Community-based rangeland management in Il'Ngwesi group ranch, Laikipia, Kenya

Taking successes in land restoration to scale project





ILRI PROJECT REPORT







Community-based rangeland	
management in Il'Ngwesi group	ranch,
Laikipia, Kenya	

Taking successes in land restoration to scale project

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International Livestock Research Institute

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Acronyms

ILRI International Livestock Research Institute

LWF Laikipia Wildlife Forum

NRT Northern Rangelands Trust

KWS Kenya Wildlife Service

I

A. Introduction

This case study was compiled as part of the Restoration of degraded land for food security and poverty reduction in East Africa and the Sahel: Taking successes in land restoration to scale project. The work of the International Livestock Research Institute (ILRI) in the project focuses on rangeland management as an intervention option for management of land that avoids degradation, restores land where it has already been degraded, and improves productivity. The design and operation of successful natural resource management systems for pastoral drylands continue to pose significant challenges to policymakers, government agencies, and development actors (Moiko 2015). Initiatives that strive to promote efficient and sustainable use of dryland resources and increase resilience in the non-equilibrium environments demand holistic understanding of socio-ecological conditions and natural resource governance in the dryland ecologies.

Part of ILRI's research effort here is focused on understanding what we refer to as community-based rangeland management as an option or approach. Community-based rangeland management can be considered to be a subset of the community-based natural resource management approach, adapted and applied to rangeland settings. It is undertaken in varying ways and with various labels. Despite differences in labels, however, there is a core set of characteristics that are common including participatory approaches, the creation of a new or strengthening of an already existing community organization at a medium to large rangeland scale (i.e., larger than "village level"), and a fairly common suite of technical practices that a community committee implements and enforces. On the other hand, there can be important differences in the details of how the approach is implemented, and also in the social and biophysical context in which it is implemented. This report summarizes findings from a case from north-central Kenya: Il'Ngwesi Group Ranch and Conservancy. It is hoped that this study will provide useful lessons to guide choices for NRM policymakers and development actors in the drylands, by contributing to the pool of evidence on what succeeds and what does not in different dryland situations and contexts.

B. Methods and study area

Description of the study area

Il'Ngwesi group ranch is in northern Laikipia County on the lower slopes of Mt. Kenya within the expansive North Rift region. The group ranch borders areas such as Isiolo County to the east, Samburu County to the north, Mukogodo forest to the west, Lekurukki group ranch, and the expansive Borana Ranch and Lewa Conservancy (Moiko 2015).

The area is largely semi-arid savannah grasslands mixed with shrub-lands and acacia woodlands, all of which combine to create ecological landscapes suitable for pastoralism and livestock rearing, but also ideal habitats for wildlife. The more arable, high altitude land areas in the south, adjoining the slopes of Mt Kenya, are well suited for cultivation and host some of the most productive large-scale commercial farms in Kenya. The area is also surrounded by privately owned ranches, communal group ranches, small individual land holdings and government/ public lands. In the larger landscape, in Isiolo and Samburu counties, there are unregistered community lands 'held in trust' by the former local county councils (now county governments) (Moiko 2015).

Methods

This report is, on the whole, a compilation of research conducted through other projects, including particularly the CGIAR Research Program on Dryland Systems and the Local Governance and Adaptation to Climate Change project. Most of the findings presented in the report are gleaned from reports done in those projects. See particularly Moiko (2015), Ontiri and Robinson (2015) and Ontiri and Robinson (2016) for a description of the methods used in that work.

Further information for this report was drawn from a meeting held with seven Il'Ngwesi group ranch leaders and the area chief on 14 November 2017, at which issues such as the rangeland condition, climate change, social differentiation, governance, inter-community relations, and milestones in the group ranch's history were discussed.

C. Basic information on the case

Summary of case

- I. General information
 - Ia. Development agent(s).

Northern Rangelands Trust, Laikipia Wildlife Forum, Lewa Wildlife Conservancy

1b. Name of program(s)/project(s)

Various projects.

Ic. Terminology used by the development agent to describe their community-based rangeland management approach.

