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The Evolution of Collective Land Access Regimes in Pastoralist Societies: Lessons from East African Countries

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Executive Summary

A large majority of land held under collective tenure regimes in East Africa is located in areas characterised by arid and semi-arid conditions such as high temperatures and low rainfall. These lands occupy vast territories and are mainly inhabited by pastoral communities who practise extensive livestock production systems that are well-suited to these conditions.Collective land tenure systems not only facilitate this type of livestock keeping, they also play a key role in determining the social, economic and political status of pastoral communities.

This study examines the evolution of collective land tenure regimes in East Africa including how they affect pastoral communities living on these lands. Specifically, we attempt to identify the drivers and impacts ofchanges in collective land access since the 1900s.

We begin by synthesising regional evidence onEast Africa's pastoral communities before examining changes in collective land tenure regimes in Kenya using existing literature, secondary data, and primary data collected in nine communities.

In order to isolate the drivers and consequences of change, we focus on three types of collective land tenure regimes, namely un-adjudicated communal lands and two types of group ranches - those that are intact and those that have been subdivided. We then present data collected from three communities operating each land tenure regime so as to provide representative evidence of the Kenyan case.

Based on this evidence, we analyse the changes in these land tenure regimes across four periods from the colonial era to post-independence, through the structural adjustment period to present day, and provide a discussion around the drivers and effects on pastoral communities and their livelihoods.

We develop five hypotheses about the key drivers of change in collective land access regimes relating to social, economic, demographic, urbanisation and market conditions.Following the works of Collier (2011), Benett (2010) and van Evra (1997), we use the theory testing process tracing method to test these hypotheses using data collected on in nine Kenyan communities and evaluate whether these cases provide sufficient evidence to affirm or reject these hypotheses.

We find that land individualisation and privatisation policies implemented during the colonial period and maintained by post-independence governments have not yielded the desired outcomes, especially in areas where land is accessed collectively. These policies aimed to transform the livelihoods of pastoral communities, limit livestock numbers, improve breeds and, ultimately, bring an end tothe migratory nature of extensive livestock production. However, these policies failed because, on the one hand, the government perceived the pastoralists' extensive livestock production systems as retrogressive and as such aimed to modernise them through individualising and privatising land tenure, which it was believed would increase productivity and profitability. On the other hand,

communities wanted to secure their rights to ancestral grazing lands and prevent their land from being claimed by outsiders, hence the move by the government was seen as violating thei rtraditions and way of life and as increasing competition for their land. We also find that un-adjudicated communal land mainly faced challenges associated with common pool resources, such as overuse, while group ranches suffered primarily from mismanagement.

Our analysis shows a growing trend towards individualisation of land in pastoral areas triggered by a combination of factors including the potential for change in land use, proximity to urban cities and large-scale infrastructural developments, and the nature of community mechanisms for accessing collectively owned land and other resources. Where prospects for changing land use emerged due to proximity to urban areas or potential for crop agriculture, and land was not equitably accessed among community members, the land was more likely to be individualised. We also find that demographic change and access to markets on their own do not explain the changes observed in collective land access regimes.

The evidence also shows that changes in collective land access regimes created winners and losers. The winners were individuals outside pastoral communities who were able to purchase prime land i.e. located near urban cities or arable, and the local elite including wealthy and connected pastoral households who acquired larger parcels of land and land in favourable locations resulting from the subdivision of group ranches. Losers were less wealthy pastoral households which included widows who were given small parcels of land and land in drier locations after subdivision, and descendants of pastoral households who sold off their land or who lost grazing land and were unable to find alternative sources of income. In addition, where collective land was individualised,extensive grazing areas were lost and this has created pressure on public land, mainly natural reserves, game parks and forests. This has exacerbated human wildlife conflict and hindered environmental conservation efforts.

Based on this analysis, we argue in favour of the maintenance of collective access to land especially in pastoral areas where extensive livestock production systems provide key economic and social benefits. As such, it is recommended that customary laws be included in legal frameworks. We expect that this will enable communities to enforce customary laws that will protect and improve management of their land. In addition, we recommend higher investments in the provision of public goods, such as schools, infrastructure, livestock markets, and veterinary services in pastoral areas to bridge the social gaps with other communities and strengthen the transparency, accountability, and inclusiveness of community governance mechanisms.

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Acronyms

AFC	Agricultural Finance Corporation
AGMs	Annual General Meetings
ALDEV	African Land Development programme
CCROs	Certificates of Customary Rights of Occupancy
CLA	Community Land Associations
CPR	Common Property Resource
CVLs	Certificates of Village Land
FGDs	Focus Group Discussions
HDI	Human Development Index
KLDP	Kenya Livestock Development Project
LAO	Land Adjudication Office
LAPSSET	Lamu Port South Sudan Ethiopia Transport Corridor
LMD	Livestock Marketing Department
MDGs	Millennium Development Goals
MTA	Military Training Area
NRT	Northern Rangelands Trust
TAZARA	Tanzania Zambia Railway

1. Introduction

During the 1970s and 1990s, multilateral agencies and governments in many developing countries promoted land market liberalisation policies based on bestowing individual property rights, as part of a wider policy programme based on structural reforms. It was believed that market forces were the key to increasing access to land and improving rural livelihoods. Top among these policies was land titling (or land registration), as a means to assure land tenure security and, thus, improve rural livelihoods.

Emerging literature, in contrast, suggests that maintaining collective land access rights may have positive effects on rural livelihoods. First,land liberalisation policies have generated land concentration and fostered social inequalities (Jansen & Roquas, 1998; Ghimire, 2001; Zoomers & van der Haar, 2001; Lohr, 2012);marginalised poor communities have low ability to participate in land markets (Toulmin, 2005; Lohr, 2012); and land liberalisation policies have not necessarily led to increased investment, production and access to credit amongst these communities (Atwood, 1990; Deininger & Binswanger, 1999; De Janvry & Sadoulet, 2001; Zoomers & van der Haar, 2001; Place, 2009; Obeng-Odoom, 2012). Secondly, communities with collective land access might benefit from economies of scale in production, spread the risks and avoid costs of enforcing individual property rights (Nugent & Sanchez, 1998; De Janvry & Sadoulet, 2001). Additionally, collective land access can ensure greater access to resources for the poor and control over common resources and lay the foundations for the development of systems of mutual insurance through cooperation (De Janvry & Sadoulet, 2001; Zoomers & van der Haar, 2001).

Collective land access is a salient form of tenure in East African countries, with 67% of land in Kenya, 50% in Tanzania and 40% Uganda controlled under customary systems (KNBS, 2014; Government of Uganda, 2013; USAID, 2010). A large proportion of land under collective access regimes in these countries is inhabited by pastoral communities. These communities have lived on these lands since the pre-colonial period and share a number of characteristics[1]. For instance they live in an environment which is mainly suitable for livestock where they use extensive production systems; they have historically practised nomadic pastoralism; they havea strong cultural identity that defines their social and economic systems; they have faced similar land adjudication systems during the colonial period; they have faced economic exclusion from successive government administrations resulting in economic and social inequalities; they have undergone a period of state-led interventions in land tenure reforms, provision of public goods and interventions in production and marketing systems; and currently they face different pressures to their collective land tenure regimes including public funded mega projects and the alienation ofcommunal lands to private use. For example, communal land has

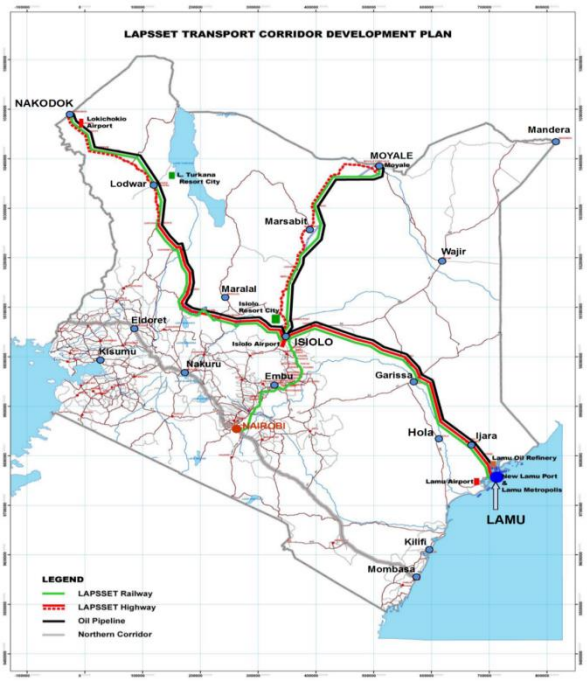
[1]Much of the history before the colonial period is not documented, instead African communities shared their history from one generation to the next through word of mouth.

been allocated to private individuals in Kenya (Government of Kenya, 2004), for mineral exploitation in Uganda (Owor et al., 2015), and to private large-scale land developers in Tanzania (Lekaita et al., 2014).

Although pastoral communities have maintained their customary land access practices alongside national legal frameworks, they are now pushing for regulations to secure their land tenure as well as other policies that are likely to have a positive effect on their livelihoods including legal recognition of customary laws. This pressure has grown as a result of tensions around communal land resulting from the implementation of mega projects and increasing awareness of communities concerning their rights, especially rights for minority groups. Examples of public funded mega projects being implemented in communal lands include the Lamu Port South Sudan Ethiopia Transport (LAPSSET) corridor[2], the Northern Transport Corridor in Kenya[3] and Uganda, oil exploration in Uganda and the Mtwara and Tanzania Zambia Railway (TAZARA) development corridor in Tanzania (see Figure 11 below). Compensation to these communities for loss of land has mainly been overlooked,yet there has been direct negotiation with private owners in cases where private land has been affected by these projects. Against this backdrop, East African governments have been pressured into initiating policy discussions aimed at improving land use and livelihoods for communities in areas where land is accessed collectively. For example, in Kenya, new land policies are under debate and include the Community Land Bill which proposes to secure communal land tenure and promote investments in improving land management and livelihoods in areas where land is owned and accessed communally.

Figure 1: Transport Corridors in Kenya

[2]LAPSSET corridor projects include the Lamu Port, construction of a railway line, highway, crude oil pipeline, product pipeline, oil refinery, three resort cities, airports and a mega dam.
[3]The northern transport corridor involves construction of a standard gauge railway line covering Kenya, Uganda, South Sudan and Rwanda.



Source: LAPPSET Corridor Development Authority

Previous studies on collective access to land in East Africa have mainly focused on specific regimes, while others have compared land tenure systems to identify the conditions within which different systems are effective, specifically with reference to land liberalisation policies. Even in the face of these policies, communities in East Africa have been able to maintain various regimes of collective land access which have evolved over time and differ across communities and regions. Therefore, there is a need to understand the drivers of change in collective access to land in relation to different geographical regions and across different conditions and cultures. This will be of great relevance to the current policy debate, especially given that communities that have maintained collective land access regimes are usually minorities with limited political power to influence policy. Our research aims to provide answers to our main research question: how have collective land access regimes in East African countries, specifically Kenya, changed over time? Our methodology will allow us to explore the main drivers of these changes, compare these changes and their triggers across different communities and regions and explore how these changes affect or are likely to affect communities' livelihoods.

2. Research Design and Methods

It is conceivable that collective land access regimes have changed in East African countries over time given the region's political background. During the 1900s, colonial powers executed land adjudication using force and laws. In the post-colonial period (early 1960s and 1970s), a period of state-led development initiatives was followed by structural reforms (1980s and 1990s) that promoted market-based development pathways. It is expected that these factors may have influenced collective land access practices amongst pastoralist communities. However, other influences may also have played a role. For example, in Kenya, some policies concerning collective access to land have been modified in response to changing economic, cultural and social dimensions of communities that depend on communal land.

The major objective of our research is to answer the question: how have collective land access regimes in East African countries, specifically Kenya, changed over time? In particular, we seek to examine:(i) the factors that explain these changes, and (ii) the implications of these changes for the livelihoods of pastoralist communities.

Our unit of analysis is the regimes that govern land tenure in pastoralist societies. We analyse the changes in these land tenure regimes from the colonial period in the 1900s to present day, including the drivers and impacts on pastoral communities. To achieve this, we begin by synthesising regional evidence to understand the context around pastoral communities in East Africa. We then identify three types of collective land regime and explore three case studies per type based on primary data collection among nine communities in Kenya.

The general approach to our study is drawn from an extensive review of literature on collective land tenure regimes in East Africa supplemented by qualitative analysis of secondary data and primary data collected using Focus Group Discussions (FGDs). Specifically, we use the theory testing process tracing method (Collier, 2011; Beach & Pedersen, 2012; Punton & Welle, 2015) for our analysis and to identify causality. This method is suitable because the outcomes of changes in collective land access regimes and some of the drivers of these changes are known to us. However, these factors may not provide a complete explanation since other drivers may trigger a chain of responses that lead to the observed changes. This method has several additional advantages. First, while it is expected that the changes in collective land access have been caused by a number of factors, this method will help us identify the combination of conditions that were necessary to induce these changes. Secondly, this method will allow us to establish and test for causal inference among these factors. Finally, this method allows us to test which intervening variables were important for observed changes in the dependent variable by establishing whether the intervening variables were necessary or sufficient or both to have caused the observed changes.

2.1 Key Concepts and Typology of Land Tenure Regimes

Generally, land that is accessed collectively has attributes of a Common Property Resource (CPR)[4]. These include non-excludability i.e. it is difficult to exclude potential beneficiaries from using the land even when they do not participate in its maintenance, and use of the resource by one person does not limit its use by another. As such, land under collective access is likely to suffer from overexploitation common amongst CPRs (Hardin, 1968).

To avoid the 'tragedy of commons' in land accessed collectively, institutional arrangements that establish relationships among people, as individuals or groups, with respect to land are a necessity. These arrangements are essentially understood as land tenure regimes which define an enforceable set of rules, rights, and duties that apply to the beneficiaries of these resources (Ostrom, 1990).

A property right is the authority to have ownership and control over a resource. In the case of communal land access, a variety of property rights can be held by different people or groups and this has given rise to the concept of 'bundle of rights'. We define this bundle of rights using a simplified characterisation proposed by Schlager & Ostrom (1992), which distinguishes among diverse bundles of rights that may be held by different users of CPRs. According to this scheme, individuals engage in both operational and collective-choice levels of action, both of which are governed by a set of rules. Collective-choice action refers to ownership or control of the CPRs and includes rights of management, exclusion and alienation. Operational-choice action refers to rights of access and withdrawal (use) of a CPR.

We differentiate property rights that can be held by an individual or collectively as a group. This allows us to develop a matrix that depicts the various combinations of choice actions that characterise land tenure regimes in East Africa, showing how either individuals or groups control or access land (Table 1).

Table 1: Land Access Regime Typology for East Africa

	Operational-Choice Action (access and withdrawal)	
	Individual	***Collective***

[4]Common Property Resources can be defined as a natural or human-made resource system, the size and characteristics of which make it costly, but not impossible, to exclude potential beneficiaries from obtaining benefits from using the resources such as extensive grazing land.

Collective-Choice Action (ownership and control)	***Individual***	Private tenure	
	Collective	Group Ranch B	Group Ranch A Un-adjudicated communal land

Un-adjudicated communal land is land where no adjudication had taken place and land boundaries are established following a community's customary practices. These boundaries are not binding and are subject to conflict, however, in general, they are respected by the government during the establishment of public administrative units in these areas.

A group ranch is a defined area where the land is owned collectively by a group of individuals. Group Ranch A refers to land for which access, ownership and control has been granted to a group, and the group acts together in accessing the land. Group Ranch B refers to collectively owned land where individuals act independently in making decisions around access and use.

