compensate the provider for externality (Coase, 1960). Tripp and Sondak (1992) recommended researchers to measure the quality of negotiated agreements, for instance conservancy-investor in the case of the current study, with a measure of Pareto efficiency[18] rather than joint profit since Pareto efficiency better integrates the theoretical methods of individual rationality. We could not establish whether the conservancies-investors arrangements were Pareto efficient or not. This limitation is a result of the inability to secure the information needed from tourism investors.

In our PES case study, a Pareto efficient outcome implies that on the demand side, payments should be made voluntarily by the tourism investors (Wunder et al., 2008; Fisher, 2012).

[18] Pareto efficiency, as applied in our study follows Coase (1960), is a state whereby the total net monetary benefits accrued by the conservancies and the tour operators are maximized. Therefore, none of the parties would be made worse off as a result of their continued negotiations/arrangements.

On the supply side, it implies that payments should target the most effective service providers, including community conservancies that deliver the highest level of environmental additionality[19] and incur the minimum level of opportunity and transaction costs (Wunder et al., 2008; Kroeger, 2013). One possible measure of performance to calculate additionality in our case study could be changes in the population densities of key wildlife species in the conservancies under study, compared to changes in non-conservancy areas. But baseline studies that can be used to achieve this goal are lacking for the conservancies considered in this research.

Our Samburu case study has commonalities with the CAMPFIRE programme in Zimbabwe (Frost and Bond, 2008) and Namibia's CBNRM (Naidoo et al., 2011), in that it meets most of the criteria used to define pure PES schemes. Concurrently, it has elements that deviate from those used to characterize pure PES schemes (such as on conditionality, additionality and potentially involuntary participation of some households within the conservancies). Therefore, Wunder's (2005:3) definition of PES falls short of including many current innovative approaches developed under the looser notion of PES (see Robertson and Wunder, 2005). Our Samburu case study fits within the latter cluster.

4.3.5 Contextualizing realities in PES

Community-based natural resource management approaches hinge on the principle that for wildlife to survive, indigenous populations must both manage and recognize it as a land use form in their ecosystems and concurrently reap benefits from it. Therefore, these populations take initiative to conserve wildlife out of their own economic interests (Western and Wright, 1994; Rihoy 1995). Just as in our case study, PES schemes compensate landowners for management that

[19] Additionality refers to the amount of ecosystem services generated under a PES scheme that is additional to what would be generated if the scheme was not implemented. Often, the level of additionality can only be postulated, since its empirical measurement is strongly curtailed be the obstacles of obtaining context-specific information on the relationship between land use practices and ecosystem service provision (Corbera et al., 2007).

provides benefits to other parties regarding ES or biodiversity conservation. In this case, landowners are paid for the services that their lands provide, thereby internalizing positive externalities. Dressler et al. (2010) document community-based conservation strategies as having taken on new market mechanisms with a view of conserving ecosystem services by placing an imputed market value on them. The benefits derived then provide indigenous communities with the incentive to curb extensive use of natural resources in their ecosystems. The formulation of PES mechanism in the 1990s is documented by Fletcher et al. (2014) as a major innovation in the development of what they termed Nature^{TM} Inc, signalling a shift from hybridized forms of community-based conservation strategies to reliance on market mechanisms. Kosoy and Corbera (2010) documented PES as a neoliberal approach to environmental management based on the fundamental principle that payments can alter land-use and management practices. This is supported by the Coase economic theorem in which externalities are addressed by market extension through property rights. The incorporation of PES in community-based projects is influenced by international bodies and policy (Dougill et al., 2012). Our case study clearly shows that the NRT, which is heavily financed by international donor organizations, offsets a large proportion of the costs to the conservancies (Tables 4.3-4.6) thereby sustaining their existence.

The commodification of natural resources is a consequence of the strong belief that private ownership and market exchange is the basis for better management of natural resources, a key tenet of neoliberal policy (Heynen et al., 2007). Büscher and Dressler (2012) further underscored neoliberal conservation strategies as having placed pressures on indigenous communities to commodify their natural resources to avoid being omitted from participating in broader market and socio-political dynamics. The result is the entry of these communities into market economies rather than relying on their own natural resources for subsistence. Conservation-led initiatives of

enclosure have thus been viewed as forms of violence, even though no observable force might have been used, since the state and other stakeholders involved fail to provide equivalent livelihood alternatives or adequate compensation to the communities (Neumann, 2001). Sullivan (2013) shows how various stakeholders and professionals engage in intensified financialization of discourses and endeavours associated with environmental conservation and sustainability resulting in the incorporation of environmental arenas into forms of economic expansion allowing for capital generation and accumulation.

In the Global South, Benjaminsen et al. (2013) acknowledge neoliberal reforms to have opened the avenue for direct foreign investments into natural arenas, promoting multinational non-governmental organizations to commodify natural resources as a revenue stream. Primitive accumulation as described by Marx entailed the alienation of resident populations from land and then enclosing it, thus creating a landless proletariat, and then releasing the land into the privatized mainstream of capital accumulation (Harvey, 2003). In our Samburu case study, the creation of conservancies themselves served to exclude members who do not hold rights to land from accessing resources such as pastures/forage for their livestock, amongst other benefits. The zoning of conservancies themselves exacerbate the situation in that even conservancy members are excluded from accessing certain areas, for instance those earmarked and allocated to eco-lodge operators as well as core conservation areas. This has influenced pastoral livelihoods. Some people have been forced to drop out of pastoralism and seek jobs outside of the pastoralism-conservation economy, as a means of diversifying their livelihoods, an observation corroborated by other scholars (e.g. Watete et al., 2016; Mbaria and Ogada, 2016). The inadequacy of the current resource base and its inability to sustain a purely pastoral system (Kandagor, 2005; Sandford, 2006), as well as the sedentarization of the local population as a result of losing access to grazing

lands and drought-related destitution (Fratkin, 2013; Catley and Scoones, 2013), are some of the factors forcing pastoralists out of their mainstay livelihood.

4.4 Conclusion

We conceptualized wildlife conservation in terms of community conservancies and their subsequent contractual agreements with investors as a PES scheme. We clearly show the convergence and deviations of our case study from 'pure' PES schemes thus qualifying it as a 'PES-like' scheme (see Wunder et al., 2008). PES schemes have been argued to be instrumental to neoliberal processes of commodification and private enclosure of land, which is considered by some to be a fictitious commodity (Polanyi, 1968; Kosoy and Corbera, 2010; Büscher, 2012). Under the guise of neoliberal conservation, Samburu communal land and wildlife resources have been commodified as seen in negotiated agreements with tour operators. Therefore, through the releasing of land into the privatized mainstream of capital accumulation, the mainstay of the Samburu community has been affected leading to the entry of some of the population into the labour market. The PES schemes market dynamics as per our findings can be termed as monopsonistic characterized by the NRT's control of the market dynamics in the study area.

We found both formal and informal institutions existent in the PES scheme with conservancy boards and management teams enforcing them. The community is motivated by the augmentation of rights to land, and enhancement of their wellbeing from the financial and non-financial accruing from the scheme. The tourism investors are motivated by financial returns. Furthermore, in their effort to ensure permanence, the results from this study show that the conservancies incur various costs that render their operations inefficient. Inefficiency, we argue, is a function of the conservancies' inability to maximize profits (enough income generation), rather than their ability to minimize costs. The inability to generate a sizeable income from the PES

schemes, has created a situation that has rendered the conservancies dependent on donor funding/support to execute their functions. While one may argue that the main aim for the various entities' participation in the scheme is sustainable wildlife management, in reality they are motivated by divergent goals. For the NRT, an intermediary who executes other functions as well, it can be said that its aim is the expansion of conservancies under its umbrella, culminating in increased land area control. This can be thought of as an act of donor funds attraction considering its operations are donor-funding dependent. The case of Meibae conservancy detailed in this study pinpoints to the lack of the NRT's focus on the sustainability of existing conservancies before out-scaling their approach to other regions. For a conservancy to lack an investor after being in operation for thirteen years certainly reflects badly on the NRT whose stated objective is to link donors or investors to conservancies. Since managing vast land areas requires relatively more commitment and input, for the conservancies to be more efficient in their operations, more income should be generated from the PES schemes. This can only be attained through better negotiated agreements with the conservancies' respective investors. Our study could not reveal whether the current conservancies-investors arrangements are Pareto efficient since investors were unwilling to share their financial records with us. We acknowledge this shortcoming as part of our fieldwork challenges, and it would be desirable for future studies to surmount this obstacle. The commodification of nature through PES schemes in the Samburu case study has undoubtedly opened an entry of the global community (foreign tourism investors and INGOs) into the conservation arena. Yet, in judging how effective PES schemes are, the NRT's efficiency and their 'real' motives are yet to be defined.

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4.6 Ethical standards

This research was conducted in Kenya with the permit No: NACOSTI/P/18/85991/20350 from the National Commission for Science, Technology and Innovation (NACOSTI), and approval from McGill University's Research Ethics Board File No. 213-1017 for Ethical Acceptability of Research Involving Humans.

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FORWARD TO CHAPTER FIVE

The previous two chapters documented the evolution of the public-private conservation partnerships, and their efficiency in executing their mandate. In the next chapter I employ the Sustainable Livelihoods Framework (SLF) to investigate the conservancies' effect on pastoral livelihood outcomes and biodiversity conservation in the study area. Recommendations to enhance effectiveness of PPPs as a mode of governance in natural resources are made.

The chapter has been considered as a manuscript for publication in a peer reviewed journal (Authors: Lugusa, K., Galaty, J., and Kosoy, N.).

CHAPTER FIVE

The impact of public-private conservation partnerships on pastoral livelihood outcomes and biodiversity conservation in Samburu County, Kenya

Abstract

Pastoral livelihood outcomes are tightly knit to the arid and semi-arid rangeland ecosystems from which critical services and resources are derived. Using Samburu East sub-county as a case study, we employ the Sustainable Livelihoods Approach (SLA) framework to analyze the impact of public-private conservation partnerships on livelihood outcomes and biodiversity conservation. Data was collected through key informant interviews, focus group discussion, individual household interviews and by use of secondary data sources. Twenty-two key informant interviews were achieved, as well as seven focus group discussions. A total of 240 interviews with members of conservancies as well as non-members were conducted. The Statistical Package for the Social Sciences was used in the analysis. Our findings show that conservation partnerships through community conservancies are associated with various social benefits such as investment in physical security, health and medical emergencies, and rangeland reseeding. Benefits at the household level enjoyed by some individuals include access to employment opportunities, bursaries, dry season grazing reserves, monetary year-end payouts, as well as access to livestock and the beadworks markets. Despite being associated with the advantages, conservation partnerships are characterized by challenges in the form of human-wildlife conflicts, severe rangeland degradation and prevalence of invasive species, problematic distribution of benefits and corruption and the subsequent absence of following through on compensation for losses incurred. To augment the effectiveness of conservation partnerships on livelihood outcomes and biodiversity conservation, we make recommendations of interest to relevant conservation

stakeholders. Furthermore, in the presence of hybrid natural resource governance modes such as conservation partnerships, we recommend the use of our modified SLA framework in analyzing conservation and livelihood outcomes.

Key words: Partnerships; Conservation; Pastoral livelihoods; Sustainable Livelihoods Approach; Samburu.

5.1 Introduction

Rangeland ecosystems cover large proportions of Asia, the Americas, Australia and Africa, and they offer ecosystem services upon which the well-being of current and future generations is based. These services include the maintenance of stable and productive soils, clean water delivery, plants, animals and the sustenance of other organisms that support livelihoods as well as the aesthetic and cultural values of rangeland inhabitants (Daily, 1997; Grice and Hodgkinson, 2002). The Millennium Ecosystem Assessment (MA) (2005) categorizes ecosystem services into provisioning services (e.g. fresh water), cultural services (e.g. aesthetic and spiritual benefits), regulation services (e.g. climate and flood regulation), and supporting services (e.g. nutrient cycling). Ecosystem services are aspects of the ecosystems utilized for human well-being and are usually context-dependent (Hassan et al., 2005; Díaz et al., 2006). The sustainability of ecosystem services is important because it forms the basis for sustainable development in society. They are considered to form core building blocks for pro-poor economic growth and poverty alleviation (Sharpley, 2000; Tao and Wall, 2009).

Sustainable development is a key paradigm to sustainable wildlife conservation and to a sustainable livelihoods approach to development (Sharpley, 2000; Tao and Wall, 2009). Sustainability entails both environmental and social perspectives (Chambers and Conway, 1992). Environmental sustainability perspectives highlight the mitigation of livelihood activities that

degrade and over-exploit non-renewable resources (Munanura et al., 2016). Communities whose livelihoods threaten ecosystem services are, on the one hand, supported in order to access resources to improve their capability and concurrently minimize their vulnerability (Solesbury, 2003). Social sustainability, on the other hand, is the ability of a household and a community to cope with stress and shocks, and to transform opportunities and resources to allow members to lead a decent lifestyle (Chambers and Conway, 1992). In developing economies, stakeholders in wildlife conservation are promoting the integration of conservation and development using strategies like ecotourism (Wunder, 2000). The long-term success of conservation initiatives hence lies in their aims and their acceptability by local communities (Sommerville et al., 2010). Poor management of natural resources that are key income and food sources for local communities, may negatively impact biodiversity, for instance through environmental degradation as well as declining returns to scale (Wallace et al., 2015). Following this observation, Hutton and Leader-Williams (2003) encourage stakeholders in wildlife conservation to prioritize sustainable utilization as well as to make conservation incentive-driven.

Stakeholders, with varying interests, that benefit from arid and semi-rangelands (ASALs) include landowners, land tenants, conservationists, government and non-governmental organizations among others (Scheffer et al., 2000; Castro et al., 2011; Yahdjian et al., 2015). In the ASALs of Samburu County of Kenya, such stakeholders are in partnership with community conservancies leading to the formation of hybrid governance modes in conservation. These modes are what we term public-private conservation partnerships (PPPs) (see Chapter 3. Lugusa et al., *A stakeholder analysis of conservation PPPs in the lowlands of Samburu County*). Conservation PPPs strive to safeguard sustainable wildlife utilization with a view of enhancing livelihood outcomes for pastoral communities. However, the link between wildlife conservation and

sustainable livelihoods is inadequately understood despite many pastoral communities cohabiting with wildlife (Eddins and Cottrell, 2013). Following this observation, we undertook the current study with the aim of: (i) analyzing conservation PPPs, making community conservancies the focal point of analysis, contribution to biodiversity conservation and pastoral livelihood outcomes in the ASALs of Samburu County; (ii) adapting, employing and recommending the use of the Sustainable Livelihoods Approach (SLA) framework in analyzing conservation and pastoral livelihood outcomes. This research is conducted with the aim of providing empirical evidence that can influence policy regarding wildlife conservation and pastoral livelihoods.

Pastoral communities' well-being is directly affected by changes in environmental quality and access (Agarwala et al., 2014). Several frameworks (e.g. Happy Planet Index, Domains of Life, Well-being in developing countries and Sustainable Livelihoods Approach (SLA) framework) for understanding well-being exist although a universally applicable definition of the term that transcends disciplines, cultures and scales of analysis remains elusive (Agarwala et al., ibid.). SLA is an appropriate framework for analyzing conservation and livelihoods for this study since it links broader socioeconomic components of household assets to livelihood activities, outcomes of livelihoods activities and factors mediating access to livelihood activities (Scoones, 1998; Ellis, 2000). SLA framework has extensively been applied in literature to analyze connections between livelihoods and environmental conservation (e.g. Bhandari and Grant, 2007; Mbaiwa and Stronza, 2010; Munanura et al., 2016). In practice, however, consideration of SLA framework for making decisions about how to integrate conservation goals and pastoral livelihood outcomes in the ASALs of Kenya remains lacking (see Sumba et al., 2007; Lesorogol, 2008; Glew et al., 2010; Komu, 2013).

In our study, SLA framework assists in examining conservation PPPs' efforts in ecosystem management and, their accomplishments and outcomes on pastoral livelihoods in the lowlands of Samburu County. The framework also helps structure our study's presentation and analysis. Overall, SLA framework brings together the notions of well-being, security and capability, through in-depth analysis of existing wealth, vulnerability and resilience, as well as natural resource sustainability (Bhandari and Grant, 2007).

5.2 Material and methods

5.2.1 Study area

Samburu County covers an area of 21,022 Km^2 and is bordered by Turkana County to the Northwest, Baringo County to the Southwest, Marsabit County to the Northeast, Isiolo County to the East and Laikipia County to the South. The county lies between latitudes 0°30´ and 2°45´ north of the equator between longitudes 36°15´ and 38°10´ east of the Prime Meridian. It is divided into three administrative units: Samburu Central, East and North (RoK, 2018). The high elevation of the Leroghi Plateau dominates the southwestern part of the county and is characterized by open savannah and grassland. To the north and east, the land drops away sharply to the desert and thorn bush region interrupted by intermittent hills and forested mountains (Spencer, 2004). It is within the lowlands that the case study site is located. The economy of the county is constrained by soil erosion and a general scarcity of water (Westley, 1977; Spencer, 2004).

The primary land use practices in the study area are pastoralism and wildlife conservation. Samburu County has the largest number of wildlife outside the game reserve which serves as a major tourist attraction. The private sector plays a key role in the socio-economic development of the county. Their main areas of focus include health, education, water, housing, recreation and culture, as well as environmental protection (RoK, 2018).

5.2.2 The Sustainable Livelihoods Approach (SLA) Framework

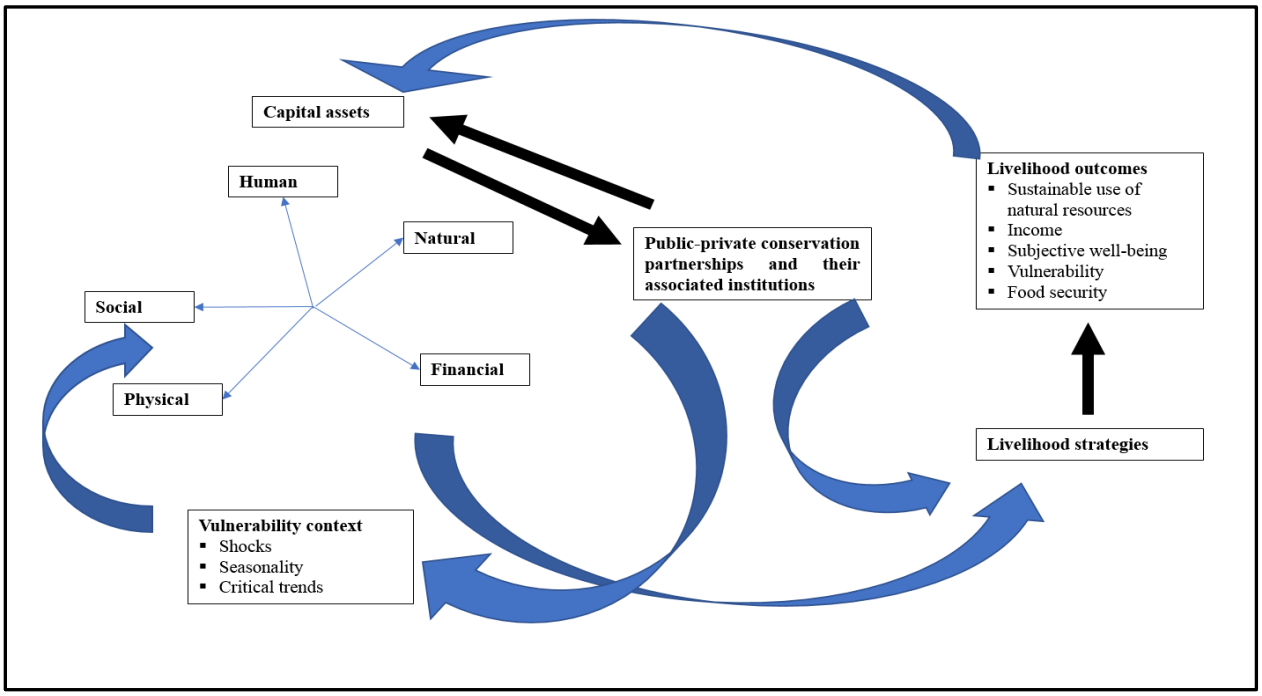

Figure 5. 1: Theoretical model depicting the relationship between household assets, livelihood strategies and livelihood outcomes.

Source: Adapted from Serrat (2017).

The SLA framework in Figure 5.1 organizes the factors that constrain or enhance livelihood opportunities and shows how they relate. A livelihood comprises the capabilities, assets, and activities necessary for a living. A livelihood is deemed sustainable when it can cope with and recover from known or expected stresses and shocks and maintain or enhance its capabilities, assets and activities for current and future generations without compromising the natural resource base. A central notion around the SLA framework is that different households have different access to livelihood assets (Serrat, 2017). The assets include human capital representing the skills, knowledge, ability to labour and good health that enable pastoral communities to pursue different livelihood strategies and attain their livelihood objectives. Human capital is required to make use of the other four types of assets. Human capital is contingent upon household size, education, skills

and health status of pastoral household members. (Ellis, 2000). Financial capital includes the availability of cash that permits pastoral communities to adopt different livelihood strategies. In pastoral settings, a critical component of this type of capital is livestock, which acts as a store of wealth and buffer against droughts. Other capital sources include savings, credit and debt, remittances, pensions and wages (Ellis, 2000; Serrat, 2017). Physical capital is created by economic production and includes infrastructure such as roads, irrigation works, communications, energy and housing. Tools and technology include equipment for production, traditional technology etc. For physical capital, ownership is only a measurement of access, as a high degree of reciprocity allows non-owners to access some of the crucial physical assets (Watete et al., 2016; Serrat, 2017).

Natural capital comprises land and other resources such as water and aquatic resources, trees and forest products, wildlife, wild foods and fibers, biodiversity and environmental resources. The productivity of these resources may be degraded or improved by human management (Elasha et al., 2005; Serrat, 2017). Social capital on the one hand entails networks and connections, relations of trust and mutual understanding and support, formal and informal groups, shared values and behaviours, common rules and sanctions, collective representation, mechanisms for participation in decision-making, and leadership (Serrat, 2017). It can be used to reduce poverty by affecting information flow among the pastoral communities, thereby improving economic growth and income redistribution (Grootaert and Bastelaer, 2002). Vulnerability on the other hand, is characterized by insecurity in the general well-being of individuals, households and communities in the face of external environmental changes. Factors causing vulnerability include shocks (e.g. conflict, diseases, floods, storms, droughts and pests), seasonality (e.g. prices and

employment opportunities) and critical trends (e.g. demographic, environmental, economic, governance, and technological trends) (Serrat, 2017).

