

Independent Impact Assessment Report

**Participatory Rangeland Management (PRM)
in Kenya and Tanzania**



A report by African Research
and Economic Development Consultants LTD.

Acknowledgements

Completion of this report would not have been possible without the support provided by the client (ILRI) and especially Fiona Flintan. We also acknowledge the support provided by implementing partners i.e., Resource Conflict Institute (RECONCILE) in Kenya and Tanzania Natural Resource Forum (TNRF) and KINNAPA Development Programme both in Tanzania. Particularly, the following individuals needs a mention: Ken Otieno, Irene Aloo, Irene Musundi and Beatrice Mutua from RECONCILE. We also acknowledge the support provided by the 4 RECONCILE field coordinators in Baringo, Kenya. From Tanzania, we acknowledge Zakaria Faustin, Amos Pendaeli, Daniel Ouma from TNRF; as well as Abraham Stanslaus Akilimali, and Pauline Ngurumwa both from KINNAPA.

The information provided by almost 2,000 household respondents, almost 150 FGD participants and more than 40 key informants from both Kenya and Tanzania is highly appreciated. Lastly, the role of the consulting team from AFREDEC under the leadership of Mr. Timothy Waweru, Joel Maina, Dr. Basili Liheta and Edwin Apunda, the research supervisors and the more than 45 research enumerators cannot go unmentioned.

NOTE: *The opinions expressed here belong to the authors and do not necessarily reflect those of the EU, the CGIAR Research Programs on Livestock or PIM, ILRI, ILC, RECONCILE, TNRF or KINNAPA.*

Independent Impact Assessment Report

Participatory Rangeland Management (PRM) in Kenya and Tanzania

Key Authors:

Timothy Waweru, Joel Maina, Dr.Basili Liheta, Edwin Apunda

December 2021



A report by African Research
and Economic Development Consultants LTD.

Acronyms and abbreviations

AFREDEC	African Research and Economic Development Consultants (Ltd)
AGREST	Agricultural Economics Society of Tanzania
ALKA	Alolle Livestock Keepers Association
BCCA	Baringo County Conservancies Association
CFA	Community forest association
CIDP	County Integrated Development Plan
CSOs	Civil society organizations
CVP	Communication and visibility plan
DRR	Disaster risk reduction
EU	European Union
FAO	Food and Agriculture Organization –UN
FDG	Focus group discussions
GEF	Global Environment Facility
IFAD	International Fund for Agricultural Development
ILC	International Land Coalition
ILRI	International Livestock Research Institute
KEFRI	Kenya Forestry Research Institute
KFS	Kenya Forest Services
KIIs	Key informant interviews
KILKA	Kimbo Livestock Keepers Association
KWS	Kenya Wildlife Service
LGAs	Local government agencies
LKAs	Livestock keepers associations
LMAs	Livestock marketing associations
N (TWG)	National Technical Working Group
NDMA	National Drought Management Authority
NEMA	National Environment Management Authority
NES	National engagement strategy
NGOs	Non-governmental organizations
NLKA	Napalai Livestock Keepers Association
NRT	Northern Rangelands Trust
OLKA	Olengapa Livestock Keepers Association
PIM	Policy Institutions and Markets
PRM	Participatory rangeland management
PWDs	People living with disabilities
RECONCILE	Resources Conflict Institute
RMU	Rangeland management unit
TASO	Tanzania Agricultural Society
TAWLAE	Tanzania Women Leaders in Agriculture and Environment
TDV2025	Tanzania Development Vision-2025
TNRF	Tanzania Natural Resource Forum
TSAP	Tanzania Society of Animal Production
TVA	Tanzania Veterinary Association
VEO	Village executive officer
WEO	Ward executive officer
WVK	World Vision Kenya

Table of contents

Executive summary	7
1 Introduction	11
1.1 About the Report	11
1.2 About the Project	11
1.3 Assignment Objectives and Scope	15
2 Methodology and approach	17
2.1 Overall Impact Assessment Approach	17
2.2 Data Needs and Tools	17
2.3 Selection of Respondents	18
2.4 Sampling Design	19
2.5 Data Collection Tools and Approaches	25
2.6 Data Analysis and Management	27
2.7 Assessment Limitations and Challenges	27
3 Results and findings	29
3.1 Introduction	29
3.2 Household Demographic and Socioeconomic Information	29
3.3 Awareness and Participation in PRM	44
3.4 Governance and Decision Making in PRM	47
3.5 Capacity-Building Through PRM	71
3.6 The Community Rangelands Investment Fund	76
3.7 Outcomes and Impacts of PRM	78
3.8 Partnerships, Collaborations and Policy Influence	87
3.9 Key Lessons Learnt and Success Factors of the PRM	89
3.10 Sustainability of PRM	91
4 Conclusions and reflections	93
4.1 Conclusions	93
<hr/>	
References	96
Annex 1 Data collection tools	97
KII checklist	114
FGD checklist	117
Annex 2 Lists and codes of FGD respondents	120
Annex 3 Other Programmatic Recommendations by AFREDEC	122

Executive summary

This report comprises findings from an independent impact assessment of the Piloting Participatory Rangeland Management project in Kenya and Tanzania. The study was conducted in November and December 2021 by African Research and Economic Development Consultants (AFREDEC), contracted by ILRI Livestock CRP (CGIAR Research Program). The main objective was to determine the impacts of participatory rangeland management (PRM) on rangelands, environment, good governance and management processes, security of rights to land and resources, livestock production, gender issues, women's empowerment and other social equity aspects and on policy influence. The study identified key lessons learnt and best practices and opportunities for scaling up.

The assessment applied a mixed-method approach comprising quantitative data collected using household surveys and qualitative data collected using key informant interviews and focus group discussions. In total, 2,000 household representatives were interviewed through the survey, with almost 150 focus group discussion participants and more than 40 key informants.

The study revealed that pilot project had positive impacts.

- » **Improved rangeland condition** was a major impact reported by 96.1% and 93.4% of the communities participating in the PRM pilot in Kenya and Tanzania. When asked about the first impacts observed during PRM implementation, 50.1% in Kenya and 41.8% in Tanzania reported improved rangelands and as reflected in the activities implemented in the rangeland management units (RMUs) through rangeland management plans (RMPs) such as bush clearing, seeding pastures, improvement of grasses, tree planting and conservation and water conservation measures. Focus group discussions revealed that rangelands were well demarcated and visible that it was easier to differentiate land for crop production from grazing lands.
- » **Improved community participation in rangelands governance and management** was reported by over 90% of the community members participating in PRM in Kenya and Tanzania. This was partly a result of training on PRM given to government and communities, the establishment of functioning PRM coordination platforms, holding multi-stakeholder dialogues and establishing effective partnerships.
- » **Security of rights to land and resources.** Improved participation of the community in governance and management of rangelands through the PRM process led to improved access to rangeland resources for the whole community and an increased feeling that the rangelands belong to them as a community. This was reported by over 90% of the community members participating in PRM in Kenya and Tanzania. There were fewer conflicts reported by 84% and 89% of the community members participating in PRM in Kenya and Tanzania.

- » **Impact on livestock production.** Improved management of and access to rangeland resources through PRM contributed to an increase in livestock numbers and improved livestock body conditions as indicated by 91% and 93% of the community members participating in PRM in Kenya and Tanzania. Changes in the types of livestock were also noted by 73.4% and 55.3% of the community members in Kenya and Tanzania. This included adoption of improved breeds of cows, especially in Kabarion Community Conservancy and Koitegan Community Forest Association in Kenya and Allole Cluster in Tanzania.
- » **Impact on gender issues, women's empowerment and other social equity aspects.** The PRM pilot increased the number of women in leadership positions in the community and improved women's participation in rangelands management as indicated by over 95% and over 90% of the community members participating in PRM in Kenya and Tanzania. Sensitization and capacity-building on the need for gender parity in the process led to the community welcoming the involvement of women and youth in the PRM processes in both countries. Women in Kiteto, Tanzania have set up a women's forum, "*jukwa la akina mama*" that meets regularly to discuss matters that affect them concerning rangeland resources. In addition, women's economic groups have been formed and registered by the District Community Development Department. Women in Baringo, Kenya can now own production units such as beehives and are allowed to make sales and own their businesses resulting in more income for women.
- » **Impacts on livelihoods, food and nutrition security and incomes.** Over 80% of direct beneficiaries indicated that PRM has contributed to improved livelihoods, improved food and nutrition security, increased incomes, and enhanced capacity of the community to cope with drought and other crises. Notably, annual income from livestock sales in Tanzania increased from approximately US\$ 650 during a baseline carried out in 2019 to US\$ 1,097 at the time of the impact assessment, while annual income from the sale of livestock products more than doubled from approximately US\$ 7 during the baseline to US\$ 16 during the impact assessment.

The study identified lessons and success factors that should be considered for replication or scaling up PRM and related interventions.

- » **Group approach:** Strong RMUs and collective action among PRM beneficiaries is vital to enhancing their capacity to achieve the intended impacts. Working in groups enhances community spirit and is cost-effective and easy for beneficiaries to learn from each other and reach as many beneficiaries as possible. Strengthening clusters and livestock associations and conservancies is important as these are vehicles for provision of extension services, training, and information sharing.
- » **Strategic engagement with the government and policy makers.** PRM engages with government at village, ward and district/sub-county and regional/county levels. The formation of Technical Working Groups (TWG) at the onset of the project was a major boost for performance and sustainability.

This enabled identification of project sites, beneficiaries, sharing approaches, information, data and solutions to community challenges. This promotes sustainability of community projects as government agencies can take over the activities of the project once it comes to an end.

- » **Community engagement and independence:** In both countries, the key success factor for the rangeland management unit was effective mobilization at the start of the PRM project. Despite the PRM process being technical and difficult for local communities, the implementing agencies undertook sufficient mobilization of key stakeholders and awareness creation and capacity-building on PRM to help communities understand and implement the project activities. This resulted in better understanding and thus facilitated the PRM processes. The fact that established RMUs were fully responsible for their own activities was a key success factor. This created a sense of ownership and trust in the PRM process. Community ownership and responsibility are basic prerequisites for sustainable development.
- » **Engagement with traditional leaders:** Local leaders, including elders and village councils, are a key source of information to which the community refers. There is active participation of traditional leaders in educating people on adoption of new innovations.
- » **Community Rangelands Investment Funds (CRIF).** This fund was intended to create financial sustainability for the project as a result of internally generated funds from member contributions and livelihood activities. The capacity of communities to implement and manage a CRIF needs further support.
- » **Recognition of women and youth.** The survey revealed that there is increasing recognition that women and youth in community project planning and implementation through avenues such as women's rights leadership forums and involvement in management committees. This increases opportunities for women and youth to participate and benefit from rangeland livelihood activities such as apiculture and the sale of livestock products.
- » **Partnerships and collaboration:** Working with local governments (district or county) and other stakeholders in the entire livestock sub-sector has proven to be an effective pathway for change towards scaling up good practices and application of appropriate technologies at different levels and by different actors in the sub-sector. Experience from collaboration with various institutions shows that PRM stands a good chance of realizing more tangible results when working in complimentary partnerships with other organizations. Such partnerships may offer the best opportunity for complimenting capacity-building with material support to kick-start activities in targeted communities. At the community level, establishment or strengthening community associations was a major success factor. Partnerships and external links are useful for gaining new knowledge, sharing experiences and meeting challenges including grazing land conflicts and infrastructure development. It also enhances sustainability of the PRM interventions.

- » **Good business enabling environment.** The enabling environment for business with and by communities can be strengthened by improving the institutional arrangements and supporting policy implementation, facilitating public-private collaboration and consultations and improving the capacities of both public and private livestock actors.
- » **Leverage on Information and Communication Technology (ICT).** ICT would go a long way to providing opportunities to enhance project implementations and cutting costs and travel time. It is also important for information dissemination.
- » **Intensified livelihood activities.** Livelihood activities have the potential to benefit many more people and are likely to be easily sustained. Some of the livelihood activities that could be scaled up include beekeeping, livestock breed improvement, eco-tourism, commercial pasture growth and conservation, agro-forestry, tree nursery establishment, commercialization of some of the indigenous plants such as *Archiconia fruticosa* whose sap can be processed and used as a fumigant. The livelihood activities should be integrated with rangeland conservation interventions such as water conservation, control of invasive plant species and increasing vegetation cover.

In conclusion, the opportunity of scaling up PRM in Kenya and Tanzania is immense. This is because there is increased knowledge and skills of the PRM process among the stakeholders including government, NGOs and RMUs. The impacts accrued to the communities as a result of PRM are catalysts for encouraging communities exposed to PRM to continue implementing the interventions and to recommend PRM to other communities.

1 Introduction

1.1 About the Report

This report comprises findings from an independent impact assessment of the piloting of Participatory Rangeland Management (PRM) project. The study was conducted by AFREDEC (African Research and Economic Development Consultants Limited) contracted by ILRI (International Livestock Research Institute). The guiding terms of reference for the assignment are included as Annex 1 of this report. The report is structured into 4 main chapters including an introduction, methodology, results, and conclusions. Any other relevant information is presented as Annexes.

1.2 About the Project

1.2.1 Background

By definition, Rangelands are lands on which the vegetation is predominantly grasses, grass-like plants, forbs or shrubs and is managed as a natural ecosystem. Rangelands include annual and perennial grasslands, shrub and dry woodlands, savannah, and deserts. Almost 80% of Kenya and 74% in Tanzania is covered by rangelands (Mwilawa et al 2008)¹. The rangelands provide livelihood to millions of people. Pastoralism and agro-pastoralism comprise the main source of livelihood in semi-arid Kenyan and Tanzanian rangelands. The Kenyan rangelands hosts 60% of its livestock population and virtually all of the country's immense wildlife heritage (Deepali G. and Preetika B. 2011)². Tanzania has the third highest number of livestock in Africa, coming only after Sudan and Ethiopia.

Over the years, rangelands in both countries have experienced pressure from a number of threats. Land subdivision, population growth, climate change, devastating droughts, land degradation and unsustainable land use practices threaten the continued productivity of rangelands and indeed their existence in the future. Increased community awareness and participation in the conservation of rangelands has been identified as a key driver towards sustainability. Such approaches include participatory rangeland Management (PRM), which is a step-by-step process for improving the management, governance and investment in rangelands, led by communities and supported by NGOs, researchers or development agents.

1.2.2 The PRM Project

Starting in 2010, the PRM was successfully piloted in Ethiopia before being scaled up in 2014. Learning from the good experience there, this project was developed to pilot PRM in Kenya and Tanzania. This pilot PRM project is led by the Resource

1 <http://www.lrrd.org/lrrd26/5/sele26078.html>

2 Kenya Rangelands Coalition 1st Launch Meeting Synthesis Report, 2008

Conflict Institute (RECONCILE) in Kenya and the Tanzania Natural Resource Forum (TNRF) in Tanzania, with technical support provided by ILRI.

The PRM project contributes to two CGIAR research programs (CRPs). These are the Livestock CRP, especially the Flagship 4 project on environment. The Livestock CRP is led by ILRI and provides research-based solutions to help smallholder farmers, pastoralists and agro-pastoralists transition to sustainable, resilient livelihoods and to productive enterprises that will help feed future generations. It aims to increase the productivity and profitability of livestock agri-food systems in sustainable ways, making meat, milk and eggs more available and affordable across the developing world.

The PRM project also contributes to the Policies, Institutions and Markets (PIM) CRP, especially Flagship 5 on governance of natural resources. The PIM which is led by IFPRI (International Food Policy Research Institute) leads action-oriented research to equip decision-makers with the evidence required to develop food and agricultural policies that better serve the interests of poor producers and consumers, both men and women.

Funding for the Piloting the PRM project was mainly from the EU through the International Land Coalition (ILC) hosted by the International Fund for Agricultural Development (IFAD). ILRI provided technical support including research funded through the project and supplemented by the above two CRPs.

1.2.3 The PRM Process

The participatory rangeland management (PRM) is a step-by-step process for improving the management, governance and investment in rangelands, led by communities and supported by NGOs, researchers or development agents. As documented in Flintan and Cullis (2010), the PRM process comprises three major phases further organized into eight steps and which, it is anticipated will be adapted to country and local contexts:

- » **Step 1:** Identifying rangeland resources and users
- » **Step 2:** Setting up or strengthening rangeland management institutions
- » **Step 3:** Defining the rangeland management Unit
and preparing the rangeland resource assessment
- » **Step 4:** Developing the rangeland management plan
- » **Step 5:** Establishing the rangeland management agreement
- » **Step 6:** Setting up new roles for communities
and rangeland management advisers
- » **Step 7:** Implementation of activities aimed at arresting
and reversing rangelands declining productivity
- » **Step 8:** Participatory monitoring and evaluation

According to the PRM project document³, the overall goal of PRM is to improve the livelihoods and nutrition status of pastoralist communities in East Africa by improving the management of rangelands. The key project purpose is “to attain and secure better use of rangelands and expand the role of women in selected pastoral communities in Tanzania and Kenya” while the key outputs/result areas are as follows:

- » Implement PRM pilots within shared grazing areas in six clusters of villages in Tanzania and four subcounties in Baringo County Kenya.
- » Strengthen the capacities of local and national governments, CSOs and pastoral communities to implement PRM in their areas.
- » Develop and implement local and national guidelines and strategies on PRM; and Ensure that PRM practices and processes are supported, disseminated, taken up, and scaled up by national and international partners.

1.2.4 The PRM Key Results Areas and Activities

The pilot PRM project in Kenya and Tanzania has three key result areas:

Result 1

Participatory Rangeland Management has been undertaken in the shared grazing areas of six clusters of villages in Tanzania and four sub-counties in Baringo County. This result aims at unpacking and applying the PRM Steps to rangelands management in Kenya and Tanzania and is guided by three indicators: (i) Increased no. of PRM pilots undertaken; (ii) Increased ha of rangelands undertaking activities to improve productivity; and (iii) Increased no. of rangeland management committees set up including both men and women.

Result 2

Capacities of local and national governments, CSOs and communities to implement Participatory Rangeland Management are strengthened. This result seeks to ensure that institutional and knowledge frameworks required for piloting PRM and its sustainability are in place at the community, local government and national government levels. This is achieved through:

- » Establishment of PRM functioning coordination platforms.
- » Training of national and local government NGOs, Community leaders and other actors in participatory rangeland management
- » Multi-stakeholder dialogues on rangelands
- » Communication and Visibility Plan (CVP) developed and implemented

³ European Union delegation agreement with International Fund for Agricultural Development (IFAD) for the implementation of the Action-Piloting the use of Participatory Rangeland Management (PRM) in Tanzania and Kenya.

Result 3

Documentation and development of guidelines, on participatory rangeland management and its outputs. To achieve this result, the main activities conducted:

- » Documentation of PRM experiences
- » Development of PRM guidelines
- » Supporting local and national governments in developing relevant participatory rangeland management guidelines, strategies and legislation
- » Forums on scaling up PRM

1.2.5 Project Areas Context

In Tanzania, PRM was piloted in Kiteto and Simanjiro districts in Manyara Region and Longido District in Arusha Region. PRM is implemented in four clusters within Kiteto district, Manyara region that are organized into community rangeland management units (RMUs). In Simanjiro district, Manyara region and Longido district, Arusha region, the PRM project targeted Revumet and Lesingita clusters of villages for scaling up though limited activities were undertaken. These grazing lands have been through joint village land use planning, adjudicated, surveyed and are either titled or in the process of obtaining a title deed. Olengapa and Alolle clusters have titles while Kimbo and Napalai are in the process of obtaining titles. Significant support to this was provided by a previous project – the Sustainable Rangeland Management Project led by ILRI and partners including Tanzanian government and KINNAPA. Thus, PRM was established on a strong foundation unlike in Kenya where no previous interventions had been undertaken by the partners.

Villages in these clusters have been through a process of joint village land use planning that zoned areas of grazing land—the RMUs for this project. Grazing land users are organized into livestock keepers associations namely: Olengapa Livestock Keepers Association (OLKA), Alolle Livestock Keepers Association (ALKA), Kimbo Livestock Keepers Association (KILKA) and Napalai Livestock Keepers Association (NLKA). The grazing lands are community owned and community operated. The communities have organized themselves into RMU Boards that run the affairs of the various grazing units (RMUs).

In Kenya, PRM was piloted in four sub-counties in Baringo County. In Baringo South and Baringo North sub-Counties. Two sets of beneficiaries are organized into community conservancies namely the Irong Community Conservancy located in Baringo South and the Kabarion Community conservancy in Baringo North. Beneficiaries in Mogotio sub-County are registered as Koitegan Community Forest Association (CFA), while beneficiaries in Tiaty (East Pokot) sub-County are registered as Paka Hills Community Rangeland Association. The beneficiary communities have elected officials to form the main management committees as well as sub-committees responsible for activities such as administration and procurement, resource mobilization, elections and resources management.