2.2 Analysing Change in Collective Land Tenure Regimes

Our analysis dates back to the colonial period during the 1900s. We divide this framework timeline into four periods: the colonial period (1900-1960), the post-independence period (1960-1980), the structural reform period (1980-2000) and 2000 to present day. Each period contains a combination of land tenure regimes, which evolve as they move into the next time period. We then identify the drivers of change in land tenure regimes and the effects on our case study communities using existing literature and secondary data, which is cross-checked with information gathered through FGDs. Additionally, we use existing literature and secondary data to contextualise our case studies at each point in time.

Specifically, we intend to trace the drivers of change and how they led to the observed evolution of land tenure regimes. We categorise the major drivers of change in land tenure regimes as economic, social and institutional. We intend to show whether these factors function in combination since we are aware that on their own, they may be insufficient to induce the changes we observe.

Table 2 presents the changes in collective land tenure regimes observed over time (from 1900 to date), with the arrows indicating specific evolutions between different land tenure regimes. For example, initially communal land was un-adjudicated in the colonial period. In the post-independence period, group ranches were established, leading to the existence of two types of collective land tenure regime: Group A Ranch and un-adjudicated land.

Table 2: Changes in Collective Land Tenure in Kenya

		Operational-Choice Action (access and withdrawal)	
		Individual	***Collective***
Collective-Choice Action (Ownership and control)	***Individual***	Private tenure	
	Collective	Group Ranch B	Group Ranch A Un-adjudicated communal land

2.3 Data Collection Methodology

First, we selected counties in Kenya inhabited by pastoralists.[5]These were Narok, Kajiado, Samburu and Laikipia in the Rift Valley region and Isiolo in Eastern region. We then identified, with the help of County Lands Adjudication Officers, existing collective land access regimes described in Table 1 in these counties and randomly picked communities as case studies in each county. We initially selected 10 communities, two in Narok, Kajiado and Samburu, three from Isiolo, and one from Laikipia. However, we were forced to cancel one community meeting in Samburu due to security issues.

Primary data was collected through nine FGDs; one in each of the communities listed above. We first developed a checklist of the information we aimed to collect, including demographics, cultural and social characteristics, education levels, pastoral practices, marketing, and group formation, composition and management in communities with group ranches. Between 15 and20 people participated in each FGD, which were attended by local leaders including local chiefs and their assistants, county government leaders, officials of group ranches (in communities where group ranches had already been formed), and land officials from the local Land Adjudication Office (LAO). In addition, we collected secondary data on economic and social indicators for each community. This was supplemented with regional level secondary data obtained from the Kenya National Bureau of

[5]We excluded communities in the northern part of Kenya because of security reasons at the time of data collection. In Kenya, pastoral communities are clustered in administrative regions known as counties, wards and locations. These were known as districts, divisions and locations in the old constitution. The new national constitution promulgated in 2010 re-drew the administrative boundaries. This clustering enables us to combine qualitative and quantitative data where possible.

Statistics. We used descriptive statistics to show different social, demographic and economic characteristics of our selected communities, to contextualise each case and allow for comparison.

2.4 Hypotheses

We developed five hypotheses about the key drivers of change in collective land access regimes. These hypotheses were tested by using the theory testing process tracing method (Collier, 2011; Beach & Pedersen, 2012; Punton & Welle, 2015) outlined in section 4. We subject the evidence regarding these hypotheses to sufficiency and necessity conditions, with implications for rival hypotheses if confirmed or rejected. The hypotheses are as follows:

1) Social conditions: Although maintaining collective land access would protect more vulnerable actors and prevent land concentration, in situations where high inequality exists it becomes difficult to maintain collective land access.

2) Economic conditions: Natural resource economic theory argues that under growing commercial pressure, the shadow price of land will increase making it attractive to investors. This, in turn, will increase demand for individual land property rights. We argue, however, that this depends on the kind of activity that can be developed on the land. The hypothesis posited by natural resource economic theory is mainly related to geographical conditions conducive to intensive agricultural production i.e. not mountain or semi-arid environments where pastoralists live. Thus, in a context where land can accommodate intensive use, particularly crop production, maintenance of collective access to land may not be feasible.

3) Demographic conditions: Economic theory argues that a growing population puts pressure on natural resources such as land. This, in turn, increases competition over land as individuals seek to increase returns from production. Ultimately, this increases demand for individual land rights where property rights are easy to enforce. Under certain conditions, however, individual property rights can also be enforced under collective land tenure regimes. Thus, this hypothesis on its own may not be sufficient to explain changes in collective land tenure regimes.

4) Urbanisations conditions: As a result of urbanisation, large infrastructure developments or natural resource exploitation such as exploration for minerals it is argued that pressure on land will increase demand for individual and private ownership. This may not always be the case since community mechanisms and other factors that foster cooperation may have a role in maintaining collective rights to counter externalities created by such investments. Thus, in contexts where land accessed collectively is in close proximity to urban areas (mainly large cities or towns), large-scale infrastructure developments or natural resource exploitation, all

of which bring about urban growth, the pressure to change land use to meet urban expansion will negatively affect efforts to maintain collective access to land.

5) Market conditions: In contexts where there is limited access to infrastructure and markets or limited support to access markets, collective land access regimes are likely to be maintained to reduce transactions costs.

3. Regional Evidence Synthesis

The majority of communal lands in East Africa are located in arid or semi-arid areas. Due to high temperatures and low rainfall, these vast rangelands are generally unsuitable for rain-fed crop production; however, they are more amenable to livestock production, especially extensive production systems. Consequently, these lands are rich in wildlife and other natural resources such as forests. Pastoralist communities living in these areas rely on mobile and extensive livestock production systems which they use under customary land systems operating largely outside the legal frame works pertaining to land administration. Figure 2 below shows the geographic location of pastoral communities in East African countries. Most of these communities are located in arid and semi-arid areas receiving annual rainfall between 250-1000 mm.

Figure 2: Pastoral Areas in East Africa

Source: Fratkin, 2001

Table 3 shows land and population characteristics in Kenya, Uganda, and Tanzania. Tanzania has the

largest land area and population but the lowest population density. All three countries demonstrate similar population growth rates. The rate of urbanisation is highest in Kenya although Tanzania has the largest proportion of the population living in urban areas. Kenya had the largest land area under collective access, estimated at 67% in 2015.

Table 3: Land and Population Characteristics in East African Countries

	Kenya	Uganda	Tanzania
Total land area (Km²)	580,370	241,550	947,300
Total arable land	274,300	142,620	406,500
Total forest area (Km²)	34,450	28,116	326,212
Permanent crop land (% of land area)	0.9	11.3	2.4
% of land under collective access	67	40	50
Total national population	44,353,691	37,578,876	49,253,126
Annual population growth rate	3	3	3
Population density (people per Km²)	78	188	56
Urban population	10,990,845	5,801,051	14,872,474
Rural population	33,362,846	31,777,825	34,380,652
Annual urban population growth	4	5	5
Urbanisation rate (%)	25	15	30

Source: Data from World Bank, 2015

Evolution of Collective Land Access Regimes (CLAR) in East Africa

In describing the evolution of collective land regimes, we define four periods; the first being the colonial period. Kenya and Uganda were colonised by the British while Tanzania was first colonised by the Germans then the British. The second period is the post-colonial or independence era. East African countries gained independence at about the same time, Tanzania in 1961, Uganda in 1962 and Kenya in 1963. This period extends until the early 1980s. The third period is from the early 1980s to 2000. During this time, East African countries adopted market-based reforms that were spearheaded by multilateral agencies and financial institutions and which peaked in the 1990s. The final period is from 2000 to present day and is characterised by post-structural adjustment reforms, which place emphasis on human development. Subsequent to the ratification of the Millennium Development Goals (MDGs) by these three countries, key reforms in social, political and economic areas have taken place. We first provide a description of the evolution of collective land regimes in East Africa and then focus on the Kenyan case across the four time periods.

Countries in East Africa have faced a similar colonial history, with Europeans arriving to the region in the late 19thcentury. Pastoral communities such as the Maasai found in Tanzania, Turkana, Samburu and Borana in Kenya and Karamojong, Dodoth and Teso in Uganda were isolated by colonial land policies, which declared all the land in the colonial protectorate as crown lands. This effectively meant that the land belonged to the colonial government, although native communities continued to live on these lands (Rutten, 1992; Mugerwa, 1992; Sendalo, 2009). Furthermore, these communities were driven out of their best pasture areas, which had more rainfall and greater potential for crop

farming, into native reserves that had been created by the colonial powers. In Uganda, the Karamojong were driven out of their land in the north towards the border with Ethiopia as a deliberate strategy by the colonial government to prevent Italian influence. The Karamojong were also forced into the west towards the border with Kenya to create room for the Pokot who were driven out of the Western Highlands of Kenya (Ocan, 1994). It is estimated that the Maasai lost 60% of their land to British[6] and German settlers in Kenya and Uganda (Fratkin, 2001). Throughout the region, colonial policies favoured the establishment of individual and private land rights.

After attaining independence, Kenya, Tanzania and Uganda implemented different policies relating to collective land access regimes, although the objectives were similar. Tanzania embraced Ujamaa, or African socialism, which completely changed the property rights regime in the country. Under this system, all land was considered public with the President serving as a trustee for the people, so any property rights granted to people were in fact just land use rights. Previous rights granted to families and individual rights held under customary law were abolished. Customary land rights of ethnic groups and clans were transferred to the newly established and elected Village Councils, which were responsible for land allocation and management. During this process, most of the rural population was moved from scattered homesteads and individual holdings into Ujamaa (communal) villages for settlement and the rest of the land was set aside for large-scale collective farming (USAID, 2010). At this time, policies such as the Villagization Act of 1975 were geared toward sedentarisation of pastoralists.

With the change of government in 1985, Ujamaa policy was reversed. In its place, the new government implemented a gradual transition to the property rights and resource governance systems that are still being put in place to date. This transition meant that the new land policy enacted in 1995 supported private property rights (with the President acting as trustee for all citizens), permitted individual rather than collective control of resources in farming lands, and promoted private investment that utilised the country's natural resources for economic gain (USAID, 2010). The new land policy also recognised customary land laws, which had been abolished under the Ujamaa system. Notwithstanding, the policy attempted to address the land problem for pastoralists without establishing practical mechanisms for securing pastoral land tenure (Olengurumwa, 2010). The Land Act and the Village Land Act were passed four years later in 1999. The Land Act governs reserved land and general land. On the other hand, the Village Land Act 1999 sets out the rules governing village land, which it divides into three categories: (1) communal land (e.g. public markets and meeting areas, grazing land, and burial grounds); (2) occupied land, which is usually an individual holding or grazing land held by a group; and (3) vacant land, which is available for future use by

[6]In Kenya, the Maasai were pushed out of their best pasture lands which were preferred by the colonialists into the then Maasai province which was traditional Maasai pastoral lands (Rutten, 1992).

individuals or communally held (specifically encompassing unoccupied land within the ambit of village land, as opposed to general land).

During the structural adjustment period (1980s and 1990s), focus on privatisation increasingly opened up rangelands to several external forces. There was a move towards alienation of pastoral lands by the government for economic activity or conservation, mainly because of misconceptions around pastoral land and resource use (Sendalo, 2009). In addition, large-scale land alienation occurred, particularly around Arusha, where vast areas of rangeland were leased out to large-scale farmers (Reid et al, 2005). The evolution of land laws in Tanzania has formed part of broad economic liberalisation policy supported by donors and the World Bank Group (Sendalo, 2009).

While the Village Land Act was passed in 1999, implementation of the law did not start until 2004/2005 (Fairley, 2012). Villages obtained Certificates of Village Land (CVLs), while the residents within the villages were issued with Certificates of Customary Rights of Occupancy (CCROs). CCROs can be held jointly or individually, are perpetual and heritable, and may be transferred within the village or to outsiders with permission of the village council. Village land allocations can include rights to grazing land, which are generally shared. Reid et al (2005) noted that village land can also be allocated by the government if it is not registered or its use cannot be demonstrated. Therefore, in order to secure their title deeds, many pastoralists started cultivating. In addition, most of the rangeland areas in Tanzania have been categorised as reserved lands, that is, national parks, game reserves or game controlled areas, which makes them inaccessible for herders and their livestock.

After independence, Uganda maintained pre-existing land tenure systems. Among pastoral communities, customary land tenure systems prevailed. However, the country experienced civil strife between 1971 and 1986.[7] In 1975, the Ugandan government passed a decree abolishing all previous ownership rights and declared that all the land belonged to the state. All individuals occupying land under customary tenure were allowed to obtain long term leases (Government of Uganda, 2013). Further changes in land tenure systems came after the promulgation of a new constitution in 1995 and the subsequent passing of a new Land Act in 1998, which re-established customary land tenure used predominantly in pastoral areas (Mugerwa, 1992).A new land policy was approved in 2013, mainly to address the challenges faced in implementing the 1998 Land Act. Currently, Ugandan law recognises customary land tenure systems under which land is held by individuals, families or communities. National laws also allow for the formation of Community Land Associations (CLA);groups that come together for the purposes of owning, holding and managing land.

[7]Uganda experience military rule from1971-78 and civil war between 1981 and 1986.

3.1 The Colonial Era before 1960:Alienation of Pastoral Communities from their Land and the Introduction of Land Tenure Rights (LTR)

Colonial authorities did not understand the migratory and extensive production systems of the pastoralist communities. Given the seasonal grazing patterns of these communities, their lands were perceived to be unutilised and were categorised as unoccupied reserves. Through the crown lands ordinances (first in 1902 then revised in 1915), this land was proclaimed property of the colonial government. Subsequent land policies such as the East African Royal Commission 1953-1955[8] and the Swynnerton Plan of 1954[9] posited private land tenure as the best form of promoting investment in land and improving productivity. Thus, these polices recommended that livestock farmers or pastoralists would benefit by transforming their productions systems to reflect those of crop farmers in high potential areas. They argued that individual tenure was a key step towards improving environmental conservation, reducing herd size and improving livestock breeds, thereby improving productivity.

In 1946, the colonial government formed the African Land Development (ALDEV) programme in Kenya which attempted to control grazing in Maasai pastoral areas. In Kajiado, the local administration resisted this and maintained free grazing rights in all areas of the district as the Maasai believed that land was a birth right accessible to all. This may have helped the Maasai community overcome the drought experienced in 1948 (Rutten, 1992). The colonial government, however, continued to establish grazing schemes, such as Kisonko in 1954, Matapato in 1957and Loodokilani in 1959, which exercised control over traditional pastoralist grazing methods. These schemes were unsuccessful due to two key factors: (i) drought forced the Maasai pastoralists to move out of the controlled grazing areas into other districts in search of pasture and water, and;(ii) the local elite, such as chiefs, teachers and other educated Maasai started to break away and establish private ranches (Rutten, 1992). In the 1950s, the colonial government started settling non-Maasai, mainly crop farmers, in traditional Maasai areas[10].

Another concern for the Maasai community was the establishment of game and natural reserves. Traditionally, there was no restriction on the use of these lands. With the development of tourism, game reserves such as the Amboseli and Nairobi National Parks, located next to traditional Maasai

[8]This plan advocated land tenure policies promoting individualisation of land ownership and was implemented in all three countries.

[9]TheSwynnerton Planrecommended that to reap economic benefits from these lands, pastoral communities should adopt sound grazing management which included limiting the number of livestock, provision of regular outlets (markets) for the absorption of excess livestock, government investment in adequate and permanent water supply as well as pest and disease control.

[10]The non-Maasai were detained MauMau freedom fighters, mainly from the Kikuyu ethnic group, who at the time were leading a revolt against the colonial government.

grazing lands, were declared areas of national interest. To the Maasai, this meant their access to grazing land was effectively cut off.

By trying to limit the movement of pastoralists, the colonial government failed to recognise and understand the nature of the extensive livestock production systems they practised, which, through migratory practices, enabled communities to cope with the harsh environment where they lived and make the best returns they could from areas that often experienced low rainfall and provided poor pastures and water supply.