We conceptualize conservation PPPs as a form of hybrid governance structures that formulate and implement policy and legislation inclusive of societal norms. The PPPs include stakeholders such as local community and their respective conservancies, tiers of local and national government, community-based organizations, private firms, local and international conservation organizations, as well as local and international non-governmental organizations (see Chapter 3. Lugusa et al., *A stakeholder analysis of conservation PPPs in the lowlands of Samburu County*). We therefore adopt the SLA framework to analyze the impact of conservation PPPs on livelihood outcomes and biodiversity conservation in the lowlands of Samburu County. We assess livelihood outcomes based on indicators such as livelihood assets and access to basic services such as education, hospitals, clean water, loans and micro-credit facilities. Protective security entails making networking arrangements to mitigate natural disaster or securing and access to emergency facilities (adapted from Sen, 1999). To strengthen control over one's environment involves enhancing one's ability to hold property, material, and employment. To extend one's affiliations increases the capacity for engagement in various forms of social interaction. Regarding other species, emphasizing their importance to humans and the ecosystem will influence communities' attitudes toward conservation and tolerance of human-wildlife conflicts (adapted from Nussbaum 2003; Elsen, 2011).

5.2.3 Research design

This study was conducted in four stages. First, purposive sampling (as described by Etikan et al., 2016; Bernard, 2017) was used to select four out of six conservancies operating under the Northern Rangelands Trust umbrella in the study area. These were Namunyak Wildlife

Conservation Trust (NWCT), Meibae Community Wildlife Conservancy[20] (MCWC), Westgate Community Wildlife Conservancy (WCWC) and Kalama Community Wildlife Conservancy (KCWC). Second, to ensure our sample was representative of the whole population, a random selection was made to choose half the zones/villages in each of the four conservancies. This was achieved by assigning numbers to all the zones and writing these numbers on uniformly cut pieces of papers that were folded, mixed indiscriminately and thrown to the ground. Half the pieces of paper were randomly picked up and selected. Third, every fourth homestead (*manyatta or enkang*) was systematically selected for conducting household interviews. A nearby demarcated road/path was often used as the starting point for the sampling of homesteads. Lastly, there was a purposeful selection of household heads within the homesteads. A household in this study is defined as a basic unit of shared economic production and resource utilization (Casley and Lury, 1981).

The Samburu community is highly patriarchal. Men are presumed to be the head of the household. We identified household heads through the assistance of household members who were present at the time of the interviews. The head of household is the person who owns means of production, controls resource utilization and makes final decisions regarding household matters. In some cases, we found households in which the husband was dead, or the woman was a divorcee, or the woman completely oversaw her household affairs independent of the husband in a polygamous set up. In such cases, the women were considered as the heads. Furthermore, in cases where the man (husband) was too old and immobilized, rendering the wife/wives as the decision-makers, the women were considered the soul bread winners of the family, hence the heads of the households. The description of the community conservancies is shown in Table 5.1.

[20] A conservancy is a collection of lands unified under a singular management plan for the purpose of collectively enhancing conservation and natural resource use (Waterhouse 1994).

Table 5. 1: A description of the community conservancies under study

Conservancy	Registration date	Ethnicity	Main livelihood	Area (hectares)	Human population
Namunyak (Nalowuon, Kalepo & Ngilai units)	1995	Samburu	Pastoralism	383,804	17,690
Kalama	2002	Samburu	Pastoralism	49,660	11,300
Westgate	2004	Samburu	Pastoralism	36,230	4,660
Meibae	2006	Samburu	Pastoralism	101,517	10,030

5.2.4 Data collection and analysis

Data were collected over a period of six months between February and August 2018. A preliminary study was conducted for a month prior to the actual study. The pilot study served to familiarize the researcher with the area and make initial contacts, test the data collection tools and approaches and then adjust them accordingly based on the field experience. Individual household interviews (as described by Varkevisser et al., 1993; Opdenakker, 2006) were used to collect data and sampling was based on the zones/villages in the four conservancies. To determine the number of household interviews conducted within the zones, the probability proportional to size formula suggested by Yates and Grundy (1953) was employed: $n = \frac{Z^2 p(1-p)}{e^2}$

Where *n* is the sample size, *z* (1.96, two-tailed) is the desired *z*-value yielding the desired degree of confidence, *p* is an estimate of the population proportion, and *e* (0.05) is the absolute

size of the error in estimating p (0.2) that the researcher is willing to permit. A total of 240 household interviews that comprised conservancy members and non-members were conducted and only 235 (209 and 26 for conservancy and non-conservancy members respectively) were included in the analysis because five were considered incomplete.

Other methods employed in data collection comprised the use of key informant interviews (KIIs), a standard data collection tool that entailed interviewing a select group of individuals who provided needed information, ideas, and insights on the subject under study. KIIs provided flexibility to explore new ideas and issues unanticipated during the planning phase of the study. According to Kumar (1989) and Barker et al. (2005), KIIs are commonly used in anthropological and economic studies as well as in social sciences, among other fields. We conducted twenty-two KIIs with people who were conversant with the topic under study. The criterion for sampling key interviewees was as follows: first, interviewees were categorized to represent the multiple stakeholders in the conservation PPPs. The categories included private investors, community members, national and local conservation stakeholders such as the KFS, KWS, NRT, and conservancies under study. Second, interviewees were selected from these organizations based on the nature of the knowledge they possessed regarding the partnerships, the role they had in the partnerships as well as through snowball sampling. Interviewees therefore included NRT, KFS, KWS, Ewaso Lions, SNR, ACK, and STE personnel, private investors, community leaders and representatives (managers and rangeland coordinators) of the community conservancies under study. Contact with the interviewees was made prior to the interviews and informed consent was sought before the start of the interviews by informing the respondents that the information was for academic purposes. For those informants who agreed to be identified by their actual names and position in their organizations in write ups, consent was given. Interviews were conducted until no

new information emerged. The key interviewees comprised seven from private organizations, five from tiers of government, one investor, three chiefs, and two conservancy managers and four rangeland coordinators. All interviews were later transcribed for analysis.

We also used focus group discussions (FGDs) to gather data. They are a research methodology where a small group of participants gather to discuss a specified topic or issue to generate data. Our discussions were limited to ten individuals in a group of mixed genders and ages, and women only. There was a moderator and a note taker during the discussions. The moderator made effort to ensure that each person was accorded the chance to provide their views without others dominating the process (Merton et al., 1990; Kitzinger, 1995; Wong, 2008; Krueger and Casey, 2014). In the end seven FGDs were conducted. We also used observations and informal discussions to gather data. An observer-as-participant manner of observation was employed (Meyer, 2001). As observers-as-participants, we attended an elders' meeting at the NRT headquarters, annual general meetings of two conservancies, SCG public participation forum on budget allocation, and peace awareness meetings in the conservancies under study. Moreover, several informal discussions were conducted mainly with the community members such as women, morans and men. We also used secondary data sources (conservancies' partnership agreements, annual reports, registers, and meetings' minutes) to collect data. Analysis of qualitative data included the following stages: transcribing, organization of data, familiarization and incorporation of pre-existing knowledge (Yin, 2003). Coding techniques for finding and marking the underlying ideas, grouping similar kinds of information together in categories and relating different ideas and themes to one another were used in the analysis of qualitative data (Rubin and Rubin, 1995).

The data collected was analyzed using qualitative and quantitative techniques in the Statistical Package for Social Sciences (SPSS) version 23.0 to generate statistics and inferences.

The number of persons per household was converted to adult equivalents (AEs), where any person in the age category of 15 years and above was assumed to be equivalent to one AE, 5 – 14 years = 0.65AE, and 0 – 4 years = 0.24 AE (RoK, 2000 *in* Komu, 2013; Kristjanson, 2002). Numbers of different livestock species were converted into tropical livestock units (TLUs). One TLU was taken as an equivalent of a mature live animal weighing 250 kg, where a cow = 1 TLU, a bull= 1.2 TLUs, a sheep= 0.2 TLUs, a goat= 0.2 TLUs, a donkey 0.8 TLUs and a camel 1.1 TLUs (Chilonda and Otte, 2006). Per capita TLU was derived by diving average TLUs per household by average AEs per household. The conversion rate of 1 USD= Ksh 100 in this study is based on the average prevailing exchange rate between April and June 2018, during our fieldwork.

5.3 Results

5.3.1 Pastoral households' socio-economic and demographic characteristics (based on livelihood strategies and capital assets within the SLA framework)

The households we sampled were mainly headed by men (85.5%). The average age for those who are conservancy members was 48.33 years with a standard deviation of 15.43. The non-members had an average age of 45 years with a standard deviation of 15.9. Most (62.1%) of the household heads had no formal education. 25.1%, 4.7% and 8.1% had received primary, secondary, and post-secondary education respectively. We found no significant difference ($x^2(3, 235) = 78.2$, $p > 0.05$) in the level of education between conservancy and non-conservancy members. We found livestock keeping and sales to be the main source of income for 75.3% of the sampled population. 14% relied on salaried/formal employment, 4.3% on small-scale business, 1.7% on pension and 4.7% on casual employment as their main source of income respectively. The majority (68.9%) of respondents relied on a single source of income. Livestock sales, remittances, small-scale businesses, casual labour, pension and farming were cited by 13.2%,

0.9%, 9.8%, 6%, 0.4% and 0.9% of the sampled population as secondary sources of income respectively. Sources of employment, both formal and informal, included employment by the conservancies as wardens, rangeland coordinators and scouts, casual workers at eco-lodges on a seasonal basis, nursery schoolteachers, community health workers, herders in conservancies, local area politicians and small-scale enterprises such as shops, butcheries and craftworks.

The conservancy members had a modestly higher number of TLUs per household (mean=22.68, SD=24.16, N=209) than the non-members (mean=19.10, SD=22.84, N=26). The conservancy members also had a higher minimum income (mean=79.64 USD, SD=135.92) and maximum income (mean=259.14 USD, SD=263.62) earned in the year 2017 compared to their counterpart who had a minimum income (mean=65.96 USD, SD=107.890) and a maximum income (194.46 USD, SD=240.66). Table 2 shows the results of the number of TLU holdings and income earnings per household. We expected those individuals who belonged to more than one conservancy to outperform those who belonged to only one conservancy, based on income earned. This is following our hypothesis that membership to multiple conservancies accrues additional economic benefits. However, this was not the case as shown by our findings.

Cattle sales is one of the income-generating activities amongst the Samburu pastoralists. A majority (76.6%) of respondents were involved in this activity, with the sales being necessitated by the desire to meet their household needs (59.6%). 43.8% of the respondents described cattle sales as having decreased over time. Small stock (sheep (85.1%) and goats (91.5%)) were sold on a needs-basis and the trend in their sales was also decreasing. 94.5% observed changes in the herds of their household over the last two years. Increase of herd size through births (37.4%), purchases (3%), and social gifts (2.1%) were cited; of those 40.4% who acknowledged an increase in their livestock holdings. 84.7% of the respondents acknowledged a decrease in herd sizes. Decrease

through sales (64.3%), diseases (16%), drought (77.9%), rustling (3.8%) and depredation (11.1%) were the factors identified by the respondents. 1.7% mentioned annual ecotourism payments from their respective conservancies as a source of income. Other seasonal income-generation sources included casual labour offered for conservancy activities (11.9%), bead-making and sales (17%), and formal employment in conservancies (3.8%). Hides and skins sales occurred but on a negligible scale; beekeeping, charcoal and manure sales also take place, but milk sales did not.

Public-private conservation partnerships, through community conservancies, are associated with various forms of benefits to the Samburu community. About 63.4% of the sampled population received some form of benefit from their respective conservancy. 31.5% had received bursaries, 5.5% medical facilitation (payment of hospital bills and the use of conservancy vehicles in case of medical emergencies), 40% had dry-season grazing access rights (whereas in normal times fines are imposed for illegal grazing), 12.8% had received some form of employment from the conservancies, 1.3% benefitted from beadworks sales, and 2.6% had received loans. Regarding access to services and amenities, 14.5% of research participants had access to loans and micro-credit facilities from a variety of sources, such as: commercial banks, savings and credit cooperatives (SACCOs), the women's enterprise fund from the Kenyan government, M-shwari (a loan initiative on the mobile provider, Safaricom), women's table banking initiatives, respective employers, and NRT women's and *morans* loans' initiatives. The mean distance to the nearest; health facility was 6.67 km (SD=7.35, max=47, min=0.1), the market was 15.69 km (SD=14.67, max=72, min=0.2), water source was 3.57 km (SD=5.06, max=42, min=0.1), school was 3.2 km (SD=3.42, max=25, min=0.1), and tarmac road was 60.78 km (SD=38.96, max=200, min=0.7). The market included shopping centres, town centres and livestock markets; water sources included

taps, boreholes, dams, and rivers; and schools comprised of nurseries, and primary and secondary schools.

Table 5. 2: A comparison of income and livestock holdings in the study area

Specific conservancy		Age of the household head	Min income (USD)	Max income (USD)	Total HH TLU
Non-members	Mean	45.00	65.96	194.46	19.10
	N	26	26	26	26
	Std. Deviation	15.90	107.89	240.66	22.84
	Median	40.00	22.50	110.00	10.35
Namunyak	Mean	46.46	140.60	353.68	24.11
	N	56	56	56	56
	Std. Deviation	15.06	221.27	360.50	21.65
	Median	44.50	70.00	255.00	16.40
Meibae	Mean	50.77	54.31	221.82	17.86
	N	57	57	57	57
	Std. Deviation	16.63	83.42	210.94	18.48
	Median	48.00	20.00	150.00	12.40
Westgate	Mean	50.06	64.06	270.86	30.97
	N	50	50	50	50
	Std. Deviation	14.74	71.96	237.37	33.45
	Median	48.50	25.00	200.00	21.00
Westgate and Meibae	Mean	35.00	50.00	150.00	26.60
	N	1	1	1	1
	Std. Deviation	.	.	.	.
	Median	35.00	50.00	150.00	26.60
Kalama	Mean	43.57	43.21	138.29	16.74
	N	28	28	28	28
	Std. Deviation	12.71	49.90	97.78	18.63
	Median	42.00	25.00	105.00	10.80
	Mean	34.50	96.25	332.50	23.00

Kalama, Sera and Namunyak	N	4	4	4	4
	Std. Deviation	7.94	75.65	182.28	10.69
	Median	33.00	80.00	325.00	23.80
Kalama and Namunyak	Mean	56.75	56.88	213.13	16.48
	N	8	8	8	8
	Std. Deviation	13.84	98.67	220.37	24.29
	Median	53.00	20.00	155.00	8.60
Kalama and Sera	Mean	51.20	74.60	222.00	20.84
	N	5	5	5	5
	Std. Deviation	21.04	115.89	275.83	20.08
	Median	57.00	18.00	70.00	15.60
Total	Mean	47.97	78.13	251.98	22.28
	N	235	235	235	235
	Std. Deviation	15.43	132.98	261.49	23.99
	Median	45.00	30.00	180.00	15.00

5.3.2 Trends in biodiversity (natural capital within the SLA framework)

Livestock is key to the Samburu pastoral economy and 74.5% of research participants acknowledged a reduction in their livestock herds. The factors they cited were drought, diseases, sales, their own consumption of herds, rustling in conflict prone areas and depredation. 94% of our study's respondents acknowledged observed changes in land cover and natural resources. 79.6% believed there was an increase in wild fauna species while 8.5% believed there had been a decrease, and the remainder were unsure. Those who believed that there was an increase in the population attributed their claim to reduced poaching and killings due to human-wildlife conflicts (HWCs) incidences, increased community awareness of the importance of coexistence with wildlife, increased security, feed availability due to rainfall experienced in early 2018, sighting of more species, and good management. For the flora species (i.e. trees and vegetation cover), 66.8% of our study's respondents acknowledged an increase, whereas 21.3% believed a decrease had occurred over the last two years. The respondents attributed good rangeland management by the conservancies and the enforcement of holistic grazing management plans in addition to good rainfall amount as the factors facilitating the increase. The Veg-CoMMS (the NRT's conservancy-based vegetation monitoring system that collects data based on key rangeland health indicators to monitor the impact of grazing in conservancies) data, for the years 2011 through 2016, was characterized by inconsistencies and hence could not be analyzed. This shortcoming is acknowledged by the NRT (2018) who clearly acknowledges the historical Veg-CoMMS data prior to 2017 as being characterized by numerous errors. Due to this limitation, the data cannot be used for monitoring the long-term rangeland health trends in the study area. We therefore adapted published data as shown in Figures 5.2 and 5.3.

Wildlife was perceived as being a benefit for 57.4% of the respondents; 31.5% perceived wildlife as a liability while the rest believed that wildlife had both benefits and costs associated with it. Only 1.7% of the sampled population received some form of monetary compensation for the loss suffered due to HWCs while 33% had never experienced any form of loss. 9.4% had suffered a loss but never took the initiative to report it, whilst the rest had followed the stipulated procedure for compensation, and nothing was forthcoming. The respondents cited wild dogs, hyenas, cheetahs, jackals, lions and leopard as the main species that preyed on their livestock. Most of the respondents (64.7%) reported the attack rates as being high. This finding is augmented by the fact that species like hyenas would visit the *manyattas* at night and attack livestock if the crushes were poorly secured. Other attacks occurred when livestock was being grazed in the vast Samburu ASALs. 68.5% of our study's respondents acknowledged the attacks as occurring during both the dry and wet seasons. Human injuries and the loss of human lives are caused by elephants, crocodiles, snakes, buffaloes and hyenas. The prevalence of these species' attacks is moderate (40.9% of the sampled population). The elephant is the main species that causes destruction to property, for instance to fences and crops (i.e. maize) for those who practiced some farming at a small-scale level. The species is mostly problematic during the dry season (51.3% of the respondents) as it invades the *manyattas* in search of acacia pods. We could not secure Wildlife-COMMS data during our fieldwork and, thus, we adapted published data as indicated in Table 5.3.

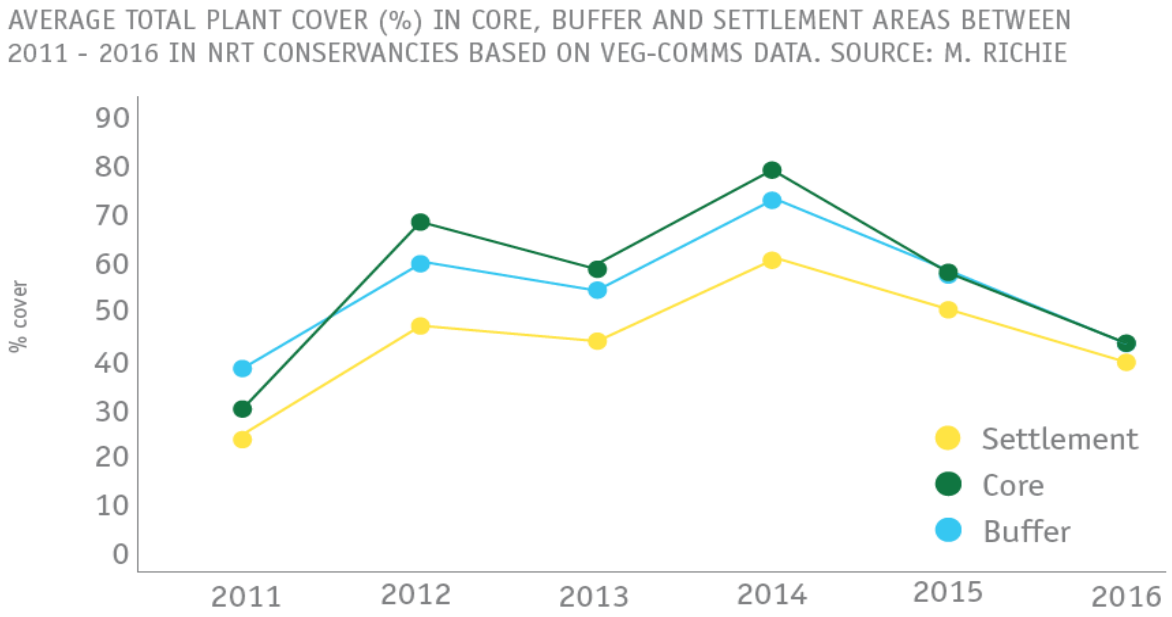

Figure 5. 2: Plant cover trends in NRT conservancies in northern Kenya.

Source: NRT (2018)

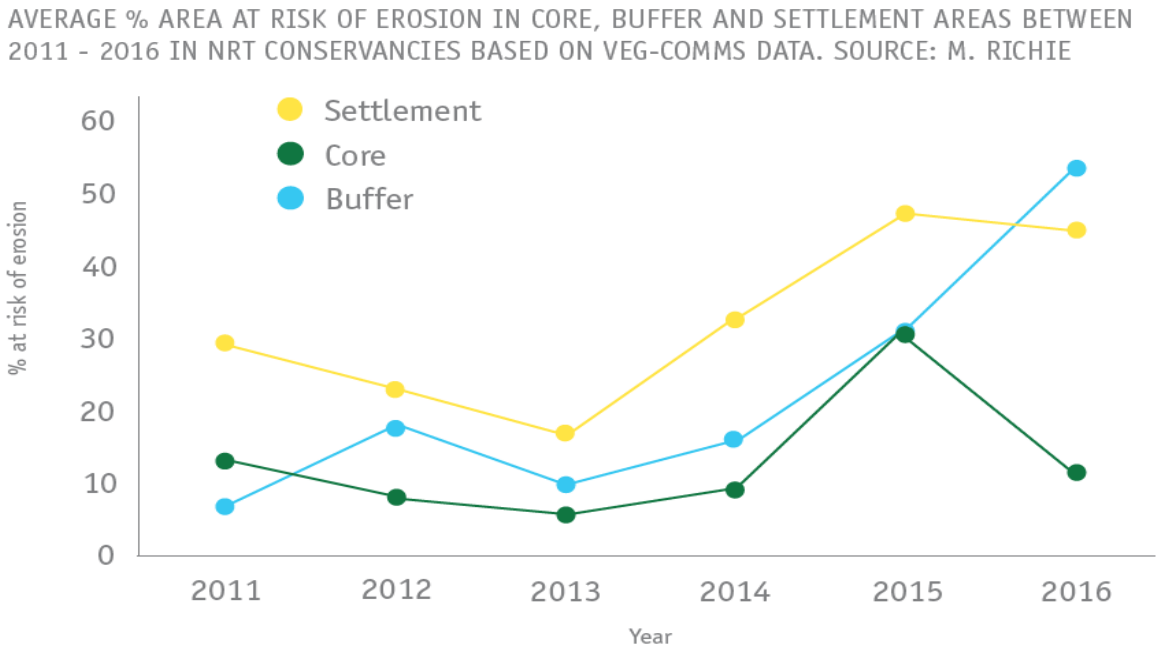

Figure 5. 3: Erosion risk in NRT conservancies in northern Kenya.