1.3 Assignment Objectives and Scope

The objectives of this assignment for AFREDEC were as follows:

- » Conduct an impact assessment in line with the project objectives, outcomes and expected impacts. The study will determine the impacts of PRM on rangelands/ environment, impact on good governance and management processes, impact on the security of rights to land and resources, livestock, gender issues, women's empowerment and other social inequity aspects, impact on policy influencing.
- » Identify key lessons learnt over the last 3 years in the pilot project- What worked well? Why? What didn't work well? Why?
- » Identify best practices and opportunities for scaling up both in-country and elsewhere.

2 Methodology and approach

2.1 Overall Impact Assessment Approach

The overall approach of this independent impact assessment comprised of a mixed-method design, incorporating both qualitative and quantitative research techniques. A quasi-experimental design was also applied where treatment and control groups were identified. As much as possible the treatment and control sites had similar geographical and socioeconomic conditions. The treatment and control sites in both countries are illustrated in **Table 2-1** below. A pre-post analysis was also conducted in Tanzania comparing the current situation with the baseline situation for some variables.

Table 2-1: Treatment and Control Areas

Country	Category	Region/County	District/Sub-County	Cluster/Conservancy area
Kenya	Treatment	Baringo	Baringo South	Irong community conservancy
			Baringo North	Kabarion community conservancy
			Tiaty	Paka Hills Community rangeland
			Mogotio	Koitegan community forest association
	Control	Baringo	Baringo South	Chuine Conservancy
Tanzania	Treatment	Manyara	Kiteto	Olengapa Cluster
				Alolle Cluster
				Kimbo Cluster
				Napalai Cluster
	Control	Manyara	Kiteto	Loltepesi Village

2.2 Data Needs and Tools

The study utilized both primary and secondary data. Secondary data were obtained from a review of project documents and other relevant literature (see references-page 52) while primary data was obtained through the household surveys, focus group discussions (FGDs), key informant interviews (KIIs), and observations.

The key data needs included the following general areas:

- » **Outcomes and impacts.** To compare the outcomes and impacts from the PRM pilot phase at the time of the impact assessment against the baseline values for the project as defined in the baseline study for the case of Tanzania.

The study also determines impacts of PRM on the rangelands, household incomes impact on good governance and management processes, impact on the security of rights to land and resources, livestock, gender issues, women's empowerment and other social inequity aspects, impact on policy influencing.

- » **Lessons learnt.** Identify key lessons learnt with regards to implementation approaches and activities conducted.
- » **Sustainability and scalability.** Seek to establish the existence of structures and/or processes that would allow the PRM activities, outcomes and impacts to continue beyond the active intervention period, and the ability to replicate the PRM process in other areas and achieve similar results.

In particular data needs collected from the various respondents included:

- » Level of household and livestock assets
- » Level of household incomes from various sources –including rangeland resources
- » Current rangeland management structures
- » Key challenges and limitations,
- » Community awareness and involvement (Mobilization) in the PRM process
- » Awareness of outcomes /benefits from the PRM process
- » Impacts of PRM
- » Sustainability of the accrued benefits; and
- » Replicability and scalability of PRM.

2.3 Selection of Respondents

Four (4) categories of suitable respondents were identified based on the roles they played in the project: Information from the respondents was provided using different approaches including a household survey, focus group discussions and key informant interviews.

- » **Project beneficiaries.** Information from project beneficiaries was obtained through a household survey. These comprised community members within the treatment areas that were targeted by the project. A control group with similar characteristics was also selected.
- » **Community leadership.** Information from community leaders was obtained through focus group discussions. Participants included members of conservancy and associations management committees and sub-committees. It also included local leaders, such as chiefs and community elders. These were chosen since they have been working with the project, where their capacities in PRM and governance aspects were improved through continuous training;
- » **Project implementers.** Information from project implementers was obtained through interviewing key staff from RECONCILE in Kenya and; both TNRF and KINNAPA in Tanzania.

- » **Project stakeholders.** These mostly included government officers involved within the technical working group for the project. Information from these sources was obtained by interviewing key staff that closely worked with the project implementers.

The household data survey tools, and FGD groupings and codes are provided as **Annexes 1** and **2** respectively. The list of KIIs has been excluded to preserve informants' anonymity.

2.4 Sampling Design

Sampling design varied depending on the targeted respondent's i.e., household surveys, FGD participants and KII respondents.

2.4.1 Household Sample Size Determination

The sample size for the household survey was calculated based on the G*power analysis formula. Power is the probability that the statistical test will reject a false null hypothesis. This means that it is the probability to detect an effect given that the effect exists. The import of the power analysis is to ensure that an appropriate, cost-effective and sufficient sample size is selected. Using this analysis implies that the resultant sample size would be large enough not to waste resources in data collection, ensure that an effect is not missed while justifying the proposed sample size to commissioners of the study. Ideally, the project was expected to have either of the following outcomes:

- » That the intervention did not have an effect on the target beneficiaries, this represents the Null hypothesis H_0 ;
- » That the intervention did have an effect on the target beneficiaries, this represents the Alternative hypothesis H_1 ;
- » α – represents the probability of Type 1 error (where we say there is an effect while there was none), this is assumed to be 5%;
- » β – Represent the probability of a type 2 error (where we fail to reject a false null hypothesis), this represents the probability of missing an effect.
- » p – Value is the likelihood that the observation is purely occurring by chance.
- » Therefore, the power is given by $1-\beta$.

Since the effect of having a treatment or a control group was not given the same weight, a single group/one-tailed equation was used with the sample size proportionately shared out to the various sites; including the control sites (see **Text Box 1**).

Text Box 1: Screenshot for the G-Power sample size determination Output

[1] -- Tuesday, November 09, 2021 -- 16:42:06
t tests - Linear bivariate regression: One group, size of slope
Analysis: A priori: Compute required sample size
Input: Tail(s) = One
Slope H1 = 0.1; α err prob = 0.05
Power (1- β err prob) = 0.90
Slope H0 = 0
Std dev σ_x = 1; Std dev σ_y = 1
Output: Noncentrality parameter δ = 2.9301636
Critical t = 1.6466525
Df = 848
Total sample size = 850
Actual power = 0.9002490

As shown above, at a 95% interval, a 5% precision level and a power of 90%, a sample size of 850 respondents was sufficient to detect an effect of at least 10% (slope). While this was the case, the sample size was upped to 1,000 (in each country) to be in tandem with the sample sizes used during the baseline surveys.

2.4.2 Multistage Clustered Sampling for Household Surveys

Multistage Cluster Sampling approach as follows:

- » **Step 1:** Identification and selection of the county and region where the project was being implemented in Kenya and Tanzania;
- » **Step 2:** Identification of the district/sub-county, and villages where the project has been implemented and map out their geographical positioning (for treatment sites and 1 control site in each country were identified).
- » **Step 3:** Identification of treatment and control sites (if it was not already established). Treatment sites were areas where the PRM project was implemented. Control sites were identified in collaboration with the implementing partners as sites where PRM activities were not undertaken, but areas with almost similar natural and socioeconomic conditions as the treatment sites. In Baringo, Chuine Conservancy in Baringo South was chosen while in Tanzania, Loltepesi site in Longido district, which was identified at the baseline, was chosen.
- » **Step 4:** Identified villages where the project was piloted. These were selected by getting village lists from RECONCILE and KINNAPA

- » **Step 5:** Categorize respondents depending on the household leadership. The total sample was proportionately distributed to each of the 4 treatment clusters and 1 control cluster based on the household headship, 3 sub-clusters were established where 50% were male-headed households; 25% were females within male-headed households (i.e. mostly spouses to the household head), and 25% were female-headed households;
- » **Step 6:** Randomly conduct interviews with the targeted populations within the treatment or control areas⁴;
- » **Step 7:** Set up a replacement criterion. The replacement criteria were established whereby random selection of households with similar characteristics, (and similar sub-category) within either treatment or control group was selected⁵.

2.4.3 Household Sample Size Achievement

Overall, 99.7% of the targeted sample size was achieved. This translated to a total of 1,991 out of a targeted 2,000 households in both countries (See Table 2-2).

Table 2-2: Achievement of Targeted Household Sample

Country	Category	Region County	Cluster/ Conservancy area	Target sample size	Achieved sample size	Percent achievement
Kenya	Treatment	Baringo	Irong Community Conservancy	314	307	97.8%
			Kabarion Community Conservancy	108	120	111.1%
			Paka Hills Community Rangeland	106	121	114.2%
			Koitegan Community Forest Association	172	160	93.0%
	Control	Baringo	Chuine Conservancy	300	319	106.3%

>>> continues

⁴ While the sampling was random, the approach targeted to avoid closely related households and clustered households to the extent possible by skipping between several households in between interviews. This also ensured distributed coverage across villages.

⁵ NB: this process was done in consultation with the ILRI and project implementation agencies

Country	Category	Region County	Cluster/ Conservancy area	Target sample size	Achieved sample size	Percent achievement
Tanzania	Treatment	Manyara	Olongapa Cluster	300	298	93.3%
			Alolle cluster	250	301	120.4%
			Kimbo cluster	150	138	92.0%
			Napalai cluster	200	117	58.5% ⁶
	Control	Kiteto	Loltepesi cluster	100	110	110.0%
Total				2,000	1,991	99.66%

2.4.4 Focus Group Discussions Sampling

FGDs mostly targeted the community group leaderships (committees and sub-committees) but not exclusively. Key community leaders including elders, chiefs and local administrators were also involved. The target was to conduct 2 FGDs per conservancy/cluster-i.e., 1 male, 1 female; because of the cultural practices in pastoral areas that necessitates separating males and females. The total target was 16 FGDs in the 2 countries; with each comprising between 8-10 members. Each FGD was timed to take not more than 2 hours while COVID-19 protocols were strictly observed. Eventually, the achievement of the FGDs in Kenya is as shown in Table 23 below. For ease of reference, the list and codes of FGDs conducted are in Annex 23 of this report.

Table 2-3: List of FGDs Conducted in Kenya

Name of cluster/ association	Type of respondents	Number of FGDs	Sex	Total participants
Irong Community Conservancy	Committee & Board Members	2	Male=11, Female=5	16
Kabarion Conservancy	Committee and Board Members	2	Male=10, Female=7	17
Koitegan Community Forest	Committee and Board Members	2	Male=7, Female=10	17
Paka Hills	Committee and Board Members	2	Male=9, Female=9	18
Total				68

⁶ Low sample achievement was associated with low community turnout as data collection coincided with a livestock market day

In Tanzania, seven FGDs were held in the five clusters selected for the impact assessment (four treatment clusters and one control cluster). Table 24 below gives the achievement summary.

Table 2-4: List of FGDs Conducted in Tanzania

Name of cluster/association	Type of respondents	Number of FGDs	Sex		Total
			Male	Female	
Olangapa	Committee and board members	1	7	1	8
	Members of Olangapa Women's Leadership Forum	1	0	14	14
Alolle	Committee and board members	1	14	0	14
Kimbo	Committee and board members	1	14	0	14
Napalai	Committee and board members	1	13	0	13
Loltepesi	Village and community leaders	1	6	0	6
Alolle, Kimbo and Napalai	Women committee and board members	1	0	11	0
Total		7	54	26	80

2.4.5 Sampling for KII Respondents

Sampling of key informants was purposive depending on the role they played in the project. These were identified in conjunction with the project implementing partners and included key staff from the following organizations:

- » Implementing organizations: RECONCILE- Kenya; TNRF & KINNAPA- Tanzania.
- » Technical officers from the county or sub-county (district) especially from the departments of livestock, water, environment, wildlife.
- » Local government representatives- e.g. chiefs, ward administrators, village executive officers etc.
- » Sub-county/district administrators- e.g. District commissioners

In Kenya, eight (8) Key informant interviews were held are illustrated in Table 25. The For ease of reference, the list and codes of KIIs conducted are not included in the report to preserve informants' anonymity. are in Annex 4 of this report.

Table 2-5: Key Informant Interviews held in Baringo County, Kenya

County /Sub-county	Roles
Mogotio – Sub-County	Sub-County Environmental Officer
Baringo County	Catchment and Wetland Protection Officer
Baringo County	County Livestock Production Officer
Marigat Sub-County	Sub-County Water Officer
Baringo County	Lake Bogoria National Reserve- County Warden
Baringo County	County Lands Director
RECONCILE Staff	Program Manager, Monitoring, Evaluation, Reporting and Learning Officer

In Tanzania, thirty-six (36) key informant interviews were held at the national, district level and within the respective villages where the project was piloted. This is given in the summary Table 26 below.

Table 2-6: Key Informant Interviews held in Tanzania

Type of respondents	Sex		Total
	Male	Female	
Traditional leaders	3	0	3
Village chairpersons	6	0	6
Leaders of women groups	0	3	3
Village executive officers	8	2	10
Community development officers	0	2	2
Livestock development officers	3	0	3
Staff of NGOs	2	2	4
District land officer (Kiteto)	1	0	1
District administrative secretary	1	0	1
District commissioner (Kiteto)	1	0	1
Implementing partners	1	1	2
Total	26	10	36

2.5 Data Collection Tools and Approaches

2.5.1 Data Collection Tools

Three key data collection tools were developed. These included:

- » A household survey tool. This was digitized on CSPro platform allowing enumerators to collect data from their phones or tablets.
- » An FGD guide was used for interviewing the community leaders; and
- » A key informant interview guide was used for interviewing the project implementers and the stakeholders.

The final tools are included in **Annex 1**.

2.5.2 Quantitative Data Collection Approaches

Household data was collected using a survey questionnaire that was digitized into the CS Pro platform. The tool included questions on impact indicators such as awareness of PRM, socioeconomic and demographic data, household assets, incomes, governance and management of PRM, and impacts of PRM. The survey tool was administered by trained enumerators supervised by field supervisors and technical team members from the consultancy. Enumerators were selected from amongst the beneficiary communities because of their knowledge of the expansive rangelands and terrain, knowledge of local languages and acceptability at the community level. Field staff from key implementing agencies (RECONCILE, TNRF & KINNAPA) served as the entry point to the cluster/conservancy leaders, who further mobilized community members for the survey. Raw data were uploaded into a database daily and checked for quality. Feedback was shared every evening and a debriefing was done early morning before the next day's data collection exercise. A backup team supported data quality checks, data cleaning and transcribing qualitative data in readiness for analysis. The research tools were translated into Swahili for ease of administration.

2.5.3 Qualitative Data Collection Approaches

Observations

Key team members conducted observations on the rangeland management. Such data was noted with photos taken where necessary.

Key Informant Interviews

KIIs were conducted with key experts involved with the PRM and its components as well as with identified partners; likely to have a major influence on the project (as listed above). Questions for KIIs ranged from impacts of PRM on physical rangelands/environment, impact on good governance and management processes, impact on the security of rights to land and resources, livestock, gender issues, women's empowerment and other social inequity aspects, impact on policy influencing, challenges, lessons learnt, best practices, replicability and sustainability of PRM and other relevant information.

Focus Group Discussions

FGDs aimed to clarify and elicit deep-seated information on issues not captured by the household questionnaire. Ideally, FGDs consisted of between 8 to 12 participants with members carefully selected by considering factors such as age, gender, and area of residence. To the extent possible, participants were placed into discussions comprising either men or women respondents⁷. Each FGD lasted up to 2 hours and was moderated by a key team member with the assistance of a note-taker. Prior consent was obtained from the participants for audio recording (Dictaphones, phones) and photos during the FGDs sessions.

2.5.4 Ethical Considerations During Data Collection

All survey tools and data checklists were approved by ILRI's Research Ethics Committee prior to the research being undertaken. In Kenya, a research licence was also obtained from the National Commission for Science, Technology and Innovation (NACOSTI). Prior to the household survey, KIIs or FGDs, the respondents were informed of the interviews' purpose. Informed and voluntary consent was sought from each of the respondents before undertaking any interviews. Each tool included an informed consent form that also assured respondents of confidentiality and anonymity of the information supplied by them. All respondents signed an informed consent form before the interview.

2.5.5 Quality Control During Data Collection

The following mechanisms were used to ensure data quality:

- » **Recruitment of qualified research assistants** (enumerators) drawn from the project areas;
- » **Extensive training of survey team** (enumerators and supervisors);
- » **Use of digital data collection devices**- These minimized errors and ensured quick corrections in case errors occur
- » **Use of field supervisors**. These ensured that enumerators were well guided and had a mechanism of seeking clarification, reporting challenges, or suggesting changes to the data collection tools.
- » **Backup data team**. A backup team was stationed in the consultant's offices to ensure that the data collected is consistent and of expected quality.

7 This was not applicable in some cases in Tanzania as attendance was much higher and the groups were mixed.

2.6 Data Analysis and Management

At the end of each data collection day, quantitative household data was uploaded into the consultant's servers where initial quality checks were undertaken. At the end of data collection, all data were merged and exported into both SPSS and STATA software in readiness for cleaning and analysis. Initial cleaning checked for completeness and quality before the analysis. Detailed analysis was conducted to generate the desired statistics for the impact assessment. The overall analytical plan followed the research design which compared findings across the treatment and control groups. A comparison between the baseline values in the baseline survey conducted in Tanzania and the impact assessment values was also done to the extent possible; to create a pre-post analytical framework. In most cases, the analysis includes descriptive statistics including means, maximum, minimum, and percentages. The analysis was also guided by the reporting needs based on the key result areas. Data were disaggregated by sex, household headship, country, county/region to the extent possible.

The **qualitative** data were transcribed and a content analysis undertaken. FGD and KIs were coded based on the country and the type of respondent for identification purposes. This also combined information from the desk review and qualitative research. Triangulation was used to draw the findings together and to establish the degree to which the different data sources complement or refute each other.

2.7 Assessment Limitations and Challenges

The following comprised the major challenges for the impact assessment:

- » Unavailability of some key informants- While most of the key informants were met a few were not available for interviews due to busy schedules. Despite some informants being interviewed through virtual interviews, some targeted KIs were not completed.
- » Vastness of the areas visited during fieldwork and data collection during a particularly dry period. This implied that the enumerators had to travel very long distances to reach the respondents. Data collection was conducted in the period when the respondents are facing an acute shortage of water hence the need to start data collection at 10.00 am instead of 8.30 am.
- » Despite assurances on confidentiality, a small number of respondents were reluctant to provide some data, especially financial data, which was considered confidential.
- » Poor record-keeping among respondents. The majority of the key informants and producers did not keep proper records or could not remember some details required for the survey. The study therefore relied on estimates that may not be accurate. Triangulation of the data with other data sources helped to solve this limitation.

- » Some respondents were unable to communicate in Kiswahili hence the need for translation into local languages.
- » Contamination of the control sites in Tanzania. Unfortunately, it was noted, albeit rare, that Loltepesi area was ideally contaminated because PRM concepts have been introduced to them and a few activities were later introduced. This contaminated the control area. In Kenya, it was also noted during the data collection that all the conservancies within Baringo County (including those who did not participate in the PRM) are members of the Baringo County Conservancies Association (BCCA); where the concept of PRM had also been introduced to members. In addition, members from the control site selected in Kenya (Chuine Conservancy) had recently visited one of the treatment sites (Irong conservancy) for a learning tour. Based on the above, the results of the processes and impacts of PRM piloting in Kenya and Tanzania were only discussed for the treatment group.

3 Results and findings

3.1 Introduction

This Chapter presents the key findings of the impact assessment study. The first section describes the respondents and household demographic and socioeconomic characteristics. This is then followed by the key findings on the processes and impacts of PRM piloting in Kenya and Tanzania⁸. The findings are disaggregated by country, cluster, sex, and by treatment and control groups to the extent possible.

3.2 Household Demographic and Socioeconomic Information

The main socioeconomic and demographic characteristics that are important in influencing the adoption or uptake of project interventions at individual, household and community levels analyzed were sex, age, education, household size, income, occupation, and ownership of livestock and household assets. These characteristics were disaggregated by country and are useful in analyzing the developmental effects of program interventions.

3.2.1 Sex and Age Distribution

Overall, there was an almost equal representation of both genders within the treatment (Kenya–50.1% male and 49.9% female; Tanzania – 58.2% male and 41.8% female) and control (Kenya – 55.2% male and 44.8% female; Tanzania – 55.5% and 44.5% female) areas. While this was intentional during the data collection exercise, it also implies that the study findings have considered the sex differentials in the project areas. This is illustrated in Table 31 below.

Table 31: Respondent's Distribution by Sex

Group	Treatment			Control		
	Respondent Sex		Sample size	Respondent Sex		Sample size
Country	Male	Female		Male	Female	
Kenya	50.1%	49.9%	708	55.2%	44.8%	319
Tanzania	58.2%	41.8%	854	55.5%	44.5%	110
Total	54.5%	45.5%	1562	55.2%	44.8%	429

The average age of the respondents within the treatment area was 41 years and 43 years in Kenya and Tanzania, respectively. Within the control areas, the average age was 39.5 years and 41 years in Kenya and Tanzania, respectively.