Laikipia Wildlife Forum (LWF) uses the term "holistic management".

Id. Extent of the case (the rangeland unit).

The rangeland unit is Il'Ngwesi group ranch that is in the northern lowlands of Laikipia county within the North Rift region of Kenya, covering a land area of 9,296 ha and with a population of about 7,000 people.

This group ranch is comprised of seven localities/neighbourhoods, namely Sanga, Nandugoro, Chumvi, Ethi, Ngarendare/Manyangolo, Lebarua and Olchurai.

This rangeland unit is bordered by Isiolo county to the east, Samburu county to the north, Mukogodo forest to the west, Lekurukki group ranch, and Borana Ranch and Lewa Wildlife Conservancy.

Ie. Briefly identify and describe the key community governance structures and/or processes for the case.

Governance is based on the communal group ranch holding framework where formal ownership is bestowed upon the pastoral communities through resident families, mostly represented by male heads, who are then registered as 'private owners' of the communal ranches and charged with the responsibility of managing these ranches.

The authority and governance of natural resources specifically in Il'Ngwesi group ranch is under the legally mandated group ranch committee which has delegated part of its functions to two other independent committees, Il'Ngwesi Community Trust and Il'Ngwesi Company Limited. The group ranch also has a secretariat that manages community project activities, marketing for the income generating community hotel and handles external communication. This secretariat is coordinated by the group ranch manager.

2. Specification of the approach

2a. Short description of the approach

A multi-level planning approach applies to this case study and operations at the group ranch level are guided by a constitution where the secretariat and coordination framework is established and neighbourhood forums take the central roles at the lowest level.

2b. Detailed description of the approach

Landscape level planning takes place at the group ranch level and resource use monitoring occurs at the neighbourhood level. These neighbourhood forums double up as grazing committees and interact with each other to negotiate management of grazing resources.

The horizontal relationship in this multi-level approach works to enhance coordinated use of pasture resources for the livestock bunching herding system where cattle from separate villages stay and graze together, moving from pasture block to another in a bid to enhance effective pasture use and revitalize degraded areas. Laikipia Wildlife Forum supports the community by appointing a grazing coordinator to coordinate these grazing committees in implementing the bunched grazing system.

The lateral relationship involves interaction between neighbouring group ranches and adjacent private ranches though on a relatively less regular basis. Some of the cross-cutting issues of common interest include sharing of pasture and water in times of scarcity, security and wildlife poaching.

The vertical relationships include interactions with government agencies and conservation groups. For county government organs, interaction is on areas of mutual interest such as wildlife, human security, road and water development, and tourism. The conservation groups include the Northern Rangelands Trust (NRT) and LWF. NRT monitors wildlife populations and supports the community wildlife ranger/scouts' programs and Rhino protection unit by paying salaries to the scouts and providing radio and other communication system for the team. NRT also plays a useful role in marketing and supporting the group ranch's ecotourism business and provides external marketing for women handicraft projects. LWF offers training in issues of grazing management, range rehabilitation and interacts with the group ranch in social projects especially those on women's issues. The group ranch has also been supported by Lewa Wildlife Conservancy in the development of its conservation programs and ecotourism lodge.

2c. Photos of the approach

Wildlife conservation is a key aspect of Il'Ngwesi's strategy.



Area zoned as core conservation area where livestock are not normally allowed.



A small portion of the group ranch territory is reserved for settlement and cultivation.



The Group Ranch has also dedicated a section of its territory for fodder farming.



All photos courtesy of Teresiah W Ng'ang'a, University of Nairobi/ICRAF .