Source: NRT (2018)

Table 5. 3: Key fauna species population trends based on abundance index (2014 to 2017)

Species	Conservancy			
	NWCT	**MCWC**	**WCWC**	**KCWC**
Elephant (*Loxodanta africana*)	Increase	Decrease	Decrease	Decrease
Eland (*Taurotragus oryx*)	Increase	Decrease	Decrease	None
East African Oryx (*Oryx beisa*)	Increase	None	Decrease	Stable
Reticulated Giraffe (*Giraffa Camelopardalis reticulata*)	Increase	None	Increase	Decrease
Gerenuk (*Litocranius walleri*)	Increase	Stable	Decrease	Decrease
Lion (*Panthera leo*)	Increase	Stable	Increase	Increase
Cheetah (*Acinonyx jubatus*)	Increase	Decrease	Decrease	Stable
African wild dog (*Lycaon pictus*)	Increase	Decrease	Decrease	Decrease
Grévy's Zebra (*Equus grevyi*)	Increase	Decrease	Decrease	Decrease
Common Zebra (*Equus quagga*)	Stable	Decrease	Decrease	None
Buffalo (*Syncerus caffer*)	Stable	None	None	None

Source: Adapted from NRT Wildlife-COMMS (2018)

5.4 Discussion

5.4.1 Conservation PPPs effect on pastoral livelihood strategies and livelihood outcomes

The majority of pastoral households are men-headed, and men are usually the key decision makers and owners of essential assets necessary for the pursuance of economic activities (Lugusa, 2015). Women-headed households may be disadvantaged regarding access to natural resources

and decision-making processes critical for pursuance of sustainable livelihoods (Wasonga and Nyariki, 2009). However, Jenet et al. (2016) argue that women are now playing a major role in pastoral societies since men seek employment opportunities outside pastoral production systems, and the youth are also abandoning pastoralism as a livelihood. Livelihood diversification in pastoral ecosystems is occurring and many factors influence the level to which diversification options are available to pastoralists (Archambault et al., 2014). We found a limited number of livelihood diversification options as the majority of the households relied on no more than a single income source.

Livestock keeping, and sales were the main source of income to households. CRA (2018) corroborates our finding by documenting nomadic pastoralism as the main economic activity in Samburu County, where livestock production contributes 85% of income in pastoral livelihood zones and 60% in agro-pastoral zones. Other sources of income reported in our study are like those found (e.g. by Bedelian and Ogutu, 2017) in the Maasai Mara ecosystem of Kenya that involves incomes from tourism and non-tourism related sources. The sources include small-scale businesses, jobs in tourism, livestock trading, and craft sales. As far as diversification goes, we found *morans* to be employed as herders in the conservancies under study. Yurco (2017) reports similar findings where pastoral livelihoods diversification in the Laikipia ecosystem occurs through the provision of professional herding labour to commercial ranchers and wildlife conservancies. We found households to be receiving a maximum of Ksh 2,000 (USD 2) as end-year payouts/dividends. This finding is contrary to the findings of Bedelian and Ogutu (2017), where monthly payments from conservancies were received by households in their study. Herrero et al. (2006) acknowledged the observation of relatively few households receiving wildlife conservation-related income in the southern rangelands of Kenya, which was a more lucrative

option than rainfed cultivation agriculture in harsh ASAL conditions. In our study, membership in multiple conservancies as shown in Table 5.2 did not confer additional financial benefits to individuals since the focus of the conservation PPPs is on investing in social projects from which the larger community can benefit. Moreover, conservancy members on average had higher incomes than non-members (Table 5.2) since conservancy membership accrues additional income-generating benefits such as employment opportunities, market opportunities for livestock and artworks. Such opportunities are inaccessible to non-conservancy members.

The goal of community conservation is to offer incentives for the sustainable management of biodiversity, by linking its maintenance with poverty alleviation or livelihoods diversification for those dependent on the resources (Hughes and Flintan, 2001). Sumba et al. (2007) documented provision of alternative incomes to diversify rural livelihoods for the community as one of the reasons for the creation of an eco-lodge in the rangelands of Laikipia County. According to our study's respondents, some of the benefits associated with the existence of public-private conservation partnerships through the community conservancies include improved security in the area, rangeland rehabilitation, end-year payouts/dividends, bursaries to school-going children, meeting allowances, dry season grazing access (accounting for a higher mean TLU holding to conservancy members), employment, livestock sales, loans to women and *morans*, construction of facilities such as schools (as well as clinics and watering points), medical assistance and exposure visits to other rangeland areas. Such benefits were also reported by Glew et al. (2010) when they evaluated the effectiveness of community conservation in northern Kenya. They reported benefits occurring at the household and community levels. Increased physical security and affordable transport were the main impacts for households. Direct financial impacts were found to occur

through the provision of medical services and educational scholarships and to a lesser extent through paid employment in the tourism sector.

Mbaria (2007) documented how communities in Kenyan ASALs devoted large tracts of lands to wildlife conservation on which ecotourism businesses are based but in turn reap minimal benefits. Therefore, such communities end up enmeshed in exploitative conservation partnerships (also see Chapter 4. Lugusa et al., *Wildlife conservation as a PES scheme in the lowlands of Samburu County, Kenya*). In the current study, we found the agreements the investors have with conservancies enjoy a 60-40% benefit sharing mechanism. The income to conservancies is earned through bed night fees charged to guests. 60% goes towards funding community developments of choice such as bursaries and water projects, while the rest is used to finance annual conservancies' operation costs. This arrangement has been in existence for a long time and has been reported for instance by Jonathan (2013). In other ASAL areas of Kenya, payments to pastoral households did not adequately compensate for the restrictions placed on other livelihood activities such as pastoralism. Thus, conservancies and their associated ventures are viewed as supplementary to pastoralism (DeLuca, 2002; Homewood et al., 2009; Bedelian and Ogutu, 2017). Contrary to the above observation, we argue that conservancies currently have evolved as the main source of livelihood to some pastoral households that lack a diversified livelihood portfolio. The creation of conservancies and the subsequent land use zoning in the conservancies has curtailed mobility of the pastoral groups. Mobility is a key adaptive strategy to the pastoral communities. The consequent curtailed mobility coupled with climate change effects, and reduced livestock herd sizes, have rendered the Samburu community dependent on the conservation PPPs as their main livelihood source of cash.

Furthermore, in the current study, for instance, in return for pastoral communities committing their communal lands to the conservation initiative, 'legible' or identifiable households of conservancy members with school-going children receive bursaries/scholarships. Education is considered as a platform for improving individuals' welfare by providing individuals with the capacity to obtain higher incomes and standard of living (Ngugi, 2013). Our findings where 62.1% had no formal education, 25.1% had received primary education, 4.7% had received secondary education and 8.1% post-secondary education respectively, portray a pattern like that of Ngugi (2013) for the general population of Samburu County. Ngugi (2013) reports that about 68% of Samburu County residents have no formal education, 26% have a primary level of education and about 6% with a secondary level of education or above. Cornia and Court (2001) argued that inequality in a population decreases with an increase in the average level of educational attainment, with secondary education producing the greatest payoff, especially for women. Furthermore, our finding where there is no significant difference between the education levels of conservancy-member and non-members is attributed to the fact that most of the household heads are aged. Household heads stated that they preferred looking after their families than going to school to attain formal education, but of course most would not have experienced true access to education. The bursary scheme, therefore, only targets school-going children in member households. An annual sum of Ksh 10,000 (USD 100) is given to each child in college, Ksh 7000 (USD 70) to those in tertiary institutions, and Ksh 5,000 (USD 50) to each child in high school. The amounts provided to students under the bursary scheme serve to partially cover the costs of tuition and school fees. Parents therefore end up covering the remainder of the fees and costs for their children. This arrangement holds true for all conservancies with a stable income source (investors), except for MCWC. In 2017, the NRT reports that an amount of Ksh 9.5 million (USD

95,000) was spent on bursaries for provisions for children in conservancies under their umbrella, with the boys to girls' recipient ratio being 7:10 (NRT, 2018). The ratio reported by the NRT, which shows that a higher ratio of girls benefitted from their bursaries, can be explained by the fact that fewer boys are enrolled in schools, as a majority of them herd livestock and are initiated into the *Moran* institution which forms the basis of defence for the community. In some instances, instead of end-year payouts being allocated to households, small stock (shoats) were given to conservancy members. The various zones' trustees are tasked with the responsibility of identifying households deserving of the animals. Based on the bursary and small stock schemes, there was displeasure amongst some of the conservancy members who had no children of school-going age, and the criteria, which is at the discretion of the zones' trustees and the conservancy boards, for selecting household for the small stock program was criticized. Those discontented amongst our study's respondents cited incidences of favoured elitism and nepotism as factors behind their displeasure with the benefit allocation in the schemes. This serves as a source of internal conflicts in the community conservancies regarding access.

Other benefits to the Samburu community emanate from programs under NRT. The Trust operates a BeadWORKS program that aims to empower women through livelihood diversification. Under the program the NRT partners with established women's groups in community conservancies, and trains them on craftsmanship, product development, and basic marketing and accounting skills. NRT-Trading (a Trading entity of NRT) provides strings, beads from the Czech Republic and needles. The pastoral women provide labour for making the products, which subsequently undergo quality control and are then sold locally as well as exported to markets in the United States of America (USA), United Kingdom (UK) and Australia. Once they are sold, 5% of the revenue is remitted to the conservancies under the NRT. The program currently supports

1,352 women across nine conservancies in the northern Kenya region. The expansion of the program is constrained by a limited market implying only a few buyers currently exist (KII, Fieldwork 2018). We established that each Samburu woman under the BeadWORKS program is paid a net sum of Ksh 300 (USD 3) per item made for the labour offered for the entire period contracted, though it varies. Women's groups who participate in the BeadsWork programs are selected from randomly selected zones in the conservancies.

5.4.2 Conservation PPPs role in livestock markets in a cattle complex

According to Konaka (1997), the Samburu adapt their pastoral system so as it is compatible with the market economy. Most of the respondents in our study are dependent on livestock even though they signaled a reduction of their livestock holdings over time. Shoat species numbers, however, are continuously increasing. The decline in livestock is reported in other ASAL areas of Kenya as well (e.g. Western, 2001; Lugusa, 2015; Ogutu et al., 2016). Moreover, pastoral communities in East Africa are diversifying their herds towards camels and livestock hybrids (McCabe, 2003; Elhadi et al., 2015). These findings show changes occurring in ASAL ecosystems of East Africa. We identified four livestock markets working in the study area: Lolkuniyani, Lenkusaka, Wamba and Archer's Post. Market days rotate but mostly they occur every Tuesday and Thursday. Some of the reasons given for selling livestock included to buy other livestock species and commodities, food, pay school fees, and acquire weaponry, beads, and generate savings. According to Onyango et al. (2008), Samburu pastoralists have not been able to realize maximum benefits from livestock trading due to inefficiencies in the livestock value chain that include high transportation costs, insecurity and stock theft, a high number of middlemen, long trekking distances for getting animals to the marketplace and mortality along the way.

Due the aforementioned challenges, the NRT introduced a LivestockWORKS program. The program entails purchasing cattle priced by their kilogram (kg) live weight (a weight-based purchasing and sales model) at the onset of the dry season, and then fattening them up at the Ol Pejeta, Lewa and El Karama conservancies. This eliminates the cost of transportation and accommodation the pastoralist sellers (KII, NRT-T, May 2018). The amount paid to the sellers is between USD 1.15 per kg and USD 1.25 per kg (KII, fieldwork 2018). According to the NRT (2018), the LivestockWORKS program provides pastoralists in conservancies with an alternative cattle market, paying pastoralists relatively fairer prices, and rewards good conservancy performance. Our fieldwork interviews revealed that the buyer (the NRT) offers Ksh 2000 (USD 20) whereas the seller (pastoralists) offers Ksh 1000 (USD 10) per cattle head transacted and this amount goes to the respective conservancy. Drought as well as conflicts experienced in the study area in the year 2017 halted cattle purchases under this program (NRT, 2018). We established that livestock purchases do not occur in all conservancies, and they are not operational year-in, year-out. The purchases are also not representative of all the zones in conservancies. According to Rufo Roba (personal communication, NRT-T, May 2018), the selective targeting of zones in conservancies exists since conservancies under the NRT umbrella are many, therefore necessitating rotation of the enterprise. Regarding zone inclusivity, the proposition to buy comes from the conservancies hence the NRT is not involved in the recruitment process.

Our study established that, in 2016, through the LivestockWORKS initiative 202 WCWC members in eight zones benefitted from selling 262 cattle heads, earning a total of Ksh 8,430,500 (USD 84,305). This translates into about USD 321 per cattle head offered for sale by an individual. In 2017, NRT-Trading documents show that 2,964 heads of cattle were sold for Ksh 135 million (USD 1.35 million) (NRT, 2018), which translates into about USD 455 per cattle head. From this

figure we are unable to tell how much profit is made per cattle head by the Trust, considering the costs incurred. Our study established that in 2017, the Kenya Meat Commission (KMC) and Kenya's National Government Animals' Offtake Program cushioned KCWC from the effects of the 2017 drought by buying 2000 head of cattle. Each cattle went for Ksh 18,000 (USD 180) and a nominal fee of USD 10 was charged for each one supplied by the pastoralists. 64 households benefitted from this arrangement. Some of the challenges experienced under this arrangement were the late delivery of cattle to the conservancy holding point, the cost involved in paying herders, hay provisions, and the loss of some of the animals. We found the pastoral communities to be exploited by middlemen, for instance by KCWC where agents collected livestock in large numbers from the pastoralists by buying at low prices. The middlemen in turn earned exorbitant profits by selling the purchased cattle in the livestock market at Isiolo town. We argue that the middlemen might have good intentions by purchasing livestock from the Samburu pastoral community. This serves to offer an avenue on which pastoralists can rely to offload their livestock. The government, through the Kenya Livestock and Marketing Council (KLMC) should be at the fore front in securing the interests of the Samburu pastoralists cutting them out of the middlemen as well as saving them from livestock losses due to drought. However, the inability of the government to secure the interests of its public by providing timely and favourable marketing conditions renders the pastoralists exposed to the effects of climate change such as recurrent and frequent droughts resulting in massive livestock deaths, and at exploitation by market middlemen.

5.4.3 Wildlife sustainability and human-wildlife conflicts in the study area

The abundance of species presented in Table 5.3 show a dynamic trend in the selected fauna species population. However, recent studies (Ngene et al., 2018 for instance) show a remarkable increase in the population of species such as elephants, buffalos and giraffes in the

Laikipia-Samburu heartland. Ngene et al. (2018) attribute this increase to the establishment of private and community conservancies as well as to the improvement of physical security in the area, resulting in decreased elephant poaching incidences. The increase, we argue, is a consequence of the effectiveness of conservation PPPs in managing wildlife. Since different species present different types of threats or costs to rangeland inhabitants, compensation schemes are implemented in such ecosystems. Compensation schemes across the globe, are generally meant to increase the tolerance levels of local populations co-habiting with wildlife, thereby averting retaliatory killings. The payments consequently reduce economic hardships experienced by the affected population. However, most compensation programs have been unsuccessful due to corruption and delays in the payment of money (Saberwal et al., 1994; Hussain, 2000; Treves et al., 2002; Naughton-Treves et al., 2003; Maclennan et al., 2009). In Kenya, the enforcement of the Wildlife Conservation and Management Act (WCMA) of 2013 offered hope to pastoral communities with the promise of compensation for wildlife-caused property damage, human loss and livestock kills and injuries (KWS, 2013). Sillero-Zubiri et al. (2006) argued that compensation schemes often do not address the root cause of conflicts and, may not be as effective in addressing human-wildlife conflicts (Landry et al., 2005). Government-initiated compensation has failed over the years due to the high administrative costs and the lack of disbursable funds and widespread cheating on claims (Thouless, 1994; Western and Waithaka, 2005; Bowen-Jones, 2012). In our study, most of the respondents who had experienced some of form of loss had taken the necessary steps to report the incident, and the stipulated procedure followed. Despite taking the necessary steps, they had never been, or were yet to be compensated. We found only three individuals who had received payments for human deaths in 2017 (USD 30,000), 2015 (USD 400) and 2012 (USD 150) or for livestock losses. There were others who had also experienced losses but did not report

the incident due to the tedious bureaucratic procedure involved. Mr. Peter Lalampaa (KII, fieldwork 2018) explained how the WCMA has never been fully implemented. People reported incidents, and nothing is forthcoming from the government. Thus, mixed feelings exist amongst the community members about the government-led compensation scheme. As stated by one of the village elders in MCWC; "If I kill a wild animal, the KWS officers will be here in no minute, and action will be taken for me to be prosecuted. But, if I suffer a loss caused by wild animals, the responsible individuals (KWS personnel) take longer to arrive at the scene. In the end, nothing is done!"

One of our study's key informants narrated to us how an old man whose camel had been killed by wild animals went to KCWC, walked into the community manager's office and threw his dead camel's skin at the manager whilst expressing his anger. The existence of HWCs stems from the existence of double standards amongst the community members. When the community benefits from wildlife, they consider it theirs. Concurrently, when losses are incurred the community term wildlife as being the property of KWS (KII, fieldwork 2018). We found NWCT to be operating a Livestock Consolation Fund (LCF) that became operational in January 2018. Under the terms of the Fund, monetary consolation is to be given to livestock owners who suffer losses caused by elephants. The loss of a human life is compensated at Ksh 100,000 (USD 1000), human injury at Ksh 50,000 (USD 500), a camel Ksh 30,000 (USD 300) and a cow Ksh 20,000 (USD 200). The Fund's purpose is to reimburse families affected by negative interactions between humans and elephants. It serves to prevent elephant deaths caused by human-elephant conflict, trophy poaching and or any illegal killing thereby reducing the Proportion of Illegally Killed Elephants (PIKE). Under the conservation PPPs arrangement for this Fund, NWCT and the Reteti Elephant sanctuary each cover half of the payable claims. NRT covers the full annual operational costs. The LCF was

operationalized in response to the high incidences of PIKEs due to encounters between livestock and elephants in the Matthew's Ranges Forest during the dry periods (NRT, 2018). Such non-governmental initiated compensation schemes exist in other ASAL areas of Kenya such as in the Maasai Mara, Amboseli and Laikipia ecosystems (see Hazzah, 2006; Maclennan et al., 2009; Ogada, 2011). Whereas such schemes have been initiated or are operational, we argue that they are not sustainable in the long run. The Kenyan government is currently reviewing clauses in the Wildlife Coordination and Management Act of 2013 regarding compensation. Stakeholders in conservation PPPs should therefore take measures that aim to reduce incidences. Community awareness of and education on human-wildlife co-existence should be at the forefront. Another intervention could be in the investment of low-cost systems of predator exclusion such as movable wired livestock-holding crushes. As Ogada et al. (2003) underscore, whilst the prevailing local economic costs often limit the quality of husbandry practices, such systems offer the potential of reducing HWCs.

5.4.4 Conservation PPPs and ecosystem management outcomes

The welfare of those who inhabit (socionature[21]) ASALs depends fundamentally on the way they cope with temporal vegetation variation (Galvin et al., 2008). We found the conservancies under study had grazing management committees that oversee holistic grazing management planning. The lands in the conservancies are zoned into core conservation areas, buffer zones and settlement areas (observation notes, May 2018, as well as conservancies respective maps). We observed more land degradation around settlement areas as compared to buffer and core conservation areas. We found that the holistic planned grazing management adopted by the NRT and their associated conservancies emanated from the Grévy's Zebra Trust

[21] Taking humanity and nature as a single concept (Armitage et al., 2012).

(GZT). The NRT staff received training on the holistic management approach of the GZT. The GZT continues to train Samburu community members as well. Glew et al. (2010) reported that seasonal grazing in buffer zones leads to an increase in green vegetation relative to non-grazed core zones during the dry season. Whereas the core zones show less of an increase in green vegetation, de Leeuw et al. (2001), document that these zones may act as a refuge for wildlife that are intolerant to livestock disturbance and whose densities decline with the presence of livestock.

The years before this study was conducted were characterized by below average rainfall amounts that led to uncoordinated grazing patterns as evidenced through illegal encroachment of dry season grazing reserves. The effects of this phenomenon were challenges associated with production, rangeland health and improvement of conservancies' ecosystem conditions. Rains started in early March during our fieldwork, and the intensity was nothing like seen before. The dominant invasive species from our field observations were *Acacia reficiens* (Figure 5.4), *Sansevieria* spp, *Solanum* spp, *Ipomea* spp and *Heliotropium subulatum* all of which are indicators of habitat degradation. Erosion gullies, another indicator of rangeland degradation, were also prominent. MCWC is the most severely degraded of the conservancies under study. Similar findings are reported by Muoria and Oguge (2011) who studied vegetation dynamics in MCWC and WCWC. Their study reported intra and inter-conservancy variation regarding invasive species density, plant cover and gullies coverage. MCWC had the highest number of gullies per kilometre, and the highest density of invasive species per hectare compared to WCWC. Glew et al. (2010) reported a significant increase in green vegetation in community conservancies (in NWCT, WCWC and Sera) compared to non-conservancy areas between 2000 and 2007 for both dry and rainy seasons. This finding implies that the management approaches employed by the conservancies were effective in bringing about changes in the ecosystems. Generally, degradation

in Samburu County is manifested through the increase of bare ground and the replacement of perennial forage species by undesirable species such as *Acacia reficiens*. The net effect of this phenomena is the reduction in forage availability for both wild and domesticated ungulates (Kimiti et al., 2017).

Figure 5. 4: Photo of an area on NWCT encroached by *Acacia reficiens*

Source: Lugusa, fieldwork (2018).

The poor performance of MCWC and its lack of investors is partly due to its severe rangeland degradation, low wildlife populations, a poor implementation of the land use plan and its physical location (KII, fieldwork 2018). Rangeland restoration initiatives in the study area include gully healing, planned or rotational grazing, and reseeding practices (using the African foxtail grass (*Cenchrus ciliaris*). *Cenchrus ciliaris* is mainly sourced from WCWC. Even though conservation PPPs undertake such initiatives to restore rangeland health or curb further deterioration, our field observations revealed that some areas failed to recover from the impacts of the Rhino Charge, an annual off-road motorsport competition that takes place on some of the toughest terrains in Kenya (NRT, 2015). Such impacts are vivid in KCWC, the area in which the event took place in 2014. The funds raised from the event go to the Rhino Ark Charitable Trust

which aims to conserve and protect Kenya's mountain range ecosystems. Local communities benefit from this event through the Landowner Access Fee charged, and these funds are used for community projects such as classrooms and boreholes construction among others. We argue that such initiatives accrue funds to the conservancies to the benefit of the communities, but that their negative impacts on rangeland ecosystems are severe. The situation is worsened when the money raised through the Charge is looted by a corrupted management, a scenario that prevailed in KCWC in 2014. KCWC's board and management (chairman, accountant and the manager) colluded and looted Ksh 12 million (USD 120,000). The individuals were sacked after a special general annual general meeting was convened, without facing legal action.