⁸ The results of the processes and impacts of PRM piloting in Kenya and Tanzania were only discussed for the treatment group due to the contamination of the control areas

3.2.2 Distribution of Respondents by Household Headship

The study design aimed at ensuring that male and female perspectives are considered. Women-headed households accounted for 26% in Keya and 16% in Tanzania (See **Table 32**). More men-headed households were interviewed (51.4% in Kenya and 57.6% in Tanzania). Women in men-headed households accounted for 22.6% and 26.3% in Kenya and Tanzania respectively. The intention was to get at least 50% male headed households, 25% female headed households and 25% been female in male headed households. While the number of male headed households interviewed were more than the female headed households, it is important to note that the ratio of male to female interviewed was almost 1:1.

Table 3-2: Household Headship in Kenya and Tanzania

Country	Category	Treatment		Control		Overall	
		Frequency	Percent	Frequency	Percent	Frequency	Percent
Kenya	Male Headed HH	351	49.9%	174	54.9%	525	51.4%
	Female Headed HH	209	29.5%	57	18.0%	266	26.0%
	Female in Male Headed HH	145	20.6%	86	27.1%	231	22.6%
	Total	705	100.0	317	100.0%	1022	100.0%
Tanzania	Male Headed HH	494	58.1%	61	55.5%	555	57.6%
	Female Headed HH	142	16.7%	11	10.0%	153	15.9%
	Female in Male Headed HH	214	25.2%	38	34.6%	252	26.3%
	Total	850	100.0%	110	100.0%	960	100.0%

3.2.3 Level of Education

Education is a good indication of the literacy level within the community. Apart from Paka Hills Community Rangeland Association (Tiaty Sub-County) in Kenya, all other areas in Kenya reflected that over 50% had at least a primary level of education. Overall 24.1% of respondents in the treatment sites and 13.9% in the control sites had no formal education while another 5.5% and 3.8% had only attended adult literacy programs. A majority (35.7% in treatment sites and 37.5% in control sites) had attained primary level education while another 23.6% in the treatment area and 32.2% in control area had attained secondary school education. Interestingly, more female headed households and more females in male headed households in both treatment and control sites had attained formal education compared to their male counterparts.

Table 3-3: Respondents Education Levels in Kenya

	Highest Level of education for respondent							
	Primary school	Secondary	Higher Education (not university)	Higher Education (university)	Adult literacy program	None	Other literacy program	Sample size
Treatment sites								
Male headed HH	34.0%	23.1%	9.7%	3.4%	4.6%	23.4%	1.7%	350
Female headed HH	35.9%	27.8%	6.7%	1.0%	5.7%	22.5%	.5%	209
Female in male headed HH	38.9%	18.8%	8.3%	2.1%	3.5%	28.5%	0.0%	144
Total	35.7%	23.6%	8.5%	2.4%	4.7%	24.1%	1.0%	704
Control site (Chuine Conservancy)								
Male headed HH	28.3%	35.8%	16.2%	1.7%	4.0%	13.9%	0.0%	173
Female headed HH	49.1%	28.1%	1.8%	1.8%	5.3%	14.0%	0.0%	57
Female in male headed HH	48.8%	26.7%	8.1%	0.0%	2.3%	14.0%	0.0%	86
Total	37.5%	32.2%	11.4%	1.3%	3.8%	13.9%	0.0%	317

In Tanzania, Illiteracy was high in all the project sites with over 50% of those sampled having no education. Illiteracy levels were even higher with 65.8% within treatment sites and 76.4% within the control sites having not attended any schooling at all. A majority (27.5% in the treatment site and 21.8% in the control sites) had at least attained primary school education. Unlike Kenya, where more female respondents had attained formal education, only 32.9 % of females in treatment sites and 11.7% in the control site had attained formal education. This is as compared to 45.6% of men in treatment sites and 39.3% in control sites.

Table 3-4: Respondents Education Levels in Tanzania

	Highest Level of education for respondent							
	Primary school	Secondary	Higher Education (not university)	Higher Education (university)	Adult literacy program	None	Other literacy program	Sample size
Treatment sites								
Male headed HH	36.5%	6.5%	.8%	1.8%	.2%	54.2%	0.0%	493
Female headed HH	12.6%	0.0%	0.0%	.7%	1.4%	85.3%	0.0%	143
Female in male headed HH	16.8%	2.3%	.5%	0.0%	.5%	79.4%	.5%	214
Total	27.5%	4.3%	.6%	1.2%	.5%	65.8%	.1%	850
Control Site-Loltepesi								
Male headed HH	36.1%	3.3%	0.0%	0.0%	0.0%	60.7%	0.0%	61
Female headed HH	9.1%	0.0%	0.0%	0.0%	0.0%	90.9%	0.0%	11
Female in male headed HH	2.6%	0.0%	0.0%	0.0%	0.0%	97.4%	0.0%	38
Total	21.8%	1.8%	0.0%	0.0%	0.0%	76.4%	0.0%	110

3.2.4 Main Livelihoods

In Kenya, the main source of livelihoods for the sampled community members' was both livestock keeping and crop farming (agro-pastoralism) followed by pastoralism (livestock keeping only) and crop farming only at 53.3%, 32.4%, and 9.2% respectively. This trend was also true for the control site where 71% of respondents practiced agro-pastoralism, 15.5% were pure pastoralists and 2.5% were purely crop farmers (See **Table 3-5**).

Table 3-5: Main Source of Livelihood in Kenya

Main occupation of household head–Kenya					
Respondent Category	Main occupation of household				Total
	Pastoralist	Agro pastoralist	Agro (crop farmer)	Others	
(Treatment Sites)					
Male headed HH	31.7%	56.9%	7.7%	3.7%	350
Female headed HH	31.6%	47.8%	12.9%	7.7%	209
Female in male headed HH	35.4%	52.1%	7.6%	4.9%	144
Total	32.4%	53.3%	9.2%	5.1%	704
(Control Site)					
Male headed HH	15.6%	71.7%	10.4%	2.3%	173
Female headed HH	12.3%	73.7%	12.3%	1.8%	57
Female in male headed HH	17.4%	67.4%	11.6%	3.5%	86
Total	15.5%	71.0%	11.0%	2.5%	317

In Tanzania, the main source of livelihoods for the sampled community members' was both livestock keeping and crop farming (agro-pastoralism) followed by pastoralism (livestock keeping only) at 88.1% and 9.9%, respectively. This trend was also true for the control site where 77.3% of respondents practiced agro-pastoralism and 22.7% were pure pastoralists. (Table 3-6).

Table 3-6: Main Source of Livelihood in Tanzania

Main occupation of household head–Tanzania					
Respondent Category	Main occupation of household				Total
	Pastoralist	Agro pastoralist	Agro (crop farmer)	Others	
(Treatment Sites)					
Male headed HH	8.3%	89.7%	0.4%	1.6%	493
Female headed HH	14.0%	85.3%	0.0%	0.7%	143
Female in male headed HH	10.7%	86.4%	0.9%	1.9%	214
Total	9.9%	88.1%	0.5%	1.5%	850
(Control Site)					
Male headed HH	27.9%	72.1%	0.0%	0.0%	61
Female headed HH	9.1%	90.9%	0.0%	0.0%	11
Female in male headed HH	18.4%	81.6%	0.0%	0.0%	38
Total	22.7%	77.3%	0.0%	0.0%	110

3.2.5 Livestock Types and Ownership

Findings from both the treatment and control areas across the two countries showed a diversity of livestock kept. In Kenya, the main livestock kept included oxen/bulls, local mature cows, goats, sheep, donkeys and chickens across both treatment and control sites. Goats were the most predominant livestock in both treatment and control sites followed by chicken and local/indigenous cattle. Camels were the least kept animals and only in Kenya. More male headed households kept goats, sheep, mature cows, beehives and bulls compared to the female head households. However, more female headed households kept chicken compared to the male headed households (See **Table 37**).

In Tanzania, local mature cows, goats and sheep were the most common livestock types in both treatment and control sites. Crossbreed cows were the least common livestock comparatively, there were more chicken keepers in Kenya than in Tanzania. More male headed households kept all types of livestock compared to the female headed households. More females in male headed households kept goats, sheep and donkeys compared to the female headed households (See **Table 38**).

Table 3-7: Livestock Ownership- Kenya

Livestock Ownership as per households–Kenya (Treatment Sites)			
	Conservancy	Oxen/bulls	Local mature cows
Male headed HH	Irong	18.5%	80.9%
	Kabarion	0.0%	27.9%
	Koitegan	30.0%	68.0%
	Paka	7.3%	53.7%
	Total	14.3%	63.4%
Female headed HH	Irong	7.6%	71.7%
	Kabarion	0.0%	12.1%
	Koitegan	12.2%	43.9%
	Paka	0.0%	27.9%
	Total	5.7%	47.8%
Female in male headed HH	Irong	15.8%	78.9%
	Kabarion	0.0%	19.2%
	Koitegan	27.6%	69.0%
	Paka	0.0%	50.0%
	Total	11.8%	59.7%
Male headed HH	Chuine	12.7%	77.5%
Female headed HH		3.5%	73.7%
Female in male headed HH		9.3%	75.6%

Livestock ownership by type.							Total (N)
Crossbred Cows	Sheep	Goats	Donkeys	Camels	Chicken	Bee hives	
5.1%	30.6%	93.6%	26.1%	.6%	79.6%	88.5%	157
18.0%	45.9%	63.9%	0.0%	0.0%	65.6%	52.5%	61
12.0%	70.0%	66.0%	2.0%	0.0%	86.0%	30.0%	50
0.0%	97.6%	97.6%	29.3%	36.6%	79.3%	73.2%	82
7.1%	54.6%	85.4%	18.9%	8.9%	78.0%	70.3%	350
5.4%	14.1%	89.1%	17.4%	0.0%	84.8%	46.7%	92
24.2%	24.2%	63.6%	0.0%	0.0%	81.8%	12.1%	33
14.6%	63.4%	61.0%	2.4%	0.0%	95.1%	19.5%	41
0.0%	81.4%	100.0%	0.0%	7.0%	69.8%	20.9%	43
9.1%	39.2%	81.8%	8.1%	1.4%	83.3%	30.6%	209
3.5%	26.3%	94.7%	19.3%	0.0%	82.5%	68.4%	57
30.8%	26.9%	80.8%	0.0%	0.0%	84.6%	42.3%	26
17.2%	62.1%	65.5%	0.0%	0.0%	89.7%	20.7%	29
0.0%	93.8%	100.0%	12.5%	18.8%	65.6%	43.8%	32
10.4%	48.6%	87.5%	10.4%	4.2%	80.6%	48.6%	144
Control sites							
1.7%	40.5%	87.9%	4.0%	0.0%	78.6%	69.4%	173
0.0%	31.6%	84.2%	1.8%	0.0%	93.0%	40.4%	57
1.2%	40.7%	79.1%	0.0%	0.0%	90.7%	50.0%	86

Table 3-8: Livestock Ownership- Tanzania

Livestock Ownership as per households–Tanzania (Treatment Sites)			
	Conservancy	Oxen/bulls	Local mature cows
Male headed HH	Olengapa	76.0%	95.3%
	Allole	77.5%	96.2%
	Kimbo	81.8%	93.2%
	Napalai	78.1%	95.9%
	% of Total	77.9%	95.3%
Female headed HH	Olengapa	67.3%	98.1%
	Allole	80.0%	92.7%
	Kimbo	75.0%	95.0%
	Napalai	87.5%	93.8%
	% of Total	75.5%	95.1%
Female in male headed HH	Olengapa	67.4%	88.4%
	Allole	74.6%	95.2%
	Kimbo	73.3%	100.0%
	Napalai	80.8%	100.0%
	% of Total	72.0%	93.5%
Total (N)			
<hr/>			
Male headed HH	Olltepesi	82.0%	96.7%
Female headed HH		72.7%	100.0%
Female in male headed HH		68.4%	97.4%
	Total (N)	74.4%	98.0%

Livestock ownership by type.							Total (N)
Crossbred Cows	Sheep	Goats	Donkeys	Chicken	Bee hives		
4.7%	90.7%	96.7%	69.3%	72.0%	22.7%		150
3.8%	91.8%	94.0%	71.4%	79.1%	12.6%		182
3.4%	88.6%	95.5%	71.6%	71.6%	4.5%		88
6.8%	91.8%	94.5%	60.3%	63.0%	8.2%		73
4.5%	90.9%	95.1%	69.2%	73.2%	13.6%		493
0.0%	73.1%	82.7%	38.5%	55.8%	5.8%		52
5.5%	74.5%	87.3%	45.5%	65.5%	3.6%		55
5.0%	85.0%	90.0%	45.0%	70.0%	5.0%		20
6.3%	100.0%	100.0%	68.8%	81.3%	18.8%		16
3.5%	78.3%	87.4%	45.5%	64.3%	6.3%		143
4.2%	83.2%	89.5%	56.8%	62.1%	4.2%		95
4.8%	76.2%	92.1%	52.4%	73.0%	4.8%		63
0.0%	96.7%	90.0%	50.0%	86.7%	0.0%		30
0.0%	92.3%	96.2%	69.2%	88.5%	7.7%		26
3.3%	84.1%	91.1%	56.1%	72.0%	4.2%		214
							850
Wetland sites							
3.3%	90.2%	93.4%	54.1%	52.5%	9.8%		61
9.1%	90.9%	100.0%	45.5%	90.9%	0.0%		11
2.6%	84.2%	92.1%	50.0%	60.5%	7.9%		38
5.0%	88.4%	95.2%	49.9%	68.0%	5.9%		110

3.2.6 Sources of Income

The sale of livestock and livestock products, the sale of crop produce, labour/wage employment, remittances, the sale of forest and beekeeping products are the main sources of income in both Kenya and Tanzania (See **Table 3-9** and **Table 3-10**).

Livestock sales accounted for over 50% of the annual incomes of the households both in Kenya and Tanzania. In Kenya, the average annual income of US\$ 956 per household was dominated by livestock sales, contributing US\$ 432, or 45.2% of the annual household incomes.

Table 3-9: Household Incomes, Kenya

Source of Income	Average income (USD)				Proportion reporting (Kenya)	Weighted income (USD) (Kenya)
	Male headed HH	Female headed HH	Female in male headed HH	Project area average		
Livestock sales	706	334	334	529	82%	433
Livestock product sales (e.g., Milk, Eggs, Hides etc.)	115	118	91	111	46%	51
Agricultural produce (crops, fruit etc.).	378	367	207	341	38%	131
Labour or wage employment	358	333	296	338	40%	135
Income generation and businesses	419	242	261	336	20%	67
Remittances or gifts of money	152	123	168	149	25%	37
Sale of forest products (e.g., Honey, Herbs/ Medicine, firewood, charcoal, timber)	223	160	141	193	52%	101
Total						956

In Tanzania, the average annual household income was US\$ 1,475 per year with the highest proportion (74.4%) from livestock sales (US\$ 1,097). Incomes from agricultural produce came a distant second contributing only 18.2% of the household incomes, or US\$ 269 per household per year.

Table 3-10: Household Incomes, Tanzania

Source of Income	Average income (USD)				Proportion reporting (Tanzania)	Weighted income (USD) (Tanzania)
	Male headed HH	Female headed HH	Female in male headed HH	Project area average		
Livestock sales	1577	720	849	1284	85%	1097
Livestock product sales (e.g., Milk, Eggs, Hides etc.)	134	73	100	111	15%	16
Agricultural produce (crops, fruit etc.).	599	268	333	511	53%	269
Labour or wage employment	429	166	235	374	5%	19
Income generation and businesses	904	72	112	528	9%	45
Remittances or gifts of money	350	117	341	302	6%	18
Sale of forest products (e.g., Honey, Herbs/ Medicine, firewood, charcoal, timber)	182	21	148	169	6%	9
Total						1,475

Notably, livestock sales and income generation and businesses are dominated by males in male headed households in both Kenya and Tanzania. There were only slight differentials in incomes between female in female headed households and female in male headed households.

3.2.7 Ownership of Household Assets

Ownership of assets can be a proxy indicator of the socioeconomic status of the community to triangulate the income levels. It also reflects the resilience of the community to economic shocks and modes of communication to the community. In Kenya, a majority of the respondents (over 90% in treatment sites and 87% in control sites) owned a mobile phone (See **Table 3-11**). This was true for male headed households (94.9%), female headed households (93.5%) and female in male headed households (91%) within the treatment sites. This implies that mobiles phones can be used as an important mode of disseminating PRM information and any other important information to the farmers. Other forms of sharing information are Radio and TVs. These were owned by approximately 57% and 24% of respondents respectively. In addition to the shared communal land, 39% of respondents owned private land for crop production while 26% owned private land for livestock production. More male headed households and female in male headed households owned land compared to the female headed households.

In Tanzania, 89.7% of male headed households, 85% of females in male headed households and 83.9% of female headed households within the treatment sites owned mobile phones. In comparison, more male headed households in the control site had higher phone ownership (91.8%) than the treatment sites (89.7%) but phone ownership in the control site for the female headed households (72.7%) and females in male headed households (76.3%) was comparatively lower compared to the treatment sites i.e. 83.9% and 85% respectively. A higher proportion of households in Tanzania (compared to Kenya), owned private land for crop production. Within the treatment sites, 85.2% of the male headed households, 80.4% of the female headed households and 78.5% of female in male headed households owned private land for crop production compared to 11.6% of male headed households, 5.6% of female headed households and 11.7% of female in male headed households who owned private land for livestock production (See **Table 3-12**).

Table 3-11: Ownership of Assets in Kenya

A19. Ownership of Assets by Households–Kenya

Type of assets owned- treatment Sites (as a %)				
	Cluster	Mobile phones	TV	Satellite TV
Male headed HH	Irong	97.5%	44.6%	5.1%
	Kabarion	91.8%	1.6%	1.6%
	Koitegan	100.0%	58.0%	0.0%
	Paka	89.0%	0.0%	0.0%
	% of Total	94.9%	28.6%	2.6%
Female headed HH	Irong	97.8%	42.4%	1.1%
	Kabarion	78.8%	0.0%	0.0%
	Koitegan	100.0%	36.6%	2.4%
	Paka	90.7%	0.0%	0.0%
	% of Total	93.8%	25.8%	1.0%
Female in male headed HH	Irong	89.5%	33.3%	1.8%
	Kabarion	92.3%	0.0%	3.8%
	Koitegan	100.0%	31.0%	0.0%
	Paka	84.4%	0.0%	0.0%
	% of Total	91.0%	19.4%	1.4%
Male headed HH	Chuine	90.2%	24.9%	3.5%
Female headed HH	Chuine	86.0%	21.1%	0.0%
Female in male headed HH	Chuine	88.4%	30.2%	1.2%

												Total
Radio	Fridge	Gas/ Electric cooker	Bicycle	Motorcycle	Car	Tractor	Shop	House in town	Private land for crop production (acres)	Private land for livestock grazing (acres)		
79.0%	1.9%	9.6%	25.5%	42.7%	6.4%	0.0%	5.7%	3.8%	61.8%	47.8%	157	
57.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	0.0%	34.4%	31.1%	61	
84.0%	0.0%	0.0%	34.0%	76.0%	2.0%	4.0%	2.0%	2.0%	44.0%	46.0%	50	
47.6%	0.0%	0.0%	22.0%	24.4%	0.0%	0.0%	15.9%	0.0%	9.8%	3.7%	82	
68.6%	.9%	4.3%	21.4%	35.7%	3.1%	.6%	7.4%	2.0%	42.3%	34.3%	350	
77.2%	0.0%	12.0%	9.8%	25.0%	1.1%	0.0%	6.5%	2.2%	54.3%	20.7%	92	
60.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	36.4%	30.3%	33	
51.2%	0.0%	0.0%	29.3%	31.7%	9.8%	0.0%	2.4%	4.9%	39.0%	31.7%	41	
25.6%	0.0%	0.0%	2.3%	4.7%	0.0%	0.0%	4.7%	0.0%	0.0%	0.0%	43	
58.9%	0.0%	5.3%	10.5%	18.2%	2.4%	0.0%	4.8%	1.9%	37.3%	20.1%	209	
61.4%	0.0%	0.0%	15.8%	29.8%	3.5%	0.0%	1.8%	0.0%	49.1%	40.4%	57	
61.5%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	3.8%	0.0%	26.9%	23.1%	26	
82.8%	0.0%	0.0%	27.6%	65.5%	0.0%	0.0%	0.0%	0.0%	62.1%	58.6%	29	
18.8%	0.0%	0.0%	9.4%	12.5%	0.0%	0.0%	12.5%	0.0%	9.4%	0.0%	32	
56.3%	0.0%	0.0%	13.9%	28.5%	1.4%	0.0%	4.2%	0.0%	38.9%	31.9%	144	
Control sites												
67.6%	1.2%	6.4%	6.9%	25.4%	1.2%	1.2%	4.6%	4.0%	75.1%	15.6%	173	
73.7%	0.0%	1.8%	5.3%	14.0%	0.0%	0.0%	0.0%	0.0%	71.9%	1.8%	57	
65.1%	0.0%	3.5%	10.5%	22.1%	0.0%	0.0%	3.5%	0.0%	74.4%	15.1%	86	