Furthermore, pastoralists kept large numbers of animals not because of the stereotype that they love association with large herds, but as a risk management strategy against losses arising from drought and disease outbreaks (Ocan, 1994). For instance, in the Maasai reserves and then in the Maasai province, the worst drought coupled with an outbreak of disease was recorded in 1891/92 when communities lost 90% of their livestock with further disasters of a similar magnitude recorded in 1929 and 1953 (Rutten, 1992). The colonial government also believed that the communal tenure systems discouraged investments in land as they were prone to land tenure insecurity.

3.2 The Post-Independence Era 1960 to 1980: Formalising Land Rights and Establishment of Group Ranches in Pastoral Areas

After independence, land was classified into three categories. First, government land which included natural forests, game reserves, and national parks. Secondly, private land which was registered to individuals and third, trust lands which were community lands and lands in the native reserves established by the colonial government. Trust lands were held by the local government (county councils) on behalf of the community in these areas. The trust lands were governed using the Trust Land Act cap 288, the Land Adjudication Act cap 284 and the Land Consolidation Act cap 283.

In 1965, the government formed a mission to find ways of enhancing land consolidation (as proposed in the Swynnerton Plan) and registration. The mission's report, famously known as the Lawrence Report 1966,is credited with recommending the establishment of group ranches in pastoral areas. This recommendation was that land should be owned communally by a registered group of people, animal movement was to be confined within the boundaries of the group's land,group members would be supported with credit to improve their livestock and the state would support the development of water points, provide extension services and disease control.

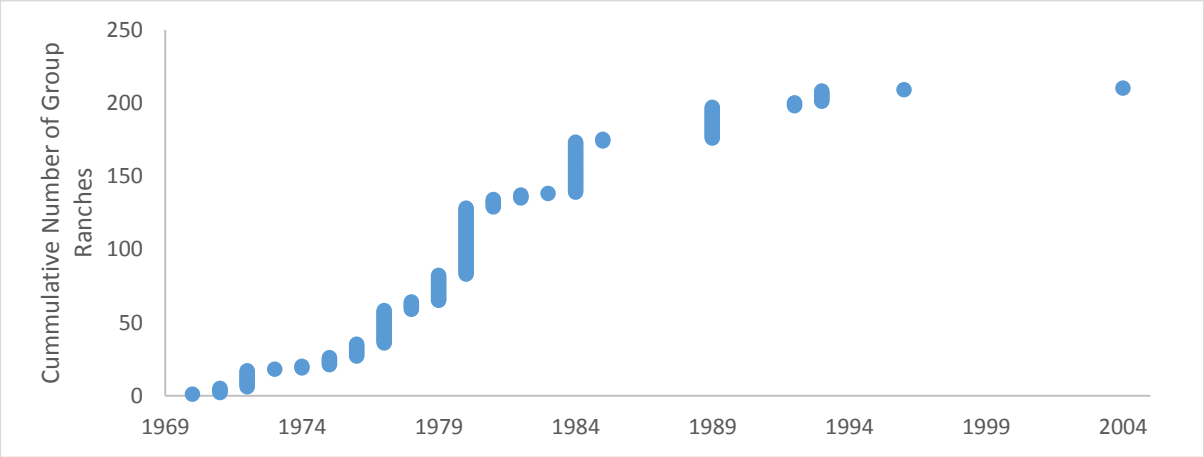
In the 1960s and 1970s, the Kenyan government received considerable support from donors and development partners for initiatives aimed at enhancing livestock production, as proposed in the Lawrence Report (Fratkin, 2001). The government began establishing group ranches in the Maasai area with the objectives of reducing animal numbers, stemming land degradation, transforming

pastoralism from subsistence to commercial livestock production and guarding against land consolidation by a few individuals and landlessness among pastoralists (Kimani & Pickard, 1998).

The Land (Group Representative) Act, cap 287, was enacted in 1967 to facilitate the establishment of group ranches. Supplementary laws included the Land Adjudication Act cap 284 and the Registration of Land Act cap 300.The process of group ranch formation started with members from a community coming together to register customary claims on a piece of land. If uncontested, the land would be declared as an adjudication section and the District Lands Adjudication Officer would then work with elders to establish boundaries. The land would be registered, with registered members as owners of a joint title deed. The group would elect leaders (group representatives) to manage the group ranch. The minimum number of members required was five, and the management was to be made up of between three and ten members. At that time, members were heads of households.[11] Women were not registered as members because of customary practices among pastoral communities.

The formation of group ranches started in the Kajiado District and quickly spread to other Maasai areas such as Narok and Laikipia, with other communities such as Samburu following thereafter. Figure3 shows that in Narok more than half (61%) of registered group ranches were incorporated between 1970 and 1980. In Kajiado, 35 group ranches covering 35% of the district area had been established by 1980 (Rutten, 1992).

Figure 3: Group Ranches in Narok County by Year of Incorporation



Source: Data from Lands Adjudication Office, Ministry of Lands, Housing & Urban Development, 2015

Government efforts to commercialise pastoralism included developing water points, roads, and access tracks, as well as providing credit. The water points were aimed at ensuring that pastoralists adopted a sedentary livelihood, while credit was provided to farmers through the Agricultural Finance Corporation (AFC) to improve cattle breeds. The government also invested in extension advice to

[11]See Lesorogol, 2002, on the procedure of group ranch formation.

help pastoralists manage their land and pasture. This was done through various projects such as the Kenya Livestock Development Project (KLDP)[12]phases I (1968-1973) and II (1974-1980). The KLDP projects were aimed at commercialising beef production, facilitating disease control and helping pastoralists transit from subsistence to commercial livestock production. In addition, other government agencies such as the Livestock Marketing Department (LMD) and Kenya Meat Commission were set up to improve marketing.

The motivation to form group ranches on the part of the community was very different from that of the government. The Maasai had signed treaties with the colonial government to exclusively occupy the Maasai province (Kajiado and Narok). Fearing that attaining independence would bring an end the treaties, they accepted the group ranch concept to protect their land (Rutten, 1992; Veit, 2011; Lesorogol, 2002). In addition, pastoral communities were not resistant to the idea of disease control and provision of water which were part of the package linked to the establishment of group ranches.

The implication of the Trust Land Act cap 288 was that county councils could allocate land to residents as well as non-residents. This was based on the constitution that gave the right to any Kenyan to own land anywhere in the country. As such, no citizen could be denied land that was in trust as it was treated as 'unclaimed' land. Second, although the county councils acted as trustees, in practice, they allocated land without consulting the community. This, in later years, was another key motivation for communities to form group ranches, to stop their customary land from being claimed and allocated to people who were considered 'outsiders' (Lesorogol, 2006.)

3.3 Structural Reforms in the 1990s and 2000s: The Collapse of Group Ranches

By 1990, collective land access regimes were broadly categorised into two types: group ranches and un-adjudicated trust lands. Many pastoral communities had established group ranches. However, as explained earlier, there were conflicting objectives for the state, on the one hand, and pastoralists on the other. From the government's perspective, group ranches were a mechanism to reduce numbers of livestock and help conserve the environment, and they also provided a pathway to higher incomes and improved livelihoods (Ng'ethe, 1993). This could be achieved because, theoretically, each member held an equal share in the group title hence each member had equal entitlement to land use. The group ranches were also to benefit from livestock off-take, thereby realising better prices for their livestock. On the other hand, pastoralists wanted to secure rights to their ancestral land and maintain their livelihoods. In addition, group ranches were perceived as offering cultural and social stability since people from other communities were excluded from the group ranch (Rutten, 1992; Ng'ethe, 1993; Lesorogol, 2002). Pastoralists had not envisaged commercial livestock production and the

[12] The KDLP offered the whole package, including the registration of group ranches.

transformation that the government had planned for them (Kimani & Pickard, 1998).

Pastoral communities used customary laws to manage the group ranches, and community elders were elected as officials. Other than using group by-laws to manage the group ranches, most of these leaders relied on customary laws and practices. For instance, most group ranches utilised the grazing fields collectively although each household grazed individually. In addition, group ranches did not impose a quota on the number of animals despite the fact that movement had become restricted. As explained earlier, pastoral communities such as the Maasai saw land as a common resource that is accessible to all members of the community. As such, each household continued to keep as many animals as they could, and when they exhausted their pasture or during drought, they would take their animals into national reserves, game parks or other collectively accessed lands, in search of pasture and water.

Other challenges to group ranches also emerged. First, there was a strong desire for individual title deeds mainly to secure development loans. Second, pressure was felt from young pastoralists who had not been registered as members since only heads of households had been registered. Third, there was considerable mismanagement of the group ranches by elected officials (Kimani & Pickard, 1998; Ng'ethe, 1993). This led to pressure to subdivide group ranches beginning in the mid-1980s and gathering momentum throughout the 1990s.

Other factors that increased pressure for the subdivision of group ranches were dynamics that emerged as the country developed such as population growth, urbanisation and changes in land use. Table 4 shows the changes in population between 1969 and 2014 for selected counties predominantly inhabited by pastoral communities.

In Narok County, population figures doubled from 1969 to 1979 and then quadrupled between1999 and 2009. Other areas that registered high growth rates are Kajiado and Laikipia counties while Samburu and Isiolo counties demonstrated modest growth rates. In Kajiado, the high growth rate is attributed to increases in the number of migrants, the majority of whom bought land for speculation. In the 2000s, most of the lands in the former Kisaju and Polka ranches were subdivided into very small plots and used as residential areas for the expanding Nairobi city. In Narok, the high population is also attributed to immigration. However, unlike in Kajiado, people migrated to Narok primarily for crop production. As the Maasai in Narok started leasing land, mostly on a large scale, new opportunities arose for people to work as farm labourers, later extending to people working in trade and services. A similar scenario unfolded in Laikipia.

Table 4: Population in Selected Counties from 1969 to 2014

	1969	1979	1989	1999	2009	2014*

Narok	125,219	210,306	398,272	365,750	850,920	1,128,131
Samburu	69,519	76,909	108,884	143,547	223,947	292,484
Isiolo	30,000	43,478	70,078	100,861	143,294	178,097
Laikipia	66,000	134,524	218,957	322,187	399,227	457,514
Kajiado	85,903	149,000	258,659	406,054	687,312	898,289

Source: KNBS and County Development Profiles, 2013 (*population projection based on 1999 census figures)

Kimani and Pickard (1998) found that group ranches in Kajiado District (in close proximity to Nairobi) were the first to be subdivided. Incidentally, these group ranches were located in areas with more rainfall compared to other group ranches in the district. They also subdivided their land into very small portions and sold off big proportions of their land. This was because many non-Maasai had migrated to these areas buying land for speculation and cultivation. Rutten (1992) found that 30% of the land subdivided to individuals from the former group ranches in Kajiado had been sold to non-Maasai. This had risen to 50% by 1996 (Kimani & Pickard, 1998).

Challenges in Subdivision for Early Group Ranches

The first group ranches to be subdivided were in Kajiado District. Initially, the government was not supportive of the idea of subdivision but changed its position allowing seven group ranches in the district to subdivide by 1990 (Rutten, 1992; Kimani & Pickard, 1998; Veit, 2011).

The process of subdividing the pioneer group ranches faced a number of challenges which varied between them. One category of group ranches distributed land equally to all the members. Another category subdivided a portion of the land to individual members who had agitated for this move, with the remaining part of the land remaining as a group ranch and being accessed collectively by the remaining households. The third category distributed land to individual members, but members received unequal portions of land[13], while the fourth category refused to subdivide and maintained collective ownership and use of land (Veit, 2011).Group ranches in the fourth category feared that subdivision would lead to erosion of cultural ties when immigrants moved in to purchase land and that crop farming in grazing fields would lead to restriction in animal movement and negatively affect livestock production under extensive systems.

During the subdivision of group ranches, communities relied on customary laws to guide the process. For instance, members of the committees that oversaw the subdivision were selected based on attributes such as honesty, personal integrity, fairness, clan and age (Mwangi, 2007). In practice, however, the community paid the price for not having laid down procedures especially when the committees acted in self-interest. For such group ranches, there were gross inequalities in allocation of land during subdivision. Committee members, their friends and relatives, local elites such as chiefs,

[13] See Galaty (1992) for examples of these three categories.

teachers, and people who had received formal education, and wealthier[14]members were allocated huge parcels of land amid claims of bribery. Another form of inequality was the allocation of land in favourable areas, such as those with higher amounts of rainfall, good access to water, pasture and roads. It has also been reported that non-members were allocated land (Galaty, 1992; Mwangi, 2007).Among those people who received small or unfavourable portions of land were widows and less wealthy individuals. Complaints to the local administration did not resolve these issues since the government refused to intervene and directed the complaints back to the subdivision committees. Some people sought legal action but failed amid complaints of bias from some court officials with interest in the matter. Sometimes committees secretly increased land for the most vocal complainants who then withdrew the court cases. In addition, the committees also threatened to withdraw land allocated to those who pursued the matter in court (Kimani and Pickard, 1998).

Consequences of Group Ranch Subdivision

The inequalities created by unequal subdivision resulted in winners and losers and led to conflicts over land use (Campbell et al., 2000).Winners were the local elite and connected individuals in some areas, who allocated themselves huge tracts of land and prime land with good rainfall, thereby securing access to water and pasture. Losers were community members allocated small plots of land or land in the drier areas with less water and pasture. To the Maasai, disparities in number of animals were tolerated as this was not considered permanent. However, given that the Maasai viewed land as a birth right that should be accessible and available to all, inequality in land distribution implied a violation of this right (Mwangi, 2007).

Galaty (1992) found that pastoralists who had no education and those who did not have other employment opportunities were likely to sell their land after subdivision. There were fears among pastoralists that sale of land would increase poverty and landlessness among their communities and some studies found this to be true (for example, Rutten, 1992). Pastoralists sold land for various reasons, such as to meet high costs of land registration, pay off debts owed to the KLDP and AFC, and to raise money for consumption and improve welfare (Galaty, 1992; Ng'ethe, 1993; Lesorogol, 2005). Some of the individuals who sold land spent the money on leisure, large durable goods such as automobiles, or married additional wives (Galaty, 1992). These households became worse off in the long run (Rutten, 1992).

Even with decreasing pasture land due to subdivision, pastoralists did not reduce their livestock herds. This exacerbated overgrazing which was already considered a problem before subdivision. With the individualisation of land, pastoral communities were now bound to sedentary lifestyles, abandoning

[14]Wealth was measured by the number of animals owned.

migratory practices that had allowed them to cope with harsh weather and environments. Although individual land owners from the Maasai community did not fence off their land, the non-Maasai who bought land, especially in areas near urban centres or with high rainfall for crop farming, started fencing off their land, effectively restricting animal movement (Rutten, 1992; Kimani & Pickard, 1998).