5.4.5 Integrated outcomes of community conservation in the study area

"Five to seven years ago biodiversity in this region was rich. This was evidenced by the presence of abundant fireflies which are less commonly seen today. In Samburu culture, fireflies indicate rich biodiversity. The threat to our biodiversity is improper land use plans manifested in land subdivision and indiscriminate settlements." (KII, fieldwork 2018). What can be drawn from this statement is that changes in biodiversity in the study area are evident. Anthropogenic factors such as land subdivision through land grabbing and indiscriminate settlement within the conservancies, are amongst some of the causes. The current land use plans implemented by the conservancies, contribute to the enhancement of vegetation and, the reduction in the risk of erosion as depicted in Figures 5.3 and 5.4.

Effort is made by stakeholders in the conservation PPPs to ensure better livelihoods outcomes and biodiversity conservation. For instance, through the PPPs there has been improvement in water delivery through boreholes and the construction of water pans. However, the presence and the role of the Ewaso Nyiro River in the surrounding ecosystem cannot be

overlooked. The mean distances to various amenities such water sources presented in the results section clearly shows the availability of such amenities. Furthermore, we found organizations such as SAFE-Samburu and Wamba Nomadic Girlchild Rescue Centre taking on the role of sensitizing the Samburu community on HIV/AIDS and Female Genital Mutilation (FGM) practices. This shows that stakeholders in PPPs extend their mandate beyond environmental conservation to include tackling social practices that do not align with improvement of the welfare of the Samburu community. Omasaja and Butto (2017) documented FGM practices in Samburu County are facilitated by the role of tradition and religion, admission into women's groups, fertility improvement, acceptance as a bride, virginity protection, and the need to decrease sex drive. The rescue Centre offers a home to girls who run away from such practices and provides them with an education. Such efforts, although non-monetary, contribute to the overall well-being of the society. Scholars and researchers (e.g. Njogu, 2018) have recommended the adoption of alternative rites of passage to replace FGM, and the transition has been successfully adopted in Maasai land.

The benefits and costs accruing to the local communities both at the household and community level have been reported in other rangeland areas of Kenya such as Laikipia, Masai Mara and the Amboseli ecosystems (e.g. by Gadd, 2005; Herrero et al., 2006; Sumba et al., 2007; Homewood et al., 2009; Komu, 2013; Spira, 2014; Nthiga, 2014; Lamers et al., 2015; and Bedelian and Ogutu, 2017). Furthermore, across the African continent, communities have been reported to benefit from conservation initiatives. In Namibia for instance, buffer zones increased, enlarging the land available for wildlife. Cash income and employment opportunities for the local communities have led to a net beneficial effect on household welfare when measured on indicators such as household income and expenditure, per capita income and expenditure (Bandyopadhyay et al., 2009; Brown and Bird, 2011). This highlights the effectiveness of conservation PPPs through

community conservancies on livelihood outcomes and biodiversity conservation. For the effectiveness of the conservation PPPs in Samburu County to increase, our study's respondents suggested some strategies that could go a long way in realizing set objectives. They include extensive education of community members on the importance of conservation, strict adherence to grazing management plans, tree planting and more rehabilitation projects to help boost the rangeland condition and health, the regulation of sand harvesting activities in the conservancies, effective invasive species control measures and more rangeland management support from the county government. Conflict avoidance between ethnic tribes and the employment of more scouts to foster peace and security in the area, rainwater harvesting and the strategic placement of more water points, reduction in logging and buffer zones protection, animal feeds provision and selling more livestock at the onset of droughts are some of the measures suggested to prevent massive livestock deaths and losses.

5.5 Conclusion

We analyzed the effectiveness of conservation PPPs on livelihood outcomes and biodiversity conservation in the ASALs of Samburu County. In realizing our objective, we adapted and used the SLA framework. The contribution we make to the literature by using the SLA provides a novel methodological and/theoretical framework that can be adapted by other scholars and researchers who study the link between conservation and pastoral livelihood outcomes. Community conservancies were the focal point in our analysis of PPPs. In trying to offset the curtailing of livestock mobility to pastoral households, we found conservation PPPs to be associated with various form of benefits to the community, thus increasing positive outcomes for Samburu pastoralists. The benefits to individuals at the household level include monetary end-year payouts, employment opportunities, and dry season grazing access, bursaries, and livestock and

beadworks sales. Most of the benefits accrue to the larger community are the form of investments in physical security, health, rangeland reseeding and other infrastructure and amenities for the area. Such benefits are important to the sustainability of the conservation initiative as well as to pastoral livelihood outcomes. The Kenya Wildlife Conservancies Association (2016) acknowledges the existence of community expectations regarding the formation and operationalization of conservancies. When the community expectations are not met, other competing land uses that are incompatible with wildlife conservation may take precedence, thus creating challenges to the conservation initiative. Challenges faced by conservation PPPs in attaining their objectives of enhancing livelihood outcomes and biodiversity conservation in the study area include severe rangeland degradation, prevalence of invasive species, prevalence of human-wildlife conflicts, corruption, a lack of follow through when reporting losses, and problematic distribution of benefits (for example in the case of the bursary scheme). Undoubtedly, the creation of community conservancies in northern Kenya has curtailed livestock mobility thereby leading to the emergence of new forms of resource management that culminate in conditional processes of inclusion and, exclusion based on lack of claims to resources or failure to negotiate access (Pas, 2018).

Conservation PPPs can enhance their performance by adopting strategies and activities that enhance the scale of benefits to incorporate more pastoral households thereby contributing to more positive livelihood outcomes amongst the participating communities. Some of the operational schemes should be continuous or all-year round (e.g. the cattle purchasing program by both the NRT and KLMC) rather than becoming operational during the on-set of droughts. Additionally, if the overall goal of schemes, BeadWORKS included, is to empower pastoral communities, then efforts should be made to link the community directly to both external and internal markets. This will foster the sustainability of schemes targeting pastoral households. Government-led

compensation schemes are a fallacy as the bureaucratic process involved for the communities and the inadequacy of funds to sustain the scheme, as well as valuation problems, have characterized the scheme as unsustainable. Therefore, the Kenyan government should instead explore or invest in mechanisms that aim to reduce HWCs incidences, or rather carry out wide scale education projects among the community about the importance of co-existing with wildlife. In a period of land degradation and a changing environment, efforts should be made by the conservation PPPs to document the existence of important flora species on their lands through mechanisms such as herbariums. This can serve as a basis for identifying or tracking species loss over time, and then taking necessary actions. Lastly, the extent to which activities such as the Rhino Charge affect the ecosystem should be assessed and efforts made to restore these ecosystems. This is easily achievable by ploughing back some of the income generated into rangeland healing processes.

5.6 Authors Contributions.

Study design: KL, NK; Fieldwork: KL; Data analysis and writing article: KL; Critical review of article for intellectual content: JG, NK.

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Declaration of interest

None.

5.8 Ethical standards

This research was conducted in Kenya with the permit No: NACOSTI/P/18/85991/20350 from the National Commission for Science, Technology and Innovation (NACOSTI), and approval from McGill University's Research Ethics Board File No. 213-1017 for Ethical Acceptability of Research Involving Humans.

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FORWARD TO CHAPTER SIX

The previous chapter looked at the outcomes of PPP efforts in conserving and managing socionature. In the next chapter, I use a three-tiered equity framework adopted from the Ecological Economics discipline, to explore the distribution of project outcomes amongst the Samburu community as a stakeholder. Equity is emphasized as having implications on the sustainability of conservation projects.

The chapter has been submitted as a manuscript for publication (Authors: Lugusa, K., Galaty, J., and Kosoy, N.).

CHAPTER SIX

Equity implications for natural resources conservation, management and use in the lowlands of Samburu County, Kenya: A landholders' perspective

Abstract

Equity is instrumental in the successful implementation of conservation initiatives. For this reason, equity has become prominent in conservation policy. Little documented empirical evidence on equity in conservation initiatives exists. Therefore, it was important to contribute through research to addressing this shortcoming. Four community conservancies under the umbrella of the Northern Rangelands Trust in the lowlands of Samburu County were purposely selected for study. Quantitative and qualitative data were gathered through individual household interviews using a semi-structured questionnaire, focus group discussions, key informant interviews and secondary data sources. 240 household interviews, seven focus group discussions, and twenty-two key informant interviews were conducted. The Statistical Package for the Social Sciences (SPSS) was used in the analysis. Equity in the context of wildlife conservation in the study area is examined using a three-tiered equity framework (recognitional, procedural and distributional). The results show the existence of inequities in access, decision-making and outcomes. We argue that the inequities are exacerbated by the failure to acknowledge the pre-existing societal structure and dynamics of the Samburu community. Other factors include the historical marginalization of the region by the Kenyan national government over the years, and the emergence of nepotism and elitism in the distribution of resources. Equity is a key aspect in the sustainability of wildlife conservation and management. Therefore, relevant stakeholders (specifically, community conservancies) should re-evaluate their current strategies for the design and implementation of

conservation initiatives and pay keen attention to context-specificity. Mechanisms for fostering transparency and accountability in the conservancies should not be ignored.

Keywords: Equity; Conservation; Policy; Wildlife; Sustainability; Samburu; Kenya

6.1 Introduction

6.1.1 Equity and its dimensions

Equity is a core pillar of both sustainable development and universal environmental justice (Brundtland, 1985; Corbera and Adger, 2004; Rosa et al., 2007). It is recognized as a component of conservation success (Campese et al., 2009; Ban et al., 2013; Halpern et al., 2013) and relates to how a person or group perceives the proportional availability of goods and services or their relative deprivation in comparison to others (Loomis and Ditton, 1993). Law et al. (2017) define equity in terms of satisfying stakeholder objectives or minimizing trade-offs. Equity is concerned with the proper distribution of resources, rights, duties, opportunities and obligations in society (Young, 1995). It manifests itself in various ways with imperative implications for how it is incorporated into conservation planning (Halpern et al., 2013).

The dimensions of equity include distributional equity that entails allocation of costs and benefits amongst stakeholders. The other dimension is procedural, meaning to look at who has the power to make decisions (Jacobs, 1989; Anand and Sen, 2000; Poteete, 2004; Luintel and Katmandu, 2006). Following these two dimensions, Brown and Corbera (2003) identified equity in terms of both instrumental efficacy and an inherent right concerning distributional and procedural justice. Dobson (1998) underscored that distributive equity relates to just distribution of benefits and costs of policy intervention, and that it falls into two broad theory categories; consequentialist and deontological (McDermott et al., 2013). On one hand, according to Wegner and Pascual (2011), consequentialist theories are focused on benefit maximization for the largest number of individuals in society and are rooted in the Paretian concept of efficiency within modern

welfare economics. On the other hand, deontological theories of equity focus on the relative distribution of costs and benefits amongst individuals in a population in accordance with rules such as; the 'liberty rule', 'equality rule', 'needs-based rule', 'opportunity cost rule' and 'merit-based rule' (Konow, 2001; Pascual et al., 2010; McDermott et al., 2013). Konow (2001) however argues that the 'needs-based rule' is popular within PES schemes because it advocates for the equal satisfaction of basic needs for all stakeholders and in turn focusses on the distribution of socio-economic benefits amongst the most disadvantaged members of society who are participants in the particular payment for ecosystem services (PES) schemes operationalized.

Franks et al. (2016) emphasize that attaining conservation's social goals can be better achieved through a shift in approach from a livelihood framing to an equity framing. This entails focussing on the recognition of, procedures for and the distribution of the outcomes of a conservation initiative (Schreckenberg et al., 2016; Zafra-Calvo et al., 2017). All of these are important determinants to the extent that conservation interventions are perceived to be fair and legitimate by stakeholders. In the global conservation context, the Convention on Biological Diversity formally introduced the aim of attaining equity in conservation initiatives (Franks et al., 2016). Attention should be given to the equitable sharing of responsibilities, rights, costs and benefits amongst the stakeholders involved (Borrini-Feyerabend et al., 2008). Klein et al. (2015) emphasize that clarifying which tiers or dimensions of equity are being measured is important for enabling an understanding of the relationship between conservation success and equity. The authors further underscore equity concerns as arising from both internal and external factors (e.g. social, economic or geographic status of the region), with project implementers having little influence on external factors.

6.1.2 Natural resource management and associated equity outcomes

Community-based natural resource management (CBNRM) is a mechanism that advances both environmental protection and the socio-economic status of local communities (Armitage, 2005). It is documented (e.g. by Larson and Ribot, 2007; Tacconi, 2007) that CBNRM, in theory, can devolve power, enhance resource management and concurrently increase equity. However, in practice, CBNRM has been reported to fail regarding the enhancement of equity amongst stakeholders involved (Berry, 1997; Cleaver and Toner, 2006). Gibbes and Keys (2010) called equity an illusion, underscoring that it is never attained in CBNRM schemes due to the presumptions about communities and the devolution of natural resource management. Working in southern rangelands of Kenya, Ondicho (2010) reports the inequitable distribution of benefits, rights to land resources and livelihoods, and democratic decision-making processes as challenges hindering the Maasai community from benefitting from tourism enterprises. Equity-related problems such as competition and power struggles for political control over the benefits from tourism have left the community polarised into splinter groups based on clan, age, gender and socio-economic status. At a broader scale, the areas' tourism potential has been heavily exploited by foreign tourist investors and tour operators, the Kenyan government and local elites reflecting the asymmetry in power relating to conservation politics (ibid.).

It is presumed that there is a direct relationship between equity and the probability of conservation success (Brown, 2002), but this link is yet to be better understood. The relationship is further complicated when values and perceptions of diverse stakeholders are considered (Ravalion, 2014). Halpern et al. (2013) argued that an ideal outcome from natural resource management and conservation is one where conservation goals and equity in social outcomes are maximized whilst concurrently minimizing costs. The ideal state, the authors underscore, is always illusive. Equity is imperative in management and decision-making processes within conservation

initiatives (Borrini-Feyerabend, 1997). Perceived or real inequity can turn potential stakeholders and cooperative stakeholders into vocal opponents of conservation initiatives, potentially leading to noncompliance or destructive actions (Berger et al., 2004; Fernandez, 2007; Miller et al., 2012).

The interplay of social structures, economic systems, and policy frameworks determine the relevance of equity to conservation outcomes and success in conservation (Klein et al., 2015). In the Kenyan context, Kariuki et al. (2018) explore institutional factors that influence equity in two PES schemes (Mara North Conservancy and the Kasigau Corridor REDD+ project) and bring to light the institutional challenges associated with achieving multiple objectives of equity simultaneously. Their findings show that procedural equity is neither a precondition nor a guarantee for distributive equity, and vice versa. The authors call for special attention to be given to gender equity. In the Mara Conservancy case study, equitable land distribution amongst PES participants did not translate into equitable gender outcomes. However, their Kasigau case study illustrates that provisions that meaningfully integrate men and women in decision-making have the potential of enhancing procedural equity. The authors conclude by advocating for critical attention to be given to formal and informal institutional dynamics that interplay in the implementation of PES schemes, and that have the potential for enhancing equity outcomes.

Studies from developing economies indicate that conservation initiatives (PES schemes inclusive) have the potential to intensify existing inequalities within communities, for instance leading to the widening of the gap between poorer and wealthier land users (Wegner, 2016). Undoubtedly, conservation decisions are comprised of multiple objectives and culminate in complex decision contexts with high potential for trade-offs and explicit conflict amongst stakeholders (Law et al., 2018). Therefore, conservation decision-making processes must account for equity, even though in so doing, some stakeholders may perceive that they are receiving unfair

treatment and their responses may potentially derail conservation interventions (Ferraro et al., 2007; Waylen et al., 2013; Bennett, 2016).

In northern Kenya's rangelands inequity in outcomes has been documented (e.g. by Sumba et al., 2007; Komu, 2013; Lamers et al., 2015) as leading to the demise of once successful community-based conservancies (Muthiani and Kristjanson, 2003; Nthiga et al., 2008). We currently lack empirical studies to investigate whether this observation holds true. It is acknowledged that conservation actions generally tend to benefit more to some stakeholders or groups than others, thereby affecting the probability of attaining conservation goals (Klein et al., 2015). Moreover, in studying equity in conservation, research has been skewed towards distributional concerns whilst paying less attention to other aspects (Friedman et al., 2018). According to Ehrlich et al. (2012), the ideal outcome of conservation is the attainment of a 'triple bottom line' that entails achieving equity alongside economic and environmental benefits. However, Halpern et al. (2013) underscored that equity is hardly formalized in conservation decision processes. Furthermore, little is known regarding the incorporation of equity in the wildlife conservation initiative in the lowlands of Samburu County of Kenya. It is in line with these observations that we aim to investigate the practicability of equity in wildlife conservation in the lowlands of Samburu County in northern Kenya.

This study is imperative since there is growing interest in exploring the degree to which existing inequalities are reinforced under conservation initiatives (Roth and Dressler, 2012; Mahanty et al., 2013; Rodriguez-de-Francisco and Budds, 2015) and the extent to which socio-economic benefits from these initiatives are distributed (Ferraro and Simpson, 2002; Corbera et al., 2007). Furthermore, the study of (in) equity is an imperative milestone for addressing injustices in conservation initiatives (Mbembe, 2017; Mollet and Keep, 2018; Büscher and Fletcher, 2019).

We employ the use of a three-tiered equity framework (recognitional, procedural and distributional) to attain our objective of studying equity in wildlife conservation in the lowlands of Samburu County. The framework has been employed by other researchers, for instance Corbera et al. (2007), in studying equity in payment for ecosystem services schemes (PES). As the concept of equity is strongly associated with the ideas of fairness and justice (Konow, 2001), it may be an important indicator of, and a positive influence on, growth and development in societies (Walton et al., 2008). Furthermore, concern over environmental equity, the equitable distribution of costs and benefits that are consistent with the equitable stakeholders' inclusion in conservation initiatives as well as their self-identities, histories, and traditions (Sikor, 2013) is imperative for the successful implementation of the initiatives and sustainability of resource use.

This section has introduced the concept of equity, discussed its various dimensions and introduced its applicability in natural resources management. In the process the research objective was also introduced as well as the justification for the study. Section 6.2 presents the research methodology. In section 6.3 results are presented, and conclusion is provided in section 6.4.

6.2 Material and methods

6.2.1 Study area

Samburu County covers an area of 21,022 Km^2. It is bordered by Turkana County to the Northwest, Baringo County to the southwest, Marsabit County to the North and Northeast, Isiolo County to the East and Laikipia County to the South. The county lies between latitudes 0°30´ and 2°45´ north of the equator between longitudes 36°15´ and 38°10´ east of the Prime Meridian. Samburu Central, East and North are the county's administrative units (RoK, 2018). According to Spencer (2004), the southwestern part of the county is dominated by Leroghi Plateau, characterized by open savannah and grassland. To the north and east, the land drops sharply to desert and thorn

bush, interrupted by intermittent hills and forested mountains. Pastoralism and wildlife conservation are the primary land use practices in the county (RoK, 2018). Even though most of the Samburu community in the study area pursues a pastoralist livelihood, they are increasingly diversifying their livelihood options. This is seen through wage labour, petty hawking, and livestock marketing (Straight et al., 2016).

Samburu County has been politically marginalized with respect to the rest of the country, resulting in inadequate to non-existent infrastructure (ibid.). Despite this, the northern Kenya region in general has gained the interest of Kenya's national government of late. This is manifested in flagship projects such as the Lamu Port-South Sudan-Ethiopia-Transport (LAPSSET) corridor program, a regional project aimed at providing transport and logistics infrastructure and connectivity. LAPSSET is anticipated to open new growth frontiers in ecosystems endowed with high value resource potentials like oil, gas and minerals (LCDA, 2016). Another flagship project is the Lake Turkana Wind Power project in Marsabit on the east side of Lake Turkana inhabited by the Rendille, Turkana and Samburu tribes. The project, amongst others, is meant to transform marginal dryland areas, historically known to be unproductive in terms of conventional agricultural production, into central platforms for national development (Cormack and Kurewa, 2017).

The historical marginalization of Samburu County, as well as ASALs in general in Kenya, show the presence of inequity in the allocation of resources by the national government, a disadvantage in areas richly endowed with wildlife resources living outside protected areas. Owing to the coexistence of pastoralism and conservation as primary land uses, there exists potential for human-wildlife conflicts. Factors in human-wildlife conflicts include livestock predation, competition for grazing resources and water, increased livestock diseases and direct threats to human life (Ocholla et al., 2013). It is worth acknowledging that one of the county's goals is to

promote peaceful and inclusive societies for sustainable development, as well as provide access to justice for all whilst building effective, accountable and inclusive institutions (RoK, 2018). This goal is clearly manifested in the mandate of the gender and culture department of the county government. The department strives to foster equality and equity among the men and women genders by championing the rights of women and girls through capacity building in education and employment (RoK, 2018).

Moreover, since the behaviour of the *morans* (warriors) is regarded as childish and irresponsible by Samburu elders, this observation increases tension between the warriors and the elders (Spencer, 2004). The *Moran* as an institution is amongst the enduring aspects of the Samburu tradition. It entails the admission of young men into a warrior-hood upon circumcision (Wasamba, 2009). In Samburu culture, *Moranhood* is defined based on age group and a rite of passage. *Morans* 'are the young unmarried men who would at one time have been the warriors of the tribe' (Spencer, 2004). *Moranhood* as an institution instils in young men the bond of comradeship as they go about their collective activities conducting raids, eating, staying and suffering together. In so doing, they learn the importance of unity, cooperation and harmony from peers (Kipury, 1983; Wasamba, 2009). Wasamba (2009) argues that *moranism* is still a coveted institution that fosters comradeships, self-esteem, courage, strength, perseverance, self-sacrifice and adventurism in young men, despite being threatened by modernity. The roles of the *Morans* in the Samburu community include herding livestock, protecting the community from enemies, raiding neighbouring communities for wealth, training as cultural ambassadors and future elders of the community.

6.2.2 Research design

In this study, we used a four-stage sampling process. At the onset, we used purposive sampling (as described by Etikan et al., 2016; Bernard, 2017) to select four out of six conservancies operating under the Northern Rangelands' Trust (NRT) umbrella in Samburu East sub-county. These were Namunyak Wildlife Conservation Trust (NWCT), Meibae Community Wildlife Conservancy[22] (MCWC), Westgate Community Wildlife Conservancy (WCWC) and Kalama Community Wildlife Conservancy (KCWC). For representativeness, we used random selection to choose half of the zones (villages) in each of the conservancies. This was achieved by assigning numbers to all the zones in a conservancy and writing the numbers on uniformly cut pieces of papers which were folded, mixed and thrown to the ground, and indiscriminately picking half the numbers. Third, systematic selection of every fourth homestead (*manyatta/enkang*) for the household interviews. A nearby path was often used as the starting point for the sampling procedure. Lastly, purposeful selection of household[23] heads was done once in the homesteads. In the absence of a household head, a representative who old enough and who possessed knowledge about the research topic was often selected as the household representative.