Table 3-12: Ownership of Assets in Tanzania

A19. Ownership of Assets by Households–Tanzania (as a %)							
	Cluster	Mobile phones	TV	Satellite TV	Radio	Fridge	Gas/ Electric cooker
Male headed HH	Olengapa	86.0%	3.3%	2.0%	12.7%	0.0%	1.3%
	Allole	92.3%	6.6%	4.4%	28.6%	0.0%	4.4%
	Kimbo	88.6%	1.1%	0.0%	10.2%	1.1%	2.3%
	Napalai	91.8%	5.5%	6.8%	27.4%	0.0%	0.0%
	Total	89.7%	4.5%	3.2%	20.3%	.2%	2.4%
Female headed HH	Olengapa	78.8%	0.0%	0.0%	3.8%	0.0%	0.0%
	Allole	85.5%	1.8%	0.0%	10.9%	0.0%	1.8%
	Kimbo	95.0%	0.0%	0.0%	10.0%	0.0%	0.0%
	Napalai	81.3%	0.0%	0.0%	6.3%	0.0%	0.0%
	Total	83.9%	0.7%	0.0%	7.7%	0.0%	0.7%
Female in male headed HH	Olengapa	84.2%	0.0%	1.1%	4.2%	0.0%	1.1%
	Allole	90.5%	3.2%	4.8%	12.7%	0.0%	1.6%
	Kimbo	76.7%	0.0%	3.3%	13.3%	0.0%	0.0%
	Napalai	84.6%	7.7%	0.0%	30.8%	0.0%	3.8%
	Total	85.0%	1.9%	2.3%	11.2%	0.0%	1.4%
Male headed HH	Loltepesi	91.8%	1.6%	1.6%	9.8%	1.6%	3.3%
Female headed HH	Loltepesi	72.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Female in male headed HH	Loltepesi	76.3%	0.0%	0.0%	2.6%	0.0%	0.0%

Type of assets owned- Treatment sites

	Bicycle	Motorcycle	Car	Truck	Tractor	Shop	House in town	Private land for crop production (acres)	Private land for livestock grazing (acres)	Total (n)
	3.3%	29.3%	.7%	0.0%	.7%	1.3%	2.7%	81.3%	14.7%	150
	9.9%	31.9%	1.1%	.5%	1.1%	6.0%	3.8%	85.2%	11.0%	182
	5.7%	18.2%	0.0%	0.0%	0.0%	0.0%	3.4%	90.9%	9.1%	88
	19.2%	30.1%	0.0%	0.0%	1.4%	4.1%	5.5%	86.3%	9.6%	73
	8.5%	28.4%	.6%	.2%	.8%	3.2%	3.7%	85.2%	11.6%	493
	1.9%	9.6%	0.0%	0.0%	0.0%	0.0%	0.0%	75.0%	3.8%	52
	3.6%	7.3%	0.0%	0.0%	0.0%	0.0%	1.8%	85.5%	9.1%	55
	0.0%	10.0%	0.0%	0.0%	0.0%	5.0%	5.0%	75.0%	5.0%	20
	12.5%	12.5%	0.0%	0.0%	0.0%	0.0%	6.3%	87.5%	0.0%	16
	3.5%	9.1%	0.0%	0.0%	0.0%	0.7%	2.1%	80.4%	5.6%	143
	2.1%	7.4%	0.0%	0.0%	1.1%	1.1%	2.1%	66.3%	12.6%	95
	3.2%	11.1%	0.0%	0.0%	0.0%	1.6%	0.0%	92.1%	9.5%	63
	3.3%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	83.3%	10.0%	30
	7.7%	26.9%	0.0%	0.0%	7.7%	7.7%	7.7%	84.6%	15.4%	26
	3.3%	10.3%	0.0%	0.0%	1.4%	1.9%	1.9%	78.5%	11.7%	214
ol sites	11.5%	31.1%	3.3%	0.0%	1.6%	0.0%	1.6%	75.4%	14.8%	61
	9.1%	9.1%	0.0%	0.0%	0.0%	0.0%	0.0%	81.8%	0.0%	11
	2.6%	5.3%	0.0%	0.0%	2.6%	0.0%	0.0%	71.1%	15.8%	38

3.3 Awareness and Participation in PRM

Generally, the level of PRM awareness within the treatment and control sites in Kenya was high at 95.3% and 92.1% respectively (See **Table 3-13**). It was noted that members from the control site (Chuine Conservancy) had recently visited one of the treatment sites (Irong conservancy) for a learning tour. It was also noted that all the conservancies within Baringo County (including those who did not participate in the PRM) are members of the Baringo County Conservancies Association (BCCA); where the concept of PRM has also been introduced to members.

Table 3-13: Awareness of PRM in Kenya

B1. Have you heard of the Participatory Rangeland Management (PRM) Project–Kenya						
Respondent category	Have you heard of the initiative/project or intervention called Participatory Rangeland Management					
	Treatment			Control		
	No	Yes	Sample size	No	Yes	Sample size
Male headed HH	3.4%	96.6%	350	5.2%	94.8%	173
Female headed HH	6.7%	93.3%	209	14.0%	86.0%	57
Female in male headed HH	4.2%	95.8%	144	9.3%	90.7%	86
Total (N)	4.5%	95.5%	704	7.9%	92.1%	317

In Tanzania, awareness of PRM within the treatment sites was high at 98.9% compared to 66.4% within the control site (See **Table 3-14**). Although awareness of PRM within the control site in Tanzania was lower than in Kenya, it is notable that KINAPPA had recently introduced the Loltepesi community to the concept and the processes of PRM; thus the 66.4% awareness levels.

Table 3-14: Awareness of PRM in Tanzania

B1. Have you heard of the Participatory Rangeland Management (PRM) Project–Tanzania						
Respondent category	Have you heard of the initiative/project or intervention called Participatory Rangeland Management					
	Treatment			Control		
	No	Yes	Sample size	No	Yes	Sample size
Male headed HH	.6%	99.4%	493	37.7%	62.3%	61
Female headed HH	2.1%	97.9%	143	18.2%	81.8%	11
Female in male headed HH	1.4%	98.6%	214	31.6%	68.4%	38
Total (N)	1.1%	98.9%	851	33.6%	66.4%	110

A majority (90.9%) within the treatment sites in Kenya who are aware of PRM said they had participated in PRM activities compared to 12% in the control site⁹. Interestingly slightly more female headed households (92.3%) compared to male headed households (91.4%) had participated in the PRM activities (See **Table 3-15**).

Table 3-15: Participation in PRM in Kenya

B2. Have you participated in any PRM intervention, planning and activities? Kenya						
Respondent category	Have you participated in any PRM intervention, planning and activities?					
	Treatment			Control		
	No	Yes	Sample size	No	Yes	Sample size
Male headed HH	8.6%	91.4%	338	91.5%	8.5%	164
Female headed HH	7.7%	92.3%	195	81.6%	18.4%	49
Female in male headed HH	12.3%	87.7%	138	84.6%	15.4%	78
Total	9.1%	90.9%	672	88.0%	12.0%	292

An impressive 99.2% of the respondents in Tanzania who are aware of PRM reported having participated in the PRM process with 26.4% within the control sites having a similar response¹⁰. All female in male headed households within the treatment sites noted that they participated in PRM followed by 99% of all male headed household respondents (See **Table 3-16**).

Table 3-16: Participation in PRM in Tanzania

B2. Have you participated in any PRM intervention, planning and activities? Tanzania						
Respondent category	Have you participated in any PRM intervention, planning and activities?					
	Treatment			Control		
	No	Yes	Sample size	No	Yes	Sample size
Male headed HH	1.0%	99.0%	490	73.8%	26.2%	61
Female headed HH	1.4%	98.6%	140	81.8%	18.2%	11
Female in male headed HH	0.0%	100.0%	211	71.1%	28.9%	38
Total	.8%	99.2%	842	73.6%	26.4%	110

⁹ This seemed misplaced since PRM activities had not been introduced in the control site. However, Chuine Conservancy are members of the Baringo County Conservancies Association (BCCA); where the concept of PRM has also been introduced. In addition, Chuine Conservancy had visited one of the PRM sites (Irong conservancy) for a learning tour. Owing to this contamination, further analysis on PRM aspects and impacts do not include the control sites.

¹⁰ While this was a control site, it was possible to have some positive response since PRM activities were introduced in the control site. Owing to this contamination, further analysis on PRM aspects and impacts do not include the control sites.

In Kenya, the project was piloted in Baringo area, the entity that supported the process the most was RECONCILE Kenya as indicated by 99.2% of the respondents in the treatment sites (See **Table 3-17**). Other organizations that supported the project included the International Livestock Research Institute (ILRI), the respective county and district governments, the Ministry of Livestock and other NGOs.

Table 3-17: Organizations Supporting the PRM in Kenya

B4. Which organization supported the PRM intervention? Kenya							
Respondent category	Organizations supporting PRM						Sample size
	RECONCILE	ILRI	County/ District Government	Ministry of Livestock	Government (no name given)	Another NGO	
Male headed HH	99.4%	12.0%	15.5%	7.8%	7.1%	2.6%	309
Female headed HH	98.9%	16.1%	19.4%	8.3%	5.0%	1.7%	180
Female in male headed HH	99.2%	3.3%	10.0%	8.3%	6.7%	.8%	120
% of total	99.2%	11.5%	15.6%	8.0%	6.4%	2.0%	610

The implementation of the pilot project in Tanzania was spearheaded by Tanzania Natural Resources Forum (TNRF) in collaboration with KINNAPA a local NGO working within Kiteto District. This was affirmed by 88.6% of the respondents in the treatment sites (See **Table 3-18**).

Table 3-18: Organizations Supporting the PRM in Tanzania

B4. Which Organization supported the PRM Intervention? Tanzania							
Respondent category	Organizations supporting PRM						Sample size
	TNRF	ILRI	County/ District Government	Ministry of Livestock	Government (no name given)	Another NGO	
Male headed HH	90.9%	1.4%	8.6%	9.3%	8.8%	15.9%	441
Female headed HH	87.6%	3.3%	9.9%	17.4%	20.7%	20.7%	121
Female in male headed HH	84.1%	3.5%	10.9%	13.4%	15.4%	21.4%	201
Total	88.6%	2.2%	9.4%	11.6%	12.4%	18.1%	764

3.4 Governance and Decision Making in PRM

3.4.1 Nature of Rangeland Management Organizations

In Kenya, two beneficiary communities (Irong and Kabarion) are registered as community conservancies while one (Koitegan) is registered as a community forest association (CFA). All these were registered before the PRM project started in 2019. Only one beneficiary area (Paka Hills community rangeland) was registered during the project implementation period. Notably, this was registered as community rangeland because the community was hesitant to register as a conservancy for fear of control by the government¹¹. Additionally, the 4 are part of the 12 conservancies in Baringo county that have come together to form the Baringo County Conservancies Association (BCCA).

The PRM project strengthened the three already established institutions¹² by capacity-building leaders on leadership and management, elections in community groups, community bylaws, rangelands management, resource mapping and management, project identification and implementation, procurement processes, community land management and laws, business modelling, monitoring and evaluation, and many other aspects.

Through capacity-building efforts under the PRM, all the 4 organizations in Baringo are managed by democratically elected officials; including a chairperson, secretary and treasurer. The community through the rangeland management unit is the supreme decision-making organ. Additionally, they have set up bylaws that assist to govern the community and manage resources. There are sub-committees that have been formed for them to narrow down to specific functions. The bylaws specify among others the rules for access to resources and the implications for going against the bylaws such as time to use wet and dry grazing areas in the rangelands. The rangeland management unit works in collaboration with the relevant county government ministries and departments, especially the county steering working groups comprising individuals from departments of lands, livestock, water, environment, health, education, and roads.

In Tanzania, community mobilization and registration of the 4 clusters in Tanzania were first conducted during the sustainable natural resource management project (SNRMP) that was a predecessor to the PRM. At the start of the PRM in 2019, the clusters in Tanzania were much more developed compared to those in Kenya. Under the PRM, Livestock keepers' associations (LKAs) have been established and certificates of customary rights of occupancy have been provided to them for the grazing lands, which they manage in collaboration with village authorities. It is important to note that in Tanzania all land belongs to the state held in custodian for the people, so communities have use rights only.

¹¹ Meaning lack of knowledge on how the community conservancy works

¹² Irong, Kabarion and Koitegan

The associations also have constitutions and agreements in place. The boundaries have been established and demarcation beacons erected. They are yet to establish physical offices as well as other support infrastructures such as cattle dips and veterinary centres. At the village level, under local government authorities. The main roles of the LKAs in PRM are:

- » Mobilization of community to support project activities
- » Provide information on the use of grazing lands
- » Educating members of livestock associations on the importance of women and youth participation in the project

The associations have enacted bylaws that govern the operationalization of the grazing unit. The communities have within their ranks, those who have been tasked with enforcement of the grazing unit bylaws. The grazing units are organized in blocks such that the blocks nearer to the settlement areas are left for weaker and smaller animals that are unable to walk far to pasture and water. The bylaws allow for the imposition of fines for those who do not abide by them. For those whose animals stray into conserved areas or farms, a fine of TSHS. 50,000 per head is imposed.

3.4.2 Establishment of Rangeland Management Structures/Committees

While three of the four rangeland management structures in Kenya had already been established before the PRM project, survey data indicated that rangeland management committees were established mostly by consensus as indicated by 74.3% of all the respondents or by a majority vote of community members (20.0%) as shown in **Table 3-19**. This affirms the involvement and the independence of the communities in establishing their leadership structures.

Table 3-19: Establishment of Rangeland Management Committees- Kenya

Respondents category	c2. which of the following best describes how the committee/organization was established/ kenya						Sample size
	By consensus of all community members	By majority vote of community members	By the management/ governance committee or organization	By government	By the project NGO	Other (specify)	
Male headed HH	75.1%	19.4%	4.2%	.3%	.3%	.6%	309
Female headed HH	71.7%	19.4%	7.8%	0.0%	0.0%	1.1%	180
Female in male headed HH	76.0%	22.3%	.8%	0.0%	0.0%	.8%	121
Total	74.3%	20.0%	4.6%	.2%	.2%	.8%	611

In Tanzania, management structures had already been established during the SNRMP project that preceded the PRM project. A majority 85.7% of respondents noted that the committees were established by the consensus of all community members, the management/governance committee (5.9%) or a majority vote of community members (4.7%) (See **Table 3-20**).

Table 3-20: Establishment of Rangeland Management Committees-Tanzania

C2. Which of the following best describes how the committee/organization was established? Tanzania									
Which of the following best describes how the committee/body/organization was established?									
Respondent category	By consensus of all community members	By majority vote of community members	By the management/governance committee or organization	By government	By the project NGO	By men only	By customary institutions	Other (specify)	Sample Size
Male headed HH	84.7%	5.4%	6.2%	.6%	.4%	0.0%	.4%	2.3%	485
Female headed HH	89.1%	4.3%	2.9%	.7%	0.0%	0.0%	1.4%	1.4%	138
Female in male headed HH	85.8%	3.3%	7.1%	.9%	.5%	.9%	0.0%	1.4%	211
Total	85.7%	4.7%	5.9%	.7%	.4%	.2%	.5%	1.9%	835

a. Country = Tanzania, Nature of group = Treatment

In addition, community members were fully involved in the decision making including who would be members of the PRM (77.1% in Kenya and 71% in Tanzania). This is illustrated in **Table 3-21**.

Table 3-21: Involvement in Decision on PRM Membership

C3. Were you involved in the decision about who should be a member of the PRM Committee?						
Respondent category	Were you involved in the decision about who should be a member of the Participatory Rangeland Management Committee?					
	Kenya			Tanzania		
	No	Yes	Sample Size	No	Yes	Sample Size
Male headed HH	22.0%	78.0%	309	27.8%	72.2%	485
Female headed HH	23.9%	76.1%	180	31.2%	68.8%	138
Female in male headed HH	24.0%	76.0%	121	30.3%	69.7%	211
Total	22.9%	77.1%	611	29.0%	71.0%	835

At the time of group formation, most community members (in both countries) had not joined the rangeland management units (55.3%)¹³, followed by those who were ordinary members (36.8%), and those that were in interim leadership positions (5.0%).

3.4.3 Involvement in the PRM Planning Process

A majority in Kenya (78.8%) noted that all community members were involved in the PRM planning processes (See **Table 3-22**). A total of 46% of respondents noted that women were involved in the PRM planning processes while 45.3% noted that youth were involved.

Table 3-22: Who was involved in PRM planning Process- Kenya

C8. Were the following Involved in the PRM planning decision making process? Kenya											
Respondents category	Involvement in PRM planning										Sample size
	All community members	Some community members	Local/ County government	The management/ governance committee or organization	Project NGO	Customary institutions	Women	Youth	ILRI	Provincial administration/ National Government	
Male headed HH	78.0%	21.4%	23.3%	22.7%	22.7%	11.0%	46.6%	46.0%	5.8%	5.8%	309
Female headed HH	80.6%	15.0%	28.3%	26.1%	21.7%	11.1%	46.1%	46.1%	6.1%	5.0%	180
Female in male headed HH	77.7%	23.1%	28.9%	15.7%	22.3%	10.7%	43.8%	42.1%	5.0%	6.6%	121
Total	78.7%	20.0%	26.0%	22.3%	22.3%	11.0%	46.0%	45.3%	5.7%	5.7%	611

Similarly, a majority of respondents in Tanzania 82.8% noted that all community members were involved in the PRM planning process. Compared to Kenya, lower percentages of respondents in Tanzania noted that women and youth were involved in the PRM planning at 29.3% and 28.7% respectively. A higher percentage in Tanzania noted the involvement of customary institutions (such as elders) at 20% compared to the same in Kenya at 11.1% (See **Table 3-23**).

¹³ Meaning they may not have joined at the time the rangeland management units were formed

Table 3-23: Who was involved in PRM planning Process- Tanzania

C8. Were the following Involved in the PRM planning decision making process? Tanzania											
Respondent category	All community members	Some community members	Local/ County government	The management/ governance committee or organization	Project NGO	Customary institutions	Women	Youth	ILRI	Provincial administration/ National Government	Sample Size
Male headed HH	82.3%	16.0%	11.4%	16.4%	14.5%	22.1%	33.5%	32.6%	1.3%	2.5%	475
Female headed HH	81.8%	16.8%	11.7%	8.8%	4.4%	18.2%	27.7%	27.7%	1.5%	2.2%	137
Female in male headed HH	84.5%	12.1%	5.8%	10.6%	9.2%	16.9%	20.8%	20.3%	1.0%	2.4%	207
Total	82.8%	15.1%	10.0%	13.7%	11.5%	20.1%	29.3%	28.7%	1.2%	2.4%	820

Further, a majority (62.9%) were satisfied with how mobilization and formation of the organizations was undertaken with another 19.4% being very satisfied. The high satisfaction levels may also be explained by the fact that a majority (81.2 in Kenya and 80.5% in Tanzania) noted that the community organizations had full governance and management powers (i.e., has full uncontested authority). This is presented in **Table 3-24** and **Table 3-25** below.

Table 3-24: Governance Power of the Rangelands Management Unit- Kenya

C6. Which of the following best describes the authority and governance powers of the Rangeland Unit's Governance Structure and Processes? Kenya							
Respondent category	Cluster	Has full governance and management powers-(has full uncontested authority)	Has a framework-setting mandate but little authority for actual Management	Has only an advisory/ coordination function	Governance powers are contested	Don't know	Sample size
Male headed HH	Irong	73.0%	5.7%	14.2%	.7%	6.4%	141
	Kabarion	85.2%	14.8%	0.0%	0.0%	0.0%	61
	Koitegan	80.0%	2.0%	0.0%	0.0%	18.0%	50
	Paka	94.7%	1.8%	0.0%	1.8%	1.8%	57
	Total	80.6%	6.1%	6.5%	.6%	6.1%	309
Female headed HH	Irong	76.7%	5.8%	11.6%	0.0%	5.8%	86
	Kabarion	87.9%	6.1%	0.0%	3.0%	3.0%	33
	Koitegan	85.3%	2.9%	0.0%	0.0%	11.8%	34
	Paka	100.0%	0.0%	0.0%	0.0%	0.0%	27
	Total	83.9%	4.4%	5.6%	.6%	5.6%	180

Respondent category	Cluster	Has full governance and management powers-(has full uncontested authority)	Has a framework-setting mandate but little authority for actual Management	Has only an advisory/ coordination function	Governance powers are contested	Don't know	Sample size
Female in male headed HH	Irong	62.5%	6.3%	20.8%	0.0%	10.4%	48
	Kabarion	84.6%	11.5%	0.0%	0.0%	3.8%	26
	Koitegan	85.7%	0.0%	0.0%	0.0%	14.3%	28
	Paka	100.0%	0.0%	0.0%	0.0%	0.0%	19
	Total	78.5%	5.0%	8.3%		8.3%	121
Overall Total		81.2%	5.4%	6.5%	.5%	6.4%	611

Table 3-25: Governance Power of the Rangelands Management Unit- Tanzania

C6. Which of the following best describes the authority and governance powers of the Rangeland Unit's Governance Structure and Processes? Tanzania

Respondent Category	Cluster	Has full governance and management powers-(has full uncontested authority)	Has a framework-setting mandate but little authority for actual Management	Has only an advisory/ coordination function	Governance powers are contested	Don't know	Other (specify)	Sample Size
Male headed HH	Olengapa	77.2%	6.2%	3.4%	4.1%	9.0%	0.0%	145
	Allole	88.5%	4.4%	2.2%	1.1%	3.8%	0.0%	182
	Kimbo	70.9%	16.3%	4.7%	2.3%	5.8%	0.0%	86
	Napalai	77.8%	5.6%	1.4%	4.2%	9.7%	1.4%	72
	Total	80.4%	7.2%	2.9%	2.7%	6.6%	.2%	485
Female headed HH	Olengapa	83.0%	6.4%	4.3%	0.0%	6.4%	0.0%	47
	Allole	78.2%	18.2%	0.0%	1.8%	1.8%	0.0%	55
	Kimbo	80.0%	10.0%	5.0%	5.0%	0.0%	0.0%	20
	Napalai	93.8%	0.0%	6.3%	0.0%	0.0%	0.0%	16
	Total	81.9%	10.9%	2.9%	1.4%	2.9%	0.0%	138
Female in male headed HH	Olengapa	77.4%	8.6%	1.1%	1.1%	11.8%	0.0%	93
	Allole	81.0%	9.5%	0.0%	0.0%	9.5%	0.0%	63
	Kimbo	83.3%	10.0%	0.0%	3.3%	3.3%	0.0%	30
	Napalai	80.0%	8.0%	4.0%	0.0%	8.0%	0.0%	25
	Total	79.6%	9.0%	.9%	.9%	9.5%	0.0%	211
Overall Total		80.5%	8.3%	2.4%	2.0%	6.7%	.1%	835

The governance structures of the RMUs as above also explain why PRM planning decisions in Kenya are majorly made as a mixture of customary and new institutions at 48.4% while in Tanzania, decisions are mainly based on customary institutions at 46.2% (See **Table 3-26** and **Table 3-27**).