2d. Country/region/locations of the specific case Mukogodo constituency, Laikipia North, Laikipia county, Kenya

2e. Key dates:

Key date	Activities
1990s	Entrance of partnering development agencies:
	Laikipia Wildlife Forum (LWF)
	Lewa Wildlife Conservancy
	Kenya Wildlife Service (KWS)
	Capacity building and implementation for:
	Planned grazing
	Segregation of conservancy areas
	Conservancy management
1995	Establishment of Il'Ngwesi Group Ranch
1996	Promotion of wildlife conservation by KWS and Lewa Wildlife Conservancy. Establishment of Il'Ngwesi Community Conservancy and Il'Ngwesi eco-lodge
2004	Formation of NRT
2005	Amendment to the Group Ranch constitution
2008	Introduction of holistic rangeland management, including the bunched grazing method by Laikipia Wildlife Forum and Natural Capital East Africa

D. Characterization of the social, economic and biophysical context

Overview of the Context

Table 1: Social, Economic and Biophysical Context - Summary

Dimension	Variable/characteristic	Value/comments
Biophysical	Mean annual precipitation	810 mm. ¹
	Rainfall variability	$CV = 28.8\%^2$
	State of rangeland condition at initiation of the intervention	Overgrazed lands with diminished preferable species
Demography, livelihoods and social structure	Population density	.292 persons/ha. living within the group ranch ³ .
	Degree of competition for/pressure on land	High competition and increased pressure on land
	Ethnic hetero/homogeneity of the rangeland unit	Ethnically homogeneous
	Ethnic hetero/homogeneity of the region within which the rangeland unit is situated	Ethnically heterogeneous
	Percentage of land within the rangeland unit under cultivation	Twenty percent of the group ranch area is reserved for settlement and farming. The percentage of land actually cultivated is somewhat less than that.
	Percentage of land within the region unit under cultivation	More land is cultivated in some other areas on the slopes of Mt. Kenya to the South. North and west of Il'Ngwesi in the lowland areas there is little to no cultivation.
	Predominant livelihoods	Agro-pastoralist livelihoods dominate (>50% of the pop.)
Governance and	Type of land tenure	Secure communal tenure
tenure	Security of land tenure	Very secure (borders and ownership are known and legally recognized, conversion/ appropriation of land is rare and follows legitimate procedures, tenure is enforced by traditional and/or state institutions)
	Is there elected local (commune, municipality, village—not meso-level such as counties in Kenya, but rather local) government?	No
	Strength of customary institutions for natural resource management	Weak

Dimension	Variable/characteristic	Value/comments
Neighbouring communities and inter-community	Extent to which other communities / rangeland units within the region also have similar community-based rangeland management and governance structures	Between 10% and 50% of neighbouring communities have similar governance and management structures
relations	Strength of community organization in other communities/ rangeland units within the region	Il'Ngwesi is one of the most organized communities in the wider region compared to weaker organization of Isiolo and Samburu
	Severity of inter-community conflict and livestock theft. Describe the source(s) and nature of the conflict, if known.	Serious inter-community clashes with neighbouring communities such as the Samburu from the north, and others from further out. The source of this conflict is from livestock theft and invasion by neighbouring communities into areas reserved for drought or dry season grazing by the II'Ngwesi community.

I.Thornton, P. 2014. Rainfall and rainfall variability. Pages 38-39 in Sebastian, Kate, Ed., "Atlas of African agriculture research and development: Revealing agriculture's place in Africa." Washington, D.C.: International Food Policy Research Institute (IFPRI) http://dx.doi.org/10.2499/9780896298460

2. Ibid

Biophysical context

Il'Ngwesi is largely a semi-arid savanna grassland mixed with shrub-lands and acacia woodlands and dominated by pastoralism, livestock rearing and wildlife conservation. Mean annual precipitation is 810 mm., and the coefficient of variation in annual rainfall is 28.8%.

However, the area further south is of a higher altitude as it adjoins the slopes of Mt Kenya and the area is therefore suited to arable farming and large scale commercial farming. The wider area is also characterized by forest areas.

Demography, livelihoods and social structure

The Il'Ngwesi group ranch covers an area of 9,296 ha. and has a population of approximately 7,000 people, but with only 2,715 people living within the group ranch boundaries, and the others living in areas owned by the group ranch but outside these boundaries. This kind of population distribution was necessitated by the need to leave more available land within the group ranch for grazing, tourism and wildlife conservation.