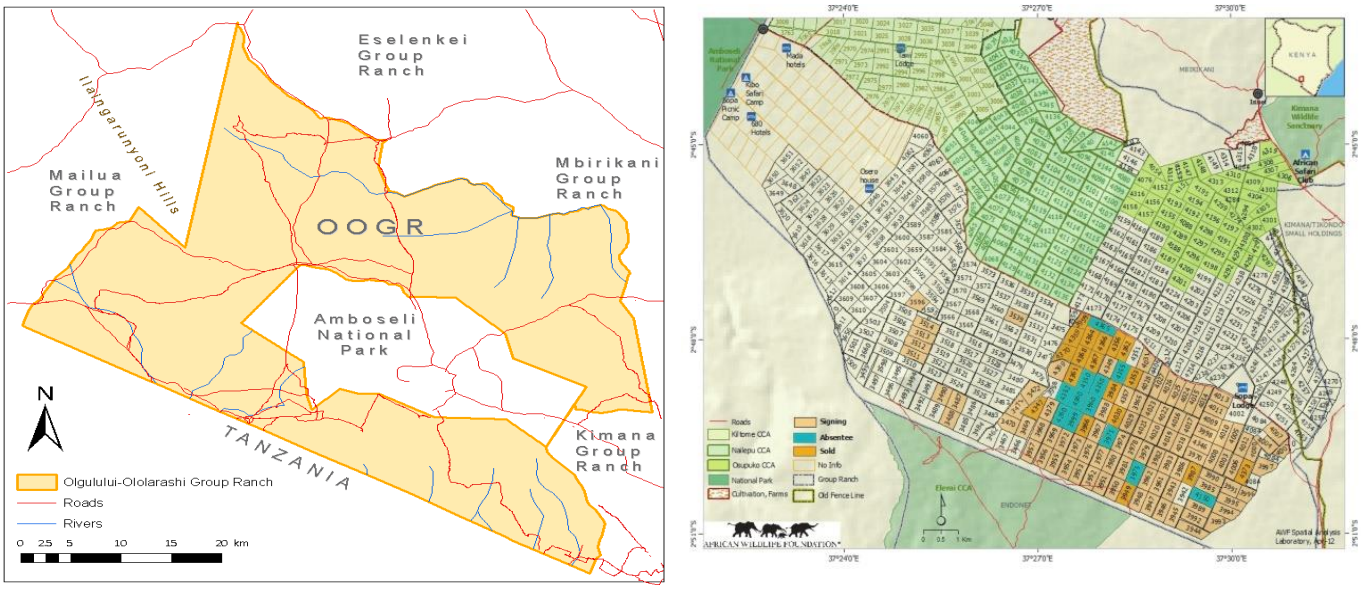
Land subdivision also gave rise to human-wildlife conflict. First, there was an increase in crop farming activities. Given that the pastoral communities lived in areas near game reserves and migratory corridors, wildlife, especially herbivores, were attracted to farmlands (KWS, 2008). Second, pastoralists moved close to wildlife in search of pasture either along migratory corridors or in the game reserves. There, their animals were likely to be attacked or contract diseases since wildlife are hosts for harmful livestock diseases such as the East Coast Fever (KWS, 2008).

Figure4 shows how human-wildlife conflict can arise as a result of subdivision of group ranches. The top left panel shows the group ranches before subdivision and the top right panel shows the subdivision of Kimana group ranch into individual parcels. The lower panel shows that although the Kimana group ranch was subdivided into individual and private land, these parcels were located on a wildlife migratory route, with animals migrating to Tsavo West National Park to the east or Mount Kilimanjaro Reserve to the south. Mailua group ranch was also subdivided, and when the private owners fenced their land to protect their crops, they interfered with wildlife movement.

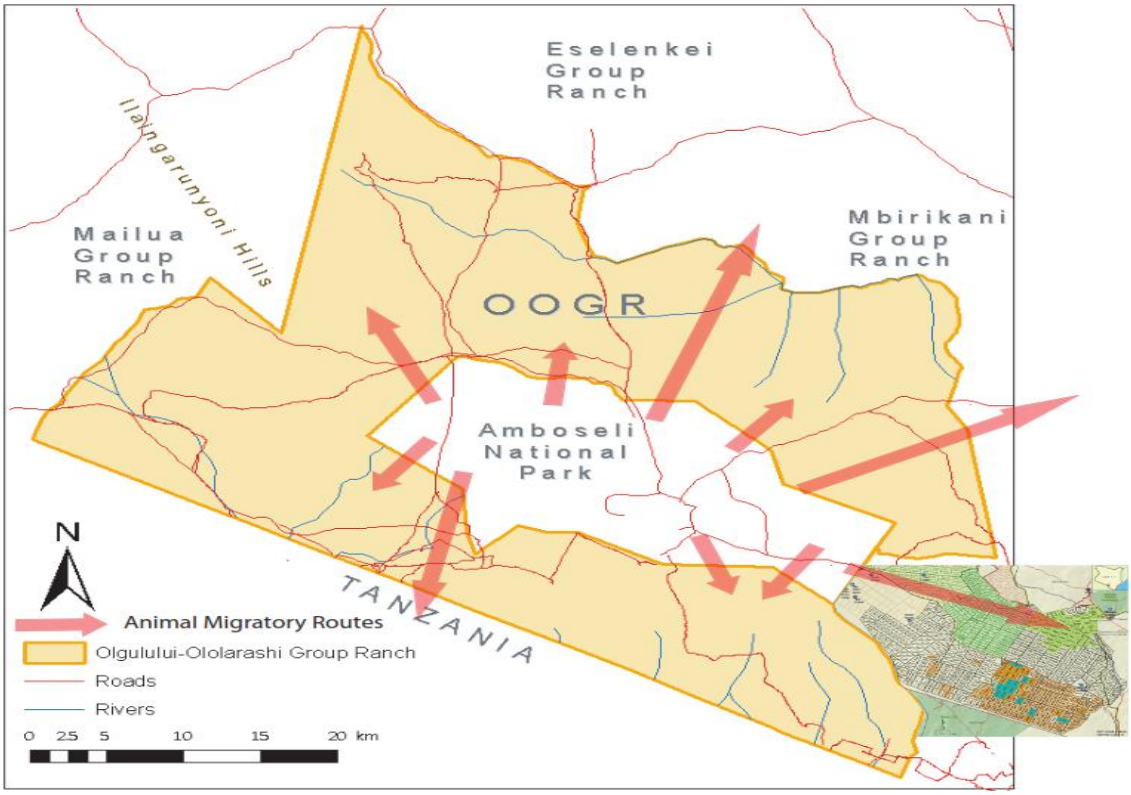
In addition, competition for land use became political leading to factions within the community, each with its own interests. For example, powerful members of the community such as the political elite fought for rights over land motivated by potential revenue from tourism (Campbell et al., 2000).

There is consensus among scholars that despite the huge investment in providing individual rights to pastoralists and implementing policies aimed at transforming the extensive and migratory systems they used, these policies failed to achieve such transformation. Furthermore, securing land tenure rights for pastoral communities is still an issue that is yet to be resolved (Fratkin, 2001; Mwangi, 2007; REGLAP, 2010; Little et al., 2008; Veit, 2011). Despite these failures, some positive outcomes did arise. For instance, pastoralists were able to adopt crop farming and diversify their incomes (Lesorogol, 2005). Intensification was also observed through pastoralists adopting small stock such as sheep and goats which mature quickly and moving away from large stock such as cattle which require more pasture and water (Rutten, 1992). Finally, total amount of land sold in areas near big urban centres was larger than in drier areas (Galaty, 1992; Rutten, 1992; Kimani & Pickard, 1998).

Figure 4: Human-Wildlife Conflict as a Result of Subdivision of Group Ranches in the Amboseli Ecosystem



Source: Amboseli Ecosystem Management Plan, 2010 - 2015



3.4 2000-2015: Challenges, Emerging Trends in Communal Lands and Current Policy Debate

Having been ignored for decades, the development of pastoral areas is now on the agenda of many donors and governments. In Kenya, this has been demonstrated over the last decade through the establishment of the Ministry of Northern Kenya and Other Arid Lands in 2008 after a similar ministry was dissolved in 1993. Under the current administration, the ministry became a state department within the Ministry of Devolution and Planning. In addition, the Arid Lands Resource Program has been in operation since 1996. Elmi and Birch (2013) highlight the disparities in education, health and other development indices between the North Eastern region and other parts of the country. The significance of the North Eastern region is that all land here is categorised as community land, is arid and suitable for extensive livestock production. Table 5 shows trends in the Human Development Index (HDI)[15] for the five counties in which we sampled our case studies. The HDI was below the national average for Narok, Samburu, and Isiolo counties in 2013. Narok and Laikipia recorded declines in the HDI between 2005 and 2013.

Table 5: Trends in Human Development Index for Selected Counties

	1999	2005	2013
Narok	0.4462	0.502	0.51
Samburu	0.2982	0.347	0.43
Isiolo	0.4245	0.58	0.45
Laikipia	0.5415	0.585	0.57
Kajiado		0.348	0.59
National	0.5035	0.532	0.52

Source:KNBS (Economic Survey, 2006 and 2014)

Land tenure plays a big role in improving livelihoods. Given the challenges experienced in the implementation of previous policies, there is now a need to address key problems in establishing and enforcing land tenure rights in areas with collective access to land. First, communities, researchers and policy makers use the terms open access land and community land interchangeably. Likewise, the terms private and individual have been used synonymously (Rutten, 2008). This is inaccurate because community land can be private land as in the case of group ranches. However, group ranches have been treated at times as open access land by communities with little enforcement of land rights.

[15]The Human Development Index (HDI) is a composite index measuring average achievement in three basic dimensions of human development: health and longevity (as measured by life expectancy at birth), education (measured by adult literacy and combined primary, secondary, and tertiary enrolments), and living standard (measured by GDP per capita in Purchasing Power Parity (PPP) terms). A higher index indicates progress in human development measured in terms of health, education and income. Achievement in each area is measured by progress in attaining the following goals: life expectancy of 85 years, adult literacy and enrolments of 100 percent, and real GDP per capita of $40,000 in PPP terms.

Subsequent to the individualisation of land in pastoral areas, which was followed by sale of land, changes in population dynamics, diversification of income, education, and changes in land use, it is now feared that a larger group of pastoralists has become poorer and more marginalised. In pastoral areas, children were not educated in favour of tending to livestock. Table 6 shows that Isiolo, Samburu, Kajiado and Narok counties the number of people who have never attended school is higher than the national average. In addition, proportions of females who have never attended school in these counties are much higher compared to their male counterparts. This underscores some of the challenges that many individuals in pastoral communities face when trying to diversify incomes, especially from non-farm opportunities. This, in turn, implies that scarcity of arable and leaves little room for income diversification from livestock incomes. Therefore, as individuals in pastoral areas sell their land, the long-term effect of scarcity of land for livestock production will weigh heavily on these communities.

Another challenge for pastoralists is the diversification of activities in the former grazing fields. The change in use of land is likely to cause conflict between two different users. In Kenya, violent clashes between Oromo (pastoralists) and Mijikenda (farmers) in Tana River County, especially during periods of drought, have escalated with the worst clashes occurring between 2011 and 2013. These clashes coincided with one of the worst droughts ever recorded in the horn of Africa and East Africa. Similar conflicts have been witnessed in Trans Mara, Narok County between the Maasai (pastoralists) and Kisii (farmers) communities. A key cause of these clashes is restricted movement following establishment of farm land in areas that used to be grazing reserves and which provide water points during droughts. In both cases, pastoralists have to go through farm land to access water. Notably, farmers also cultivate along river banks where it is easy to irrigate when necessary.

In 2004, the Government of Kenya established a Land Commission to find solutions to land issues in the country, specifically those touching on irregular allocation of land to private individuals. The Commission's report, popularly known as the Ndung'u Report, found that in pastoral areas, local governments had mismanaged trust lands under their watch. They alienated land without due consideration for customary laws, did not put in place mechanisms to manage these lands resulting in 'tragedy of commons' problems associated with common pool resources, and did not strengthen community-based institutions to manage and use land (Government of Kenya, 2004).

To address these issues, and in response to growing concerns around environmental degradation and pastoral livelihoods, NGOs and civil society organisations began working with communities. One such organisation is the Northern Rangelands Trust (NRT) which was formed in 2004 with the help of development partners to integrate community conservation activities into rangeland management in the northern and coastal parts of Kenya. These community conservancies are primarily focused on wildlife and natural resource management. They are normally registered as self-help groups and

community-based organisations (non-legal bodies),with some more established conservancies registering legally as Trusts under the Trustee (perpetual Succession) Act cap 14 (Aggarwal & Thouless, 2009).Land under these conservancies is either trust land or group ranches.

More recently, policy debate on how best to improve livelihoods for pastoral communities has gathered momentum in East African countries. In Kenya, a new constitution was promulgated in 2010 followed by the enactment of new land laws such as the Land Act 2012 and the Land Registration Act 2012[16]. A new challenge for land governance in Kenya is that trust lands are now classified as community land, while the trusteeship remains the same as under the old law. Currently, a Community Land Bill is under debate. Two critical issues being discussed are how to prevent alienation of community land to private land and how to establish mechanisms to manage the land better and improve the livelihoods of communities living there.

[16]Tanzania's Land Policy was enacted in 1995 followed by Land and Village laws in 1999, while Uganda enacted its Land Policy in 2013. In Kenya, a National Lands Policy was enacted in 2009.

Table 6:: Percentage of Population Aged Three Years and Above by Status of School Attendance and Sex for Selected Counties in 2009

	% Attending School								% Not in School			Total Population
	Pre-school	Primary	Secondary	Tertiary	University	Youth Polytechnic	Basic Literacy	Madrassa*	Left School	Never attended	Not stated	
National	0.064	0.268	0.051	0.008	0.006	0.001	0.000	0.004	0.405	0.172	0.019	35,121,475
Male	0.066	0.278	0.055	0.008	0.007	0.001	0.000	0.005	0.406	0.153	0.022	17,429,128
Female	0.062	0.259	0.047	0.009	0.005	0.001	0.001	0.004	0.405	0.192	0.017	17,692,347
Isiolo	0.073	0.224	0.033	0.004	0.002	0.000	0.000	0.004	0.231	0.409	0.020	129,908
Male	0.073	0.226	0.037	0.003	0.003	0.000	0.000	0.005	0.255	0.369	0.028	66,704
Female	0.076	0.220	0.028	0.005	0.002	0.000	0.000	0.003	0.205	0.448	0.012	63,504
Samburu	0.080	0.179	0.018	0.003	0.001	0.000	0.001	0.000	0.119	0.583	0.016	199,272
Male	0.083	0.201	0.023	0.002	0.001	0.000	0.001	0.000	0.137	0.529	0.021	99,618
Female	0.076	0.158	0.014	0.003	0.000	0.000	0.001	0.000	0.100	0.637	0.011	99,645
Laikipia	0.073	0.262	0.056	0.005	0.003	0.000	0.000	0.000	0.423	0.157	0.021	364,549
Male	0.075	0.272	0.058	0.004	0.003	0.000	0.000	0.000	0.431	0.129	0.027	181,218
Female	0.070	0.252	0.053	0.005	0.003	0.000	0.000	0.000	0.415	0.185	0.016	183,331
Narok	0.071	0.291	0.029	0.003	0.001	0.000	0.000	0.000	0.287	0.293	0.025	750,684
Male	0.074	0.304	0.034	0.003	0.002	0.000	0.000	0.000	0.302	0.251	0.028	377,901
Female	0.069	0.277	0.023	0.003	0.001	0.000	0.000	0.000	0.272	0.335	0.021	372,783
Kajiado	0.071	0.230	0.046	0.011	0.011	0.001	0.001	0.000	0.387	0.223	0.019	621,197
Male	0.074	0.238	0.048	0.010	0.012	0.001	0.001	0.000	0.408	0.186	0.024	311,605
Female	0.069	0.222	0.045	0.012	0.009	0.001	0.001	0.000	0.367	0.260	0.014	309,592

*Madrassa is an Islamic school that offers informal education based on Islamic religion
Source: KNBS, 2014