6.2.3 Data collection and analysis

We collected data for a period of six months between February and August 2018. A preliminary study was conducted for a month prior to the actual study. The pilot study served to familiarize the researcher with the area and make initial contacts, test the data collection tools and approaches and then adjust them accordingly based on the field experience. Individual household

[22] A conservancy is a collection of lands unified under a singular management plan for the purpose of collectively enhancing conservation and natural resource use (Waterhouse, 1994).

[23] A household in this study is defined as a basic unit of shared economic production and resource utilization (Casley and Lury, 1981).

interviews (as described by Varkevisser et al., 1993; Opdenakker, 2006) were used to collect data and sampling was based on the zones/villages in the four conservancies. To determine the number of household interviews conducted within the zones, the probability proportional to size formula suggested by Yates and Grundy (1953) was employed: $n = \frac{Z^2 p(1-p)}{e^2}$ where *n* is the sample size, *z* (1.96, two-tailed) is the desired *z*-value yielding the desired degree of confidence, *p* is an estimate of the population proportion, and *e* (0.05) is the absolute size of the error in estimating *p* (0.2) that the researcher is willing to permit. A total of 240 household interviews that comprised conservancy members and non-members were conducted and only 235 (209 and 26 for conservancy and non-conservancy members respectively) were included in the analysis because five were considered incomplete.

Methods employed in data collection comprised the use of key informant interviews (KIIs), a standard data collection tool that entailed interviewing a select group of individuals who provided needed information, ideas, and insights on the subject under study. KIIs provided flexibility to explore new ideas and issues unanticipated during the planning phase of the study. According to Kumar (1989) and Barker et al. (2005), KIIs are commonly used in anthropological and economic studies as well as in social sciences, among other fields. We conducted twenty-two KIIs with people who were conversant with the topic under study. The criterion for sampling key interviewees was as follows: first, interviewees were categorized to represent the multiple stakeholders in the conservation PPPs. The categories included private investors, community members, national and local conservation stakeholders such as the KFS, KWS, NRT, and conservancies under study. Second, interviewees were selected from these organizations based on the nature of the knowledge they possessed regarding the partnerships, the role they had in the partnerships as well as through snowball sampling. Interviewees therefore included NRT, KFS,

KWS, Ewaso Lions, SNR, ACK, and STE personnel, private investors, community leaders and representatives (managers and rangeland coordinators) of the community conservancies under study. Contact with the interviewees was made prior to the interviews and informed consent was sought before the start of the interviews by informing the respondents that the information was for academic purposes. For those informants who agreed to be identified by their actual names and position in their organizations in write ups, consent was given. Interviews were conducted until no new information emerged. The key interviewees comprised seven from private organizations, five from tiers of government, one investor, three chiefs, and two conservancy managers and four rangeland coordinators. All interviews were later transcribed for analysis.

We also used focus group discussions (FGDs) to gather data. They are a research methodology where a small group of participants gather to discuss a specified topic or issue to generate data. Our discussions were limited to ten individuals in a group of mixed genders and ages, and women only. There was a moderator and a note taker during the discussions. The moderator made effort to ensure that each person was accorded the chance to provide their views without others dominating the process (Merton et al., 1990; Kitzinger, 1995; Wong, 2008; Krueger and Casey, 2014). In the end seven FGDs were conducted. We also used observations and informal discussions to gather data. An observer-as-participant manner of observation was employed (Meyer, 2001). As observers-as-participants, we attended an elders' meeting at the NRT headquarters, annual general meetings of two conservancies, SCG public participation forum on budget allocation, and peace awareness meetings in the conservancies under study. Moreover, several informal discussions were conducted mainly with the community members such as women, morans and men. We also used secondary data sources (conservancies' partnership agreements, annual reports, registers, and meetings' minutes) to collect data. The data was analyzed through

the Statistical Package for the Social Sciences (SPSS) version 23.0. Qualitative data was synthesized to draw sensible information that complemented the quantitative findings. Coding techniques for finding and marking the underlying ideas, grouping similar kinds of information together in categories and relating different ideas and themes to one another were used in the analysis of qualitative data (Rubin and Rubin, 1995).

This section described the study area and contextualized some of the challenges the region is facing. The study methodologies employed have been described in depth. In the next section we expound on our analytical framework.

6.2.4 Study's analytical framework

In this study, we employ the framework proposed by Brown and Corbera (2003). The framework distinguishes between equity in access, decision-making and outcomes. In the lowlands of Samburu County, specifically for the population engaged in wildlife conservation through community conservancies, equity in access determines how individuals participate in the wildlife conservation initiative, and this is contingent upon access to information, background knowledge and social networks that the Samburu community has formed over the years. Law et al., (2018) term equity in access as recognitional equity that entails 'equitable respect for knowledge systems, values, social norms, and rights of all stakeholders in policy or program design and implementation'.

Equity in decision-making concerns the recognition and inclusion of stakeholders in making strategic decisions. It is termed 'procedural equity' and is analysed according to accountability and responsiveness with respect to local communities (Brown and Corbera, 2003; Di Gregorio et al., 2013). Relevant to our Samburu case study, Ribot (2006) underscores the need for; assessing the extent to which the community is represented on the conservancy boards, the

nature of their appointments and the frequency of regular elections as fundamental to procedural equity within the conservancies.

Equity in outcomes concerns the distribution of project outcomes, economic benefits and perceived fairness. According to Loft et al. (2017), perceptions of equity can be 'powerful determinants of human behaviour'. Distributive equity offers households and communities incentives to change or maintain land management practices that are consistent with the payment for ecosystem services scheme(s) being implemented (Pascual et al., 2010; Loft et al., 2017). In the current study, outcomes from the conservation initiative include provision of bursaries, medical assistance, access to dry season grazing reserves and investors' annual payments to conservancies. McDermott et al. (2013) underscore that the principles of equality, social welfare, merit and need provide project implementers (in our case, conservancies overseeing wildlife conservation on behalf of the Samburu community) with the aim of evaluating distributional equity.

In the next section, we present our results and discussion.

6.3 Results and Discussion

6.3.1 Equity in access

Figure 6.1 outlines a general conservancy management structure. A group ranch (GR), defined as a demarcated area of rangeland in which a group of pastoralists graze their individually owned herds, possesses official land rights (Oxby, 1981) and, has a restricted number of registered members (Galaty, 1980). We found that some conservancies (e.g. KCWC) have a harmonized management structure with their respective group ranches. The registered conservancy members have the right to participate in their respective conservancies' decision-making processes. Information regarding the activities of the conservancies is relayed to the members through each zone's elected trustee. Our study established other sources of information to the conservancy

members to include conservancy board committee members, employees at the conservancies, village elders, community forums (*barazas*), and posters at shopping centres.

The mandate of the trustees is to relay information to the conservancy members. We established the existence of displeasure among some of the community members who faulted the trustees for failing to relay information at the appropriate time. Despite the existence of such sentiments, we observed the re-election of the same trustees during annual general meetings (AGMs) in some of the conservancies. We followed up on this observation during our FGDs, and the participants acknowledged the failure on their part when they did not exercise their voting rights wisely.

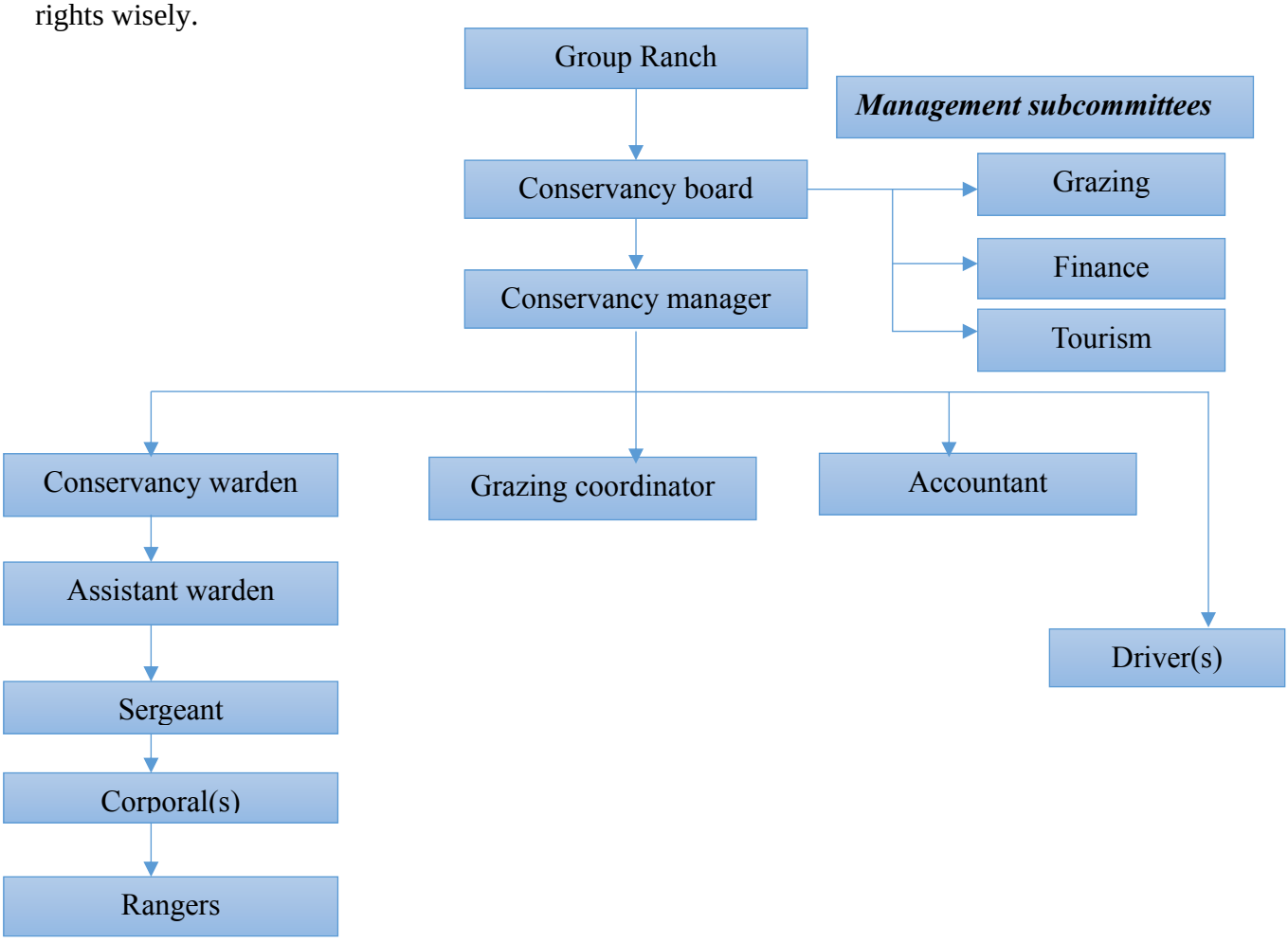

Figure 6. 1: A typical conservancy management structure.

Analysis of the data gathered from individual household interviews shows that about 57.9% of the conservancy-member respondents believed that access to information in their respective conservancies was good. However, this finding contradicts the fact that our analysis shows only 6% of this category of respondents being aware of the amount of money their conservancies had accrued in the previous financial year. 66% of conservancy-member respondents were aware of their respective conservancy's or group ranch's constitution, out of which only 15.7% had been involved in its drafting process. These results underscore the aspect of information flow and access amongst the community, specifically the conservancy members, as a stakeholder in the conservation initiative.

Our study's respondents cited numerous ways in which they participate in their respective conservancy's activities. These include grass seed harvesting/reseeding activities, invasive species clearance, bead-making, and herding in the buffer zones through grazing management. Other forms of participation include the creation of awareness amongst other community members about conservation and the selling of livestock through the NRT's LivestockWORKS program in the conservancies under study, reporting cases of injured wildlife when sighted and partaking in livestock production seminars. To further increase information on community participation beyond the conservancy but within the wildlife conservation initiative, we present the case of Ewaso Lions. Ewaso Lions is a non-profit organization that started in 2007 with the view of promoting community involvement in lion (and other wildlife) conservation. It is headquartered at WCWC. The organization operates various programs such as the Warrior Watch that provides formal education and field exposure visits of the *morans* to other rangeland areas of Kenya. The warriors help in the basic conservancy patrol by tracking lions' movements and warning the community to avoid certain areas, thus helping in mitigating human-wildlife conflicts. The Mama

Simba (women's) program conducts adult literacy and conservation training to women who help in the basic patrol of the conservancies in the course of their daily chores, and report lion sighting to the warriors. The women are also trained by Ewaso Lions to market their beaded lions' artworks. Other programs include Lions Kids and the *Wazee* (Elderly men) Forum that was dysfunctional at the time of our field research. We established that Ewaso Lions currently employs 23 *morans*, 19 women under Mama Simba, 3 scouts, 10 Wazee and 18 camp staff. Ewaso Lions' programs underscore the effort made in ensuring that the Samburu community is enlightened regarding wildlife resources on their communal land. The creation of market linkages for the by-products of wildlife conservation, such as beaded lions' artworks, further heighten aspects of community access to markets spanning wildlife conservation in the study area.

6.3.2 Equity in decision-making

The conservancies are managed by boards constituted by members from the grazing, finance and tourism sub-committees (Figure 6.1). From fieldwork observations we define the board as the conservancy's executive body that oversees resource management on behalf of the community. Board members are democratically elected by the community at AGMs and the team is typically constituted by an 'equitable' representation of residents living in the settlement zones, women and youth. The board approximately consists of 12 elected members as well as of ex-officio members from the government and conservation and development partners operating in the conservancy's area, and tour operators. Board officials hold office for terms of three years that are renewable. However, after serving for two consecutive terms, a board member becomes ineligible to vie again in order to give room for other people to serve. A few days before the AGM in KCWC, we would often come across groups of individuals (mostly men) strategizing on how they would vote in the election processes in their conservancies. Regarding participation, Gibbes and Keys

(2010) identified various forms that include passive participation, participation in information transmission, participation by consultation, participation by material incentives, functional and interactive participation, and self-mobilization. AGMs are platforms upon which conservancy members can practice their democratic rights in electing officials, freely at will. We found some members to be motivated by monetary (such as a sum of USD 20 they receive for attending the meeting) and non-monetary incentives (such as gifts in form of printed shirts and traditional Samburu *shukas*). Each conservancy made efforts to ferry the community members from their zones to the AGM venue. If transportation would not be available, only a handful of members would turn up to the meetings, rendering the whole process a sham. Conducting an AGM is costly. For instance, in 2018 NWCT incurred USD 21,980 for a successful AGM. Its counterpart, KCWC, spent USD 30,000 for an unsuccessful AGM marred with violence. This was brought about by the failure of KCWC's management to disclose its financial statements for 2017. This points to concern about the lack of accountability and transparency of the KCWC management. Furthermore, we established that in 2014 the previous board and management (chairman, accountant and the manager) of KCWC colluded with one another in looting the conservancy of USD 120,000. These funds had been raised from the Rhino Charge event that occurs yearly in NRT-affiliated conservancies. The specific board members were sacked, though without any legal action being taken against them, after a 'special' AGM was called.

The Samburu community is represented by only a few individuals among the conservancies' board members. On the board only a few individuals, for instance the conservancy manager and the chairman, would represent the conservancy during external interactions such as meetings at the NRT headquarters. This finding is documented as being the norm in other conservancies as well. For instance, working with Sera Community Wildlife Conservancy in

Samburu County, Cockerill (2018) terms this scenario as compartmentalized participation and favoured elitism. She argues that the typical conservancy structure was implemented by actors external to the sites of conservation governance who aimed to create institutions that could make conservation and development decisions that would gain local community buy-in. Her argument is corroborated by one of our study's key informants who stated that: "Most of the conservancy boards in this area tend to favour the election of illiterate members and those who can easily be manipulated." Our key informant, a grazing coordinator in one of the conservancies, has observed the 'politics' surrounding elections over the years during his tenure. He reported the sentiments he presented as holding true of other conservancies as well.

Recognition and inclusion in strategic management decisions in conservancies is another issue we explore. During our fieldwork, we established that *morans* are a group in the Samburu community that feels excluded from most of the conservancies' operations and decision-making processes. As stated by a group of *morans* during an interview*:* "Ian Craig of the NRT introduced the conservancy concept to our fathers and it is as if this idea will 'die' with our fathers as we are always excluded from conservancy matters." Such sentiments from *morans* have been reported in other studies as well (e.g. by Glew et al., 2010; Nthiga, 2014; Cockerill, 2018), placing the *morans* in conflict with other community members since they perceive conservancies as bringing them limited benefits. *Morans* represent an issue because if they do not benefit from conservation, they become defiant and violent, at times. To counter this, we found the conservancies under study and in the area in general undertaking various initiatives to make the *morans* feel incorporated and part of the conservation initiative. One such initiative is the education of the age set of in-coming *morans* on the importance of conservation and peace (Figure 6.2). The conservancies are also engaging the *morans* through grazing management sub-committees considering that they are the

group that often herds livestock. The issue of the *morans* is one of the reasons that equity in conservation is so important.

Figure 6. 2: In-coming *morans* training session at KCWC on the importance of peace.

Source: Lugusa, fieldwork (2018).

Women are another social group that echoed sentiments of exclusion from decision-making processes during our fieldwork. The *Maa*-speaking community, of which the Samburu are a part, have a strong patriarchal culture in which women have little influence in decision-making processes such as natural resource management decisions (Galaty, 1982; Tarayia, 2004). Through our fieldwork, we confirm the existence of this disparity based on the election of board members in the four conservancies, in which a majority are men. Glew et al. (2010) document similar

experiences with women in NWCT where women were excluded from decision-making processes and had a low number of representations on the board. The existence of heterogeneity in the community itself presents a myriad of challenges in the attainment of equity. Wegner (2016) refers to these challenges as participation filters or selective barriers that favour certain segments of a population over others in participating in PES schemes such as wildlife conservation in our case study. However, conservancies are making efforts to make women feel recognized and part of the wildlife conservation initiative. Besides the previously discussed Mama Simba of Ewaso Lions program, we found women to be also participating in bead-making activities in an NRT initiative project. Together with the *morans*, the women are offered loans by the NRT. The loans are used to fund various group activities. Such initiatives point to the effort conservation stakeholders are making to incorporate certain groups, particularly women and *morans*, in the conservation initiative. However, in the conceptualization of the conservancy-model in conservation, relevant stakeholders should have acknowledged and heavily invested in measures or programs that counter societal marginalization of these groups.

6.3.3 Equity in outcomes

For the conservancies under study as well as others under the NRT umbrella, we established that there exists a 60-40% benefit sharing mechanism. Sixty percent of the tourism income from tour operators is allocated to community projects. The other forty percent is for conservation management activities. Community projects include the provision of health services and facilities, bursaries, paying for kindergarten teachers' salaries, and water projects. This finding is corroborated by Gibbes and Keys (2010) who note that income from wildlife utilization is realized in the creation and implementation of community projects that take many forms, the popular being the construction of schools, health centres and boreholes. The NRT (2015)

documented that the 60% share of revenue from tourism and livestock marketing is spent on student bursaries for secondary and tertiary students, water infrastructure, medical bills for conservancy members, support to schools that includes the construction of classrooms, support for teachers' salaries and school equipment. Through our fieldwork, we found that the Samburu community in general, including non-conservancy members, benefits from the provision of these projects. We established the discontent of some of the conservancy members who had no school-going children. This implies that such households were ineligible for bursary consideration. The discontented proportion of the society termed the arrangement unfair, coupled with other confounding reasons such as the inability of members in such households to secure employment opportunities from the conservation initiative. The allocation of bursaries is a major issue in conservation equity. Whose children receive bursaries and whose do not, is at the discretion of conservancy boards. Nthiga (2008) supports the idea of investing in education via wildlife conservation initiatives. She emphasizes that investing in education is vital to the success of conservation initiatives due to its general popularity, asides from enhancing employment creation and skills enhancement in the conservation arena.

The contractual agreements between conservancies and tour operators oblige the latter group to source 75% of their labour force from the Samburu community. We established that this clause is being upheld. Employment opportunities in the conservancies, however, are subjects to complaints from the community. For instance, there were complaints that individuals from certain zones in the conservancies under study were not considered for positions. This shortcoming was acknowledged by the conservancies' management who hinted that the limited number of job slots available were unable to accommodate individuals from all zones. Furthermore, there exists nepotism, as highlighted by one of our key informants: "Nowadays people are selected based on

ties to people in top management in the conservancy. 'We' as a community, for instance, loved the old times' conservancy scouts-recruitment process which used to be conducted in military-like style. Individuals would be subjected to a rigorous selection process that entailed running. At the end of the day those who were fit and merited it were selected for the job. Nowadays people just select their people!" This assertion indicates the harsh self-interested realities prevailing in the study area. We found a disparity between men and women regarding employment. Few women had been employed in the conservation initiative. The reasons provided for this observation pointed to the fact that women were considered too weak for certain jobs. For instance, poachers would not be 'scared' by the presence of women scouts patrolling. Also, the reasoning was made that women will require frequent maternity leaves. But our study's respondents reported that the marginalization of women is changing over time, as seen through the encouragement of more women to apply for job positions. Other benefits to the conservancy members include year-end payouts within the range of USD 15 to 20. In addition to this, we found households in close proximity to the conservancies' headquarters and to shopping centres benefitted more due to their strategic location. Such households have access to better services provision such as security and general infrastructure, as well as access to potential employment, amongst other benefits.

The Northern Rangelands Trust (2015) emphasizes conservancies as being run based on equality, democracy and fairness, transparency and accountability, equitable and non-discriminatory benefit sharing, teamwork, mutual respect and cooperation, collective decision-making and needs-based development. Under its umbrella, the NRT oversee a common-pool fund that every conservancy with an investor contributes to, from which funds are later redistributed amongst all conservancies. The redistribution is not done on an equitable basis but rather on a per conservancy contribution-basis. If equity was really considered, MCWC would be benefitting

more from this arrangement considering it currently lacks an investor. “This common pool fund, for example, I would say is like a dog and its puppies. Only those puppies that are aggressive get to breastfeed!” By making this assertion our key informant was pointing at the fact that despite contributing to the kitty, the conservancies must also prove that they really need the money for specific development projects.