Cultivation is mostly practiced around the households which are on approximately 20% of land allocated by the group ranch for settlement, farming and livestock rearing. This organization of activities in various parcels of land has helped to reduce competition for resources and the pressure on land. The existence of a grazing plan has also helped to reduce grazing pressure within the rangeland unit. However, in-migration and conversion of land for crop production has led to less available land and thus increased pressure on the available resources.

This rangeland unit is ethnically homogenous, composed of mostly people from the Maasai community with a few in-migrants living in the areas outside the group ranch. However, the region in which the rangeland unit is situated is ethnically heterogeneous.

The predominant livelihood is agro-pastoralism and wildlife conservation, but with increased effects of climate change and human and livestock population pressure, livelihoods have diversified to include employment income, trade and ecotourism. The communities living in the group ranch are mostly headed by a male head and social interactions within the community are guided and based on the customary norms, traditional practices and rules established by the community members themselves. Village heads and other organized committees oversee upholding of the community interaction structure.

^{3.} However, most of the group ranch members live outside the group ranch boundaries. Calculating based on that population of approximately 7,000 gives a density of .753 persons/ha.

Governance and tenure

The land tenure for II'Ngwesi and several nearby communities is under the group ranch land holding framework, which was established in 1968. In this system, the group ranch is a registered communal land holding which designates communal territories to a registered group of members and gives them ownership and management rights over the land. The governance system as a whole involves traditional authorities, local community organizations and national and county governments. In the immediate vicinity of II'Ngwesi, tenure is generally well-demarcated and clear for almost all land: aside from group ranches there are private ranches and other private land, as well as private and state-managed protected areas. Further to the north, however, in Isiolo and Samburu counties, the vast majority of the land is former Trust Land. Under the Community Land Act (2016) former Trust Land is to be registered as Community Land with clear, enforceable tenure allocated to defined community groups. The Community Land Act is yet to be implemented, however, and boundaries and governance on that land remain fuzzy, flexible and undefined. The existence of this gradient from clearly defined tenure in the area of II'Ngwesi and further south to areas of fuzzy, undefined tenure further north is a major factor driving patterns of resource use and conflict in the larger landscape (Ontiri and Robinson 2016). See also "Neighbouring communities and inter-community relations", below.

Neighbouring communities and inter-community relations

Il'Ngwesi group ranch borders Isiolo county to the east and Samburu county to the north, largely occupied by Samburu community. Other neighbours include other ranches such as the Lekurukki group ranch, Borana and Lewa Wildlife Conservancy.

Land in Isiolo and Samburu counties, are majorly Trust Lands, which are unregistered community lands held in trust by county governments while Il'Ngwesi group ranch is under a defined tenure system, a registered communal land holding. This difference in tenure systems brings about differences in the organizational structures and in the kind of governance. Neighbouring communities have weaker organizational structures compared to the Il'Ngwesi group ranch and this results in conflict when these neighbouring communities invade areas that have been set aside by the Il'Ngwesi group ranch for drought season grazing.

Serious inter-community clashes have previously been witnessed back in 2015 and more recently in 2017. This has previously been due to invasion of drought season grazing pastures by Samburu pastoralists and other pastoralists from further out and because of livestock theft. Conflict resolution is attempted through talks between elders of one community with another. In the case of Il'Ngwesi, the village grazing committees handle such matters. However, in extreme cases such as the 2015 and 2017 clashes county government intervention is required.

Enabling and hindering factors in the context

Table 2: Enabling and hindering factors

Condition	Specification
Social/ cultural/ religious norms and values	Enabling: Organization of a planned grazing system and bunched grazing by the group ranch members
Availability/ access to financial resources and services	Enabling: Access to financial resources from eco-lodge proceeds and other business ventures of community members
Institutional setting	Enabling: Organization of the group ranch committee, community trust committee and village committee forums
Collaboration/ coordination of actors	Enabling: collaboration between the community and actors
Legal framework (land tenure, land and water use rights)	Enabling: Strong land tenure and the community has the right to use the commonly owned land
Policies	Enabling: Constitution to guide operations of Il'Ngwesi group ranch
	Hindering: Lack of full support in terms of gaining support from county government to protect the group ranch from invasions
Land governance (decision-making, implementation and enforcement)	Enabling: Controls and decisions on land governance by the group ranch committee
Knowledge about SLM, access to technical support	Enabling: the group ranch community has deep knowledge of SLM and access to technical support
Markets (to purchase inputs, sell products) and prices	Enabling: Ease of access to markets for both livestock through NRT and agro products through other markets
Workload, availability of manpower	Enabling: there exists available labour and manpower