Table 3-26: Decisions Making Criteria in the PRM Planning Process- Kenya

C9. Please say which of the following best describes how decisions were made in the PRM planning process? Kenya							
	Cluster	Based on customary institutions and decision-making procedures	is a mix of customary and new institutions	Involved elders or customary leaders as members of decision-making bodies but do	Are gender equitable	Other (specify)	Sample size
Male headed HH	Irong	33.3%	40.4%	15.6%	10.6%	0.0%	141
	Kabarion	31.1%	49.2%	16.4%	1.6%	1.6%	61
	Koitegan	12.0%	86.0%	0.0%	2.0%	0.0%	50
	Paka	35.1%	35.1%	28.1%	0.0%	1.8%	57
	Total	29.8%	48.5%	15.5%	5.5%	.6%	309
Female headed HH	Irong	43.0%	36.0%	9.3%	11.6%	0.0%	86
	Kabarion	48.5%	42.4%	9.1%	0.0%	0.0%	33
	Koitegan	2.9%	94.1%	0.0%	0.0%	2.9%	34
	Paka	40.7%	33.3%	25.9%	0.0%	0.0%	27
	Total	36.1%	47.8%	10.0%	5.6%	.6%	180
Female in male headed HH	Irong	35.4%	33.3%	20.8%	10.4%	0.0%	48
	Kabarion	23.1%	46.2%	30.8%	0.0%	0.0%	26
	Koitegan	10.7%	89.3%	0.0%	0.0%	0.0%	28
	Paka	21.1%	31.6%	47.4%	0.0%	0.0%	19
	Total	24.8%	48.8%	22.3%	4.1%	0.0%	121
Overall Total		30.6%	48.4%	15.2%	5.2%	.5%	611

Table 3-27: Decisions Making Criteria in the PRM Planning Process- Tanzania

C9. Please say which of the following best describes how decisions were made in the PRM planning process? Tanzania									
Category of respondents	Cluster	Based on customary institutions and decision-making procedures	Is a mix of customary and new institutions	Involved elders or customary leaders as members of decision-making bodies but do	Did not include customary institutions and decision-making procedures	Are gender equitable	Are not gender equitable	Other (specify)	Sample size
Male headed HH	Olengapa	46.2%	18.6%	22.1%	3.4%	4.1%	0.0%	5.5%	145
	Allole	46.2%	19.2%	21.4%	1.1%	9.9%	.5%	1.6%	182
	Kimbo	33.7%	25.6%	17.4%	9.3%	12.8%	0.0%	1.2%	86
	Napalai	43.1%	23.6%	15.3%	5.6%	8.3%	0.0%	4.2%	72
	Total	43.5%	20.8%	20.0%	3.9%	8.5%	.2%	3.1%	485
Female headed HH	Olengapa	36.2%	38.3%	14.9%	2.1%	4.3%	0.0%	4.3%	47
	Allole	54.5%	23.6%	14.5%	0.0%	1.8%	0.0%	5.5%	55
	Kimbo	50.0%	20.0%	10.0%	0.0%	15.0%	0.0%	5.0%	20
	Napalai	75.0%	0.0%	12.5%	6.3%	6.3%	0.0%	0.0%	16
	Total	50.0%	25.4%	13.8%	1.4%	5.1%	0.0%	4.3%	138
Female in male headed HH	Olengapa	40.9%	18.3%	19.4%	1.1%	11.8%	1.1%	7.5%	93
	Allole	60.3%	19.0%	11.1%	0.0%	3.2%	3.2%	3.2%	63
	Kimbo	60.0%	23.3%	6.7%	0.0%	6.7%	3.3%	0.0%	30
	Napalai	48.0%	28.0%	12.0%	4.0%	8.0%	0.0%	0.0%	25
	Total	50.2%	20.4%	14.2%	.9%	8.1%	1.9%	4.3%	211
Overall Total		46.2%	21.4%	17.5%	2.8%	7.9%	.6%	3.6%	835

The survey also noted that RMUs have backup plans in cases where decision making for the RMU is weak. In Kenya, the decision-making organ varied depending on the cluster and the respondent category. In Irong conservancy, village government, county government and the elders were the most likely to take up decision-making roles where the RMUs were weak. In Kabarion, Koitegan and Paka elders were the main fallback decision-makers as indicated by 93.3 %, 85% and 83.3% of the respondents respectively. This is illustrated in **Table 3-28**.

Table 3-28: Decision Making under Weak Authority of Rangeland Management Unit- Kenya

C7. Decision making under weak authority of the RMU–Kenya									
Cluster	Respondent category	District/ Sub-County government	Regional/ County government	Zonal government	Provincial administration/ National Government	Village government	Customary institutions	Elders	Sample size
Irong	Male headed HH	36.9%	34.8%	4.3%	16.3%	47.5%	18.4%	34.0%	141
	Female headed HH	43.0%	39.5%	3.5%	15.1%	39.5%	16.3%	32.6%	86
	Female in male headed HH	22.9%	10.4%	8.3%	22.9%	45.8%	10.4%	22.9%	48
	% of Total	36.4%	32.0%	4.7%	17.1%	44.7%	16.4%	31.6%	275
Kabarion	Male headed HH	32.8%	21.3%	1.6%	4.9%	26.2%	34.4%	88.5%	61
	Female headed HH	33.3%	21.2%	0.0%	3.0%	21.2%	39.4%	100.0%	33
	Female in male headed HH	23.1%	15.4%	0.0%	0.0%	26.9%	19.2%	96.2%	26
	% of Total	30.8%	20.0%	.8%	3.3%	25.0%	32.5%	93.3%	120
Koitegan	Male headed HH	20.0%	4.0%	18.0%	0.0%	34.0%	8.0%	76.0%	50
	Female headed HH	14.7%	20.6%	41.2%	2.9%	44.1%	2.9%	91.2%	34
	Female in male headed HH	21.4%	7.1%	14.3%	0.0%	17.9%	10.7%	92.9%	28
	% of Total	18.6%	9.7%	24.8%	.9%	32.7%	7.1%	85.0%	113
Paka	Male headed HH	0.0%	35.1%	3.5%	0.0%	14.0%	1.8%	78.9%	57
	Female headed HH	0.0%	37.0%	0.0%	0.0%	7.4%	0.0%	85.2%	27
	Female in male headed HH	0.0%	55.6%	0.0%	0.0%	0.0%	0.0%	94.4%	18
	% of Total	0.0%	39.2%	2.0%	0.0%	9.8%	1.0%	83.3%	102
Total (N)								610	

In Tanzania, the majority of the RMUS relied on the village governments as the fallback decision-making agency followed by elders (See **Table 3-29**).

Table 3-29: Decision Making under Weak Authority of Rangeland Management Unit Tanzania

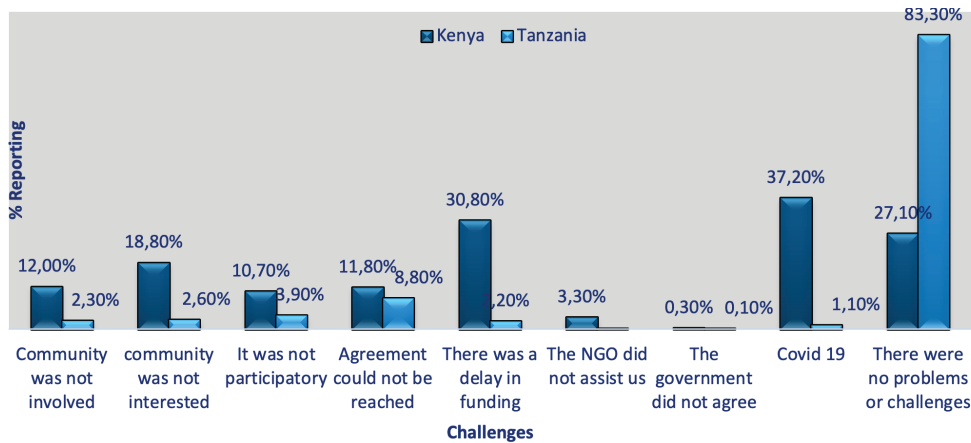
C7. Decision making under weak authority of the RMU-Tanzania									
Cluster	Respondent category	District/ Sub-County government	Regional/ County government	Zonal government	Provincial administration/ National Government	Village government	Customary institutions	Elders	Total (N)
Olengapa	Male headed HH	20.6%	7.4%	2.2%	3.7%	79.4%	33.8%	46.3%	136
	Female headed HH	11.1%	0.0%	2.2%	2.2%	88.9%	44.4%	53.3%	45
	Female in male headed HH	13.3%	6.7%	3.3%	3.3%	83.3%	32.2%	41.1%	90
	% of Total	16.6%	5.9%	2.6%	3.3%	82.3%	35.1%	45.8%	271
Allole	Male headed HH	12.1%	.6%	.6%	.6%	86.7%	38.7%	52.6%	173
	Female headed HH	15.1%	5.7%	1.9%	5.7%	75.5%	45.3%	62.3%	53
	Female in male headed HH	12.9%	0.0%	1.6%	1.6%	88.7%	33.9%	32.3%	62
	% of Total	12.8%	1.4%	1.0%	1.7%	85.1%	38.9%	50.0%	288
Kimbo	Male headed HH	14.5%	3.6%	1.2%	2.4%	94.0%	24.1%	44.6%	83
	Female headed HH	16.7%	11.1%	5.6%	5.6%	83.3%	44.4%	55.6%	18
	Female in male headed HH	13.3%	3.3%	0.0%	0.0%	83.3%	56.7%	56.7%	30
	% of Total	14.5%	4.6%	1.5%	2.3%	90.1%	34.4%	48.9%	131
Napalai	Male headed HH	8.7%	2.9%	0.0%	5.8%	91.3%	21.7%	30.4%	69
	Female headed HH	0.0%	0.0%	0.0%	0.0%	81.3%	43.8%	43.8%	16
	Female in male headed HH	4.0%	0.0%	0.0%	0.0%	84.0%	28.0%	48.0%	25
	% of Total	6.3%	1.8%	0.0%	3.6%	88.3%	26.1%	36.0%	111
Total (N)									801

3.4.4 Challenges in the PRM Planning Process

A majority in Tanzania (83.3%) noted that there were no challenges compared to 27.1% in Kenya bearing the same view. However, respondents identified a few challenges. These challenges may have caused delays and slowed down progress. Many activities have only been done only recently (in 2021). Many respondents in Kenya noted that the Covid-19 pandemic was the major challenge while planning for the PRM project while only 1.1% noted this as a challenge in Tanzania. Notably, Kenya implemented full lockdown in 2020 and partial lockdowns thereafter to control Covid-19 cases; contrary to Tanzania which did not have any Covid-19 restrictions (See **Figure 3.3**).

Delays in funding and low interest by community members were ranked the second and third most important challenges in Kenya while in Tanzania, only 8.8% ranked inability to reach agreement as the number one challenge.

Figure 3-1: Key Challenges in PRM Planning Processes in Kenya and Tanzania



3.4.5 Setting Rangeland Boundaries

Resource mapping, including setting rangeland boundaries, is one of the key steps in the PRM process. Generally, most community members in treatment sites are aware of the rangeland management unit boundaries. In Kenya, 79.7% were aware of the boundaries with a higher percentage being respondents from Irong conservancy as indicated by 86.2% and the lowest being in the Paka Hills community rangeland at 74.8%. It was also noted that fewer (59.3%) female headed households and females in male headed households (68.4%) in Paka Hills community rangeland were aware of the rangeland boundaries compared to the male headed households (84.2%). This is illustrated in **Table 3-30**.

Table 3-30: Awareness of Rangeland Management Unit Boundaries- Kenya

C13. Do you know where the boundaries of the rangeland management unit are? * Kenya				
Conservancy	Respondent category	No	Yes	Sample size
Irong	Male headed HH	12.8%	87.2%	141
	Female headed HH	12.8%	87.2%	86
	Female in male headed HH	18.8%	81.3%	48
	Cluster Total	13.8%	86.2%	275
Kabarion	Male headed HH	26.2%	73.8%	61
	Female headed HH	24.2%	75.8%	33
	Female in male headed HH	38.5%	61.5%	26
	Cluster Total	28.3%	71.7%	120
Koitegan	Male headed HH	20.0%	80.0%	50
	Female headed HH	17.6%	82.4%	34
	Female in male headed HH	35.7%	64.3%	28
	Cluster Total	23.0%	77.0%	113
Paka	Male headed HH	15.8%	84.2%	57
	Female headed HH	40.7%	59.3%	27
	Female in male headed HH	31.6%	68.4%	19
	Cluster Total	25.2%	74.8%	103
Total		20.3%	79.7%	611

In Tanzania, those who were aware of the rangeland boundaries were 78.8% of the respondents. Awareness was, however, higher in Olengapa and Kimbo clusters at 81.8% and 80.1% respectively while it was lowest in Allole cluster at 75.7% (see **Table 3-31**).

Table 3-31: Awareness of Rangeland Management Unit Boundaries- Tanzania

C13. Do you know where the boundaries of the rangeland management unit are? * Tanzania				
Cluster	Respondent category	No	Yes	Total
Olengapa	Male headed HH	11.7%	88.3%	145
	Female headed HH	25.5%	74.5%	47
	Female in male headed HH	24.7%	75.3%	93
	Cluster Total	18.2%	81.8%	285
Allole	Male headed HH	14.3%	85.7%	182
	Female headed HH	34.5%	65.5%	55
	Female in male headed HH	44.4%	55.6%	63
	Cluster Total	24.3%	75.7%	300

Cluster	Respondent category	No	Yes	Total
Kimbo`	Male headed HH	17.4%	82.6%	86
	Female headed HH	30.0%	70.0%	20
	Female in male headed HH	20.0%	80.0%	30
	Cluster Total	19.9%	80.1%	136
Napalai	Male headed HH	27.8%	72.2%	72
	Female headed HH	6.3%	93.8%	16
	Female in male headed HH	16.0%	84.0%	25
	Cluster Total	21.9%	78.1%	114
Total		21.2%	78.8%	835

The levels of awareness of RMU boundaries may be because a majority (73.5% in Kenya and 76.7% in Tanzania) stated that all community members were involved in setting out the boundaries of the RMUs.

In almost all the clusters, most respondents noted that the RMU boundaries were established based on the traditional units of grazing (65.6%) (**Table 3-32**). According to the FGDs (**TF001, TF003, TF004, TF005**) there was a consensus that, community elders were crucial in identifying traditional community boundaries including areas that were traditionally reserved for dry season grazing and watering of livestock.

Table 3-32: Basis for Rangeland Unit Boundaries

Country		Sample size		
		Traditional	Non-traditional	
Tanzania	Olongapa	66.1%	33.9%	286
	Allole	78.1%	21.9%	301
	Kimbo	66.2%	33.8%	136
	Napalai	60.9%	39.1%	115
Kenya	Irong	58.7%	41.3%	276
	Kabarion	82.5%	17.5%	120
	Koitegan	2.7%	97.3%	113
	Paka	100.0%	0.0%	104
Average		65.6%	34.4%	1451

The decisions on setting out the RMU boundaries in the treatment areas was mostly by consensus amongst all community members (80.5%) with a further 10.9% deciding through a majority vote. This further explains the high satisfaction levels with the RMUs boundaries with 62.9% “satisfied” and a further 24.0% in Tanzania “very satisfied” giving a satisfaction index of 81.2%¹⁴ and 64.3% in Kenya “satisfied” and a further 11.5% “very satisfied”; thus an overall satisfaction of 75.8% (See **Table 3-33**).

Table 3-33: Satisfaction Levels with Decisions on RMU Boundaries

Level of Satisfaction		Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Total
Tanzania	Olengapa	3.5%	2.8%	7.0%	60.1%	26.6%	286
	Allole	.7%	1.3%	3.7%	73.1%	21.3%	301
	Kimbo	.7%	2.9%	5.1%	68.4%	22.8%	136
	Napalai	2.6%	5.2%	7.8%	58.3%	26.1%	115
	Average-	1.9%	2.6%	5.6%	65.9%	24.0%	835
Kenya	Irong	.4%	1.4%	18.5%	59.8%	19.9%	276
	Kabarion	.8%	9.2%	35.0%	50.0%	5.0%	120
	Koitegan	0.0%	0.0%	24.8%	72.6%	2.7%	113
	Paka	0.0%	1.0%	8.7%	83.7%	6.7%	104
	Average-	.3%	2.6%	21.3%	64.3%	11.5%	611
Overall Average		1.2%	2.6%	12.2%	65.2%	18.7%	1,451

A majority (37.7% in Kenya and 84.6% in Tanzania) also noted that there were no challenges in establishing the RMU boundaries (See **Table 3-34** and **Table 3-35**). However, 32.2% in Kenya (compared to only 3% in Tanzania) indicated delayed funding as a major challenge. Also, 20.4% in Kenya (compared to only 2.9% in Tanzania), indicated that the community was not interested with another 13.1% in Kenya (compared to 7.4% in Tanzania) indicating that agreements could not be easily reached.

¹⁴ Sum of satisfied and very satisfied

Table 3-34: Challenges in Defining RMU Boundaries-Kenya

Cluster	Community was not involved	community was not interested	It was not participatory	Agreement could not be reached	There was a delay in funding	The NGO did not assist us	The government did not agree	There were no problems or challenges	Total Sample size
Irong	13.9%	21.2%	9.9%	13.9%	33.2%	6.6%	0.0%	40.1%	274
Kabarion	28.4%	20.2%	22.0%	4.6%	6.4%	0.0%	0.0%	30.3%	109
Koitegan	0.9%	10.0%	7.3%	2.7%	10.9%	0.0%	0.0%	72.7%	110
Paka	0.0%	30.4%	11.8%	31.4%	78.4%	1.0%	0.0%	7.8%	102
Average	10.8%	20.5%	12.8%	13.2%	32.2%	1.9%	0.0%	37.7%	595

Table 3-35: Challenges in Defining RMU Boundaries-Tanzania

Cluster	Community was not involved	community was not interested	It was not participatory	Agreement could not be reached	There was a delay in funding	The NGO did not assist us	The government did not agree	There were no problems or challenges	Total Sample size
Olongapa	3.6%	4.0%	5.6%	9.2%	2.0%	0.8%	0.4%	82.8%	250
Allole	1.1%	0.4%	1.5%	3.3%	1.1%	0.0%	0.0%	93.0%	270
Kimbo	1.6%	2.4%	5.6%	8.8%	3.2%	0.8%	0.0%	84.0%	125
Napalai	2.8%	4.7%	10.3%	8.4%	5.6%	0.0%	0.0%	78.5%	107
Average	2.3%	2.9%	5.8%	7.4%	3.0%	0.4%	0.1%	84.6%	752

Overall, 93.6% in Kenya agree with the existing RMU boundaries; thus only 6.1% disagreed). However, a higher percentage of those who do not agree with the boundaries was noted in Kabarion conservancy-Kenya (25%) while none of the respondents (0%) in the Koitegan community forest association (CFA) was in disagreement with the RMU boundaries. According to FGD respondents (**KF003** and **KF004**), Kabarion is yet to establish their southern border; with two pastoralist communities laying claim to an extensive grazing area that has always served as a dry season reserve and claimed to have diatomite¹⁵ deposits. This area has always been a source of conflict between the two communities. Additional reasons for disagreement with RMU boundaries in each of the clusters are summarized in **Table 3-36**.