4. Case Studies

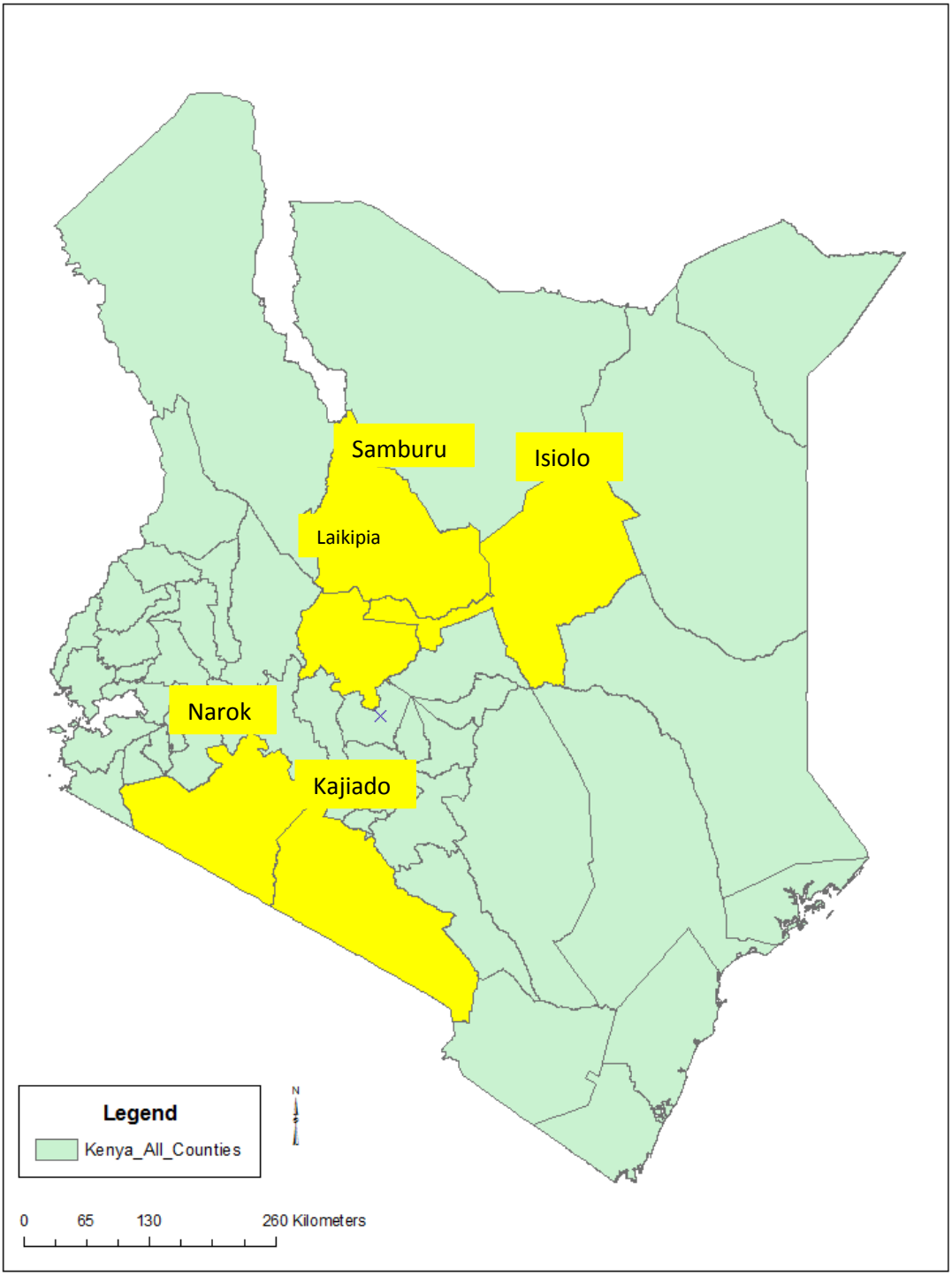
For the purpose of this research, we selected three case studies in Kenya in order to trace the evolution of collective access land regimes. In this section, we discuss changes in land access observed among these cases as well as explanations for those changes.

The three case studies represent three different collective access land regimes, namely: (i) un-adjudicated communal lands - communities own land and use land communally but the land is yet to be adjudicated; (ii)group ranch A - communities own and use the land communally, but the land has been adjudicated, and (iii) group ranch B - land is owned communally but used individually, or land may be used communally, but the community has started the process of individualising ownership. For each of these three types of regime, we selected three communities for carrying out Focus Group Discussions (FGDs). These nine communities are from four different ethnic groups- the Maasai (in southern Kenya) and the Samburu, Turkana and Borana (in the north) and demonstrate different economic and social characteristics. Our selection of communities enables us to learn from different pastoral cultures, thereby strengthening the basis for extracting and generalising findings. Table 7 provides a summary of these communities by land regime type, county, and predominant ethnic group, while Figure5 shows their geographical locations.

Table 7: Communities by Case Category, County, and Ethnicity

Category of land regime	Community	County	Predominant Ethnic Group
Un-adjudicated communal lands	Kiina community	Isiolo	Borana
	Ngaremara community	Isiolo	Turkana
	Oldonyiro community	Isiolo	Samburu
Group Ranch A	Losesia group ranch	Samburu	Samburu
	Ilpolei group ranch	Laikipia	Maasai
	Eselenkei group ranch	Kajiado	Maasai
Group Ranch B	Olpekedong group ranch	Narok	Maasai
	Naroosura group ranch	Narok	Maasai
	Mailua group ranch	Kajiado	Maasai

Figure 5: Counties Selected as Case Studies



4.1 Land Regime Type 1: Un-adjudicated Communal Lands

4.1.1 Kiina Community

Kiina community is located in Isiolo County, in Kiina ward of East Division in Isiolo South Sub-county and is mostly made up of the Borana ethnic group which settled in the area in 1972 as part of a government resettlement programme. At that time, the major economic activities practised by the community were irrigation crop farming and mining, however these did not last, and the community reverted back to livestock as the main economic activity following their customary way of life. Agriculture was discouraged mainly due to repeated destruction of crops by wildlife from Meru National Park, for which the community received little or no compensation. Currently, irrigated crop farming is carried out next to the Ewaso Ng'iro River on land covering approximately 700 acres (283 ha), with maize, tomatoes, onions, and mangoes representing the most important crops.

The majority of livestock kept are indigenous cattle, sheep, and goat breeds. In the 1970s, each household had an average of 20 cattle and 25 sheep and goats, together with a small number of donkeys, mainly for transportation. The community grazed animals together in groups and was able to access livestock markets in Garbatulla and Meru (neighbouring counties), however, this was done on an individual basis. Currently, the number of animals per household is estimated as 100 cattle and 200 sheep and goats, while a few households keep camels. There is no restriction on the number of animals that each household can keep, and so the households try to keep as many as possible. Population increase has put a strain on the land resources available to the Kiina community. First, the rise in number of animals has increased demand for pasture and water and, second, there is greater demand for more food and fuel among the human population.

We observed that unlike in the 1970s when the area had only one primary school, the number of schools and pupils attending schools have increased, with more girls attending school currently.

When the community first settled in Kiina, issues of land ownership were not clear as explained in section 3. The government considered the land to be trust land, held on behalf of the local community by local authorities who, for their part, interpreted this to mean that they owned the land and in some cases alienated it to individuals in areas such as Kiina trading centre. These individuals have now fenced off the land and restricted other members from accessing it.

The community has its own land governance and management structure, although this is operated outside Kenya's legal framework. During the 1900s[17], this structure was based on the premise that land was communally owned by all members in the community. To enhance land management, several households formed a cluster, and several clusters formed a grazing community (*dheeda*). Each

[17]During interviews, farmers indicated that Borana community land governance systems are said to date back to about 500 years ago.

dheeda had its own grazing rules along with pasture and water management plans. For instance, grazing land was used and managed differently during rainy, dry and drought seasons. In the post-independence period, the community found that this customary arrangement was not easy to enforce as the local authority, which now held ownership of the land in trust, did not base its by-laws on the community's customary laws.

Lack of enforcement of customary laws reinforced land tenure insecurity on the part of the Kiina community. For example, during famine or drought, other communities such as the Somali from the north, would come and graze on the land claimed by Kiina in total disregard of the rules and grazing patterns established by the community. Under national law, the land was held in trust by local authorities and as such the Somalis were not necessarily breaking any law and could ignore the customary claims made by the Kiina community. Additionally, the Kiina community did not have titles to prove their claims to the land.

The local authorities never managed to resolve the disputes between pastoral communities in conflict over the use of pasture and water, which was compounded by cultural practices such as cattle raiding (cattle rustling) between these communities. Ocan (1994) identified three categorises of cattle raiding in general. The first is the traditional form of cattle rustling done as a community. This was sanctioned by elders and was mainly used to restock animals. It took place mainly after major disasters such as drought or disease outbreaks. The second category is cattle rustling motivated by individual self-interests. Individuals disguise these raids as community raids, but they are actually seeking to acquire and sell the livestock to make income. This kind of raid has become more destructive and extensive because of the use of modern weaponry. The third category is a state sanctioned raid, usually used as a punitive measure against the raiding community. This type of raid is open to abuse by communities with strong political power.

With the collapse of the Somali government during the early 1990s, insecurity in the northern parts of Kenya escalated due to the proliferation of small arms from Somalia. Other than the cattle raids, other reasons for insecurity were political in nature (Elmi & Birch, 2013). Constant fighting between pastoral communities led to the Modogasheo-Garissa Declaration in 2003. Among other things, the Declaration set out provisions that all unauthorised grazers return to their localities; that they must seek prior consent from the elders and chiefs of the localities they wish to migrate to; they must return to their home areas at the end of a drought/famine; and, carrying of firearms when grazing in foreign (non-local) areas was prohibited. This Declaration essentially recognised customary laws on land usage that had been precluded by national laws.

Following the enactment of the 2010 constitution, all land that was held in trust by local authorities is now classified as community land. The Kiina community has already formed a land management committee. As they await the enactment of the Community Land Bill, the community has been

holding discussions about the formation of a group ranch, which it perceives as the best strategy for secure rights to their land.

4.1.2 Ngaremara Community

Ngaremara community is located in Isiolo County, in Ngaremara location of Central Division in Isiolo Sub-county and largely comprises the Turkana ethnic group. It is thought that their ancestors came from Lodwar and Baragoi to their current location in 1918, after the First World War, in search of water and pasture for their livestock. Just like the Kiina community, the land was held in trust by the local authority on behalf of the community.

The main economic activity of this community is pastoralism although there is some small-scale crop cultivation along the river banks. The major livestock kept is cattle, sheep, goats and donkeys, mainly for transportation. Initially, the community were nomadic pastoralists, but they have since adopted sedentary lifestyles, although the animals move from place to place in search of pasture. There is no household limit on animal numbers, although total livestock numbers have reduced over time. For instance, the current cattle herd size is about 100 per household, down from 300 in the 1980s.

Each household determines its dwelling area, which is usually dependent on the size of the household and number of animals owned. Since the community adopts a sedentary lifestyle, the dwelling area is recognised as belonging to the household. Therefore, the community settlement is organised in villages. The settlement area is determined by factors such as level of security and access to water. The community practises cattle rustling with the neighbouring Samburu community. Cattle rustling in this area has also evolved into the second category of cattle rustling, occasioned by selfish motives, and can be regarded as theft and a security concern. Another security problem is wildlife, especially lions and hyenas, which prey on both livestock and humans, especially during drought.

Each village has a committee whose role is to settle disputes concerning use of land and other domestic issues, to direct and monitor how grazing land and water points are used to ensure grazing plans are adhered to, and to watch and inform of any intruders from other communities coming in to look for pasture and water. Currently, Ngaremara community is composed of 35 villages with a total population of some 15,000 people.

Ngaremara community has experienced problems with its neighbours (Samburu and Somali) who invade its grazing lands during drought seasons. The community has customary laws on sharing of pasture which require the elders of the pastoralist community intending to graze in a ‘foreign’ land to make a request to the ‘host’ community. Once the ‘host’ community agrees, the ‘foreign’ community is advised on the duration of grazing and specific areas to graze, among other rules it must adhere to. Conflicts have arisen as some communities do not consult the ‘host’ communities before grazing on their land, or refuse to follow the grazing patterns set by the ‘host’ community.

In addition, the local authority charges licence and extraction fees from traders who harvest sand from the land claimed by the Ngaremara community. These traders do not pay any fees to the community, marginalising them from income generated through resources on their land. Between 2003 and 2007, the government constructed a major road linking Isiolo and Marsabit counties. During the road construction, the contractor extracted sand and quarry stones from the land claimed by the community. The community did not receive any compensation because they could not produce a title deed. In contrast, neighbouring communities in Samburu County further up the road were compensated by the contractor for resources extracted on their land since they did have a title deed.

A major transport infrastructure, the LAPSSET corridor, is expected to pass through Isiolo County to the North. This has led to fears that the Ngaremara community may be displaced since there is no formal recognition of their customary claims. As a result, the community has initiated the processes of formal recognition of the land by registering a group ranch. Further, the community feels that having a title will strengthen their position when demanding compensation for livestock killed by wildlife.

4.1.3 Oldonyiro Community

Oldonyiro community is located in Oldonyiro location and division in Isiolo County and is mainly inhabited by the Samburu ethnic group. Itis believed that their ancestors first came to this area in early 1960s in search of pasture for their livestock. They maintained their nomadic way of life for some time but adopted a sedentary lifestyle in the 1990s. The major livestock were cattle, sheep, goats and donkeys, which are mainly used for transportation. Each household had large herds with an average of 600 cattle, 50 sheep and goats and 20 donkeys. Currently, the number of animals per household has reduced significantly owing to recurrent droughts, increasing population and decline in pasture. At the same time, the community has adopted camels which are more drought tolerant and also fetch good prices at market.

The change to a sedentary lifestyle resulted in the development of basic amenities such as schools and hospitals. For instance, the area had one classroom-less school in 1971 where students learned under trees. Nowadays, there are 16 pre-nursery schools, 12 primary schools and two secondary schools. Despite being sedentary, their animals still move from area to area in search of water and pasture.

During drought periods, the elders negotiate with counterparts in the neighbouring areas to allow them to graze their animals. They also reach out to private ranchers in Laikipia County. Until recently, the private ranchers did not allow community members to graze their animals even at a fee. Usually, the local communities would drive their animals into the private ranches during the night resulting in conflict. In recent times, the private ranchers have changed their position towards local communities. Currently, a controlled number of animals are allowed to graze for a restricted duration at a fee. For example, one rancher charges the community Ksh.150 (approximately USD1.5) per head for one month and allows a maximum of 300 heads of cattle. The community then allocates this number

across the households. In addition, private ranchers are now offering veterinary services to locals to avoid the spread of diseases.

Previously, the community resisted the government's attempt to register its land as a group ranch. A key reason for this was that part of the land used to belong to the government through a collapsed government institution, the Livestock Marketing Department (LMD). Overtime, a section of the community fully settled on that land. The community continued to use customary laws to govern land use and was not evicted by the government. A second reason was that the community believed that formalising land ownership through a group ranch would limit the number of animals it could own. Currently, there is no restriction on the number of animals a household can keep, and the settlement areas are determined by a household's size and number of animals owned.

To control pasture, the community developed grazing plans which were enforced by a grazing committee in 2007. Due to declining pasture, one of the key recommendations made by this committee was to put a limit on the number of animals to control environmental degradation due to overgrazing, but this was opposed by the community. The committee also alienated land used for grazing and designated it as a conservation area for wildlife.

Following the LAPPSET corridor projects, there are continuing fears of displacement. One of the major projects, the Isiolo resort city, is believed to be situated next to land claimed by the Oldonyiro community. These fears of displacement, either by the project or by 'non-natives', have led the community to demand the formation of a group ranch. A key obstacle, however, is that part of this land belonged to the LMD. The community has already formed a committee to spearhead registration. However, it faces conflict with other communities who graze on the land and who argue that the land belongs to LMD.

The former local authority had already allocated land in the trading centre to individuals. This was done by passing a resolution at the local authority council meetings made up of local elected leaders. The unilateral authority used to alienate land that belongs to the community without consultation emphasises the confusion that existed in the past with regard to community land tenure and represents a key reason why community members distrust their elected leaders who are supposed to act in good faith for the benefit of the whole community.