E. Characterization of the approach to community-based rangeland management

Overview

Table 3: Characterization of the Approach—Summary

Dimension	Variable/characteristic	Value/comments
Methods used by development agent	Methods	
	3a) Community entry process and participatory activities used by the development agent	Entry process used by organizations such as NRT and LWF is through the II'Ngwesi Group Ranch Committee. Both these organizations also involve II'Ngwesi in network activities and forums at larger scales. They also fund some staffing such as for a grazing coordinator and scouts/rangers.
	3b) Approach to capacity building used by the development agent	Both NRT and LWF have conducted training workshops in the community. Development of bunched grazing and other techniques of holistic rangeland management were initiative through participatory action research.
	3c) Nature of incentives and business model	The group ranch earns incomes from its eco-tourism operation. It has also recently started contract grazing, renting out pastures to livestock owners from other communities. It is also using some of its territory for fodder farming.
	3d) Types of technical rangeland management options	Seasonal planned grazing management.
	being supported by the development agent	Intensive bunched grazing.
		Reseeding.
	3e) Advisory service	Yes
	3g) Is monitoring and evaluation part of the approach?	Yes
Governance	4. Governance design	
	4a) Governance type	Community governance
	4b) What form does community representation take? Participation/ representation	Based on communities and/or jurisdictions
	4c) Are there provisions for regular election of officers/representatives?	Yes
	4d) Involvement of women, minorities and other groups	Yes. Two slots reserved for women in the committee. Slots shared on a rotational basis across the neighbourhoods

Dimension	Variable/characteristic	Value/comments
Governance	5. Basis of structures/processes in customary institutions	
	5a) The decision-making structures/ processes for the rangeland unit	Do not formally include customary institutions and decision-making procedures
Authority	5b) Are there any hereditary or other customary leaders who are automatically part of the leadership structure?6. Legal mandate	No
	6a) Is the main decision-making structure registered as a legal entity?	Yes
	6b) Are the decision-making structures or processes of the rangeland unit recognized and given legal mandate by a legislative framework?	Yes
	7. Authority and governance powers of the rangeland unit's governance structures/ processes	
	7a) What governance powers do the rangeland unit's governance structures/ processes have?	Full governance and management powers
	7b) In cases where rangeland unit's governance structures/ processes have limited authority (have merely an advisory/ coordination function), where instead does the bulk of authority lie?	Not applicable
	7c) Who decided on the selection of technical options to be implemented	Mainly land users, supported by rangeland specialists
	7d) Specify on what basis decisions were made (several options are possible)	Personal experience and opinions expressed at AGMs
		Knowledge/evidence based decision making
		Research findings shared by collaborating partners
	7e) Graduated sanctions	Yes
	7f) Conflict resolution mechanisms	Yes
Management	8. Staffing	
	8a) Is there a secretariat (e.g., paid staff working for the community organization in an office)?	Yes
	8b) Are there paid field staff (e.g., rangers, rangeland managers, etc.)?	Yes
	8c) Does the rangeland unit hire professionals (e.g. rangeland ecologists, tourism managers, etc.)?	Yes
Spatial organization,	9. Definition of the rangeland unit	
scales, and levels	9a) How is/was the geographic extent of the rangeland unit defined?	Pre-defined
	9b) What criteria are/were used to define it?	Traditional territories
	10. Nesting and multi-level planning approach	
	IOa) Are there clearly defined territories and associated institutions nested within the rangeland unit structure?	Yes
Spatial organization,	10b) Is the rangeland unit formally nested within a larger structure?	Yes
scales, and levels	10c) How does resource planning at the rangeland unit level relate to planning at levels above and below?	Primarily at the rangeland unit level and then further details and planning are done at lower levels

Methods

3. Methods used by development agent

The development agents' community entry process is through the Il'Ngwesi Group Ranch Committee. This committee is formed by a group of representatives elected by community members, through an AGM process. The development agent uses a collective decision-making process where they involve the group ranch committee in all decision-making processes for the group ranch.