There exist contractual agreements between the conservancies under study and tour operators. Unfortunately, we could not establish how the minimum payable fee to the conservancies was determined, and whether these arrangements were equitable in terms of costs and benefits for investors and conservancies. Norton-Griffiths et al. (2008) acknowledged inequity in revenue sharing where tour operators and owners of the *safari* industry pocket a large proportion of tourist revenues at the expense of local communities. Lamers et al. (2015), while studying three tourism conservation enterprises, documented how communities wish to enhance transparency between them and the private investors. Communities proposed having people from their community work closely with investors, to monitor investors’ activities. This proposition was rejected by the investors based on their demand for exclusive management control over the enterprise. In our Samburu case study, we found KCWC to be the only conservancy that had a revenue collection unit both at the main gate and the airstrip; these controlled entry points allowed the conservancy to register the number of tourists or visitors going to Saruni lodge. This is a perfect example of an initiative taken by the conservancy to ensure accountability and transparency from their tour operator.

Both members and non-members of the conservancies freely utilize certain resources, such as wood-fuel, so long as the tree species are not categorized as endangered. Forage is another resource that is commonly shared between the two groups. The grazing committees in the

conservancies oversee shrewd rangeland management by guiding forage utilization by herders during the wet and dry seasons. Access to the grazing resources particularly during the dry season is not equitable because some households have varying tropical livestock units while others have none. A research participant we interviewed, explained that: "Yes, we are allowed to graze a particular number of livestock species in particular spots during the dry season. But my household does not have many cattle as other people do, they therefore end up benefitting more unlike some of us!" (KII, fieldwork 2018). This assertion points to the dynamics prevalent regarding forage utilization. Most of the costs incurred by the Samburu community are in the form of livestock depredation that occurs when livestock herds forage in the rangelands traversing predator species' areas, as well as when the predators attack livestock in holding crushes in homesteads. The opportunity costs of conserving wildlife are meant to be offset by the benefits accruing from the conservation initiative. Undoubtedly, wildlife yields benefit in wildlife-rich areas (Western, 1994) but this does not guarantee the local communities' support for conservation as wildlife-related costs often outweigh the benefits, which are often monopolized by an elite minority (Homewood, 2002; Adams and Infield, 2003). Kenya's Wildlife Management and Coordination Act of 2013 was operationalized to enhance the equitable distribution of benefits from wildlife conservation and the appropriate compensation of subsequent (RoK, 2013). We established that the government compensation scheme generally has been ineffective when it comes to compensating losses incurred by community members.

As a conclusion regarding the findings from our study, about 55.3% of the respondents believed that the distribution of costs and benefits in their respective conservancies were fair. The main reason for the respondents describing the distribution of costs and benefits as being fair is that the conservancy boards decided equitably on the utilization of funds generated. Other reasons

include the fact that all zones are considered for job opportunities and equal grazing rights are allocated to community members. Equity is also judged based on equal year-end payouts to households and transparency in bursary allocation, and the ability of any person to call on conservancy vehicles for medical emergencies as well as the fair allocation of loans to community members. Of the respondents who had a different opinion on the distribution of costs and benefits, the reasons cited include: the squandering of funds by their boards and the falsification of financial records given to the community (in other words, corruption by the top management); the absence of bursary schemes in their zone(s) and the failure of human-wildlife conflict victims to be compensated; the absence of merit in the recruitment of individuals for some job positions and influential or prominent individuals in the community being favoured over others; the payment for sand harvesting by the community although the resource exists freely on their land; and that some zones in the conservancies received more resources than others despite the level of income earned by conservancies, with little trickling down to the community.

Table 6. 1: Summary of the three equity tiers

Equity in access	Equity in decision-making	Equity in outcomes
Available markets through LivestockWORKS and BeadWORKS programs of the NRT.	Conservancies are managed by boards that constitute members from grazing, finance and tourism subcommittees.	There exists a 60-40% benefit sharing mechanism regarding income earned by the conservancies. 60% is for community projects whereas 40% is for conservation management activities.
The conservancies operate on land registered by their respective group ranches, with registered members.	AGMs provide the conservancy members with a platform to democratically exercise their voting rights in electing their officials.	The community projects entail the provision of bursaries, water projects, weed control, rangeland rehabilitation, and medical facilitation.
Information relayed to the community through various channels such as zones' elected trustees, open air forums and village elders.	On recognition and inclusion in management decisions in the conservancies, *morans* and women are the social groups who echoed sentiments of exclusion and marginalization from the wildlife conservation initiative.	The investors in the conservancies are contractually obliged to hire 75% of their labour force from the Samburu community. This occurs on a permanent and seasonal basis in line with tourism seasonality.
Besides, accessing the wildlife conservation initiative through their respective conservancies, other organizations (conservancies' partners) offer the same opportunity to the Samburu community. These include; Ewaso Lions, Grevy's Zebra Trust amongst others.		Employment in the conservancies critiqued by the community, for failing to observe the villages in the conservancies. Furthermore, *manyattas* located close to conservancies' headquarters, major roads and shopping centres had an edge over their counterparts in remote zones/villages of the conservancies.
		Forage and other rangeland products such as wood-fuel utilized by both conservancy-and-non-members.
		Livestock depredation and competition for forage resources are the main causes of human-wildlife conflicts. NWCT the only conservancy operating a livestock consolation fund that tries to enhance human tolerance to elephant conflicts.

6.4 Conclusion

Our study's findings show the existence of inequities in access, decision-making processes and outcomes. This, we argue, is a result of what Jax et al. (2013) term as the contextual dimension of equity. This dimension entails equitable consideration of the broad social, governance, economic, and cultural contexts past and present (e.g. power dynamics, gender and age) that influence a stakeholder's ability to gain recognition, participate in decision-making, and lobby for fair distribution. Furthermore, the situation prevailing in Samburu is exacerbated by nepotism, elitism and historical marginalization. For instance, investments in communal projects, as manifested through health and education amenities and services, is a consequence of weak governance by the Kenyan government, which has historically and politically marginalized people of the Samburu region over the years. Such infrastructure and amenities would have already been in place if the national government had prioritized investments in the region. If this had been done, it could have been a different scenario from what our study reveals, where most of the conservation monetary benefits is invested in communal projects. Sustainability is the central focus of the human-economy-environment interaction and most importantly issues of intra-generational and intergenerational equity cannot be ignored (Venkatachalam, 2007). Thus, for the continued operationalization of wildlife conservation initiatives, stakeholders should pay greater attention to contextual dynamics. This will ensure that growth in local economies is coupled with decreased inequity. Mechanisms for enhancing transparency and accountability for stakeholders involved should also not be overlooked.

6.6 Authors Contributions.

Study design: KL, NK; Fieldwork: KL; Data analysis and writing article: KL; Critical review of article for intellectual content: JG, NK.

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Conflict of interest

This study has no competing interests.

6.8 Ethical standards

This research was conducted in Kenya with the permit No: NACOSTI/P/18/85991/20350 from the National Commission for Science, Technology and Innovation (NACOSTI), and approval from McGill University's Research Ethics Board File No. 213-1017 for Ethical Acceptability of Research Involving Humans.

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FORWARD TO CHAPTER SEVEN

Chapters 3 through 6 have documented the conception of the partnerships, examined their efficiency, effectiveness and equity implications through PE and EE lenses. In the next chapter I explore some of the challenges under PPP arrangements. In so doing, I make recommendations which can help better the performance of the PPPs as a form of hybrid governance.

The chapter has been considered for publication as a manuscript (Author: Lugusa, K.).

CHAPTER SEVEN

Who's in, who's out? Challenges in conservation partnerships in the arid and semi-arid rangelands of Samburu County

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Abstract

The arid and semi-arid rangelands of Kenya have for long been marginalized by their very own government. However, recent policy changes saw a turn towards addressing the marginalization with a view of bringing development and stirring change in these ecosystems. The devolution of management rights over wildlife outside protected areas gave rise to collaborative wildlife management, opening an avenue for the formation of partnerships. Understanding the challenges experienced by partnering stakeholders who aim to contribute to the capacity of institutional systems in order to sustainably govern natural resources is a prerequisite for conservation success. Therefore, this study aimed to document the challenges in conservation partnerships using Samburu East sub-county as a case study. Findings indicate that the community and their respective conservancies are not contented with their partnership arrangements that are meant to help conserve wildlife and improve livelihoods through non-consumptive wildlife utilization. I argue that partnership is a good concept, however, there is a need to reflect upon the position of the community and of the conservancies that are supposed to be at the core of the conservation initiative.

Key words: Wildlife; Partnerships; Samburu; Community; Conservation; Kenya

7.1 Introduction

Partnership as a concept is often used to refer to a voluntary process by which partners impartially share amongst themselves functions, rights, and responsibilities for the conservation of a protected area, whether public, private or communal, and its related resources (Borrini-Feyerabend and Sandwith, 2003). Partnerships in wildlife conservation and management are an approach whose basis is collaborative management (Mburu and Birner, 2007). The shift from the fortress conservation model to a participatory approach was fostered by the fact that the alienation of local communities from natural resources renders conservation initiative unsuccessful (Cock and Koch, 1991; IIED, 1991). The emergence of community-based natural resource management as a model for sustainable natural resource use, therefore, promises to address both social and environmental protection. This is achieved by allowing for the collaborative management of resources often based on a community strategy executed in partnership with other legitimate stakeholders (Brosius et al., 1998; Josserand, 2001; UNEP, 2009).

Studies on partnerships in wildlife conservation and management have been documented across sub-Saharan Africa. In Kenya, such studies include those done by Rutten (2004), Sumba et al. (2007) and Lamers et al. (2014). Even though such studies exist, and partnerships are ever forming and dissolving (ACC, 2014), an empirical gap exists on the dynamics of conservation partnerships in Samburu County. Therefore, this study was concerned with characterizing the challenges faced by conservation partnerships in that area. Since partnerships offer a logical and achievable strategy for assisting communities and their ecosystems adapt considering climate variability and change (Monahan and Theobald, 2018) amongst other challenges, gathering empirical evidence to aid in institutional performance enhancement is warranted.

7.2 Methodology

7.2.1 Study area

I was motivated to study conservation partnerships in Samburu East sub-county due to the controversy surrounding the Northern Rangelands Trust's (NRT) work, and the conflict-prone status of the region. Moreover, northern Kenya is one of the study sites under the Institutional Canopy of Conservation (I-CAN) project. I purposefully sampled four conservancies under the umbrella of NRT namely; Namunyak Wildlife Conservation Trust (NWCT), Meibae Community Wildlife Conservancy (MCWC), Westgate Community Wildlife Conservancy (WCWC) and Kalama Community Wildlife Conservancy (KCWC).

7.2.2 Data collection and analysis

I collected data for this study for a period of seven months from February through August 2018 through key informant interviews (KIIs), focus group discussions (FGDs), secondary data sources and my observation of fieldwork conditions as described in depth in the previous chapters. 22 KIIs and 7 FGDs were conducted. Data gathered was synthesized to draw sensible information.

Figure 7. 1: A key informant interview with Mr. Chris Lentaam (ACK).

Source: Lugusa, fieldwork (2018).

7.3 Results and discussion

The categorization of who or what is public or private in this study follows Nshimbi and Vinya's (2014) model, who categorized local communities and agencies tied to the state as being public, and those who operate under a free market economic system being independent of the state as the private actors. Table 7.1 shows a description of the conservancies under study.

Table 7. 1: Studied conservancies and their respective partnerships

Conservancy	Formation year	Area (hectares)	Group ranches	Investors	Partners
Namunyak (Nalowuon, Kalepo & Ngilai units)	1995	383,804	Sarara, Sabache, Ngilai west, Ngilai central, Ngare-Narok, Ndonyowasin	Sarara and Kitich camps.	NRT, KWS, KPS, KFS, TNC, STE, Tusk Trust, Conservation International, San Diego Zoo, county government, other conservancies, local community.
Kalama	2002	49,660	GirGir	Old Boma Limited (Saruni lodge)	County government, NRT, GZT, SNR, STE, Ewaso Lions, KPS, local community, other conservancies.
Westgate	2004	36,230	Ngutuk Ongiron	Tamimi Company Limited (Sasaab lodge)	NRT, GZT, KPS, SNR, STE, Ewaso Lions, SAFE Samburu, other conservancies, local community.
Meibae	2006	101,517	Sesia, Ltirimin, Lpus, Ngaroni	None	NRT, ACK, KWS, KPS, Ewaso Lions, other conservancies, local community.

The definition of a conservancy in this study is adapted from Waterhouse (1994) to represent a collection of lands (communal holdings) unified under a singular management plan for the purpose of collectively enhancing conservation and natural resource use.

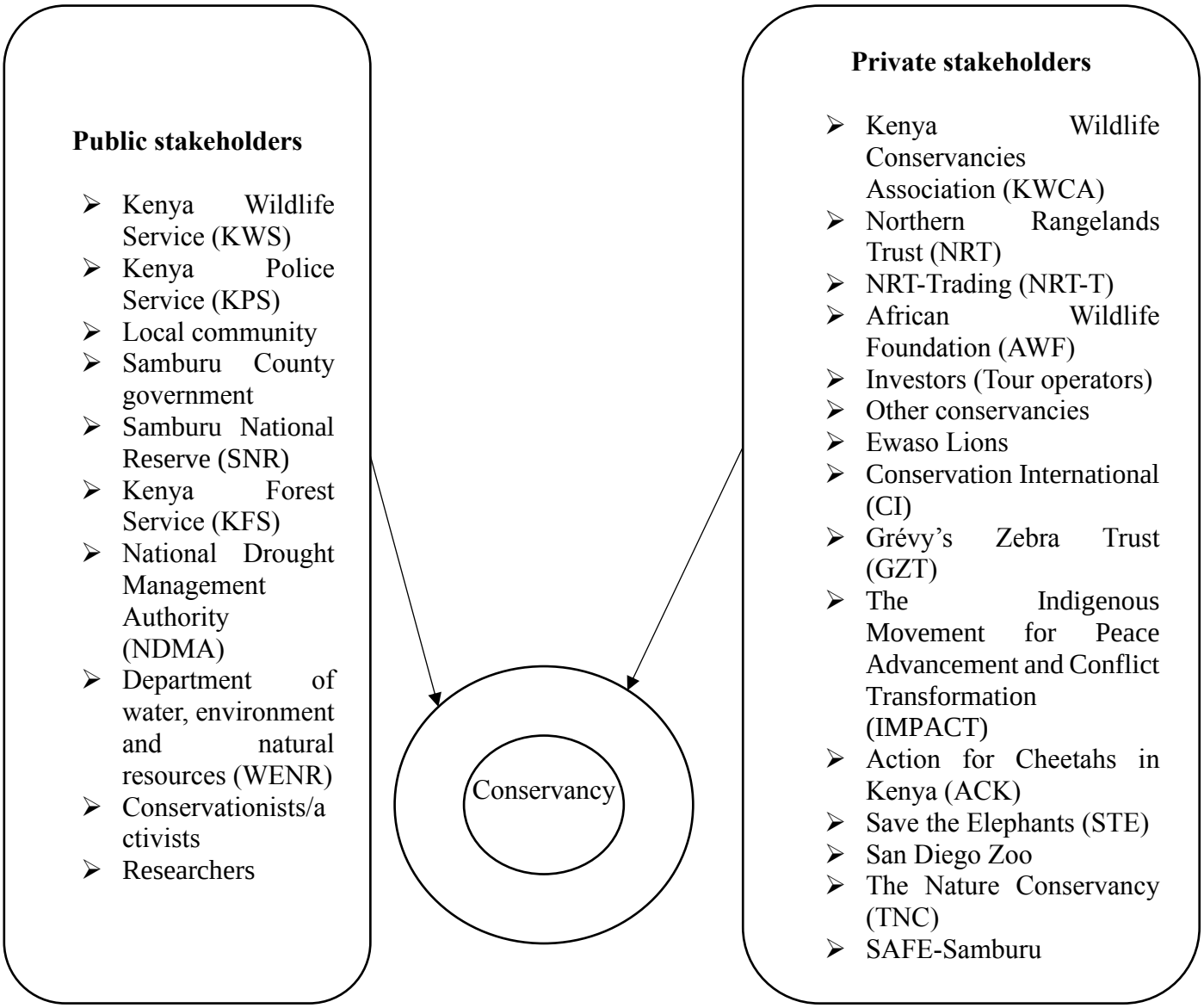

Figure 7. 2: A model for conservancies and their partnerships.

I adapt the concept of stakeholders from Freeman (1984) who described those who affect and are affected by a decision or action taken by the conservancies as stakeholders. Figure 7.2 shows these stakeholders. The conservancy is central, nested in another circle to represent its first

point of partnership with the respective group ranches. Therefore, the first point of partnership that the conservancies uphold is with their respective group ranch(es) each with their respective management boards. In some conservancies such as Westgate and Kalama, the boards have been integrated into one another, thereby representing a singular management unit both for the conservancy and the group ranch.

I classify the challenges identified under six themes:

i. The role of international organizations in conservation

Lamers et al. (2014) recommended the collaboration of stakeholders such as county governments, as well as locally and regionally rooted organizations to take on the responsibility of effectively and democratically fulfilling metagovernance roles considering that it is becoming impractically difficult for international organizations to be involved in this capacity. This is because of international non-governmental organizations' (INGOs) failure to navigate the complex and often harsh political dynamics faced during partnerships implementation. However, Mosse (2004) argued that international donor organizations are increasingly demanding integration, thereby forcing collaboration between conservation organizations even if it implies contravening their own practices. The year 2016 saw the formation of the Coalition for Private Investment in Conservation (CPIC) with a view of scaling up conservation finance by identifying opportunities that can provide cash flows (Mendlewicz, 2016). I found various INGOs such as Conservation International, Tusk Trust, San Diego Zoo and The Nature Conservancy being involved in conservation in the study area mostly through NRT. The motives of some of these INGOs such as TNC have been questioned (e.g. by Mbaria and Ogada, 2016, and other conservationists and activists concerned with indigenous communities' ownership, access and rights to resources advocacy. Social media has of late become the popular platform used by some of the activists). The role of such organizations termed as 'conservation elites' in enhancing capitalism, selling or saving nature has been critically explored for instance by Holmes (2011; 2012). They come with

strings attached, and at times are only interested in spending money without leaving a long-lasting impact. This leads to a donor-dependency syndrome thereby creating a perception in the community that conservation is a white-man driven initiative (KII, fieldwork 2018). Asaka (2018) found the community conservation model in NRT-affiliated conservancies in Samburu County to be heavily donor-dependent, rendering the model grossly unsustainable in its current form.

ii. Disillusionment of the Samburu community

The lack of a sense of project 'ownership' is due to inadequate understanding of the conservancy concept. Two key challenges were identified by key informants: (i) The burden of sharing financial resources with other conservancies without investors such as Meibae and Mpus Kutuk by pooling resources in a common fund managed by the NRT, and (ii) the questions surrounding who the real beneficiaries are since the NRT and the conservancies have taken too long to achieve the goals they envisioned when the conservancy model was adopted. Romañach et al. (2011) called for policy changes to allow landholders to capitalize on benefits from wildlife, thereby encouraging their participation in conservation. The year 2013 saw the enforcement of Kenya's Wildlife Conservation and Management Act (WCMA), which offered hope to pastoral livestock owners with the promise of compensation for wildlife-caused property damage, human loss and livestock depredation. According to one of the key informants, "The WCMA has never fully been effected, people report(ed) incidences of human-wildlife conflicts. Nothing is forthcoming, this leads to anxiety and false hope. Simply, the compensation scheme is unsustainable!" Furthermore, there is a common perception within the community that KWS is the body in charge of compensation payment, yet its mandate is only to facilitate the process (KII, KWS Wamba Office, 2018). Some of community members believe that research organizations such as Action for Cheetahs in Kenya, Ewaso Lions, and Save The Elephants are seeking to increase populations of species that heighten human-wildlife conflicts or retaliatory killings.

The issue of cost-benefit sharing amongst the partners in the study area is a contentious one. For instance, according to Mr. Gideon Ruto, a forester at KFS Wamba office, the community believes that KFS should share the revenue it generates from the sale of products from the Matthew Ranges, yet such arrangements have not been discussed at the national government level. Data from observations conducted during annual general meetings of some of the conservancies and informal interviews with some of the community members revealed that some income from sources like sand harvesting were not revealed to the community members leading to suspicion and mistrust in the conservancies' management boards. The disillusionment of pastoral communities regarding natural resources has also been reported in other arid and semi-arid rangelands (ASALs) of Kenya (e.g. by Muthiani et al., 2011; Kirigia and Riamit, 2018).

iii. The Northern Rangelands Trust's position and its role in conservation

The umbrella of the NRT consists of thirty-five-member conservancies covering 42,000 km^2 of northern and coastal Kenya. Through member conservancies, communities take the lead in managing their natural resources, livelihoods and relationships with partners. NRT continues to innovate, explore alternatives, and attract new partnerships, investors and donors to support the conservation movement (NRT, 2017; 2018). Despite executing its stated functions, the Samburu community faults the Trust for not being flexible in power-sharing and for focussing on expansion of the conservancies' membership under its umbrella, rather than pursuing the sustainability of the existing conservancies (KII, fieldwork 2018). The legitimacy, motives and operations of this organization have been questioned (e.g. by Mbaria and Ogada, 2016; Bersaglio, 2017; and Fox, 2018) and ambivalent sentiments about the Trust exist amongst members of the Samburu community. During fieldwork some community members would often question whether I had any affiliation with the NRT.

iv. Conservancy-investor relations

"We could have been very far in terms of self-sustenance as a conservancy only if the investor regularly reviewed the terms of agreement and paid us well" (KII, fieldwork 2018). This sentiment highlights the nature of partnership agreements that the conservancies have with their respective investors. I established that the fees payable by the investors across the conservancies entail acquiring a concession (lease) and holding the right to community fees based on a per-guest per night calculation. The annual rate of increase in the concession/bed night fees varies across the conservancies. The clauses that stipulate an increase in the conservation fees are aligned with KWS and Reserve fees; if these do not increase then the investors' rates are also expected to not increase.