4.2 Land Regime Type 2: Group Ranch A

4.2.1 Ilpolei Group Ranch

Ilpolei group ranch is located in Mukogodo division of Laikipia West Sub-county in Laikipia County. The group ranch was formed in 1974 with 47 members, and only household heads were allowed to register at the time. All community members come from the Maasai ethnic community. The certificate

of registration was issued in 1977, however the group ranch was not fully incorporated until 2003. The total ranch size is 1,993 ha which has been maintained since registration.

The government initiated the move to form the group ranch, and the community went along with this decision. The key objective for the government was to contain pastoralists in one area, stem environmental degradation and avoid landless pastoralists. On the other hand, the motivation for community was to stop other communities from laying claim to their ancestral land. Their decision to form a group ranch was also informed by what was happening with the other Maasai communities living in the then Kajiado district.

Group membership has since grown due to inclusion of the offspring of the original members as well as members who were not initially registered. There are now 285 registered members. Initially, only household heads were registered. This was interpreted to be the entire household, although some men were not married and therefore represented a one-person household. Women are registered as members if they are widowed. The Maasai culture allows for polygamy, and so wives and children of each household are also registered, with male offspring obtaining membership after attaining 18 years of age.

After registration of the group ranch, the community maintained cultural systems of land use. This included no regulations relating to animal numbers and the determination of settlement areas based on household size and livestock numbers. The main animals kept are cattle, sheep, goats and donkeys, with average numbers per household of50 cattle, 200 sheep and goats and 10 donkeys. These figures have reduced compared to the 1970s mainly because of droughts and disease outbreaks, although total numbers have increased due to population growth. Some households now keep camels which tolerate drought conditions.

During drought, the community drives its animals as far as Mount Kenya (about 70 Km away) in search of pasture. Due to bad relations with local private ranch owners, who manage their pasture efficiently, the Ilpolei community could not access these pastures until 2000. Currently, private ranchers are reaching out to the community members by offering bulls for upgrading indigenous cattle breeds. These private ranch owners are also now charging a fee for a limited number of cattle to graze in the ranches for a set duration during drought. Development agencies have also worked with the community to introduce improved breeds of sheep and goats.

In the 1970s and 1980s,the government imposed restrictions on livestock movement as a measure to contain livestock diseases. The only market outlet was through the LMD. In the late 1980s, the restrictions were lifted allowing the community to access Nanyuki town. Over time, livestock markets developed in Kimaiyo, Doldol and Oldonyiro. There is no collective marketing, but the community does organise itself to take livestock to the market as a group due to insecurity.

Between 1974 and 2002, the group ranch was managed by the same committee selected in 1974. Due to cultural reasons, elections were never held and the Maasai would never challenge the elders' authority. When the chairman passed on in 2002, the governance dynamics changed. By then, the group had more members who were younger and more educated than the founders and seven elections were held every two years between 2003 and 2015. Currently, the committee is made up of 10 people and since 2010 the number of women has been kept at a minimum of three.

The group ranch makes money from some of the resources on its land such as sand harvesting. There were no records kept between 1974 and 2002 regarding the group's finances. Members did not question how the money generated from sand would be used since each household would be given five goats at the end of each year. The group drafted its first constitution in 2007 and this has not been reviewed to date. However, there is much more transparency nowadays since the officials present the state of affairs of the group to members each year in a general meeting. Currently, finances raised from resources within the group ranch are used for bursary allocations to children of group members (given to all registered children); to pay salaries for non-government (Parent Teacher Association) teachers for schools within the group ranch; to pay hospital bills for members; for constructing an office and three surface dams; and to purchase the 'now customary' five goats for each household per year.

Ilpolei group ranch is a member of Naibunga conservancy trust, which consists of nine group ranches. The total conservancy area is 47,470 ha. Group ranches in the conservancy benefit from the Livestock to Market Programme.[18] Other benefits include training in craft-making, product development, basic accounting, pricing structures and leadership skills. These skills allow pastoralists to diversify their income sources by engaging in small and micro enterprises. In addition, the Northern Rangelands Trust (NRT) runs a credit programme targeting women and promotes tourism, including eco-tourism. Conservancies benefit from the NRT brand which is important for their marketing.

Through such exposure, Ilpolei group ranch established a cultural centre with support from various organisations. The centre, which is on 8 ha of land, is now managed by Twala Women's Group (Figure 5). The ranch has set aside 16 ha for planting trees with the help of the African Conservation Centre. This site will also be used as a demonstration and teaching area for conservation activities. The group has developed a land use plan for the entire ranch area. In the plan, 2,300 ha have been set aside for nature and wildlife conservation activities, and 325 ha are used as settlement area. The plan also allocates land for amenities such as roads, school, hospitals and trading centres, as well as

[18]This program facilitates purchase of livestock directly at the conservancies, hence removing the time and cost of accessing markets. The prices offered are expected to be at a par with market prices or higher as a reward to encourage pastoralists to form conservancies.

communal grazing areas. The plan proposes diversification of income by setting up a camp site for eco- and cultural tourism and providing for Aloe Vera farming and bee keeping.

Figure 6: Twala Cultural Centre, Part of Ilpolei Group Ranch

Top left: A biogas digester is used to train community members to prepare biogas using dung from their livestock. This will reduce dependence on wood fuel.

Top right: a shop used to sell curios made by women within the community.

Bottom left: The cultural centre, which was opened with support from development partners.

Source: Picture taken by Authors

One important setback facing this group is environmental degradation. First, due to uncontrolled sand harvesting, massive gullies exist within the land. Secondly, an invasive species of cactus plant, *Opuntiastricta*, has displaced most of the local grass and is a big threat to pastoralists. Third, the huge numbers of animals kept is more than the land can sustain.

4.2.2 Losesia Group Ranch

Losesia Group is located in Waso East Division of Samburu East Sub-county in Samburu County. The members belong to the Samburu ethnic community. The group ranch was formed in 1981 with 940 members. The original size of the ranch was 203,653 ha, although the current size is disputed. First, about 90,000 ha were allocated to individual ranchers, the

majority of them believed to be former leaders or people associated with them. Secondly, in relation to the remaining 113,653 ha, there is a dispute on 33,721 ha with claims that this land was allocated to the Military Training Area (MTA) without the community's consent or knowledge. The community blames the government and the local authority (which was holding the land in trust on behalf of the community) for this dispute.

The ranch was initially formed to secure the land on which the community had customary claims. Prior to the formation of the ranch, the land was categorised as trust land held in trust by the local authority on behalf of the community. Alienation of land to the MTA was done in 1977 via a gazette notice 2310 dated 31st October 1977 but published on 11th November 1977.

Just like other pastoral communities, the ranch has no limits on number of animals owned. There are no designated settlement areas, although households live in clusters for security reasons as the community practises cattle rustling. The disputed area allocated to MTA is out of bounds for the pastoralists. Similar to the customary laws, members are not allowed to individualise any part of the land, and all land belongs to the entire community. Members access grazing areas communally. The Samburu have customary grazing fields for different seasons. This does not hold, however, because there are now more animals than the land can sustain and sometimes during shortages they have to go outside the ranch in search of pasture and water.

The current management committee came to office in 2012. It comprises10 members, three of whom are women. The group is in the process of drafting its constitution and land use plan for the ranch with the help of government officials. The group now maintains records of income generated from ranch resources, although this has not always been the case. The land use plan is being developed with the aim of maximising benefits from the LAPSSET corridor projects.

The group ranch is part of Sera Conservancy Trust and a member of NRT. Sera Conservancy was registered in 2001 and incorporates 345,000 ha. The conservancy benefits pastoralists through its livestock to market programme and also offers training and credit to women. The trust also raises money through tourism.

A key challenge for the group ranch is insecurity since it is located at the centre of communities who practise cattle rustling, which is presently viewed as organised crime. In response to this, the group has donated funds, a vehicle and human resources to the local

police to improve security. Another challenge is environmental degradation caused by overgrazing and a lack of conservation activities to protect the two rivers passing through the ranch.

4.2.3 Eselenkei Group Ranch

Eselenkei group ranch is located in Lenkisem Division of Loitoktok Sub-county in Kajiado County. The ranch was formed in 1968 and registered in 1977 with 443 members. All the members come from the Maasai ethnic community. The total ranch size was 74,794 ha at the time of registration and has not changed to date. The formation of the ranch was initiated by the government with the main aim of stemming seasonal migration of pastoralists by creating boundaries based on customary pasture lands[19]. Seven group ranches were formed in Loitoktok Sub-county, under an umbrella association known as the Amboseli Group Ranch Association. The aim was to bring together the communities and organisations in order to develop land use practices that improve their livelihoods and wellbeing, including allowing for the coexistence of people and wildlife.

Group membership has now grown to 3,407. The increase in membership is a result of population growth with the offspring of original members being registered as new members. The group is managed by a committee of 10 elected officials. Since the members of the group ranch come from three clans, each clan elects three people while the fourth person is elected on a rotational basis from each clan. The positions of chair, secretary and treasurer are also rotated in each election. The group ranch has held four elections since its formation. In line with customary practices, no woman has ever been elected to the leadership committee. The group ranch has no written constitution, and decision making is conducted through community meetings. The committee only makes decisions on minor issues whereas elders determine land allocation and use. In recent years, the Maasai started farming along the rivers through irrigation where they mainly grow horticultural crops that are sold in nearby towns. The community has settled in 6 clusters or villages near the arable land. The community has a grazing committee in place which has set aside grazing areas for different seasons and ensures adherence to grazing rules. The committee also negotiates with elders in neighbouring communities whenever there is need to move out of the ranch in search of pasture. In addition, the group ranch has a conservation area which has wildlife. Currently, this area has been leased to an investor who has set up a tourist camp. Money generated from the lease has been used to pay non-government teachers serving in schools within the ranch, to hire attendants for water sources e.g. boreholes, within the cam, to; compensate members whose livestock are killed by wildlife, mainly lions (usually a percentage of the value of total loss),and, to provide bursaries and support for medical and funeral expenses for the less wealthy households.

In 2009, members started discussing the issue of subdividing the ranch into individual parcels. One of the key reasons for subdivision was given as encroachment into communal lands by non-members. For instance, private ranchers and individuals from neighbouring communities who have already

[19]At the time of formation of the group ranch, the community was given the option of registering individual ranches.

subdivided their group ranches e.g. Mailua group ranch, invade the Eselenkei group ranch during drought in search of pasture. A second reason is the unequal utilisation of communal land. Since there is no limit on the number of animals, households with large numbers of animals benefit more. Although there have been attempts to rationalise this by providing more benefits to less wealthy households, the view of less wealthy households is that they still get a smaller share of the benefit. They believe that this can only be sorted out by subdividing the land since each member is entitled to an equal share. Another reason is societal pressure to subdivide the ranch. Most ranches in Kajiado have been subdivided and members allocated individual plots. Some of those members sold part or all of their land. As they spend this income in the short run, they portray the image of being economically well off. Given the demand for land by speculators in Kajiado, group ranches that are not yet subdivided find themselves under pressure to do so. A final reason is that individual titles would allow members to access loans and construct better housing. This is debatable since there is enough evidence that owning a title does not guarantee access to a loan (Atwood, 1990). It is important to note that some members of the group ranch are opposed to subdivision citing examples from neighbouring communities where subdivision has not necessarily resulted in members being better off. There is the fear that certain members, especially those seeking to get quick money, will sell their land and become a bigger challenge for the community by engaging in crime. Additionally, the loss of pasture once land has been individualised represents a big problem for those with large herds of animals.

Key challenges faced by Eselenkei group ranch can be summarised as follows. First, the group requires institutional strengthening to be accountable to its members. This includes keeping records of incomes received and how these are utilised. Second, enforcing tenure rights represents an on-going challenge for the group. Communal ownership is confused with open ownership by the leaders and courts. This creates conflict especially when there is shortage of pasture. Conflicts are usually resolved using customary laws which often exacerbate the confusion. There are instances where trespassers have been let off free by courts of law. This could be as a result of corruption in the courts, but it has serious consequences for group dynamics. Third, human-wildlife conflicts pose a challenge especially during dry seasons when pastoralists are forced to graze their animals in conservation areas. High population growth is another challenge since, initially, children of original members of the group were admitted as members upon attaining 18 years. After three generations were added, the group closed the register and is not adding any new members. Thus children born after the register was closed will only be able to access land through their families. Finally, strong cultural ties contribute to the maintenance of practices that do not contribute to broader development goals. For instance, the Maasai do not sell lactating animals even when it is profitable to do so, say, during periods of drought.

4.3 Land Regime Type3: Group Ranch B

4.3.1 Mailua Group Ranch

Mailua group ranch is located in Matapato section in Kajiado County along the border with Tanzania. Initially, Matapato was a grazing scheme but later on was subdivided into seven group ranches through government-led initiatives. The process of registration of the group ranch was started in 1974, and the group was incorporated in 1977 with 1,026 members. The size of the ranch was 63,000 ha.

During the colonial period, some members of the Kikuyu and Meru ethnic communities who were involved in the Mau Mau freedom fighter movement were resettled in Matapato. They have been engaged in crop farming since they came to the area. The Maasai's main economic activity was pastoralism although they started crop farming from 2005. They grazed their animals on communal lands, and there was no limit on the number of animals a household could keep.

In the 1970s, the average number of cattle per household was 150, but this has declined to 20 at present. This decline has been occasioned by drought, disease outbreaks and reduced pasture after individualisation of the group ranch. The community also substituted cattle with sheep and goats which multiply faster and require less pasture and water. At the same time, the community adopted improved breeds of cattle such as the Sahiwal and Borana which produce more than the indigenous breeds.

The group ranch was managed by a committee of ten members. It has a constitution and has kept records and held AGMs as prescribed in the constitution. Elections are held every five years. However, due to customary reasons, there are no women in the committee.

The group ranch was subdivided in 1989. The key reasons for subdivision were to allow for members to use land as collateral in acquiring loans, influence from the euphoria that was sweeping through Maasai land to individualise the group ranches, and personal desire to own land. Urbanisation could also have been a factor with the construction of the Kajiado-Namanga highway and growth of urban towns such as Amboseli, Chyulu hills, Sultan Hamud and Maili Tisa which led to the migration of many men. At subdivision, each household was allocated 2 ha of arable land and 60 ha of drier land suitable for livestock.

The land was divided into four blocks, three of which have been subdivided and title deeds issued. The last block is in the process of being subdivided. After subdivision, there are no communal grazing areas left and each household has to manage its livestock within its parcel of land. Households which had large number of animals have been forced to reduce their herds.

After subdivision, a new committee comprising 32 members was formed. Members are elected from the 8 clans with each clan electing 4 members. The members hold office for 2 years. There are still no

women in the committee as a result of strong cultural influence. The key objective of this committee is to finalise the subdivision of the land and deal with issues arising from this process.

Key challenges that arose after subdivision of the group ranch include:(i) household-level conflicts, such as when household heads sell land without consulting their wives and family, or when widows are disinherited by in-laws; (ii) community-level issues related to very slow processing of land titles; (iii) shortage of finances to finalise the subdivision of the last block, and; (iv) human-wildlife conflict as a result of subdividing the land with no regard for wildlife conservation areas or migratory corridors. At the moment, the community has joined a pastoralist association, the South Rift Association of Land Owners, which aims to commercialise tourism. This is achieved by each member contributing land which is managed communally as a conservation area. In addition, they have game scouts who provide information about the movement of wildlife in the area.

4.3.2 Olepekedong Group Ranch

The group ranch is located in Narok North Sub-county in Narok County. Members from the group belong to the Maasai community. The group ranch was formed in 1973 and had 55 members. The main reason for formation of the group was to obtain land tenure security to prevent customary grazing fields from being claimed by other communities. The size of the ranch at registration was 4,500 ha.