15 Diatomite is a soft, friable and very fine-grained siliceous sedimentary rock composed of the remains of fossilized diatoms. Chalky to the touch and often light in color, diatomite can be white if pure, but more commonly it is buff to gray in situ, or sometimes black. It is processed to food grade standards as a filler material and for removal of impurities as well as for industrial purposes in medicine, plastics and paints.

Table 3-36: Reasons for Disagreement with RMUs Boundaries- Kenya

C20. If you disagree with the RMU boundaries, Why do you disagree with RMU Boundaries * Kenya							
Cluster	Respondent category	Reasons for disagreeing with RMU boundaries					Total
		Because it does not reflect traditional use of the rangeland	because it breaks up tradition use or unit of the rangeland	because it is too small	because it is too big	because it is too far	
Irong	Male headed HH	0.0%	0.0%	0.0%	100.0%	0.0%	1
	Female headed HH	100.0%	0.0%	0.0%	0.0%	100.0%	1
	Female in male headed HH	0.0%	0.0%	0.0%	0.0%	100.0%	2
	Total	25.0%	0.0%	0.0%	25.0%	75.0%	4
Kabarion	Male headed HH	16.7%	25.0%	0.0%	58.3%	8.3%	12
	Female headed HH	25.0%	12.5%	12.5%	50.0%	0.0%	8
	Female in male headed HH	14.3%	14.3%	0.0%	57.1%	14.3%	7
	Total	18.5%	18.5%	3.7%	55.6%	7.4%	27
Koitegan	Male headed HH	0.0%	0.0%	0.0%	0.0%	0.0%	0
	Female headed HH	0.0%	0.0%	0.0%	0.0%	0.0%	0
	Female in male headed HH	0.0%	0.0%	0.0%	0.0%	0.0%	0
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0
Paka	Male headed HH	33.3%	33.3%	33.3%	33.3%	0.0%	3
	Female headed HH	0.0%	0.0%	0.0%	0.0%	0.0%	0
	Female in male headed HH	0.0%	100.0%	0.0%	0.0%	0.0%	1
	Total	25.0%	50.0%	25.0%	25.0%	0.0%	4

**Based on the percent of those who disagreed with the RMU boundaries.

**The total percent of those in disagreement in Koitegan was 0%.

In Tanzania, 94.2% of all respondents agree with the existing RMU boundaries. A higher percentage of those who do not agree with the boundaries was noted in the Kimbo cluster at 11%. The reasons for disagreement with the RMU boundaries in each of the clusters are summarized in **Table 3-37**.

Table 3-37: Reasons for Disagreement with RMUs Boundaries- Tanzania

C20. Reasons for disagreement with RMU Boundaries * Tanzania							
Cluster	Respondent category	Because it does not reflect traditional use of the rangeland	because it breaks up tradition use or unit of the rangeland	because it is too small	because it is too big	because it is too far	Total (N)
Olengapa	Male headed HH	25.0%	37.5%	12.5%	12.5%	12.5%	8
	Female headed HH	0.0%	0.0%	0.0%	0.0%	0.0%	0
	Female in male headed HH	50.0%	0.0%	50.0%	0.0%	0.0%	2
	Total	30.0%	30.0%	20.0%	10.0%	10.0%	10
Allole	Male headed HH	50.0%	0.0%	50.0%	0.0%	0.0%	2
	Female headed HH	0.0%	0.0%	0.0%	0.0%	0.0%	0
	Female in male headed HH	100.0%	0.0%	0.0%	0.0%	0.0%	1
	Total	66.7%	0.0%	33.3%	0.0%	0.0%	3
Kimbo	Male headed HH	25.0%	0.0%	50.0%	0.0%	50.0%	4
	Female headed HH	0.0%	0.0%	0.0%	50.0%	50.0%	2
	Female in male headed HH	100.0%	0.0%	0.0%	0.0%	0.0%	1
	Total	28.6%	0.0%	28.6%	14.3%	42.9%	7
Napalai	Male headed HH	40.0%	40.0%	20.0%	40.0%	0.0%	5
	Female headed HH	0.0%	0.0%	0.0%	0.0%	0.0%	0
	Female in male headed HH	0.0%	0.0%	0.0%	0.0%	0.0%	0
	Total	40.0%	40.0%	20.0%	40.0%	0.0%	5

**Based on percent of those that disagreed with the RMU boundaries

3.4.6 Rangeland Management Plans

A majority of respondents are aware of rangeland management plans (61.3% in Kenya and 64.0% in Tanzania). However, it was worrying that 33.9% in Kenya and 28.9% in Tanzania were not aware or not sure of the existence of rangeland management plans. According to key informants in Kenya (KK007, KK008), this may be because some of the RMPs were established only recently some as late as 2021 (See **Table 3-38**).

Table 3-38: Awareness of Rangeland Management Plans

C21. Does a rangeland management Plan exist for the RMU? * Kenya				
Cluster	Yes	No	No aware/not sure	Sample size
Irong	55.4%	8.3%	36.2%	276
Kabarion	53.3%	.8%	45.8%	120
Koitegan	55.8%	2.7%	41.6%	113
Paka	92.3%	1.9%	5.8%	104
Average %	61.3%	4.7%	33.9%	613
C21. Does a rangeland management Plan exist for the RMU? * Tanzania				
Cluster	Yes	No	No Aware/Not Sure	Sample size
Olangapa	75.5%	5.6%	18.9%	286
Allole	63.1%	6.0%	30.9%	301
Kimbo	55.1%	8.8%	36.0%	136
Napalai	47.8%	12.2%	40.0%	115
Average %	64.0%	7.2%	28.9%	838

Despite knowledge of the existence of a rangeland management plan, only 57.7% of those aware of the existence of the RMP in Kenya and 41.4% in Tanzania had read the management plan. Higher percentages of those who had not read were recorded in Paka Hills- Kenya (65.6%), Kimbo-Tanzania (62.7%) and Allole-Tanzania (60.5%). Unsurprisingly these areas also recorded a higher population of respondents that noted that they cannot read (are illiterate). This was recorded as the major reason for having not read by 66.8% in Tanzania and 51.5% in Kenya. A total of 31.1% noted that they had been told about the management plan by their leaders while 11.1% were told by family members; and thus, did not find the need to read.

For those who were aware, a further majority noted that the decisions on which activities were to be included in the rangeland management plans were either by consensus among community members (73.2% in Kenya and 83.9% in Tanzania). In Kenya, decision by a majority vote ranked second at 22.8% while in Tanzania, decision by the management committee came second as noted by 9.7% of the respondents who were aware of the RMP.

In addition, 81.7% of the respondents that were aware of existence of RMP in Kenya noted that they were indeed involved in deciding the activities to be included in the management plans as compared to 76.7% in Tanzania. Further, 93.1% of respondents aware of the RMP in Kenya were satisfied with the activities included in the RMP compared to 87.5% in Tanzania.

In Kenya, 37.5% of those aware of the existence of RMPs indicated that there were no challenges during the development of the rangeland management plan (RMP). The majority (41.3%) however, noted that the key challenges were delays in funding, low interest by community members, agreements not being reached and lack of a participatory process. On the contrary, a majority of the respondents in Tanzania (85.9%) indicated that there were no challenges. This is illustrated in **Table 3-39**.

Table 3-39: Challenges and Problems in establishing the Rangeland Management Plans

C25. Challenges and Problems in establishing the Rangeland Management Plans–Kenya									
Cluster	Community was not involved	community was not interested	It was not participatory	Agreement could not be reached	There was a delay in funding	The NGO did not assist us	The government did not agree	There were no problems or challenges	Sample size
Irong	4.6%	23.7%	9.2%	9.9%	38.2%	2.0%	0.0%	36.8%	152
Kabarion	9.7%	1.6%	19.4%	3.2%	17.7%	0.0%	0.0%	61.3%	62
Koitegan	1.6%	9.5%	12.7%	4.8%	6.3%	0.0%	1.6%	65.1%	63
Paka	2.1%	31.3%	4.2%	34.4%	84.4%	1.0%	0.0%	5.2%	96
Average %	4.3%	19.6%	10.2%	14.2%	41.3%	1.1%	.3%	37.5%	373
C25. Challenges and Problems in establishing the Rangeland Management Plans–Tanzania									
Olengapa	.5%	2.0%	4.0%	12.0%	3.0%	.5%	.5%	79.5%	200
Allole	0.0%	.6%	1.1%	3.9%	2.8%	.6%	0.0%	91.0%	178
Kimbo	0.0%	2.7%	1.4%	4.1%	4.1%	0.0%	0.0%	91.8%	73
Napalai	3.7%	5.6%	3.7%	7.4%	5.6%	0.0%	0.0%	85.2%	54
Average %	.6%	2.0%	2.6%	7.5%	3.4%	.4%	.2%	85.9%	505

** Based on percentage of those who were aware of the RMP.

In cases where the rangeland management plan did not exist, decisions on rangeland management activities in Kenya was undertaken by the elders (58.6%), the village councils (37.6%) and the rangeland management committee (33.8%). In Tanzania, the village council was mentioned by a majority of respondents (66.4%) followed elders (44.0%) and the rangeland management committee (26.5%). Customary institutions were mentioned by 17.9% of respondents in Tanzania compared to 10.8% in Kenya. This is illustrated in **Table 3-40** below.

Table 3-40: Decision-Makers on Rangelands in Absence of a Rangeland Management Plan

Country	Cluster	Village councils	Rangeland management committees	Government decides	there is no control	no one decides	I decide	the NGO decides	Customary institutions	Elders	Sample size
Kenya	Irong	12.2%	73.2%	0.0%	9.8%	2.4%	0.0%	2.4%	17.1%	29.3%	41
	Kabarion	29.6%	48.1%	3.7%	0.0%	0.0%	0.0%	0.0%	29.6%	85.2%	27
	Koitegan	26.9%	15.4%	11.5%	11.5%	30.8%	0.0%	0.0%	7.7%	53.8%	26
	Paka	61.9%	9.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	68.3%	63
	Total	37.6%	33.8%	2.5%	4.5%	5.7%	0.0%	.6%	10.8%	58.6%	157
Tanzania	Olongapa	75.6%	24.4%	7.6%	1.7%	0.0%	1.7%	1.7%	22.7%	39.5%	119
	Allole	66.4%	24.8%	1.8%	1.8%	1.8%	0.0%	4.4%	21.2%	46.9%	113
	Kimbo	55.3%	14.9%	0.0%	2.1%	0.0%	0.0%	2.1%	17.0%	53.2%	47
	Napalai	46.4%	21.4%	3.6%	0.0%	3.6%	0.0%	3.6%	25.0%	35.7%	28
	Total	66.4%	22.8%	3.9%	1.6%	1.0%	.7%	2.9%	21.5%	44.0%	307

**** Based on percentage of those who were aware of the RMP.

3.4.7 Project Activities in the Rangeland Management Plan Implemented

As stated by respondents that were aware of the existence of RMPs, key activities included in the rangeland were bush clearing (mentioned by 68.1% of respondents), strengthening of governance structures (59.2%), seeding of pastures (57.3%), improvement of grasses (55.7%), tree planting (37.8%), and water conservation measures (37.1%) (See **Table 3-41**). Overall, 99.5% of the respondents that were aware of the existence of the RMP in Kenya and 98.2% in Tanzania were in agreement with the activities included in the RMP

Although it was not expected that all the activities in the RMP were to be fully implemented at the pilot phase, only 4.2% of respondents in Kenya and 3.7% in Tanzania noted that planned activities were fully implemented. A total of 24.7% in Kenya and 55.2% in Tanzania, noted that activities were partially implemented, 9.9% in Kenya and 22.0% in Tanzania noted that one or two activities have been implemented, with another 1.2% in Kenya and 4.7% in Tanzania noting that the activities have not been implemented at all.

The majority of the respondents (52.7% in Kenya and 80.5% in Tanzania) noted that the activities within the management plan were implemented by consensus among all members while an additional 34.7% in Kenya 4.4% in Tanzania noted that decisions were made by a majority vote. Notably, 9.9% of the respondents in Tanzania noted that activities were implemented based on a decision by the rangeland management committee.

A majority, 73.6% in Kenya and 64.7% of the respondents in Tanzania indicated that they were involved in the implementation of project activities, out of which 85.5% in Kenya and 84.5% in Tanzania indicated to be satisfied with the way project activities were implemented. In Tanzania, a majority of respondents (51.7%) noted that there were no challenges during the implementation of RMP. However, 16.1% indicated that conflicts with the neighbours concerning the activities carried out was the main challenge. This was particularly so in Napalai cluster as indicated by 25% of the respondents. Other challenges were insufficient funds (9%) and lack of appropriate tools to carry out planned activities (7.3%).

In Kenya, 29% indicated that there were no challenges while implementing the RMP activities. Delayed funding, insufficient funds, delays in reaching agreements, and low interest by community members were mentioned by 34.2%, 25.5%, 21.5% and 20.8% respectively were mentioned as the key challenges in implementing activities in the management plans. Other implementation challenges identified through KIIs (**KK001**, **KK002** and **KK005**) and review of PRM progress reports in Kenya were:

- » Covid 19- slowed down the implementation of activities and training due to limitations in attendance of meetings and occasioned delays in approvals as some staff were out of the office. It exposed communities to a myriad of challenges including increased prices for farm input and other commodities, closure of livestock markets, job losses.
- » Low rainfall affected the growth of the pastures;
- » The continued rise of both Lake Baringo and Lake Bogoria in Kenya which led to community migrations to higher ground and sometimes settling in designated grazing areas in Kenya
- » Low prioritization by other stakeholders- some County technical working group (CTWG) members were not fully committed and prioritized other activities over PRM project activities
- » Changes in government staff in the CTWG- This affected continuity or occasioned delays; and
- » Limited mobility as field officers do not have any means of transport. Information from (**KK005**) recommended that the project can consider motorbikes for the field officers and consider having project vehicles.

Table 3-41: Major Activities in the Rangeland Management Plans

Country/cluster		Major activities						
		strengthening of governance structures	clearance of bush	clearance of invasive species	development of water points/ Structures	seeding of pastures	improvement of grasses	Irrigation
Tanzania	Olengapa	60.2%	57.0%	38.7%	34.4%	57.0%	63.4%	10.8%
	Allole	55.1%	29.0%	23.2%	26.1%	26.1%	39.1%	8.7%
	Kimbo	50.0%	50.0%	17.9%	14.3%	42.9%	39.3%	14.3%
	Napalai	54.5%	40.9%	31.8%	27.3%	31.8%	45.5%	13.6%
Kenya	Irong	92.7%	93.6%	81.8%	67.3%	79.1%	63.6%	1.8%
	Kabarion	21.6%	94.6%	0.0%	43.2%	97.3%	56.8%	2.7%
	Koitegan	35.1%	94.6%	51.4%	2.7%	70.3%	64.9%	10.8%
	Paka	33.3%	69.7%	0.0%	0.0%	21.2%	51.5%	6.1%
Total		59.2%	68.1%	40.3%	35.2%	57.3%	55.7%	7.5%

in the rangeland management plan									Total (N)
soil conservation measures	water conservation measures	tree planting	Community mobilization	Bylaws on wet and dry grazing areas	marketing and value addition	Breed improvement	Establishment of disease control centres		
24.7%	37.6%	28.0%	43.0%	38.7%	18.3%	19.4%	32.3%	93	
27.5%	36.2%	17.4%	33.3%	50.7%	23.2%	21.7%	30.4%	69	
17.9%	42.9%	7.1%	46.4%	75.0%	17.9%	21.4%	25.0%	28	
22.7%	36.4%	18.2%	40.9%	45.5%	18.2%	27.3%	27.3%	22	
82.7%	85.5%	77.3%	38.2%	23.6%	23.6%	21.8%	.9%	110	
2.7%	2.7%	0.0%	8.1%	0.0%	0.0%	2.7%	0.0%	37	
29.7%	5.4%	89.2%	29.7%	5.4%	5.4%	8.1%	8.1%	37	
12.1%	6.1%	0.0%	18.2%	3.0%	0.0%	6.1%	3.0%	33	
37.1%	41.7%	37.8%	34.3%	30.5%	16.3%	17.5%	16.1%	429	

3.4.8 Rangeland Management Unit Bylaws

All the management units have established bylaws for enforcing project activities. Most respondents 79.5% noted that the bylaws were consensually agreed upon (and implemented) by all community members, 11.6% indicating that b-laws were agreed upon after a majority vote by the community members, and a further 7.5% by the management/governance committee or organization. A mixture of old and new bylaws drawn from cultural practices such as livestock fines and caning were noted in some cases especially in Paka Hills (**KF007**, and **KF008**). These were administered with the help of the village elders/village council and the local chiefs. In other cases, adherence to national laws, including arrest and prosecution of perpetrators in courts of law, were applied (**KF007**, and **KF008**).

Text Box 2: Punishment for prohibited grazing in Paka Hills (KF007 and KF008)

Traditional led bylaws: The case of Paka hills

In Paka Hills community rangeland, the areas atop the Paka hills are traditionally reserved for dry season grazing. During the wet seasons, all community members are expected to graze on the lower reaches of the rangeland; which often dries up earlier during the dry seasons. This allows pasture, shrubs and the forested hills to regenerate during the wet season. In such times when members are prohibited from accessing the forest, youthful members of the rangeland unit patrol the forest and report any individuals grazing within the prohibited area to the rangeland committee and the elders.

The rangeland committee have adopted traditional rules including caning (5 strokes) and a fine of 1 bull for perpetrators; in line with traditional prescriptions by the elders. Additionally, such perpetrators can be reported to the area chief and legal actions taken against them.

A total of 42.2% of respondents in Kenya and a majority (91.5% in Tanzania), these bylaws were established without any challenges. A further 30.2% of all respondents in Kenya noted delayed funding, while another 16.6% noted low interest by members to be the key challenges in establishing the bylaws. Additionally, only 9.6% felt that the bylaws have been fully implemented with a majority (42.8%) noting that bylaws have only been partially implemented. Overall, 88.3% were satisfied with how decisions were made in establishing the bylaws while 86.5% were satisfied with the way by which the bylaws were implemented. Further, 35.2% and 71.1% in Kenya and Tanzania respectively, felt that the bylaws were implemented without any challenges.

3.5 Capacity-Building Through PRM

Strengthening the capacities of local and national governments, and pastoral communities to implement PRM is a key result area of the PRM piloting in Kenya and Tanzania. Capacity-building of the various stakeholders involved in the implementation of the PRM was considered essential to ensure the effectiveness and sustainability of the PRM interventions and benefits. The key capacity-building interventions included enhancing coordination capacity through establishing coordination platforms; improving government and community representatives understanding of PRM through sensitizations and training; and developing PRM guidelines and toolkits. Other strategies of enhancing capacities to implement PRM are holding multi-stakeholder dialogues on rangelands including PRMs and producing press articles and other media events on rangelands including PRM.

3.5.1 PRM Coordination Platforms Established and Functioning

PRM is a multi-stakeholder process that requires intricate coordination through multiple inter-country and intra-country coordination platforms for creating common understanding, building consensus around priorities, building accountability, and sharing and learning.

At the inter-country level, the project established and operationalized the Regional Project Steering Committee bringing key stakeholders from governments, EU, FAO, IFAD and others together with the implementing partners (RECONCILE, TNRF, ILRI and VSF-Belgium). The Steering Committee has an advisory and oversight role and meets once a year preferably in October to discuss the project implementation, challenges, opportunities, and solutions. At the implementation level, the project has established the Project Implementation Committee to provide a platform for the implementing partners to jointly plan, share progress, learn from each other and hold each other accountable.

In Kenya, a project-specific technical working group was formed at the country level—the TWG incorporates members from departments of lands, environment, water, and livestock, reflecting the various project components. It also incorporates the County warden for the Lake Bogoria National Reserve. The TWG members are involved in planning activities (work plans), capacity-building, and offering technical advice during procurement, budgeting and implementation. In addition, the TWG members are also involved in monitoring activities; together with RECONCILE and the community members. PRM is also part of the National Engagement Strategy on Land Governance (NES). RECONCILE the implementing partner of PRM in Kenya is co-convening with FAO the NES Working Committee on Rangeland and Community Lands.

In Tanzania, a project-specific National Technical Working Group was established. This brings together technical officers from all the relevant departments of the district and local governments. TNRF, which is also the implementing partner in Tanzania, is an active member of NES and thus has ensured that PRM is connected and contributing to NES results and informing national rangeland management processes. TNRF has been confirmed as the convener of the Land-Based Investment working group and is a member of the Rangelands Working Group.