The development agents used Participatory Action Research where these partnering organizations approached and engaged the community in carrying out a set of activities aimed at rangeland improvement, conservation management, land rehabilitation and land restoration efforts. These were based on holistic rangeland management, especially the bunched grazing system. One of the approaches used for institutional capacity building is in the formation of conservancies to raise financial resources from eco-tourism.

The business model conceptualized is where the financial resources raised can be directed towards rangeland management and improvement of household livelihoods. Some of the technical rangeland management options undertaken within the group ranch with support from the development agents included seasonal planned grazing management, intensive bunched grazing and reseeding. These development agents serve on an advisory role and capacity.

Community members are involved actively at all stages of the process and monitoring and evaluation is done by the community members through local village forum/grazing committees.

Governance and management

Governance design

The governance design used is collaborative/shared between NGOs (NRT and LWF) and partnering communities (Il'Ngwesi). Participation of communities is through representation of all constituent localities in each of the key governance organs, these are the committees operating at different levels and with different mandates.

The group ranch committee is elected in an annual general meeting and is comprised of a chair, a vice-chair, a treasurer, a secretary, an assistant secretary and five other committee members to serve for a period of five years' renewable once. The committee can co-opt up to three extra members to assist in the delivery of its mandate. Members of the trust serve for one term of three years, but are eligible for re-election once.

There are two slots reserved for women in the committee to ensure some level of gender inclusivity. These slots for women are shared on a rotational basis (one term) between the seven neighbourhoods to ensure equal opportunities for all constituent localities.

5. Basis of structures/processes in customary institutions

Although there is no formal role for particular categories of traditional leaders or institutions, elders are involved in decision-making. The internal institutional structures are created through community participation and representation in the committees which are the governance institutions and which operate at different levels and with different mandates. The group ranch committee is the strategic and policymaking organ in charge of group ranch development and future directions, the secretariat oversees coordination and implementation of projects, the community trust governs natural resources and manages community projects, the village forum committees coordinate village forums

in their respective villages and the Il'Ngwesi company guides the community in initiating and overseeing incomegenerating projects of the group ranch.

6. Legal mandate

The group ranch committee is legally mandated with authority and governance of natural resources. This authority is derived from the Group Ranch Act (1968) which stipulates the group ranch committee as the formal legal organ for group ranch management including authority and jurisdiction over land matters within the group ranch as derived from the Group Ranch Act and approved in the Annual General Meeting.

7. Authority and governance powers

The committees have full authority and governance powers and because of this, higher level institutions such as national or county government cannot force the committee to rescind or make any decisions unless through consensual persuasion. This also applies to external groups that are also required to obtain the approval of the committee to access any resources within the group ranch.

The committees are therefore in charge of decisions on group ranch development, future directions, governance of natural resources, managing community projects, overseeing of all environmental and ecosystem related programs, developing of policies and guidelines for livestock grazing control and enforcement of the same, selection of technical options for implementation, carrying out graduated sanctions and as conflict resolution mechanisms.

8. Management

The legally mandated group ranch committee which has the authority on governance of natural resources delegates parts of its functions to two other independent committees, the Il'Ngwesi Community Trust and the Income Generating Project (Il'Ngwesi Co. Ltd). The group ranch has a secretariat that has a working staff of six people and offices in Nanyuki township. The secretariat is coordinated by the group ranch manager and it oversees managing community project activities, handling external communication and marketing for the income generating community hotel, the Il'Ngwesi Eco-Lodge. Members of the committees are not necessarily employed based on their professionalism, but they do receive training to enable them to perform their duties better. At the lodge, some level of professionalism is considered during the hiring process.