The main economic activity in the ranch is pastoralism. Members were not restricted in the number of animals they owned. In the 1970s, each household kept an average of 100 heads of cattle. The nearest livestock market was in Ngong which is located more than 100km away. The Maasai living in this ranch did not start crop farming until the late 1990s. At the start of the group, ranch children were taught customs and traditions in informal settings rather than being sent to formal schools. At that time, there was no school within the group ranch.

The group had a management committee of ten members who relied on customary rules and practices to govern group affairs. There were no women in the management committee. The group had a registered constitution drawn up with the help of government officials. However, AGMs were only held when there were complaints about the management and mainly to elect new leaders. From its inception, the group has changed leaders only three times. The committee did not keep records of income and expenditure, and this resulted in wrangles amongst members especially during the 1980s and 1990s.

The group ranch started leasing out land to large-scale farmers in the mid-1980s for wheat and maize production. At that time, the lease agreements were made between a few elected officials and the leasee. Details of the lease were never made public, but officials reported the amounts of money they received from the lease in an AGM. At the end of the year, the committee would provide goats to

members from the incomes raised. Other expenditures included paying of medical and funeral expenses as well as bursaries for the less wealthy households.

Divisions in the group escalated in the 1990s, and there were court suits and counter suits by different factions. There was a lot of dissatisfaction with regard to inequality in land utilisation, the way the committee managed the group's income and how resources were shared. As a result, members felt that they would be better off managing their lands individually. In 1995, they agreed to subdivide the group ranch, and each member was attributed 20 ha of land. To date, the group is yet to process title deeds because members lack the money for land registration. In addition, boundary disputes are now common since permanent beacons were not erected during subdivision. Currently, only a few members are engaged in crop farming, with the majority having leased out their lands, even long-term in some cases. It is feared that upon receipt of title deeds, many of the members will sell their land.

4.3.3 Naroosura Group Ranch

Naroosura group ranch is located in Osupuko Division, Narok North Sub-county in Narok County. The ranch was formed in 1972 by 676 members. The members belong to the Maasai ethnic community. During the pre-independence period, non-Maasai groups and specifically the Kikuyu were resettled in Osupuko. They immediately started crop farming along the rivers and sold their produce in Naroosura market. This attracted buyers from the neighbouring Trans Mara District. Following government efforts to title land, the community formed the group ranch to protect ancestral land from being claimed by non-Maasai individuals and groups and to stop other Maasai communities from encroaching on their territory. At the time of formation, the ranch was 162,000 ha, although about 652 ha was alienated to the Kanunga group made up of the Kikuyu community settled in Osupuko.

From the initial 676 members, the group's membership has grown to about 6,000 at present. Some members who were left out during the initial registration were included, and offspring of original members were added after attaining 18 years of age. In addition, people came and settled in the area so that their children could acquire an education since this area had the only primary school in the division, while others came as labour to businesses in the trading centre. These two groups of people were later registered as members of the group ranch. However, it was the elders who made the final decision on who was to be admitted membership.

The main economic activity for the community was pastoralism. The common livestock kept were cattle, sheep and goats, with each household having an average of about 100 cattle. There was no limit on the number of animals a household could keep and members utilised the grazing areas communally. In the mid-1980s, the community started crop farming after a missionary introduced an irrigation project to the area and also as a result of interactions with members of the Kanunga group.

Initially, the community grew maize and horticultural crops. With the profits from crop farming, particularly horticultural crops, the Maasai took up this practice mainly along the river banks.

With population growth, education of the younger generation and increases in the incidence of drought, the community started to improve their livestock breeds. Initially, there was a shift to keeping fewer cattle and more sheep and goats because they mature faster and require less pasture. Cattle breeds were also improved with assistance from NGOs, and as a result, the Sahiwal breed was adopted. This also coincided with the development of Naroosura market as a major food and livestock market. However, a key challenge that persisted was ensuring that there was enough pasture for all the livestock.

Literacy levels in Osupukoare still low compared to the other parts of the country. This is mainly attributed to low development of education infrastructure[20] and a strong attachment to Maasai traditions. For instance, the Moran culture and female circumcision distract children from going to school since these rites are considered important for gaining respect from peers.

The group ranch was managed by a committee which followed customary rules and regulations. It planned for grazing fields, settlement and farming areas. The founding committee did not keep records of income and expenditure by the group nor did it hold AGMs. Women have never been part of the committee because of strong cultural influence.

Members, especially the younger generation, gradually became disillusioned with the management of the group ranch. First, there were no elections or AGMs held for about a decade; a period dotted with court cases. Second, during this time, members were divided into factions and there was no accountability regarding how resources generated from leasing of land[21] and excavation of quarry stones were used. In addition, due to the strong revenue base generated by the group, locally elected leaders exercised political influence on the management committee. Third, as a result of the customary ways of using land, inequalities among members were becoming obvious. Households with large numbers of animals were utilising more land than others, were connected to the political elite and in some cases, they fenced off certain areas for themselves. Fourth, the adoption of crop farming became popular among the community and with limited arable land, the committee allocated land for crop farming in a way that was deemed unfair. Although allocations were made at there quest of members, some people had large parcels, and there was no rationale for the variations in allocations. Finally, there was a growing move towards subdivision of the ranch, particularly given the experiences of the other ranches where members got equal shares of land. As a result of growing

[20] The number of schools has increased from 1 primary school and 1 secondary school in the 1970s to 22 primary schools and 2 secondary schools.
[21] Land was leased to an investor who developed a wildlife conservancy and a tourist camp

dissatisfaction, the new members (children of the founders), who were more educated, took over the management of the ranch after a decade of wrangles and court cases.

Figure 7: Fencing of Land by Individuals in Naroosura Group Ranch Restricting Collective Access

Source: Pictures taken by Authors

The members have now agreed on subdivision of the group ranch; a process which will be conducted in two phases. Phase one will cover the arable land which is approximately 18,000 ha, and subdivision of this portion is on-going. Phase two will involve subdivision of the drier land area. It is estimated that each member will get 2 ha of arable land and 16 ha of the drier land. Using customary structures, the common areas such as salt licks and water points will be shared communally and cannot be allocated to an individual. However, the community is yet to reach an agreement regarding conservation areas. Currently, the conservation area is a breeding ground for wild dogs, which are recognised as an endangered species. In addition, there is need to develop a land use plan providing for social amenities and public goods. Implications of subdivision include growth of land markets, land fragmentation and reduction in livestock population.

4.4 Hypotheses Tests

We follow the works of Collier (2011), Benett (2010) and van Evra (1997) in generating tests for causal inference for our hypotheses. These tests have been used in these studies where sufficient background information has been available. Background information allows the authors to distinguish among the tests. Table 8 presents these tests and the implications of passing or failing rival hypotheses.

Table 8: Hypotheses Tests

NECESSARY FOR AFFIRMING CAUSAL INFERENCE	SUFFICIENT FOR AFFIRMING CAUSAL INFERENCE: NO	SUFFICIENT FOR AFFIRMING CAUSAL INFERENCE: YES
	Straw in the Wind	**Smoking Gun**
NO	**Passing**: Affirms relevance of hypothesis, but does not confirm it **Failing**: Hypothesis is not eliminated, but is slightly weakened **Implications for rival hypotheses:** **Passing**: Slightly weakens them **Failing**: Slightly strengthens them	**Passing**: Confirms hypothesis **Failing**: Hypothesis is not eliminated, but is somewhat weakened **Implications for rival hypotheses:** **Passing:** Substantially weakens them **Failing:** Somewhat strengthens them
	Hoop	**Double Decisive**
YES	**Passing:** Affirms relevance of hypothesis, but does not confirm it **Failing:** Eliminates hypothesis **Implications for rival hypotheses:** **Passing:** Somewhat weakens them. **Failing:** Somewhat strengthens them.	**Passing**: Confirms hypothesis and eliminates others **Failing**: Eliminates hypothesis **Implications for rival hypotheses:** **Passing:** Eliminates them **Failing:** Substantially strengthens

Source: Collier, 2011

We subjected our hypotheses to the evidence we collected and carried out the tests in Table 8. The findings can be summarised as follows:

1) Social conditions: We hypothesised that in situations where high inequality exists, it becomes difficult to maintain collective land access. We find that one of the reasons for establishing group ranches was to guard against land concentration that would have led to landless pastoralists. Furthermore, high inequality in access and utilisation of collective land was one of the triggers of the collapse of group ranches and of the movement towards individual private tenure. However, there is insufficient evidence that inequality on its own would trigger the changes observed in collective access land regimes. This is because pastoral communities, such as the Maasai, tolerated inequality in use of land since this was not considered a permanent state. This evidence, therefore, passes the hoop test, affirming the relevance of the hypothesis, however we are unable to confirm it.

2) Economic conditions: We hypothesised that where land can accommodate activities that imply intensive land use, particularly crop production, maintenance of collective access to land may not be feasible. We find that pastoral areas containing arable land were transformed into individual private holdings, which occurred as pastoral communities started farming, such as in Olekepedong and Naroosura group ranches. Crop agriculture was supported by growing markets such as in Naroosura and Narok and the increasing number of pastoralists adopting this practice. In Kiina, although the land has potential for crop farming, the community reverted to livestock due to constant destruction of crops by wildlife. Therefore,

collective access to land was maintained. The evidence, therefore, fails the smoking gun test suggesting that the potential for change in land use was not the only driver towards individualisation of land.

3) Demographic conditions: Based on economic theory, we posited that a growing population constrains natural resources, such as land, thereby negatively affecting the preservation of collective land access. We find that the population grew in all pastoral communities selected as case studies. However, population growth on its own was not responsible for changes in land tenure. Population growth in pastoral areas near urban centres was higher as a result of migration and the emergence of an active land market as the communities sold land to outsiders. However, even with a high population, some pastoral communities such as Ilpolei, Losesia and Eselenkei group ranches have maintained collective access. Overall, evidence fails the smoking gun test suggesting that other intervening factors may also have triggered changes in collective land access regimes.

4) Urbanisations conditions: We hypothesised that where land accessed collectively is located in close proximity to urban areas (mainly large cities or towns), large-scale infrastructural developments or natural resource exploitation such as mining, all of which bring about urban growth, the pressure to change land use to meet urban expansion will negatively affect efforts to maintain collective access to land. We find that pastoral communities near urban areas faced strong pressure to subdivide and sell land, mainly to migrants. Additionally, large infrastructure projects have created land tenure insecurity among pastoral communities leading to demands for formal recognition of ancestral land rights, mainly to prevent encroachment or displacement. Our evidence passes the hoop test as these are compelling reasons that have negatively affected collective land access regimes. However, there is insufficient evidence to suggest that on their own these drivers are strong enough to have led to the changes that have been witnessed in collective land tenure regimes. This is because some forms of natural resource exploitation such as mining, quarrying and sand exploitation have been carried out on land under collective access.

5) Market conditions: We hypothesised that limited access to infrastructure and markets would lead to the maintenance of collective land access regimes as this would reduce transactions costs. We find that a majority of the pastoral communities live in areas that are underdeveloped. In addition, the communities maintained close cultural ties that were beneficial to their production and marketing systems. Markets were accessed communally, although participation was on an individual basis. These communities also benefit from collective action such as security during cattle rustling. Our evidence passes the smoking gun

test as we are able to confirm the hypothesis, however, we are unable to eliminate rival hypotheses.

From our analysis, we did not establish one particular hypothesis as double-decisive. We do, however, argue that a combination of hypotheses will lead to the double decisive condition i.e. a combination of factors appears to explain changes in communal land tenure systems. In the case of group ranch B, inequality in land use played a primary role in changing some communities' perceptions about collective access to land. Furthermore, inequality was brought to the fore by changing social dynamics within the communities. For instance, we found evidence that as the population grows and younger generations receive education, this creates demand for higher incomes and greater income diversification. The potential for change in land use, such as engaging in crop farming, which the communities perceived could only be carried out on individual private land since this was the case with other farming communities in the country, raised demand for private land. In addition, we found evidence that as urban populations expand, demand for land for settlement can prompt pastoralists to individualise communal land and participate in land markets. Finally, consistent government policies promoting privatisation and individualisation of land tenure galvanised the process of change towards individual land tenure.

Therefore, from the evidence we can affirm that the following three hypotheses hold true in relation to land use changes among pastoralist communities in Kenya:

i. Although maintaining collective land access would protect more vulnerable actors from losing access to land and prevent land concentration processes, in a context of high inequality it becomes difficult to maintain collective land access.

ii. In contexts where land accessed collectively is in close proximity to urban areas (mainly large cities or towns), large-scale infrastructural developments, or natural resource exploitation such as mining, all which bring about urban growth, pressures to change land use to meet urban expansion will negatively affect efforts to maintain collective access to land.

iii. In a context where the land can accommodate intensive use, maintenance of collective access to land may be not sustained.

5. Key Findings

In this section, we discuss the key findings as related to our hypotheses and case study evidence.

First, we find that social dimensions within pastoralist communities greatly affect motivation for maintaining collective land access regimes. There is compelling evidence in the case of group ranches that households which accessed smaller portions of land and so felt short-changed, had the greatest incentive to break the group ranch and subdivide into individual parcels. Inequality in land access and use ultimately means that economically and socially disadvantaged households are worse off. Although inequality in land access was tolerated among the Maasai as it was considered temporary, it affected the economic and social well-being of households. Households with greater access to land kept more livestock and were wealthier than households with less access. We also find that where community mechanisms were weak, wealthier and, well-connected households were able to obtain larger shares of land when the group ranches were subdivided by influencing management committees. However, based on the literature review we argue that this is not a compelling enough reason on its own to drive the changes observed in collective land access.

Nevertheless, when coupled with mismanagement of resources in the group ranch case, the incentive to individualise becomes greater especially where land is shared equally across households. We further argue that where community mechanisms for establishing and enforcing rules are weak, although the threat to disadvantaged households is greater, this situation can also imply greater benefits for these families when private land rights are established since it generally results in greater access to land than under the previous regime. Additional benefits can be derived from participation in land markets or by adopting more intensive land use practices. As such, we find that inequality, combined with other factors, leads to the demise of collective land access regimes.

Second, we argue that economic pressure, especially pressure to commercialise land under collective access, does not necessarily increase demand for private and individual land among pastoralist communities. We find examples of communities that were able to change use of land, for example from extensive livestock production to crop agriculture while maintaining collective land access. However, the ecological environment and type of crop farming can create demand for individualisation of land under collective access. This is especially the case where these factors necessitate significant investments in land, such as improving soil quality. Therefore, economic pressure combined with other factors can negatively affect the maintenance of collective land access regimes.

Third, we argue that demographic pressure may not necessarily increase demand for individual private land access among pastoralist communities. We base our argument on the fact that within certain ecological, social and economic conditions, collective access to land may be maintained. We

find that this holds true where land use is not easy to change, where the community has organised itself allowing for inter-generational transfer of collective land rights and where communities use and share resources equitably without some sorts of discrimination. We find that these conditions hold under all three types of communal land access regimes we examined i.e. un-adjudicated communal lands and group ranches A and B. However, where there is population growth from migration and where land under collective access is in close proximity to urban areas, these conditions will not sustain and the pressure for individual private land will prevail.

Fourth, we argue that large infrastructure developments or natural resource exploitation such as mining will increase demand for individual and private land ownership. We contend that this condition holds because these developments usually lead to the expansion of urban centres and lifestyles, which, overtime, affect lifestyles and land use among pastoralist communities. Eventually, land access regimes must change to accommodate these new preferences and developments. Without changes from communal to private tenure, urbanisation is unlikely to occur.