I argue that the partnership arrangements should be based on mutual respect for all stakeholders and none should feel entitled or superior to others. In 2018 there was an incident with Kalama conservancy in which the manager of the Saruni lodge beat up an employee (a local from the area). The incident threatened the conservancy-investor agreement, leading to an emergency conservancy board meeting to address the matter. It was only resolved after an apology from the lodge manager. In Namunyak Wildlife Conservation Trust, the Sarara lodge operator complained to the conservancy manager that his visitors heard dogs barking, rather than sounds made by wild animal at night. The operator also threatened to forfeit the payment of annual fees if the conservancy did not address the issue of livestock grazing in the area designed for the lodge as per their agreement. The use of threats by investors is not a unique phenomenon. Working in southern Kenya rangelands, Butt (2016) documents similar occurrences where one of the preconditions for the lease agreements entailed limiting or stopping livestock grazing inside conservancies altogether as tourists were drawn to big cats (leopard, cheetah and lion) and did not make the trip to see a bunch of skinny cows grazing according to the tourism facility managers. To illustrate another incident of entitlement that the investors in the current study possess, a rangeland coordinator of one of the conservancies was reported to the NRT management simply because the coordinator was unavailable to execute functions that the investor required. Rangeland

coordinators of conservancies participating in this research are hired by the NRT. The Trust pays their salaries and outlines their job description, which does not include the coordinators performing duties delegated by the tourism facilities managers.

v. Lack of proper coordination amongst stakeholders

The Samburu county government supports conservation and livelihoods enhancement in the study area in various ways. For instance, when it comes to livestock production and management, the county operates a breeding stock program. In a forum meant to provide public participation for the proposed budget for the 2018-2019 financial year, which occurred in Wamba town, the stock program was challenged by one of the participants who stated: "These camels that you provide are not adaptable to the prevailing conditions in this area. Furthermore, they are lazy and end up dying when drought sets in. With camels each region ends up getting only one or two. So, I suggest from now henceforth, you rather provide goats to us. They are easily adaptable and are cheaper hence many households will benefit by at least getting some, rather than just a few individuals as with the camel program." The forum had been hosted by Samburu County Assembly's budget and the appropriation committee. In attendance were the conservancies' rangeland coordinators and the general Samburu community comprising the youth, women and elders from Waso, Wamba West, East and North wards. Other participants from the community also present were all in support of the proposition made. In response, the chairman of the Appropriation committee stated that the proposition would be considered for the future, but not for the 2018-2019 financial year. He cited the planning required (bureaucratic process, e.g. where to source for the goats amongst other factors) by the county to effect the change as the main reason. In the same forum, the public also questioned the county's inability to follow up on the implementation of previous projects. For instance, a water project that the county funded in the previous year's budget was dysfunctional as the contractor hired used substandard pipes that had

burst, and no one made the effort to see the fault addressed. The shortcoming was acknowledged by the committee and a promise was made to investigate the issue.

Some key informants cited the county government as failing to adhere to the conservancies' respective land use plans when setting up development projects. Citing an example, Grévy's Zebra Trust (GZT), an organization founded in 2007 to monitor Grévy's zebras that are endemic to northern Kenya and to conserve their habitat, provides technical support and trains the Samburu community on rangeland management issues. GZT also trained NRT's staff leading to the formation of the Rangeland department at NRT. GZT gets along well with other partners except for the county government when it comes to sharing information regarding their intended projects: "For instance, indiscriminate borehole drilling in Westgate conservancy by the county government led to settlement in designated dry season grazing areas. They are also putting up Early Childhood Centres everywhere, for instance Westgate conservancy has a land use, and one wonders whether the County government ever considers this!" (KII, fieldwork 2018). Similar sentiments were echoed throughout fieldwork, where individual projects by some stakeholders often overlooked the pre-existing conditions on the ground. These examples show the failure of partners to reach out to others, align their activities and do a needs assessment or to harmonize their activities.

vi. Conflict-prone status of northern Kenya

Reda (2015) documented that competition over natural resources among different groups have become rampant and often lead to violent conflict in the East African pastoral drylands. A key informant interview with a KWS official at the Isiolo-Samburu complex, revealed how the availability of guns and their possession by the local community members renders it difficult for KWS security personnel to differentiate between poachers and herders. The availability of guns not only exacerbates human-wildlife conflicts but also human-human conflicts. During fieldwork I woke up to numerous incidents of attacks. For instance, on the night of 21st May 2018 Turkanas attacked Samburus who were holding on-going *Moran* (warrior) graduation celebrations. The

attack was retaliatory in response to what they had experienced in 2016 when Samburu *morans* rustled their cattle. Mr. Alex Galhaile (Rangeland coordinator, Westgate conservancy) narrated how in 2017 in Isiolo around the Ewaso Nyiro river, sixteen Turkanas were killed. This was a resource-based conflict brought about by drought/dry-season conditions, with the Ewaso Nyiro River and the surrounding ecosystem serving as critical water and pasture source, leading to the convergence of cattle from both communities. During such times Archer's Post town is usually subject to a curfew. In early April 2018 three police officers were killed, and seven others injured after an ambush by bandits who had rustled cattle from the community around Ngare Mara area (Informal conversation with one of the key interviewees). Nothing much was known regarding the pursuit of the attackers after the incident since no information was shared by the security organs operating in the county. My observations indicate that during such incidents the police would become indiscriminate and punish innocent civilians whilst in pursuit of bandits. The Samburu community believes that those in illegal possession of guns smuggle them from Somalia. I found that one of the reasons for the creation of the Meibae conservancy was to curb the rampant insecurity experienced on the Wamba-Maralal highway. Since its creation, insecurity cases have significantly reduced. This highlights the role conservancies are playing in enabling peace in northern Kenya. Simply put, conservation and peace are not mutually exclusive. However, at times, particularly during drought periods, conservancies may increase conflicts since they restrict livestock mobility.

7.4 Conclusion

Partnerships aimed at enhancing the resilience of pastoral and agropastoral households faced with changes in their ecosystems are existent but not devoid of challenges (Lugusa et al., 2016). The challenges, as discussed in this study, curtail stakeholders' attainment of set objectives. Some of the stakeholders such as INGOs who are committed to conservation initiatives do so from a point of goodwill, but there are others whose intentions are questionable such The Nature

Conservancy. Using the NRT through the provision of donor-funding, such organizations are exerting their presence and rendering their legitimacy questionable. Furthermore, the NRT's continued conglomeration of conservancies under its umbrella reflects badly on them. Rather than out scaling the conservation model, the NRT should focus on the financial sustainability of the current conservancies with a view of empowering them. Otherwise, one might argue that with the commodification of nature, more conservancies (land area) under the NRT's mandate might translate into a good that will attract more donor funding to the benefit of the Trust. If this be the case, then the question of who the real beneficiaries of conservation are cannot be overlooked. For instance, Meibae conservancy has been under the NRT's umbrella since it still does not have investors, twelve years down the line. Such an occurrence, along with other issues raised in this study, lead to the disillusionment of the Samburu community who had high hopes regarding the adoption of the conservancy model in conservation. Tourism investors are key stakeholders whom conservancies depend upon as a continuing source of income through contractual agreements. Asides from honouring the contracts, there should be flexibility to allow for regular reviews. Conservancy boards elected by the community as their representative should champion for the community's genuine concerns whenever raised, rather than being keen on being accountable to the NRT.

Since peace is imperative for conservation in ASALs, communities themselves should take charge of ensuring that it prevails. I argue that the presence of continued conflicts in the study area provides an avenue for benefitting various stakeholders. This should serve as an aspect of future research. Stakeholders in this case study all have different motives or aspirations for engaging in conservation, and often the community/conservancies have found themselves overlooked, as highlighted in this study. Whereas it can be said that all stakeholders aim to enhance biodiversity conservation and the well-being of the Samburu community, it is often challenging to attain coordination, respect, trust and transparency given the heterogeneity or complexity of their

individual objectives. However, mechanisms enhancing these virtues, if explored, in conjunction with making the community and their respective conservancies the core of the conservation initiative, can enhance the success of the partnership approach to conservation.

7.5 Acknowledgement

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7.6 Ethical standards

This research was conducted in Kenya with the permit No: NACOSTI/P/18/85991/20350 from the National Commission for Science, Technology and Innovation (NACOSTI), and approval from McGill University's Research Ethics Board, File No. 213-1017 for Ethical Acceptability of Research Involving Humans.

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CHAPTER EIGHT: GENERAL DISCUSSION OF FINDINGS

This research was conceived with the aim of documenting the implications of Kenya's evolution as a flexible environmental state by examining the processes of natural resources conservation and management. In doing so, two main scholarly disciplines were explored as the main references for this research: ecological economics and political ecology. Theoretical frameworks and methodologies from both disciplines were used to engage with multiple research questions drawing from ecological, social, economic and political dimensions of collaborative natural resource management. In summary, this research made use of several conceptual frameworks including socionature (referring to nature and humanity as a single concept), ecosystem services, neoliberalism, conservation, and pastoralism and pastoral livelihoods. Conservation justifies the creation of a collaborative management approach to land and wildlife resources. It also centres on the notion that protecting biodiversity is in part realized through the creation of protected areas (community conservancies in this research). Neoliberalism is an important ideological foundation when discussing new developments in natural resource governance. It is characterized by the participation of non-state stakeholders who pursue market-based approaches with a view of addressing challenges in conservation (Wagner, 2017). The effectiveness of PES schemes depends on who benefits from them, and whether the benefits provide adequate incentives (Tuanmu et al., 2016). Undoubtedly, decisions regarding conservation's socionature are shaped by political and economic agendas (power and capital accumulation) that reconfigure present and future structures of socionature where conservation occurs.

The rolling back of the state and the subsequent rolling out of policies and laws facilitating collaborative natural resource management was portrayed by the emergence of the PPPs in Chapter 3. I was motivated to study PPPs because they are characterized by diverse stakeholders, and the arrangements portray various webs of relations, responses to the contexts they operate in, and

portfolios of activities (Larsen and Brockington, 2018). Through the stakeholder salience model, it was possible to classify stakeholders providing insights about the motivations and kinds of exchanges underpinning their interactions with each other. These exchanges were contrary to those documented by Bäckstrand et al. (2010) who found that participation of non-state actors enhanced the effective and equitable allocation of resources, costs and benefits, and increased access to a diversity of knowledge and expertise. Moreover, Ribot and Larson (2013) underscored the possibility of power capture by elites despite the enforcement of policy and regulatory frameworks by the state under PPP arrangements. Chapter 3 illustrates the rise to power and dominance of the NRT in Samburu. The NRT's dominance, in part, is augmented by its ability to sustain the existence of Meibae conservancy, in the absence of an external investor, through the redistribution of conservation income managed by way of a common-pool fund. The creation of Meibae was aimed at curbing rampant insecurity in the region, considered a threat to the success of conservation in neighbouring conservancies. The NRT has thrived in the context of a relative existence of peace by funding the operations of Meibae despite the Trust's inability to secure an investor for the conservancy, as stipulated under the NRT's objectives. Donor-funding for conservation channeled through the NRT also plays an important role in enabling the fulfillment of their mandate in the study area and northern Kenya in general.

Chapters 4, 5, and 6 treat conservancies as the focal point of analyses and explore aspects of efficiency, effectiveness and equity. Chapter 4 specifically demonstrates the inefficiency that characterizes conservancies as elaborated through financial cost-benefit analyses. The net effect of donor funding by international organizations through NRT is brought to light. As a result, I question the nature and clauses in the conservancy-investor agreements as well as the aim or motivation of NRT as an intermediary in the public-private conservation partnerships, based on its position as identified in Chapter 3. Scholars such as Bersaglio and Cleaver (2018) argue that the creation of community conservancies in the ASALs of Kenya should offer local populations

greater control over how their communal lands and natural resources are managed for conservation, including control over revenues accruing from market-based approaches to conservation.

Chapter 5 shows the effort of the conservancies in addressing socio-ecological challenges of improving human well-being and the conditions of their ecosystems. This chapter illustrates how conservancies place emphasis on communal projects such as investments in health, education and security to the benefit of society at large. The conservancies also invest effort towards ensuring the sustainability of the ASAL ecosystem. The social challenges associated with the distribution of costs and benefits in conservation are teased out in the chapter. In an attempt to meet the objectives of improving human well-being and ecosystem sustainability, equity aspects stemming from that effort are documented in Chapter 6. The findings in Chapter 6 do not corroborate the observations of Armitage et al. (2012) according to whom enabling policy in conservation addresses the concerns of equity and distributive conflicts. Furthermore, just like other PPPs that endeavour to enhance the resilience of pastoral communities against climate change effects in the ASALs of Kenya are characterized by challenges (Lugusa, 2015; Lugusa et al., 2016), Chapter 7 documents the challenges in conservation PPPs. The chapter draws from the preceding chapters (3, 4, 5, and 6), and poses recommendations that can serve as tools for reflection for conservation stakeholders.

Decisions in conservation hybrid governance modes such as PPPs are better understood when their efficiency, effectiveness and equity as criteria for evaluation are simultaneously studied (Adger et al., 2003). In reality, the success of conservation initiatives, given objectives that are based on these three concepts, is always illusive (Law et al., 2018). As underscored by Corbera et al. (2007), conservation initiatives that have attempted to realize efficient outcomes often offset power structures leading to significant equity implications. As a result, different possible combinations of these criteria have been proposed and recommended as feasible if contextualized

in various settings (Pascual et al., 2010). The research presented in this thesis has illustrated that whether PPPs are an important and growing area of conservation remains quite controversial, so the kind of analysis presented has the potential to influence both conservation policy and practice, and the study of conservation. In general, I conclude that conservation PPPs as hybrid forms in environmental governance are characterized by diverse stakeholders and networks and taken on a wide portfolio of activities. In the pursuit of realizing of their objectives, PPPs exhibit 'Dirty Harry' approaches (Larsen, 2018) leading to the issues explored in this thesis. Therefore, conservation PPPs can enhance their performance if relevant stakeholders implement findings from this research.

CHAPTER NINE

FINAL CONCLUSION AND SUMMARY

The conclusions drawn from this study that address the specific objectives identified in section 1.5 are as follows:

Objective 1: Stakeholder analysis

I used the stakeholder salience model (Mitchell et al., 1997) to conduct a stakeholder analysis. Stakeholders in the PPPs were identified. The basis of the partnerships, the kind of exchanges taking place and the consequences of stakeholders' interactions were also explored. Even though stakeholder status may be impermanent (ibid.), there is a need to monitor the actions of the Northern Rangelands Trust (NRT). The NRT's actions whether intentional or unintentional lead to its growing influence in the region. This is even more true considering that the Trust's aim has been argued to be about conducting a 'green grab' (Bersaglio and Cleaver, 2018). My findings are supported by Humphreys (2009) who documented that the rolling back of the state under neoliberalism facilitated the rise to prominence of two categories of stakeholders in environmental governance: the for-profit (e.g. ecolodges) and the not-for-profit sector (e.g. the NRT). The roles of stakeholders are often complementary (Kihima, 2016). Just as per my findings, the diverse actors in conservation include 'transnational conservation elites' that comprise NGOs, the state, corporations, intellectuals and the media, whose influence on conservation is massive (Holmes, 2011). Therefore, Kenya as a state, through the devolved county governance system, should strive to secure the interests of the Samburu community and in the process even out power imbalances.

Objective 2: Study of schemes of payments for ecosystem services

I conceptualized wildlife conservation as a PES scheme and Vatn's (2010) framework permitted its evaluation. The conservancies are inefficient in their operations and the categories of stakeholders discussed in the scheme are motivated by divergent aims. This implies that there is a need to revisit the initial goals or objectives of conservancies creating the partnerships. It is

evident that the commodification of nature in Samburu opened an avenue for benefitting certain categories of stakeholders more than others. One of the consequences has been the development of a donor-dependency tendency for the conservancies. Manyara and Jones (2007) corroborate and underscore this finding by emphasizing that even though the roles of stakeholders in conservation partnerships are complementary, they often do not adequately address community priorities. Instead, partnerships reinforce donor-dependency. The nature of the PPP arrangements as it is, implicitly allows or explicitly increases the dominance of the NRT and the growing influence of international elites in the conservation arena. Furthermore, clauses in the investor-conservancy agreements where conservation fees paid by investors are adjusted in accordance with KWS park fees should be reviewed. Flexibility in the frequent re-negotiation of fair conservancy-investor partnership agreements could go a long way in contributing to the financial stability of the conservancies. This will be so only if, the conservancies are autonomous in their financial management!

Objective 3: Applying the Sustainable Livelihoods Approach framework

I used the Sustainable Livelihoods Approach framework as a lens for investigating the impacts of the conservancies on the ecosystem and pastoral livelihoods. While investing in communal projects may be a desirable focus of the conservancies, there is a need to expand the scope of benefits accruing at the individual household level. Also, human-wildlife conflicts are an issue that the Samburu community continually grapple with. Currently, the government-led scheme is unsustainable and alternatives for mitigating HWCs should be explored. Rangeland reseeding projects and invasive species control are good projects aimed at improving rangeland conditions along with the use of planned grazing management by the conservancies. Such projects are also associated with problems of high transaction costs of excluding non-conservancy members and the enforcement of rules within the conservancies which have the potential of conflict. Another corollary is the grouping of settlements, which has the potential of causing other problems such as

overgrazing around settlements and higher risk of the spread of livestock diseases. In an effort to enhance the livelihood outcomes for the Samburu community, the NRT through its business models of the NRT-Trading (LivestockWORKS and BeadWORKS) should strive to link the pastoral communities directly to markets. Having the NRT-Trading act as an intermediary in the process, arguably a justifiable intervention, only serves to better enhance the Trading entity itself rather than the community. The same principle that the NRT applies in identifying, linking and brokering tourism investment agreements between the conservancies and investors should apply to the two business models of LivestockWORKS and BeadWORKS.

Objective 4: Applying the three-tiered equity framework

I used a three-tiered equity framework by Brown and Corbera (2003) to explore equity implications of the PPPs arrangements. Findings imply that more effort is needed in incorporating the *morans* and women into the decision-making processes and as well as have them access more benefits stemming from the conservation initiatives. In other words, the contextual dimensions of equity should critically be re-examined. Transparency and accountability as virtues need to be enhanced in partnerships. For instance, where cases of corruption have been reported, the law should be allowed to take its course. Furthermore, different auditors should be used in the financial auditing processes, to enhance aspects of accountability. Finally, the Samburu community should exercise their right to vote during annual general meetings in a wise manner in the election of members to conservancy boards who represent them. This is by voting in individuals whom they deem competent, and not by voting for candidates favoured by elites or by shifting their voting preferences by virtue of having received gifts meant to persuade them to vote for candidates favoured by elites.

9.1 Contribution to Knowledge

The work presented in this thesis provides original contributions to the scholarship on public-private conservation partnerships that are currently among the most championed forms of

governance in collaborative natural resource management. Studies on conservation PPPs contribute to the identification of areas that need interventions, as well as the shaping of conservation policy and practice. Specific contributions of this thesis are as follows:

- The stakeholder salience model illustrates an approach for analyzing stakeholders in conjunction with the concept of socionature as applied in political ecology. The application of the model in conjunction with the theoretical framework, offers a novel approach to analyzing such arrangements in socionature. The qualitative approach I undertook enabled the incorporation of wildlife as a stakeholder in the analysis, giving voice to the non-human entities which are often overlooked in such analyses. In working with the Salience model, I learned that legitimacy cannot be a stand-alone criterion, since the actions of one stakeholder might be legitimate to one but not another, and undoubtedly the stakeholders interact with each other.
- This research conceptualized wildlife conservation on communal lands and the subsequent partnerships with tourism investors as Coasean-based payments for ecosystem services schemes. Furthermore, in doing so, it employed a newly proposed framework by Vatn (2010) for evaluating the design of PES schemes. The combination of economic valuation with institutional analyses provides a more elaborate description of the system in which the PES-like scheme is operational. Therefore, conceptualization and application of the framework contributes to the field of ecological economics and literature on PES.
- I adapted Serrat's (2017) Sustainable Livelihoods Approach framework in studying the contribution of conservation PPPs through community conservancies to pastoral livelihoods and biodiversity conservation. I modified the SLA framework by emphasizing the study of conservation PPPs and their associated institutions and recommend its application for studying conservation and pastoral production systems by other researchers and scholars. This underscores a novel contribution to literature where the model has been

employed in the study of conservation initiatives. However, I learned that the SLA framework does not offer the luxury paying attention to efficiency and equity issues when employed in the analysis. In circumnavigating this shortcoming, I make refence to other chapter in the thesis that speak to efficiency and equity aspects. Furthermore, in analyzing livelihoods, the application of model is only limited to known/expected shocks or trends.

- Multiple studies have analyzed community-based conservation in Kenya. However, scant research has been devoted to understanding the equity implications of community-based conservation initiatives by simultaneously studying three distinct dimensions of equity. Chapter 6 provides the empirical application of a framework (by Brown and Corbera, 2003) that could be employed by other scholars to study equity in conservation initiatives. In studying equity, I learned that it is perhaps important for all stakeholders in the conservation initiative to set the criteria with which to evaluate equity. Otherwise, it might be difficult to really assess what is considered equitable and from whose perspective.
- Finally, this body of research is relevant for society and policy making in different ways. It aims to generate a process of reflection, in translating the effects of Kenya's evolution as an institution of environmental statehood whilst providing insights for collaborative natural resource management across the globe. The overall results of this thesis constitute an effort to analyze neoliberal conservation through the lens of public-private partnerships.

9.2 Overall Study Limitations

The limitations in the findings of this thesis are identified in this section:

- In conducting a stakeholder analysis in public-private conservation partnerships, I used expert knowledge in conjunction with empirical ground data, as well as secondary data sources. In conducting stakeholder analysis, future research that does not involve the incorporation of the non-human component (nature) in the analysis could benefit from

incorporating other methodologies such as interest-influence matrices, actor-linkage matrices or Q methodology.

- This research could not establish whether the investor-conservancy agreements were Pareto efficient or not. Future research should endeavour to circumnavigate the challenges associated with data collection. Empirical evidence could go a long way in aiding the bargaining power of the local communities who are often disfavoured by partnership agreements.
- The issue of human-wildlife conflicts and government-led compensation could not be explored as I had initially envisioned, using social multicriteria evaluation (SMCE). This shortcoming was as a result of the sensitive nature of compensation amongst the Samburu community. In settings that permit the exploration of this issue, future research should illustrate, with empirical evidence, compensation alternatives preferred by the community. This could go a long way towards influencing policy formulation and the sustainability of conservation programs in general.

9.3 Recommendations for future research

- The stakeholder salience model is a conceptual model commonly used in business studies where an organization is placed at the centre of analysis. In doing so, legitimacy as a stand-alone criterion is applied. However, in analyzing relationships that involve multiple stakeholders, without placing the organization (conservancy, herein) as central to the analysis, legitimacy cannot be used as a stand-alone criterion. Future studies in natural resources conservation that adopt the salience model and employ a different analytical approach should take this into consideration.
- I documented the efficiency of the conservancies by conducting financial cost-benefit analyses. This provided a snapshot of the current status. Future research could benefit from exploring the opportunity costs to communities by opting to participate in wildlife

conservation as a form of land use. It is also desirable to shed some light on the financial cost-benefit analyses of the ecolodges.

- In documenting the impacts of the PPPs on human well-being and ecosystem health, future studies should endeavour to analyze such impacts against a baseline. Therefore, before-and-after comparisons, or with-and-without conservation studies could go a long way in proving empirically the effects of the conservation projects on socionature.
- The current study identified the Northern Rangelands Trust as being the definitive stakeholder in the conservation initiative. Being a dominant force in the study area, it would be desirable for future studies to shed some light on the financial dealings of the Trust. This could go a long way in advancing our understanding of and characterization of this important organization.