NRT supports the group ranch's initiatives through community wildlife ranger/scouts' programs where salaries are paid to these field scouts to support them in monitoring wildlife populations.

Spatial organization, scales, and levels

9. Definition of the rangeland unit

The geographic extent of the rangeland unit was determined based on predefined customary Maasai land tenure and later formalized from the creation of the group ranch. Maasai territoriality and land access rights were traditionally allocated along Maasai political sections, Ilóshon, of which the larger Laikipia Maasai section was one. Below the Olósho, distinct groups identified based on common local territorial occupation occupied segments of the larger territories, l'nkutot and controlled specific rights over resources in such areas. In the case of the Il'Ngwesi such several adjacent land segments, occupied by the hunting and livestock keeping Il'Ngwesi Maasai, were collapsed and converted into a formal group ranch.

10. Nesting and multi-level planning approach

The rangeland unit applies a multi-level planning approach where landscape level planning takes place at the group ranch level and resource use monitoring occurs at the neighbourhood level. The group ranch therefore operates at two levels, at the group ranch level where the secretariat and coordination framework is established and at the neighbourhood level where the neighbourhood forums (grazing committees) take the central roles.

There is a horizontal engagement where neighbourhood forums which double up as grazing committees interact with each other in negotiated management of grazing resources and this enhances coordinated use of pasture resources especially under the new livestock bunching herding system. This ensures effective pasture use and revitalization of degraded areas. LWF supports the community through the seconding of a grazing coordinator to coordinate grazing committees in implementing this bunching herding system.

There is lateral engagement where there is interaction between the group ranch and neighbouring group ranches and adjacent private ranches, but this is on a less regular basis.

Vertical engagements are usually between the group ranch and government agencies or other entities of concern. Interactions occur in areas of mutual interest such as wildlife and human security, road and water development and tourism. However, interaction with regional conservation groups such as NRT and LWF is more operative and the group ranch members receive support for their ecotourism business, there is marketing for women's handicraft projects as well as holding of discussions and deliberation on pertinent issues with the council of elders.

F. Outcomes impacts, and changes over time

The community members and the leadership committee of Il'Ngwesi community agree that they have witnessed changes in the rangeland condition since they began implementing activities towards better rangeland management, and towards conservancy management. Areas segregated for conservancy have good grass cover but these areas are not open to livestock grazing. This leads to overgrazing and increased bare land for the areas left aside for livestock grazing.

However, to solve this, there are increased efforts by the Il'Ngwesi community as they engage in the hay making business and other efforts directed towards reseeding to restore these degraded lands. With the current increase in rainfall amounts, there are hopes of natural reseeding but the fears of invasion by other communities remains a primary issue for the Il'Ngwesi community who sacrifice a lot to ensure they have good drought reserves. The recent invasions witnessed in these areas has the potential to greatly deter the Il'Ngwesi community to continue with these land restoration efforts. Therefore, calls to peace, respect of property regimes and rights, increase in security efforts, and increased involvement and support from county governments is required.

G. Discussion

The use of participatory methods as an approach to involve the Il'Ngwesi community has been important in ensuring longevity of the implemented plans in this group ranch. Presence of a well-structured committee in charge of the decision making and as the bridge between the community members, other development actors and county government has attributed to organization and smooth implementation and communication between the various stakeholders. Adjustments to the governance structure to better suit the types of management actions being taken—particularly a two-level structure with planning and management being implemented both at group ranch level and also at the lower, "neighbourhood" level was also important. The various activities implemented in the area have worked well but more is needed to consider the larger landscape. This is because intrusions by herders from other locations who fail to respect the grazing organization patterns and rules of the Il'Ngwesi community has resulted in the conflict witnessed in 2015 and again more seriously in 2017. It is therefore important for all stakeholders from Laikipia county and other neighbouring counties to come together with lasting solutions regarding these problems.

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