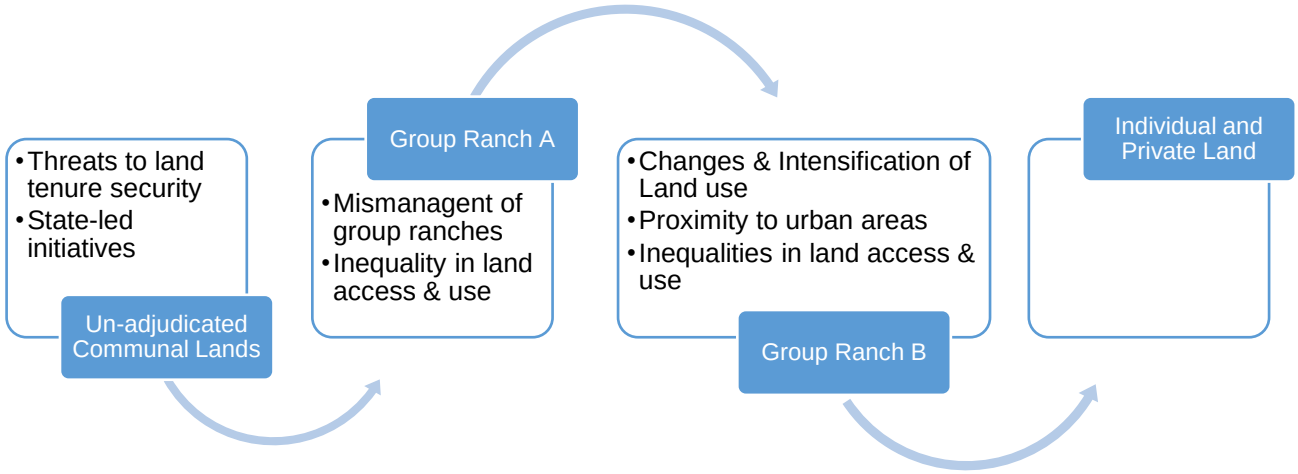
Fifth, we argue that market access does not increase demand for individual private land among pastoral communities. However, changes in land access regimes in the face of increased market access and penetration is dependent on community and institutional mechanisms that foster cooperation. We argue that communities which maintain and enforce customary rules, such as the maintenance of extensive grazing fields, are unlikely to change these arrangements as a result of increased market access. However, in communities with weak institutional mechanisms, increased market access can lead to individualisation of land tenure as each household acts independently to maximise the gains that come with increased market access.

Finally, we find that strengthening community mechanisms to establish and enforce rules on common property is a key strategy for maintaining collective access to land. This mechanism should include strategies promoting equitable access to resources, intergenerational succession and efficient allocation of land rights to provide incentives for investments.

Based on this evidence, we can identify a pathway from collective to individual private land access which is depicted in Figure 8 below. Initially, communities occupied communal land that was not adjudicated. Due to threats to land tenure security posed by colonial governments and state initiatives to modernise pastoralists, communities formed group ranches. Albeit in different time periods, pastoral communities have also experienced land tenure insecurity due to mega projects and have responded in a similar way, by moving towards the formation of group ranches. The group ranches privatised land ownership to a group of people and land was still collectively accessed and utilised. However, owing to mismanagement of resources within the group ranch and inequalities pertaining to the use of land, the pressure to individualise land within the group ranches increased. The potential for

land use change or to use land intensively, as well as proximity to urban areas, piled on the pressure to establish individual private land rights, especially among individuals who hoped to take advantage of high land value, such as in the cases where land was converted into real estate or where higher returns could be gained from crop agriculture.

Figure 8: Pathways from Community to Individual Private Land



6. Conclusions and Policy Implications/Recommendations

We analysed the evolution of collective land tenure regimes in East African countries and focused on experiences in Kenya that could be generalised to the region and similar areas in sub-Saharan Africa. We found that the government's perception that land under collective access is better utilised if it is individualised and privatised was consistent over the years. Furthermore, a lack of understanding about how pastoralists operated led to policies that aimed to transform pastoralists by limiting their stock numbers, improving their breeds and bringing to an end the migratory nature of extensive livestock production. These policies were viewed differently by pastoral communities, who mainly sought to protect their customary land from encroachment. This clash of objectives became visible as the policies failed to attain the envisioned outcomes.

Policies that established individual private ownership in pastoral areas restricted overgrazing allowed for the development of land markets, crop farming and improvement in breeds of livestock and opened up opportunities to diversify livelihoods. However, these policies also had the impact of diverting high potential land away from pastoralist control (through sale of land), thereby reducing pastoralist access to land, disenfranchising women and less wealthy households and reinforcing structural poverty among pastoral communities.

In response, pastoralists formed group ranches as a means of establishing private land rights among a collective group of individuals. These group ranches were governed by customary laws. The Kenyan case shows that policy attempts to modernise the way pastoral communities utilised land without recognising their customary tenure arrangements led to unintended consequences. We further find that trust lands and un-adjudicated communal land suffered mainly from challenges associated with common pool resources, such as overuse, while group ranches suffered primarily from mismanagement.

Across sub-Saharan Africa here is a renewed call for the enactment of new land laws that recognise and incorporate customary laws into legal frameworks. Furthermore, new literature is emerging suggesting seasonal rights as a strategy for securing collective land access among pastoralists. This could be achieved by using information on pastoralists' migratory patterns (Lengoiboni, et al., 2010).

Our findings suggest that communities will embrace collective access to land if the benefits are clear and under certain conditions. In harsh ecological and climatic environments, the migratory nature of pastoralist communities represents an essential component of extensive livestock production and can maximise returns on land. Collective action by communities has been maintained in these conditions wherever there is equitable distribution of benefits and better management of resources. This implies that with education and training and by strengthening community governance mechanisms, these benefits can be scaled-up. However, most pastoralist communities lag behind in terms of socio-

economic development especially investments in human capital. This underlines the role civil society organisations can play in supporting community mechanisms, especially with waning government influence. Examples include mobilisation among communities in northern Kenya to diversify income sources through nature and wildlife conservation. These efforts have shown to have a positive effect, for example between 2010 and 2011poaching accounted for one third of elephant deaths within community conservancies compared to 87% outside (NRT, 2013). In return, these communities have benefited from tourism and eco-tourism as well as other employment opportunities that have opened up as a result.

Our findings are relevant to the on-going policy debate around community land in the region. Currently, communities in East Africa are seeking legal recognition of customary laws. In Kenya, this process is crystallised in the draft Community Land Bill, which, once enacted, will empower communities to handle issues around access to land and land use by allocating clear rights and providing sanction mechanisms for violation. Our findings show that strengthening community governance mechanisms to enforce customary land rights and ensure transparency and fairness in land and resources access and use will help pastoral communities maintain collective land access regimes. As such, the Government of Kenya should ensure that the Community Land Bill facilitates these processes. In addition, the county governments in pastoral areas should invest the equalisation funds (provided under the new constitution to bridge the gap between pastoral communities and other communities) in provision of public goods, such as infrastructure, schools, hospitals, livestock markets and veterinary services in pastoral communities to support income diversification based on opportunities such as large infrastructure projects like the LAPSSET corridor or from conservation activities.

References

Aggarwal, S. &Thouless, C. 2009.*Land Tenure and Property Rights Assessment: The Northern Rangeland and Coastal Conservation Programs of USAID/Kenya.* USAID Kenya, Burlington.

Atwood, D. 1990. Land Registration in Africa: The Impact on Agricultural Production. *World Developmen,* 18(5) 659-671.

Beach, D., & Pedersen, R. B. (2012).Case selection techniques in Process-tracing and the implications of taking the study of causal mechanisms seriously. *In APSA 2012 Annual Meeting Paper.*

Bennett, A. (2010). Process tracing and causal inference. In Henry Brady and David Collier, second edition (Eds).*Rethinking Social Inquiry: Diverse Tools, Shared Standards* Rowman and Littlefield Publishers, Lanham

Boone, R. B.,BurnSilver S. B., Thornton P. K., Worden J. S., &Galvin K. A, 2005.Quantifying Declines in Livestock Due to Land Subdivision. *Rangeland Ecology & Management,*.58(5).523-532.

Campbell, D. J., Gichohi, H., Mwangi, A. & Chege, L. 2000. Land Use Conflict in Kajiado District, Kenya. *Land Use Policy*17 337-348.

Collier, D. 2011. Understanding Process Tracing. *Political Science and Politics*44(4) 823-830.

De Janvry, A. & Sadoulet, E.2001. *Access to Land and LandL Policy Reforms.* UNU/WIDER, Helsinki.

Deininger, K. & Binswanger, H. 1999.The Evolution of the World Bank's Policy: Principles, Experience and Future Challenges. *World Bank Research Observatory*142247-276.

Elmi, M. & Birch, I. 2013.*Creating Policy Space for Pastoralism in Kenya.* Future Agricultures Consortium, Brighton.

Fairley, E. 2012.*Upholding Customary Land Rights Through Formalization: Evidence from Tanzania's Program of Land Reform.* World Ban, Washington D.C.

Fratkin, E. 2001.East African Pastoralism in Transition: Maasai, Boran and Rendille Cases. *African Studies Review* 44(31-25.

Galaty, J. G. 1992. The Land is Yours': Social and Economic Factors in the Privatisation, Sub-Division and Sale of Maasai Ranches. *Nomadic Peoples*30.26-40.

Ghimire, K. 2001. *Land Reform and Peasant Livelihoods: The Social Dynamics of Ruralur Poverty and Agrarian Reform in Developing Countries* .ITDG Publishing, London.

Government of Kenya.2004. *Report of the Commission of Inquiry into the Illegal/Irregular Allocation of Public Land.* Government of Kenya, Nairobi.

Government of Uganda.2013. *The Uganda National Land Policy.* Government of Uganda, Kampala.

Hardin, G. (1968). The Tragedy of the Commons. *Science,* 1243-1248.

Jansen, K. & Roquas, E. 1998.Modernising Insecurity: The Land Titling Projects in Honduras. *Development and Change*29(1) 81-106.

Kenya National Bureau of Statistics (KNBS) 2006. *Economic Survey* Government Printer, Nairobi

Kenya National Bureau of Statistics (KNBS) 2014. *Economic Survey* Government Printer, Nairobi

Kenya Wildlife Service (KWS) 2008. Amboseli Ecosystem Management Plan 2008-2018. Nairobi

Kimani, K. & Pickard, J. 1998.Recent Trends and Implications of Group Ranch Sub-Division and Fragmentation in Kajiado District, Kenya. *The Geographic Journal*164(2) 202-213.

Lekaita, E., Nelson, F. & Davie, J. 2014.*Securing Communal Land Tenure in Northern Tanzania Using Certificates of Customary Right of Occupancy.* Ujamaa Community Resource Team,Arusha.

Lengoiboni, M., Bregt, A. K. & Molen, P. v. d.2010. Pastoralism within Land Administration in Kenya - The Missing Link. *Land Use Policy* 27(2) 579-588.

Lesorogol, C. K. 2002. *Cutting up the Commons: The Political Economy of Land Privatization among the Samburu of Kenya.* Ph.D Dissertation, Saint Louis, Missouri.

Lesorogol, C. K. 2005. Privatizing Pastoral Lands: Economic and Normative Outcomes in Kenya. *World Development*33(11)1959-1978.

Little, P. D., McPeak, J. G., Barrett, C. B. & Krisjanson, P. 2008. Challenging Orthodoxies: Understanding Poverty in Pastoral Areas of East Africa.*Development and Change*39(4) 587-611.

Lohr, D. 2012. The Failure of Land Privatization: On the need for New Development Policies. In:Bollier, D.& Helfrich, S. (eds). *The Wealth of Commons. A World Beyond Market and State.* The Commons Strategy Group. Levellers Press, Amherst

Meinzen-Dick, R. &Mwangi, E. 2008.Cutting the Web of Interests: Pitfalls of Formalising Property Rights. *Land Use Policy*2636-43.

Mugerwa, W. K. 1992. *Rangeland Tenure and Resource Management: An Overview of Pastoralism in Uganda.* Makerere University, Kampala.

Mwangi, E. 2007. Subdividing the Commons: Distributional Conflict in the Transition from Collective to Individual Property Rights in Kenya's Maasailand. *World Development* 35(5) 815-834.

Ng'ethe, J. C. 1993. *Group Ranch Concept and Practise in Kenya with Special Emphasis on Kajiado District.* International Livestock Centre for Africa, Addis Ababa.

Nugent, J. & Sanchez, N. 1998. Common Property Rights as an Endogenous Response to Risk.*American Journal of Agricultural Economics* 80(3) 651-657.

Obeng-Odoom, F. 2012. Land Reforms in Africa: Theory, Practice and Outcome. *Habitat International* 36(1) 161-170.

Ocan, C. 1994. Pastoral Resources and Conflicts in North-Eastern Uganda: The Karamojong Case. *Nomadic Peoples* 34/35 123-135.

Olengurumwa, O. P. 2010. *1990's Tanzania Land Laws Reforms and Its Impact on the Pastoral Land Tenure.* Legal and Human Rights Centre, Arusha.

Ostrom E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press, Cambridge

Owor, E., Nnamulondo P.; Achola L.; Augustinus C., Antonio D.; Rosales-Kawasaki L., Christopher Burke C., and Mabikke S., 2015. *Enhancing Tenure Security on Customary Land through Communal Land Associations.* World Bank, Washington D.C.

Place, F. 2009. Land Tenure and Agricultural Productivity in Africa: A Comparative Analysis of the Economic Literature and Recent Policy Strategies and Reforms. *World Development*75(1) 10-19.

Punton, M. &Welle, K. 2015.Applying Process Tracing in Five Steps. *CDI Practice Paper Annex* Issue 10. Institute of Development Studies, Brighton

Punton, M. &Welle, K. 2015. *Applying Process Tracing in Five Steps.* Institute of Development Studies, Brighton.

Nothern Rangelands Trust. 2013. *The Story of Nothern Rangelands Trust*. Acsent Limited, Nairobi

Regional Learning and Advocacy Program (REGLAP).2010. *Pastoralism Demographics, Settlement and Service Provision in the Horn and East Africa: Transformation and Opportunities.* Humanitarian Policy Group,London.

Reid, R. S., Serneels, S., Nyabenge, M. & Hanson, J 2005.CI: J. M. Suttie, S. Reynolds & C. Batello (eds) *Grasslands of the World.* FAO, Rome.

Rutten, M. 1992. *Selling Wealth to Buy Poverty: The Process of the Individualisation of Landownership Among the Maasai Pastoralists of Kajiado District, Kenya 1890-1990.*Verlag Breitenbach Publishers, Saarbrücken.

Rutten, M. 2008. Why De Soto's Ideas Might Triumph Elsewhere but in Kenya: A Review of Land Tenure Policies Among Maasai Pastoralists. In: M. Rutten, A. Leliveld & D. Foeken, edits. *Inside Poverty and Development in Africa. Critical Reflections on Pro-Poor Polices.* Brill, Leiden, Boston.

Sendalo, D. S. C. 2009. *A Review of Land Tenure Policy Implication on Pastoralism in Tanzania*. Department of Livestock Research, Training and Extension, Ministry of Livestock Development and Fisheries, Dar es Salaam

Schlager, E., and Ostrom, E. 1992. Property-rights Regimes and Natural Resources: AConceptual Analysis.*Land Economics*, 249-262.

Toulmin, C. 2005. Securing Land and Property Rights in Sub Saharan Africa: The Role of Local Institutions. *Land Use Policy*, 26(1) 10-19.

USAID.2010. *Tanzania Property Rights and Resource Governance Profile* .USAID, Dar es Salaam.

Van-Evra S. 1997. Guide to Methods for Students of Political Science. Cornell University Press, Ithaca, New York

Veit, P. 2011. *The Rise and Fall of Group Ranches in Kenya*. Focus on Land in Africa, Washington D.C.

Zoomers, A. and van der Haar, G.2001.*Current Land Policy in Latin America: Regulating Land Tenure under Neoliberalism.*Royal Tropical Institute, Amsterdam.

World Bank webpage 'Kenya' 'Uganda' 'Tanzania', accessed 10 March 2016.