9.4 A reflection on PPPs as a mode of natural resource governance in the lowlands of Samburu County

I set out to establish whether PPP approach to natural resource governance was efficient, effective and equitable in delivering conservation and livelihood outcomes in Samburu East sub-county of Kenya. Based on this research:

- I focussed on operational efficiency of the conservancies by analysing their cash inflow and outflow. What could have been important to reveal is for instance the amount invested by each conservancy in uplifting the livelihood standard of its members by a unit percentage. Of great value to this research would have been establishing/measuring additionality in the PES-like scheme in the study area which could gone have gone a long way in revealing the dynamics involved for instance, the annual increase in populations of key species, or the proportion of degraded rangeland rehabilitated and brought to productivity since the inception of the contractual agreements with their respective investors, and most importantly, the proportion of financial investment committed to

conserving key species and its economic viability. Furthermore, the issue of opportunity cost to the conservancies and Samburu community could reveal important issues such as the livelihood forgone by say, committing one hectare of rangeland to conservation and whether the returns from conservation are commensurate with the forgone livelihood opportunity.

- It remains to be seen whether conservation PPPs are effective for livelihoods of the Samburu conservation community since it is undocumented whether the landscape could feed more, or less livestock numbers in the absence of PPPs. PPP approach in the study area is associated with various advantages such as better management of livestock grazing resources and the rehabilitation of degraded land. However, concurrently, land grazing management plans are associated with the curtailing of livestock mobility as seen through the ban of livestock grazing in certain areas of the conservancies. The net balance of such management decisions remains unknown. For other livelihood benefits emanating from the PPPs (physical security provision, investment in health, education and water projects) all provided by the private stakeholders i.e. the NRT and its partners, it is unknown what would have been if the Kenyan state provided these services in the first place. Then the question that begs is whether these are really benefits if such services should be provided by the state independently of whether there would be conservation or not. Thus, as it is, development in the conservancies is under the NRT which has its own agenda beside conservation of natural resources in the region. Importantly, It is to be seen whether wildlife contributes more to the wellbeing of foreign tourists or locals who bear the costs of cohabiting with the wildlife species.
- On equity, my analyses focussed mainly on the community conservancy. It remains to be seen what the ecotourist lodges earn in a financial year and the proportion of their profit is given to the community. Furthermore, on the efficiency-equity debate, one could argue for

inequity if it reduces transaction costs and makes decision-making simpler. Also, in studying equity, I acknowledge the issues associated with it. For instance, giving more financial resources to a conservancy without an investor such as Meibae conservancy, and thus without touristic revenues, could be seen by others as inequitable. Additionally, tourism investors envision returns, and therefore judging their investment decisions based on key factors. They want equity of conditions and resources, which as per my findings Meibae conservancy does not offer.

9.5 References

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APPENDICES

Institutions in Public-Private Partnerships for Natural Resources Conservation, Management and Use: A Case Study of the Northern Rangelands of Kenya

HOUSEHOLD SURVEY QUESTIONNAIRE

1.0 General information

1.1 Date of interview ……/……/…… Name of research assistant ……
1.2 Name of respondent: ……Sex: (1) Male…….. (2) Female……..
1.3 County…… Sub-county……..Location…….. Sub-location…… Village……
1.4 Age: ……. (1) Under 30 years (2) Between 30-60 years (3) Over 60 years
1.5 Relationship of the respondent to the household head (Main decision maker)? (1). Self……. (2). Spouse…… (3). Son…….. (4). Daughter…….. (5). Relative……..

2.0 Household head's information

2.1 Sex: 1) Male……. 2) Female…… 2.2 Age…….. (Years)….2.3 Age set……

2.4 Highest education attained: (1) None (2) Primary (3) Secondary. (4) Post-Secondary

2.5 Possibility of continuing with education? (1) Yes…….. (0) No……. Reason(s)……..

2.6 Household size/composition. Please fill in the table below where applicable:

Total Members	**No. of males**	**No. of females**	**Wives**	**Children**	**Relatives**	**No. dependent on HH head**	**No. living in the same homestead**

2.7 General information on household members:

	Member *{Spouse(s) and children}*	**Age**	**Sex**	**Education level**	**Primary source of income {*Most important*}**	**Secondary source of income {*Second most important*}**	**Maximum income last year**	**Min income last year**
1	Household head							
2								
3								
4								
5								

***Codes for education level**: (1) None (2) Primary (3) Secondary (4) Post-secondary **Sex codes:** (1) Male (2) Female*

2.8 What income-generating livelihood activities do you or any member of your household carry out after the formation of this conservancy/Group Ranch? Please fill in the table below appropriately:

Source	**Involvement (1=Yes; 0=No)**	**Income last month (Ksh)**	**Frequency of activity (1=Monthly; 2=Seasonal; 3=Depends on needs)**	**Activity trend (1=Increasing; 2=Decreasing; 3=constant)**
Cattle sales				
Sheep sales				
Goat sales				
Milk sales				
Manure sales				

Hide and skins sales				
Bee keeping				
Ecotourism payments				
Charcoal sales				
Bead-making				
Casual labour				
Salaried employment				
Other (specify)				

2.9 Do you receive any remittances from your family members employed elsewhere? (1) Yes (0) No

2.10 If yes, on average, how much do you receive from them monthly? Ksh.....

2.11 Is this your first place to settle? (1) Yes (0) No

2.12 If yes above, how did you acquire it? (1) Inheritance (2) Bought (3) Communal (4) Public

2.13 Do you own land elsewhere? (1) Yes (0) No.

2.14 If yes, what is the TOTAL land size under your ownership? …….. Acres

2.15 Land ownership type? (1) Private/individual (2) Group (3) Communal

2.16 Household herd size and composition, please fill in the table below:

Species/Class	**Currently owned No.**	**Loaned out No.**	**Total No.**	**Total TLU**
Heifers				
Productive females				
Steers				
Productive bulls				
Calves				
Goats				
Sheep				
Camels				
Donkeys				
TOTAL HH TLU				

2.17 Has your household herd size changed over the last 2 years? (1) Yes…. (0) No……

2.18 If yes, please fill in the table below:

Increased (1=Yes; 0=No)	**Means (1=Births; 2=Purchases; 3=Social gifts; 4=Rustling; 5=Other)**	**Decreased (1=Yes; 0=No)**	**Reasons (1=Sales; 2=Diseases; 3=Drought; 4=Rustling; 5=Depredation; 6=Other)**

3.0 Institutions and Organizations in natural resource conservation and management.

3.1 What type of institutional arrangements exist in this county that you are aware of? Please list……

3.2 Are you a member of a group ranch/conservancy? (1) Yes (0) No

3.3 If Yes, Which one? .....

3.4 **If No, go to section 4.0**

3.5 Which year was it formed? …….

3.6 Has the conservancy formed any partnerships with stakeholders? (1) Yes (0) No (2) Don't know

3.7 If yes, please fill the table below:

Stakeholder/Partner	**Year joined the organization**	**Role/expertise**

3.8 Are you or any member of your household in a current leadership position of the decision-making structure in the conservancy/group ranch? (0) No (1) Yes. If yes, please fill in the table below:

HH members	Sex: (1) Male (2) Female	Age (Years)	Engaged in leadership (1) Yes (0) No	Period of service (year)	Position: (1) Chairman (2) Secretary (3) Treasurer (4) Other (Specify)	Trained (1) Yes (0) No
Household head						

3.9 Is there a constitution governing the Group Ranch/Conservancy? (1) Yes (0) No (2) Don't Know

3.10 Were you involved in the drafting of the constitution? (1) Yes (0) No

3.11 Are there external non-partners/agents who influence decision-making in the conservancy/group ranch? (1) Yes (0) No (2) Don't know

3.12 If yes, who are they? Please name them…….

3.13 What are the laid down procedures regarding cost and benefit-sharing in the conservancy/group ranch? .....

3.14 Are you aware of activities that the Group Ranch/conservancy is involved in? (1) Yes…… (0) No….

3.15 If yes, please list them……...

3.16 Do you participate in the Group Ranch/Conservancy activities? (1) Yes (0) No

3.17 If yes, how do you participate? …….

3.18 What benefits are associated with Group ranch/conservancy membership? .....

3.19 Are you aware of the amount of money the conservancy gets in a year? (1) Yes (0) No

3.20 Have you or any of your family members received any form of benefits from the conservancy in the last year? (1) Yes (0) No

3.21 If yes, please fill in the table below:

Benefit	**Amount/Quantity**	**Frequency** (1=Monthly; 2=Seasonal; 3=Yearly
School fees/bursaries		
Medical fees/facilitation		
Employment		
Grazing access/rights		

Other (specify)		

3.22 Do you believe that benefits and costs from the conservancy/group ranch are fairly distributed? (1) Yes (0) No (2) Don't know

3.23 Reason(s) for your answer above ……

3.24 How is information accessed in the conservancy/group ranch set up? ……..

3.25 In your view, please rank principles of good governance of the decision-making structure of the conservancy/group ranch.

Principles of good governance	**Rank (1=Bad, 2=Average, 3=Good)**
Information access	
Stakeholders' participation	
Transparency/accountability	
Fairness in benefit sharing	
Partnerships creation	
Effectiveness on biodiversity and human well-being	

4.0 Perceptions on changes in biodiversity and pastoral resources

4.1 Have you observed any changes in land cover and pastoral resources over the last 2 years /since the conservancy/group ranch was set up in your area? (1) Yes (0) No

4.2 If yes, please indicate the general trend of the following resources:

Resource	**General trend (1=Increase; 2=Decrease; 3=Constant)**	**Accessibility (1=Increasing; 2=Decreasing; 3=Constant)**	**Reason(s)**
Wildlife species richness			
Wildlife relative abundance			
Abundance of trees			
Medicinal plants/trees			
Spiritual sites numbers			
Livestock species			
Habitat varieties			
Dry season grazing reserves			
Watering points			

4.3 Which strategy(s) do you perceive can address the long term changes experienced in biodiversity in this area?

……

5.0 Human wildlife conflicts

5.1 Do you consider wildlife as a? (1) Benefit (2) Liability/Cost (3) Both

5.2 Identify human wildlife conflicts in your area and rate their prevalence:

Type of conflict	**Wildlife species involved**	**Prevalence (1=High; 2=Moderate; 3=Low)**	**Season (1=Wet; 2=Dry; 3=Both)**
Livestock predation			
Human injury and loss of human lives			
Property destruction (crops andfences)			

Codes for animal species: (1) Elephant (2) Hyena (3) Lion (4) Leopard (5) Cheetah (6) Jackal (7) Wild dogs

5.3 Have you ever been compensated against the following? (1) Yes (0) No If yes, please fill in the table below:

Damage/Loss	**(1) Yes (0) No**	**Amount paid (Ksh)**	**When compensated(year)**	**Who compensates**
Livestock depredation				
Property damage				
Human injuries/life loss				

5.4 If No, what is the reason(s)? Please list…….....

6.0 Access to services and amenities

6.1 Do you have access to loans and micro-credit facilities? (1) Yes (0) No

6.2 If yes, what is the source? ……

6.3 Do you use M-Pesa services? (1) Yes (0) No

6.4 If yes, have you ever got a micro-loan from them? (1) Yes (0) No

6.5 Do you have access to the following amenities? Please fill in the table below:

Facility	**(1) Yes (0) No**	**Distance from homestead (km)**
Health facilities		
Formal/informal markets		
Water		
Education/schools		
Tarmac road		

6.6 According to you, how has the conservancy/Group Ranch performed in the following areas so far?

Area	**Rank (1=Very poor; 2=poor; 3=Fair; 4=Good; 5=Excellent**
Environment conservation	
Health services provision	
Indigenous people employment	
Grazing management	
Conflict resolution (conservancy-related)	

7.0 Institutional capacity development

7.1 Have you got any training on how to conserve natural resources in your area? (1) Yes (0) No

7.2 If yes, who provided the training? ..... Frequency? …… Cost……. (Ksh)

7.3 Has the training been beneficial so far? (1) Yes (0) No

7.4 Please rate the performance of institutions in partnerships for natural resources conservation, management and use in addressing the following socio-economic and ecological issues in your region:

Issue	**Performance (1=Poor; 2=Good; 3=Excellent)**	**Priority (1=Not important; 2=Important; 3=Extremely important)**
Economic		
Inadequate financial services (Loans)		
Poor infrastructure (roads)		

Ecological		
Droughts		
Diseases		
Invasive flora species		
Social		
Employment		
Insecurity		
Support for education		
Compensation for losses incurred		

THANK YOU FOR YOUR TIME!

KEY INFORMANT INTERVIEW GUIDE

Country: KENYA			
County:		**Division:**	
Date of interview		**Duration of interview:**	
Key informant interviewed: (Government official, local chief, NGO/CBO representative, conservancy leader)	**Name of the organization**		
	Title of the informant		
Name of the interviewer:			
Name of the note-taker:			

Introduction

The aim of this study is to assess the role of Public-Private Partnerships in conserving, managing and utilization of natural resources in the northern ASALs of Kenya. The proposed baseline has the following components; the organizations' formation, their operations and challenges encountered.

Organizations and institutions formation:

a) What is your view on the current status and formation of organizations for natural resource management in this county?
b) What is your take on the property rights regimes and the scales of operations of these natural resource management organizations?
c) What do you think are the challenges encountered by institutions in public-private partnerships for natural resources conservation, management and use in this county?
d) What is your take on community involvement in conservation initiatives and their perceptions on partnership arrangements?

Compensation and natural resources management in pastoral ecosystems:

a) What is the existent compensation amount for human injuries, deaths, property destruction and livestock depredation? Sources of this information?
b) Are you aware of payments as incentives and as compensations? Please elaborate?
c) What is your take on egalitarian versus individual compensations/payments?
d) What do you think of pastoral communities' arrangements with natural resource management organizations with respect to the resources that communities commit in terms of land, labour, and other resources?
e) What do you think can be done to improve the effectiveness and enforcement of compensation arrangements with regards to natural resources conservation, management and use?

Effectiveness of institutions/organizations in managing natural resources:

a) What is your take on biodiversity trends over the years with respect to efforts of organizations in overseeing resources management?

b) Do you think natural resource management organizations are doing enough with respect to ensuring communities' access to basic services and income improvement?
c) What are the network arrangements that pastoral communities use to mitigate natural disasters such as droughts?
d) What is your take on human-wildlife conflicts and the level of communities' tolerance to these incidences?
e) What is your take on the ability of individuals to hold property, property rights and the right to seek employment in these institutional settings without discrimination?
f) Are there any negative functioning that affect the well-being of stakeholders involved in natural resources conservation, management and use in this county?

Legitimacy of organizations in managing natural resources:

a) In the phase of the changes being experienced in this region, do you think natural resource management institutions/organizations stand a chance in protecting this region's biodiversity?
b) What is your take on the distribution of costs and benefits in these organizations?

CHECKLIST FOR FOCUS GROUP DISCUSSIONS ON INSTITUTIONS IN PUBLIC-PRIVATE PARTNERSHIPS FOR NATURAL RESOURCES CONSERVATION, MANAGEMENT AND USE IN SAMBURU COUNTY, KENYA

Objective: Characterize distinct types of partnerships existent and identify mechanisms facilitating the formation of PPPs for natural resources conservation, management and use.

- What types of institutional arrangements are existent currently? Five and ten years ago?
- What networks for natural resources management and use governed or existed before the current partnership arrangements?
- Property rights regimes in which the organizations operate?
- Trends in their scale of operations?
- Legal, institutional, cultural and operational challenges facing the partnerships.
- Mechanisms for revisiting and making changes to signed agreements?
- Monitoring and evaluation of the organization activities? Frequency? Criteria used?

Objective: Establish the effectiveness of the partnerships based on environmental stewardship as well as human well-being objectives.

- Trends in the changes in ecosystems and the organizations' management decisions on both flora and fauna species.
- Changes pastoral communities' income levels as a result of organizations.
- Access to basic services like schools, hospitals, clean water, roads, markets, loans and micro-credit facilities.
- Communities' social interactions and non-discrimination based on ethnicity, religion or sex.
- Communities' attitudes towards conservation initiatives and tolerance of human-wildlife conflicts?
- Negative functioning or challenges affecting individuals' well-being?
- Along gender lines, ability to inherit and hold property, and having property rights on equal basis with others.
- Empowerment and the right to seek employment on an equal basis?

Objective: Examine equity and legitimacy of the partnerships based on distributive effects and representational issues.

- Democratic procedures
- Benefit sharing procedures
- Size, diversity and access to information?
- Roles and responsibilities?
- Perceived fairness?
- Challenges encountered?

TOURISM INVESTORS INTERVIEW GUIDE

1. When was this eco-tourism venture started? (A brief history)

2. What were the requirements for the formation of this eco-tourism enterprise?
   a) _____
   b) _____
   c) _____
   d) _____
   e) _____
   f) _____
   Any other requirements legal or otherwise (kindly explain)
   _____
   _____

3. Who initiated this kind of enterprise?
   - Community
   - Conservation donors
   - Private investor
   - Government

4. Who oversees the day to day running of this tourism enterprise?
   _____

5. What does the governance structures of the enterprise look like / how is it run? (Decision making/ give a hierarchy of management and the role of each.)
   a) _____
   b) _____
   c) _____
   d) _____
   e) _____

6. How is dispute resolution undertaken?
   _____
   _____

7. What challenges do you face in the running of this eco-lodge?.....
   .....

ACTIVITIES

8. What was the cost of putting up this facility/ enterprise)?
   _____
9. How many tourist facilities do you have within this conservancy? _____
10. What is the bed capacity of that facility? _____
11. Do you have camping sites within that the conservancy? Yes/no
    If yes, how many_____
12. How many employees does the eco-tourism venture have? _____

No.	occupation	number
a)	Managers	
b)	Cooks	
c)	Driver	
d)	Waiters	

e)	House keepers	
f)	Tour-guides	
g)	Security /guards/rangers	

13. Insert your daily activities in the table below (in order of sequence and by whom, how long in a normal day)

Item	activity	By whom /who does it	How long/hours
a)			
b)			
c)			
d)			
e)			
f)			
g)			

14. Are the employees permanently employed or hired on a contractual basis?
15. Are they from the locality or outsiders? _____
16. What is the basis of employment in the eco-tourism venture? (what are the considerations)_____
_____
_____
_____
17. Does the facility have tourist vans/vehicle? yes /no
    a) If yes How many? _____
    b) If no, How do you run the business_____
_____
_____
18. What is the overall operation/management cost for running the facility?
_____Ksh (annually)

no	Item	Cost/annually	Cost /month
a)	Employees maintenance and salaries		
b)	Facility maintenance		
c)	Vehicle maintenance		
d)	Others (specify)		
e)			
f)			

19. What is the amount of income this enterprise generated last year (2017), and 2016? Ksh……

BENEFITS SHARING

20. Does the community benefit from the venture? Yes /no_____
    a) If yes, list several ways it benefits/

I. _____
II. _____
III. _____
IV. _____
V. _____

b) If no why(explain in few words)_____
_____
_____
_____
_____
_____

RESEARCH PERMITS

THIS IS TO CERTIFY THAT:
MR. KLERKSON OKOMBOLI LUGUSA
of MCGILL UNIVERSITY, 888-100 Nairobi,has been permitted to conduct research in *Isiolo , Laikipia , Marsabit , Samburu Counties*

on the topic: *INSTITUTIONS IN PUBLIC-PRIVATE PARTNERSHIPS FOR NATURAL RESOURCES CONSERVATION, MANAGEMENT AND USE: A CASE STUDY OF THE NORTHERN RANGELANDS OF KENYA*

for the period ending:
16th January,2019

.....
Applicant's Signature

Permit No : NACOSTI/P/18/85991/20350
Date Of Issue : 16th January,2018
Fee Recieved :Ksh 2000

.....
Director General
National Commission for Science, Technology & Innovation

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2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
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REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No.A 17101

CONDITIONS: see back page

NATIONAL COMMISSION FORSCIENCE, TECHNOLOGY ANDINNOVATION

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NAIROBI-KENYA

Ref: No. **NACOSTI/P/18/85991/20350**

Date: **16th January, 2018**

Klerkson Okomboli Lugusa
McGill University
CANADA.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Institutions in public-private partnerships for natural resources conservation ,management and use: A case study of the northern rangelands of Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **selected Counties** for the period ending **16th January, 2019.**

You are advised to report to **the County Commissioners and the County Directors of Education, selected Counties** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

BONIFACE WANYAMA.
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioners
Selected Counties.

The County Directors of Education
Selected Counties.

McGill

Research Ethics Board Office
Faculty of Agricultural and Environmental Sciences

Macdonald Campus
21 111 Lakeshore
Saint-Anne-deBellevue, QC H9X 3V9
Email: lynda.mcneil@mcgill.ca Tel: (514)398-6831
Website: www.mcgill.ca/macdonald/research/compliance/human/

FAES Research Ethics Board
Certificate of Ethical Acceptability of Research Involving Humans

REB File #: 213-1017

Project Title: Institutions in Public-Private Partnerships for Natural Resources Conservation, Management and Use: A Case Study of the Northern Rangelands of Kenya

Principal Investigator: Klerkson Okomboli Lugusa **Department:** Natural Resource Sciences

Status: Ph.D. student **Supervisor:** Prof. Nicolos Kosoy

Approval Period: November 21, 2017 –November 20, 2018

The FAES REB reviewed and approved this project by delegated review in accordance with the requirements of the McGill University Policy on the Ethical Conduct of Research Involving Human Participants and the Tri-Council Policy Statement: Ethical Conduct For Research Involving Humans.

Lynda McNeil
Associate Director, Research Ethics

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* Approval is granted only for the research and purposes described.
* Modifications to the approved research must be reviewed and approved by the REB before they can be implemented.
* A Request for Renewal form must be submitted before the above expiry date. Research cannot be conducted without a current ethics approval. Submit 2-3 weeks ahead of the expiry date.
* When a project has been completed or terminated, a Study Closure form must be submitted.
* Unanticipated issues that may increase the risk level to participants or that may have other ethical implications must be promptly reported to the REB. Serious adverse events experienced by a participant in conjunction with the research must be reported to the REB without delay.
* The REB must be promptly notified of any new information that may affect the welfare or consent of participants.
* The REB must be notified of any suspension or cancellation imposed by a funding agency or regulatory body that is related to this study.
* The REB must be notified of any findings that may have ethical implications or may affect the decision of the REB.

PHOTOS OF PLAQUES FOR RESEARCH PARTICIPATING CONSERVANCIES

Source: Lugusa, fieldwork (2018)