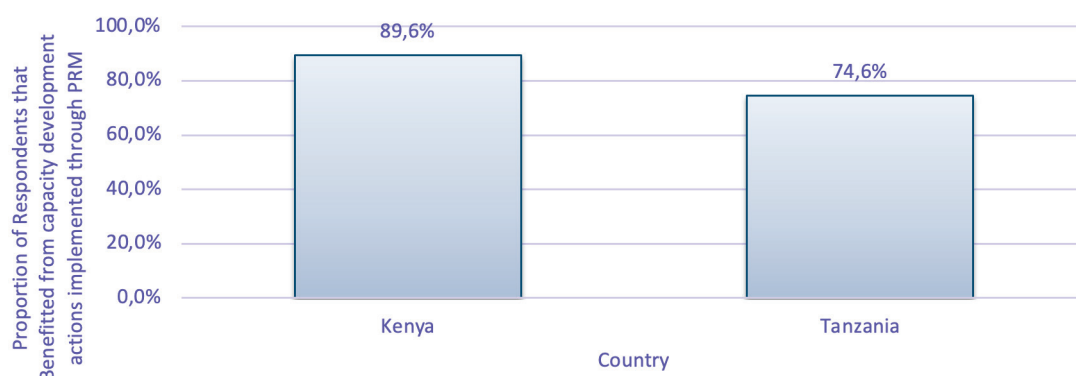
3.5.2 Training on PRM

Strengthening of the capacities was done by continuous engagement with different national, regional and county/district government institutions to secure more support for PRM and identify opportunities for replications in other areas. This was done through project launches, training, joint assessments, and dialogue on PRM methodological review (KK007, KK008, and TK015)¹⁶. Training conducted took different forms such as learning exchanges, policy engagement meetings or training/capacity-building workshops.

Proportion of Community Members that Benefitted from PRM Training

A majority of survey respondents (89.6% in Kenya and 74.6% in Tanzania) within the treatment sites where PRM was piloted reported that they benefitted from capacity-building actions through the PRM process (See **Figure 3-2**).

Figure 3-2: Proportion of Community Members that Benefitted from Capacity-Building Actions via PRM



Based on the survey, the main training topics imparted to the PRM direct beneficiaries in Kenya included resource mobilization, pasture conservation, institutional strengthening, water and soil conservation, climate change, and community land registration amongst other topics (See **Table 3-42**).

Table 3-42: Training Topics Disseminated through PRM Interventions- Kenya

What capacity-building actions have received through PRM? Kenya	
Capacity-building topics	Proportion Reporting capacity-building actions have received through PRM
Resource mobilization	57.7%
Pasture conservation	57.3%
Water conservation	44.5%
Institutional strengthening	43.8%

¹⁶ International Land Coalition Secretariat (2021) Piloting the use of Participatory Rangeland Management (PRM) in Tanzania and Kenya Project. Year 3 Narrative Report. IFAD, Via Palo Di Dono Rome -IT

Capacity-building topics	Proportion Reporting capacity-building actions have received through PRM
Soil conservation	41.6%
Climate change adaptation and resilience	33.7%
Community land registration	22.3%
Participatory monitoring and evaluation	18.7%
Financial management and reporting	16.3%
Marketing and value addition	15.9%
Action/work planning	12.6%
Proposal review, development	11.0%
GLMPs development	3.7%
Sample size (N)	501

In Tanzania, the main topics included pasture conservation, resource mobilization, institutional strengthening, community land registration, and water conservation amongst other topics (See **Table 3-43**).

Table 3-43: Training Topics Disseminated through PRM Interventions- Tanzania

What capacity-building actions have received through PRM? Tanzania	
Capacity-building topics	Proportion trained
Pasture conservation	46.8%
Resource mobilization	46.3%
Institutional strengthening	39.3%
Community land registration	32.3%
Water conservation	27.3%
Financial management and reporting	16.5%
Soil conservation	16.1%
Climate change adaptation and resilience	16.1%
Marketing and value addition	14.1%
Participatory monitoring and evaluation	13.3%
Action/work planning	10.5%
Proposal review, development	5.7%
GLMPs development	2.0%
Sample size (N)	601

Benefits of Training Through PRM to Project Beneficiaries

In Kenya, the main benefits of training through PRM to those that received training via PRM were acquiring new skills (77.3%), acquiring new knowledge (69.4%), and increased knowhow about PRM (42.9%). This is illustrated in **Table 3-44**.

Table 3-44: Benefits of PRM Training to PRM Beneficiaries- Kenya

Why do you think you have benefitted from capacity development actions implemented through PRM? Kenya	
Benefits of training	Proportion reporting benefits from capacity-building actions received through PRM
Acquired new skills	77.3%
Acquired new knowledge	69.4%
I know about PRM	42.9%
Feel stronger and confident	23.1%
Know how to look after the rangeland	19.2%
Sample size (N)	546

In Tanzania, the main benefits of training through PRM to those who received training via PRM were knowing how to look after the rangeland (53.2%), acquiring new skills (45%) and acquired knowledge (40.1%). This is illustrated in **Table 3-45**.

Table 3-45: Benefits of PRM Training to PRM Beneficiaries- Tanzania

Why do you think you have benefitted from capacity development actions implemented through PRM?, Tanzania	
Benefits of Training	Proportion reporting benefits from capacity-building actions received through PRM
Know how to look after the rangeland	53.2%
Acquired new skills	45.0%
Acquired new knowledge	40.1%
Feel stronger and confident	22.7%
I know about PRM	18.2%
Sample size (N)	601

Satisfaction of Community Members With Training Through PRM and Suggested Improvements

The satisfaction levels with training via PRM were high in Kenya at 79.9% with 67.1% satisfied and 12.8% very satisfied (See **Table 3-46**). Further analysis of the household data noted that the capacity-building through PRM could be improved by more funding being budgeted for training, increased frequency of training and more practical and demonstrations sites for the various training technologies and practices.

Table 3-46: Level of Satisfaction with Training through PRM- Kenya

What is your level of satisfaction with the capacity-building actions received through the PRM? Kenya						
Country	Dissatisfied	Neutral	Satisfied	Very Satisfied	Satisfaction Index ¹⁷	Total sample Size
Male headed HH	1.1%	20.4%	65.7%	12.8%	78.5%	274
Female headed HH	0.6%	18.5%	65.4%	15.4%	80.9%	162
Female in male headed HH	0.0%	18.2%	72.7%	9.1%	81.8%	110
Average	0.7%	19.4%	67.1%	12.8%	79.9%	546

In Tanzania, satisfaction levels were 96% with 67.3% noting that they were satisfied and another 28.7% noting that they were very satisfied (See **Table 3-37**). Further discussions with project implementers in Tanzania (**TK015**) noted that the capacity-building plans had not been fully implemented by the time the impact assessment was been conducted.

Table 3-47: Level of Satisfaction with Training through PRM- Tanzania

What is your level of satisfaction with the capacity-building actions received through the PRM? Tanzania							
Country	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Satisfaction Index ¹⁸	Total sample Size
Male headed HH	.6%	1.4%	3.4%	61.2%	33.3%	94.5%	348
Female headed HH	0.0%	0.9%	2.6%	71.3%	25.2%	96.5%	115
Female in male headed HH	0.6%	0.0%	0.6%	78.0%	20.8%	98.7%	159
Average	0.5%	1.0%	2.6%	67.3%	28.7%	96.0%	622

3.5.3 Development of PRM Guidelines/Toolkit

In Tanzania, TNRF and its project stakeholders have been able to develop and launch the PRM guidelines document that would provide a roadmap into the development and implementation of rangeland units. This document, "*Mwongozo wa upatikanaji, uendelezaji na usimamizi wa maeneo ya malisho*" was launched on 22 December, 2021, and it captures the process as well as the experiences through the process of formulation and implementation of the rangeland units. These guidelines provide the "do's and don'ts" of the PRM process and introduce the process to a much wider audience, stakeholders and decision-makers both within the state machinery and the private sector. This provides an opportunity for a much wider investment into the process.

17 Sum of satisfied and very satisfied

18 ibid

In Kenya, PRM facilitated the development and launch of the County Spatial Planning toolkit to guide the County in land use planning. Discussions with project stakeholders (**KK007** and **KK008**) indicated that the first edition of the PRM toolkit for Kenya was developed in 2018 and comprises 12 PRM tools. The purpose of this first edition PRM toolkit is to introduce the essential elements of participatory rangeland management to county government personnel and others who are supporting communities in their rangeland management efforts. It is meant to provide guidance on steps they may take with these communities.

The revised edition of the PRM guidelines and toolkits were to be developed jointly with stakeholders during the PRM piloting phase. The guidelines were developed and launched in December 2021. However, during the PRM piloting, draft revised PRM guidelines/toolkits were in use in Baringo County to guide the RMUs to come up with better functioning management structures and units and to provide guidance to what activities or interventions to be implemented and how to do it. The main challenge noted with the utilization of the revised draft PRM guidelines/toolkits was illiteracy. For example, in Tiaty sub-county where there was a need for interpretation and explanation of the guidelines and other policy documents (**KK007**).

3.6 The Community Rangelands Investment Fund

Through the PRM project, conservancies have benefitted from the community rangelands investment fund (CRIF). CRIF is a framework that is developed by the community to be able to implement the Rangeland Management Plans (RMPs). It is a community-led initiative whereby the communities develop proposals on how to implement the various activities that have been captured in the Rangeland Management Plans (RMPs). When the impact assessment respondents were asked “Which PRM activities were you involved in?” 8.2% in Kenya¹⁹ and 18.1% in Tanzania indicated “Contributing to the Community Rangeland Investment Funds (CRIF)”.

According to the CRIF framework in Tanzania, the community does not make cash contributions to the fund, they just present proposals to TNRF for funding. The communities are, however, given priority in the provision of labour to implement these projects and are paid daily wages that are slightly below the conventional daily wage rates, constituting their contribution to the project. CRIF framework in Tanzania was developed and approved by ILC and IFAD in 2019 and has been operational from 2019 to December 2021. After the community submits proposals, TNRF sorts forwards the proposals to the National Technical Working Groups (TWGs) that screen and prioritize the proposals that are feasible and can be funded. TNRF then conducts the procurement process of the Technical Service Providers. The reasons for TNRF procuring service providers are that the community lacks the capacity and technical knowledge to be able to implement some of these projects at scale on their own.

¹⁹ This belonged to Irong Conservancy that had received CRIF in 2020 to implement sustainable rangelands management activities.

Currently, the funds have been released in three batches. The first two have been awarded and have been implemented in the Four Clusters of Kiteto District. These are Olengapa, Allole, Napalai and Kimbo²⁰. In Olengapa, CRIF funded projects included bush clearing and borehole drilling. In Napalai the funds were utilized to rehabilitate the Charcoal Dam and reseeding of 15 ha of land as well as selective bush clearing. In Kimbo, the funds were instrumental in the establishment of a demo rangeland reseeding area and selective bush clearing. In Allole, the funds were targeted for renovation and equipping of a vet centre as well as providing improved bulls to the community for breed improvement and multiplication to be shared across the villages of Lesoit, Loolera and Amei. This was yet to be done as the region was facing a famine spell; therefore, the breeds were kept at the suppliers until the villages were able to experience adequate rains to sustain the improved breeds.

The challenges with CRIF in Tanzania as highlighted by key informants (TK015) include:

- » Procurement processes are tedious and present a challenge when it comes to awarding contracts. In some instances, retendering has had to be done given that the Service provider access the same kind of information and submit almost identical proposals for implementation. Tendering requirements also delay the award process and the timeliness of implementation.
- » Most CRIF projects are climate dependent, for instance reseeding of pasture land is dependent on the onset of rains, climate variability will affect awarding of such tender and this affects the ability to absorb the project funds
- » The expectation of the community is that all proposals submitted for funding will be financed. This has not been the case and in reality, there are very few projects that can be financed

In Kenya, CRIF funds are limited to USD 20,000 per proposal developed by RMUs and submitted to RECONCILE for funding. The key activities funded through the CRIF include: Rehabilitation and the protection of water resources; Rehabilitation and protection of rangeland grazing areas through planting of trees, reseeding of grass and conservation of natural regeneration, and rehabilitation through the removal of invasive (colonizing) plant species. In addition, there was the installation of beehives as an alternative livelihood system and to the protection of special trees from logging.

The four conservancies in Kenya where PRM piloting have received funding from the CRIF through RECONCILE. Irong Community Conservancy received funds for protection by fencing the SUKTA spring to control human and livestock disturbance; planting of trees adapted to work within the spring catchment area; Installation of a solar-powered water pumping system at Tabarweche borehole to replace human-powered pumping solution; procurement of two additional water storage tanks at two boreholes (Chepkoimet and Kamar) in the conservancy;

20 NB: The last batch was awarded for the scaling up project that covers Simanjiro and Longido districts in Ruvumiti and Lesing'ita villages respectively.

and Training of committee members and technical team on effective use for the sustainability of the project. Koitegan community forest association received funding for the support in tree planting initiatives and conservation of natural regeneration efforts. The intention is to fence off 30 acres of land, remove invasive species, construct a security house, purchase and install water tanks, establish Rhodes grass as well as support alternative livelihoods through beekeeping. Paka Hills community rangelands conservancy received CRIF funding for rehabilitation and regeneration of community forests, removal of invasive plant species, and installation of beehives to reduce logging and charcoal burning activities and establishment of a 10-acre demonstration plot. Kabarion Community Based Conservancy received CRIF funds for the development of rangeland management plans, bush thinning, fencing the allocated land, reseeding, and uprooting unwanted species.

Encouragingly, it was notable from the conservancies that received funds from CRIF in Kenya set aside in-kind community contribution in form of donating land for PRM activities, labour and locally available materials (such as seedlings, building posts, building stones). This is important in enhancing the ownership and sustainability of the projects implemented.

3.7 Outcomes and Impacts of PRM

3.7.1 Overall Satisfaction with PRM Interventions

The satisfaction levels with PRM interventions among those that had participated in PRM activities are relatively high in both Kenya and Tanzania, with satisfaction indices of 76.6% and 89.1% respectively (See **Table 3-48** and **Table 3-49**). In Kenya, females in female headed households had a slightly higher satisfaction level than males in male headed households and females in male headed households. In Tanzania, females in male headed households had a higher satisfaction level than males in male headed households and females in female headed households.

Table 3-48: Level of Satisfaction with PRM Interventions, Kenya

Category of Respondents	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Satisfaction Index ²¹	Sample Size (N)
Male headed HH	0.0%	3.2%	23.0%	64.1%	9.7%	73.8%	309
Female headed HH	0.0%	2.8%	14.4%	71.1%	11.7%	82.8%	180
Female in male headed HH	.8%	.8%	24.0%	64.5%	9.9%	74.4%	121
Average	.2%	2.6%	20.6%	66.3%	10.3%	76.6%	610

21 Sum of satisfied and very satisfied

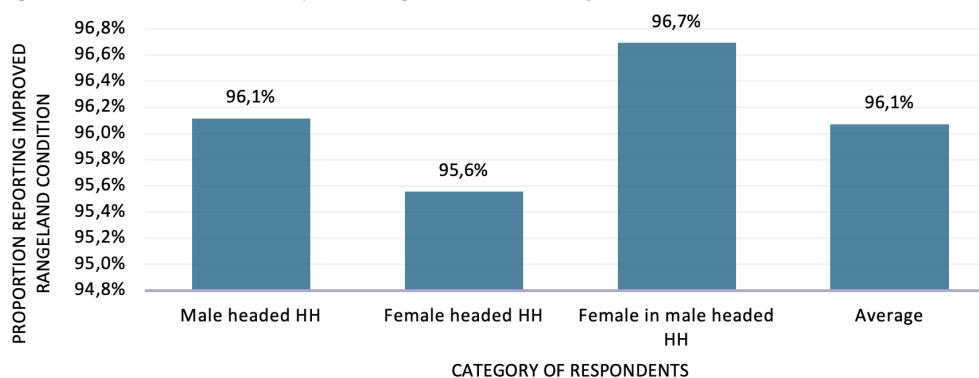
Table 3-49: Level of Satisfaction with PRM Interventions, Tanzania

Category of Respondents	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Satisfaction Index ²²	Sample Size (N)
Male headed HH	2.5%	7.0%	5.2%	56.9%	28.5%	85.4%	485
Female headed HH	0.0%	2.8%	14.4%	71.1%	11.7%	82.8%	138
Female in male headed HH	.5%	3.3%	1.9%	72.0%	22.3%	94.3%	211
Average	1.6%	5.4%	4.0%	62.9%	26.2%	89.1%	834

3.7.2 Impacts of PRM on Rangeland Condition

Improved rangeland condition was a major impact reported by 96.1% and 93.4% of the communities who were undergoing PRM piloting in Kenya and Tanzania respectively (See **Figure 3-3** and **Figure 3-4**). This may be attributed to the fact that the PRM piloting in Kenya and Tanzania increased the area (ha) of rangelands undertaking activities to improve productivity. By end of 2020, a total of 412,610.2 ha had been identified and secured against a target of 200,000 ha (over 200% achievement), including 85,629.2 ha in Kenya and 326,981 ha in Tanzania (*International Land Coalition Secretariat, 2021*)²³. This was done in the 8 areas where the PRM was piloted, and rangeland management committees had been set up. This meant that there was increased access to pasture and water for livestock.

When asked about the first impacts observed during PRM implementation, 50.1% in Kenya and 41.8% in Tanzania reported improved rangelands (See **Figure 3-3** and **Figure 3-4**). This may be explained by the fact that some of the key physically visible activities implemented in the RMPs were bush clearing, seeding of pastures, improvement of grasses, tree planting, and water conservation measures. Further discussions with the communities through FGDs (**TF001, TF003, TF005, KF001, KF002**) established that the rangelands well-demarcated and visible, and easy to differentiate land for crop production and graze lands.

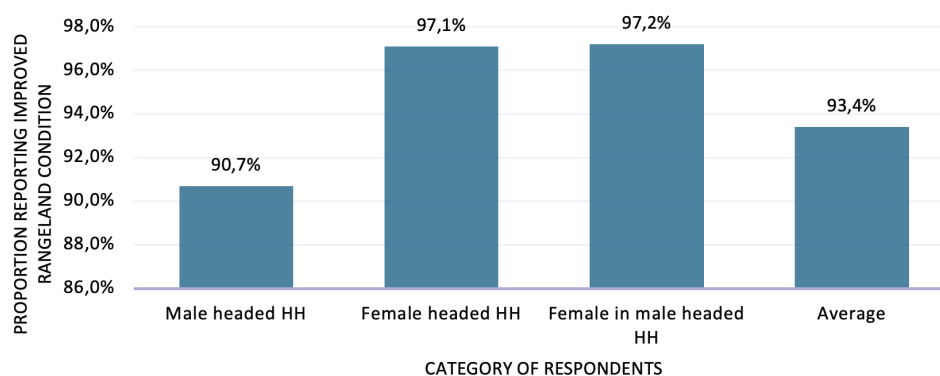
Figure 3-3: PRM contribution to Improved Rangeland Condition, Kenya*

**Based on percent of respondents that responded "Yes"

22 ibid

23 Piloting the use of Participatory Rangeland Management (PRM) in Tanzania and Kenya Project. Year 3 Narrative Report

Figure 3-4: PRM contribution to Improved Rangeland Condition, Tanzania*



**Based on percent of respondents that responded "Yes"

3.7.3 Outcome/Impact on Good Governance and Management Processes

Improved participation of the community in governance and management of rangelands was a key outcome of the PRM piloting as reported by over 90% of the community members consulted during the impact assessment in Kenya and Tanzania (See **Table 3-50** and **Table 3-51**). Training on PRM was given to the government and communities. The establishment of functioning PRM coordination platforms and holding multi-stakeholder dialogues on rangelands including PRMs were also important interventions that contributed to improved good governance and management processes. The PRM in Tanzania and Kenya has also established strategic partnerships with other organisations to take advantage of synergetic effects and to ensure programme work produces more benefits to the target group.

Table 3-50: Impact of Governance and Management Processes in Kenya

Impacts/Outcomes	Male headed HH	Female headed HH	Female in male headed HH	Average
Improved participation of the community in the governance and management of the rangelands	97.7%	97.8%	98.3%	97.9%
Improved participation of women in the management of rangelands	98.1%	98.3%	100.0%	98.5%
Improved ways that people work and interact together	96.4%	97.2%	99.2%	97.2%
Sample Size (N)	309	180	121	610

Table 3-51: Impact of Governance and Management Processes in Tanzania

Impacts/Outcomes	Male headed HH	Female headed HH	Female in male headed HH	Average
Improved participation of the community in the governance and management of the rangelands	88.9%	97.1%	94.8%	91.7%
Improved participation of women in the management of rangelands	89.7%	94.2%	91.5%	90.9%
Improved ways that people work and interact together	89.5%	97.1%	95.7%	92.3%
Sample size (N)	485	138	211	834

3.7.4 Impact on Security of Rights to Land and Resources

Improved participation of the community in governance and management of rangelands through the PRM process has led to improved access to rangeland resources for the whole community including women and an increased feeling that the rangelands belong to them as a community. This is illustrated by over 90% of the community members in Kenya and Tanzania (See **Table 3-52** and **Table 3-53**). Reduced number of conflicts was also an impact contributed to by the PRM process as indicated by between 84% and 89% of the community members in Kenya and Tanzania participating in the PRM piloting.

Table 3-52: Impact on Security of Rights to Land and Resources in Kenya

Impacts/Outcomes	Male headed HH	Female headed HH	Female in male headed HH	Average
Improved access to rangeland resources for the whole community	92.6%	91.1%	90.9%	91.8%
Improved access to rangeland resources for women	95.8%	95.0%	95.9%	95.6%
Increased feeling that the rangelands belong to us as a community	96.1%	95.6%	94.2%	95.6%
Reduced number of conflicts in the village	89.0%	88.9%	83.5%	87.9%
Reduced number of conflicts from outside the village	84.8%	85.0%	83.5%	84.6%
Sample Size (N)	309	180	121	610

Table 3-53: Impact on Security of Rights to Land and Resources in Tanzania

Impacts/Outcomes	Male headed HH	Female headed HH	Female in male headed HH	Average
Improved access to rangeland resources for the whole community	88.9%	94.9%	93.8%	91.1%
Improved access to rangeland resources for women	90.3%	95.7%	93.8%	92.1%
Increased feeling that the rangelands belong to us as a community	87.6%	94.2%	91.0%	89.6%
Reduced number of conflicts in the village	87.4%	89.9%	92.4%	89.1%
Reduced number of conflicts from outside the village	85.4%	91.3%	90.5%	87.7%
Sample Size (N)	485	138	211	834

3.7.5 Impact on Livestock Production

Improved management of and access to rangeland resources through the PRM contributed to the increase of livestock numbers and improved livestock body conditions as indicated by 91% and 93% of the community members in Kenya and Tanzania respectively (**Table 3-54** and **Table 3-55**). Changes in the types of livestock were also noted by 73.3% and 55.2% of the community members in Kenya and Tanzania respectively. This included the adoption of crossbreed cows especially in Kabarion community conservancy and Koitegan community forest association in Kenya and Allolle cluster in Tanzania. Better management of resources such as water and pasture has led to less movement of animals hence healthier livestock and more productivity.

Table 3-54: Impact on Livestock Production in Kenya

Impacts/Outcomes	Male headed HH	Female headed HH	Female in male headed HH	Average
Increased livestock numbers	90.9%	91.7%	89.3%	90.8%
Improved livestock body condition	94.8%	94.4%	95.9%	94.9%
Changes of types of livestock kept	70.9%	76.1%	75.2%	73.3%
Sample Size (N)	309	180	121	610

A notable unintended outcome is the establishment of livestock markets in the PRM piloting areas in Tanzania because of improved condition of animal health.

Table 3-55: Impact on Livestock Production in Tanzania

Impacts/Outcomes	Male headed HH	Female headed HH	Female in male headed HH	Average
Increased livestock numbers	88.2%	94.9%	94.8%	91.0%
Improved livestock body condition	89.3%	95.7%	94.3%	91.6%
Changes of types of livestock kept	53.6%	61.6%	54.5%	55.2%
Sample Size (N)	485	138	211	834

3.7.6 Impact on Gender Issues, Women's Empowerment and Other Social Inequity Aspects

An important indicator of the PRM piloting in Kenya and Tanzania was that by the end of the project implementation in 2021, at least 10 rangeland management committees should be established, with at least 30% female and youth representation. By the time of the impact assessment, there are eight (8) fully functional rangelands management institutions with almost 45% of women representation (*International Land Coalition Secretariat, 2021*)²⁴.

The impact assessment household survey indicated that the PRM piloting improved the number of women in leadership positions in the community and improved participation of women in the management of rangelands as indicated by over 95% and over 90% of the PRM direct beneficiaries interviewed in Kenya and Tanzania respectively (See **Table 3-56** and **Table 3-57**). A majority of the community members (over 90%) felt that the rangelands belong to them as a community and improved the synergy and social status of the community members.

Table 3-56: Impact on Gender Issues, Women's Empowerment, and other Social Inequity Aspects in Kenya

Impacts/Outcomes	Male headed HH	Female headed HH	Female in male headed HH	Average
Improved social status of people/groups	94.5%	93.9%	97.5%	94.9%
Improved ways that people work and interact together	96.4%	97.2%	99.2%	97.2%
Improved number of women in leadership positions in the community	98.1%	97.2%	99.2%	98.0%
Improved participation of women in the management of rangelands	98.1%	98.3%	100.0%	98.5%
Increased feeling that the rangelands belong to us as a community	96.1%	95.6%	94.2%	95.6%
Sample Size (N)	309	180	121	610

24 Piloting the use of Participatory Rangeland Management (PRM) in Tanzania and Kenya Project. Year 3 Narrative Report

In Tanzania, it was notable more females than males were of the opinion that PRM had an impact on gender issues, women's empowerment, and other social inequity aspects. However, there were no major differentials in opinion on gender issues among males and females in Kenya.

Table 3-57: Impact on Gender Issues, Women's Empowerment, and other Social Inequity Aspects in Tanzania

Impacts/Outcomes	Male headed HH	Female headed HH	Female in male headed HH	Average
Improved social status of people/groups	89.1%	94.9%	94.8%	91.5%
Improved ways that people work and interact together	89.5%	97.1%	95.7%	92.3%
Improved number of women in leadership positions in the community	90.3%	95.7%	91.0%	91.4%
Improved participation of women in the management of rangelands	89.7%	94.2%	91.5%	90.9%
Increased feeling that the rangelands belong to us as a community	87.6%	94.2%	91.0%	89.6%
Sample Size (N)	485	138	211	834

Further analysis of the qualitative data²⁵ noted that in Tanzania, the PRM process is open to every member of the community who so wishes to join. The contribution of men, women and youth are considered equally. The community however is still patriarchal in nature, Men still make most of the decisions while the youth enforce them. Following sensitization and capacity-building on the need for gender parity in the process, the community has welcomed the involvement of women and youth in the PRM processes. They are included in the meeting and decision-making processes. In Tanzania, women have set up a women forum, "*jukwa la akina mama*" that meets regularly to discuss matters that affect them as concerns the rangeland and its resources. This is in addition to the formation of women economic groups because of capacity-building. Some of these groups have been registered by the District Community Development Department.

In Kenya, men are the custodians of land and wealth. However, through the PRM process, women have slowly been accepted in leadership roles. For example, they have been given positions in the management committees. Therefore, slowly but steadily women are involved in decision making and livestock production activities. For instance, women can now own production units such as beehives and are allowed to make sales and own the business, thus, more income for women.

25 TF001, TF002, TF003, TK001, TK002, TK004, TK005, TK007, TK011

3.7.7 Impacts on Livelihoods, Food and Nutrition Security and Incomes

Direct beneficiaries of the PRM piloting in Kenya and Tanzania (over 80%) indicated that PRM has contributed to improved livelihoods, improved food and nutrition security, increased incomes, and enhanced capacity of the community to cope with drought or other crises (See **Table 3-58** and **Table 3-59**).

Table 3-58: Impact on Livelihoods, Food and Nutrition Security and Incomes in Kenya

Impacts/Outcomes	Male headed HH	Female headed HH	Female in male headed HH	Average
Improved livelihoods	92.9%	92.2%	91.7%	92.5%
Improved food and nutrition security of community	92.6%	92.2%	95.0%	93.0%
Increased incomes	84.1%	84.4%	81.8%	83.8%
Improved capacity of the community to cope with drought or other crises	96.8%	95.6%	95.9%	96.2%
Sample size (N)	309	180	121	610

A notable impact of the PRM is that the income from livestock sales in Tanzania increased from approx. US\$ 650 during the baseline²⁶ to US\$ 1,097 during the impact assessment. The income from sale of livestock products more than doubled from approx. US\$ 7 during the baseline²⁷ to US\$ 16 during the impact assessment.

Table 3-59: Impact on Livelihoods, Food and Nutrition Security and Incomes in Tanzania

Impacts/Outcomes	Male headed HH	Female headed HH	Female in male headed HH	Average
Improved livelihoods	88.2%	92.8%	93.4%	90.3%
Improved food and nutrition security of community	88.5%	93.5%	94.8%	90.9%
Increased incomes	82.5%	89.9%	83.9%	84.1%
Improved capacity of the community to cope with drought or other crises	88.2%	93.5%	92.4%	90.2%
Sample size (N)	485	138	211	834

Community members were asked to rate their perceptions of nutrition, food security and resilience to drought in their households on a scale of 1-10, with 1 being very low and 10 being very high. This is illustrated in **Table 3-60** and **Table 3-61** for Kenya and Tanzania respectively. The perception is higher in Tanzania which had more exposure to PRM than in Kenya.

26 Flintan, F., B. Eba, and A. Assefa (2019) Baseline Report for the Participatory Rangeland Management Project in Tanzania. Addis Ababa: ILRI.

27 *ibid*

Table 3-60: Household Scores for PRM Impacts on Nutrition, Food Security and Resilience to Drought- Kenya

On a scale of 1-10, how do you rate the following within your household, with 1 being very low and 10 being very high in Kenya?				
Category of respondents	Nutrition	Food security	Resilience to drought	N (Sample size)
Male headed HH	5.23	5.15	5.42	350
Female Headed Households	4.82	4.81	5.42	209
Female in Male headed household	4.76	4.80	4.71	144
Average	5.02	4.99	5.29	703

When comparing the baseline and impact indicators in Tanzania, there is a better perception during the impact assessment as compared to the baseline (**Table 3-55**).

Table 3-61: Household Scores for PRM Impacts on Nutrition, Food Security and Resilience to Drought-Tanzania

On a scale of 1-10, how do you rate the following within your household, with 1 being very low and 10 being very high? Tanzania							
Category of respondents	Nutrition		Food security		Resilience to drought		Sample Size (N) for impact assessment
	Baseline	Impact	Baseline	Impact	Baseline	Impact	
Male headed HH	5.4	6.34	5.51	6.56	5.13	5.78	493
Female headed households	4.06	5.48	3.95	5.40	3.6	5.20	143
Female in Male headed household	4.49	5.72	4.45	5.69	3.97	5.21	214
Average	4.69	5.85	4.68	5.88	4.27	5.40	850

3.7.8 Recommendations of PRM Beneficiaries to Other Communities

When the respondents were asked if they would recommend PRM to other communities, the majority (97.6% in Kenya and 96% in Tanzania) reported in the affirmative. When respondents were asked why they responded in this way, the majority said because PRM has 'helped to improve our rangeland', 'has helped to improve our livelihoods', 'has helped to improve our livestock', 'has helped to improve our land and resource tenure security', 'PRM has helped to resolve conflicts', "PRM has helped improve relations with our neighbours" 'because PRM is good for us' and 'PRM improved our nutrition'.

3.8 Partnerships, Collaborations and Policy Influence

3.8.1 Partnerships and Collaborations

During the piloting phase, the PRM project implementing partners established strategic partnerships with other government and NGO organisations. According to project implementers (**KK007, KK008, TK015**), partnerships are important in ensuring synergetic implementation of the PRM interventions and enhancing project sustainability.

In Kenya, the PRM project has planning and implementation partnerships with the Baringo County government through an MOU signed between RECONCILE and the Baringo County Department of Lands, Housing and Urban Development. The MOU includes the roles played by the County, RECONCILE and the local communities. A technical working group (TWG) was also formed that incorporates members from the Departments of Lands, Housing and Urban Development; Environment, Natural Resources, Tourism and Wildlife Management; Water and Irrigation; and Agriculture, livestock Development and Fisheries. It also incorporates the County Warden Lake Bogoria National Reserve. The TWG is also involved in activities planning (work plans), capacity-building, and offering technical advice during, procurement, budgeting and implementation. In addition, the TWG members are also involved in monitoring activities; together with the community members.

A key outcome of the partnership and collaboration in the PRM process, Baringo County have attracted new funding based on the activities they are undertaking (**KK005**). For example, UNDP Global Environment Facility Small Grants Programme (GEF SGP) for environment and biodiversity conservation in the Lake Bogoria, Baringo Landscape granted Irong conservancy (Kshs 3 Million) to promote eco-tourism; In Koitegan there has been additional funding by County Government of Baringo for water structures. In Kabarion, the County, through Economic Stimulus Programme funds, supported payment of staff in the conservancies. Individual households have undertaken pasture production and conservation on their own; which is seen as a more sustainable approach. Irong and Kabarion conservancies have sites that have been recognized internationally as geo-sites.

In Tanzania, the relationship between Local government agencies (LGAs), TNRF and KINNAPA (**TK021, TK020**) has been strengthened during the course of the project through joint planning and implementation (**TK21**).

Text Box 3: Quote- Partnerships in Tanzania

PRM Partnerships in Tanzania

The project is working with different development partners in implementing PRM. At a district level it collaborates with Kiteto District Council.

At community level it collaborates with livestock keepers' associations and local government leaders (VEOs and WEOs) and local NGOs. Partnerships and external linkages are useful for gaining new knowledge, sharing experiences and solving some challenges including graze land, infrastructure development and information". *Birikaa Rukuya, Kiteto District PRM Focal Person.*

Further, the following were identified by KINNAPA officials (**TK020** and **TK021**) and LGAs as potential partners in the project.

- » **Private Sector:** This impact assessment noted minimal involvement of the private including within the whole livestock sub-sector. From KIIs and FGDs (**TK016, TK018, TK019, TK011, TF005, and TF006**) the private sector roles were identified as commercial activities such as the provision of inputs, processing of livestock products and purchase of livestock and livestock products. It is also expected that the private sector will provide other services such as extension and provide employment opportunities.
- » **Non-Governmental Organizations:** The impact assessment found several current and potential support institutions (NGOs) working in the area. These organizations provide services such as social intermediation (group formation; leadership training; and cooperative learning); enterprise development services (marketing, business and production training) and livestock development.

3.8.2 Importance to Policy and Programmes

The PRM project is aligned to Tanzania's development policies and priorities as embedded in the Tanzania Development Vision 2025 (TDV 2025); which focuses on poverty reduction and graduating Tanzanians from a least developed country to a middle-income country by the year 2025. The project contributes directly towards these aims through the provision of capacity development services, high-quality livelihoods by improving livestock production and productivity. In addition, the project improves governance in livestock associations through training members and board members to provide sustainable services. Through the implementation of these activities the project contributes to building a competitive economy capable of producing sustainable growth and shared benefits.

The project is also aligned with the following policies: Tanzania National Livestock Policy (2006); National Youth Development Policy (2007); Gender and Women Development Policy (2000); National Strategy for Gender Development, 2008.

The project also supports local government policies. Interviews with LGA officials (**TK017, TK019**) reported that the livestock sub-sector is among the strategic sectors identified by the district for investment and capacity development. It must be noted that the government require each region and district to identify and support the strategic sectors which contribute to the development of the community. Others include the Electronic Land Transactions, Registration and Conveyance Regulations, the Forest (Community Participation in Sustainable Forest Management) Rules and the Draft National Forest Policy, 2020

In Kenya, the project is aligned to the objectives of the Vision 2030 as well as the Baringo County Integrated Development Plan (CIDP). Most of the activities done under RECONCILE are incorporated in the CIDP on aspects such as environmental management, reduction of resource-based conflicts, land access and use as well as livelihoods improvement. It is also aligned to other key policy documents including the policy on Disaster Risk Reduction Management; County Climate Change policy -which is pending ratification; and the County Rangelands Policy that is currently under development.

3.9 Key Lessons Learnt and Success Factors of the PRM

The following project activities and approaches were determined to have been lessons learnt and success factors for the PRM project. These could be replicated and scaled up in PRM related interventions.

- » **Group approach:** Strong RMUs and collective action among PRM beneficiaries are vital in enhancing their capacity to achieve intended impacts. Working in groups enhances the communal spirit, is cost-effective and easy for beneficiaries to learn from each other. PRM is building on organizations such as conservancies²⁸, CFAs, and livestock keepers' associations to achieve its objectives which also makes it easy for project implementing partners to reach as many beneficiaries as possible. Strengthening of clusters and livestock associations, conservancies etc is important as these are important vehicles for the provision of extension services, training, and information sharing.
- » **Strategic engagement with the Government and policymakers:** The project engages with the government at village, ward and district/sub-county, and regional/county levels. The formation of a TWG at the onset of the project was a major boost for the performance and sustainability of the project. This enabled the identification of project sites, beneficiaries, sharing of approaches, information, data, and solutions to community challenges. This promotes the sustainability of the community projects as the government agencies can take over the activities of the project once it comes to an end. It is notable that in Tanzania, livestock associations have been integrated into district activities and workshops to further build their capacity while in Kenya, a majority of the PRM activities are aligned to the CIDP.
- » **Community engagement and independence:** In both countries, the key success factor for the rangeland management unit was effective mobilization at the start of the PRM project. Despite the PRM process being technical and difficult for local communities, the implementing agencies undertook sufficient mobilization of key stakeholders and awareness creation/capacity-building on PRM to help communities understand and implement the project activities.

28 In Kenya

This resulted in better understanding and thus smoothed the PRM processes. The fact that established RMUs were fully responsible for their own activities was a key success factor. This created sense of ownership and trust for PRM. Community ownership and responsibility are basic prerequisites for sustainable development. As owners, communities were responsible for their own governance, the establishment of rangeland units, the development of bylaws, the implementation of project activities and accountability.

- » **Engagement with traditional leaders:** Local leaders including elders and village councils are a key source of information and opinion to which the community refers. There is active participation of traditional leaders in educating people on the adoption of innovations. These people are crucial for bringing about cultural perspective of the project areas, traditional laws and guidelines etc. thus leading to communities adopting positive behaviour towards community development projects, and women and youth participation in projects.
- » **Community Rangelands Investment Funds (CRIF):** This fund was intended to create financial sustainability for the project as a result of internally generated funds from member contributions and livelihood activities. The capacity of communities to implement and manage the CRIF need to be supported further.
- » **Recognition of women and youth:** The survey revealed that there is increasing recognition that women and youth in community project planning and implementation through avenues such as women's rights leadership forums and involvement in management committees. This increases opportunities for women and youth to participate and benefit from rangeland livelihood activities such as apiculture and the sale of livestock products. This could be enhanced by mobilization and formation of small groups such as youth, women and Persons living with Disabilities within the RMUs. These groups can get involved in livelihood activities such as tree seedlings growing and selling, pasture growth and sale as hay and apiculture.
- » **Partnership and collaboration:** Working with local governments (district or county) and other stakeholders in the entire livestock sub-sector has proven to be an effective pathway of change towards upscaling of good practices and application of appropriate technologies at different levels and by different actors in the sub-sector. Experience from collaboration with various institutions shows that PRM stands a good chance of realizing more tangible results when working in complementary partnerships with other organizations. Such partnerships may offer the best opportunity for complimenting capacity-building with material support to kick-start activities of the targeted communities. At the community level, establishment or strengthening community associations (livestock associations, conservancies etc.) was a major success factor. Partnerships and external linkages are useful for gaining new knowledge, sharing experiences and solving some challenges including grazing land conflicts, infrastructure development and information. It also enhances the sustainability of the PRM interventions.

- » **Good business enabling environment:** The enabling environment for business with/and by communities can be strengthened by improving the institutional arrangements and supporting policy implementation, facilitating public-private collaboration and consultation, and improving the capacities of both public and private livestock actors.
- » **Leverage information communication technology (ICT).** ICT would go a long way to provide opportunities to enhance project implementations cutting on costs and travel time. It is also important for information dissemination.
- » **Intensified livelihood activities.** Livelihood activities have the potential to benefit much more people and are likely to be easily sustained. Activities such as Some of the livelihood activities that could be scaled up to include beekeeping, livestock breed improvement, eco-tourism, commercial pasture growth and conservation, agro-forestry, tree nursery establishment, commercialization of some of the indigenous plants such as *Archiconia fruticosa* whose sup can be processed and used as a fumigant. The livelihood activities should be integrated with rangeland conservation interventions such as water conservation, control of invasive plant species and increasing vegetation cover.

3.10 Sustainability of PRM

The PRM process has incorporated several sustainability measures in the project design and implementation.

- » **Community engagement and mobilization.** Initial mobilization and engagement of project beneficiaries and stakeholders has contributed to increased project ownership. This will enhance continued quality services provision and the provision capacity has been built and will continue servicing community members in need.
- » **Training of committee members and village leaders.** Project implementing partners have trained committee members, village leaders and in some cases the community at large thereby increasing the pool of knowledge and skilled people who will continue serving community members even during the period when PRM is not operating in the community. Capacity-building and involvement of the communities in the PRM activities is expected to enhance sustainability. Notably, capacity-building activities to communities have increased their capacity to manage projects- PRM or otherwise BUT the communities still need support, especially on financial and technical capacities. Currently, the existing organizations are still young. Leadership lacks the capacity to adequately satisfy the needs of the association in terms of policy direction, administration, and fundraising and guide the implementation of the project within the areas they command. Continuous capacity-building including governance, resources management, project implementation activities, monitoring and evaluation is needed. Notably, the development of the project tool kits during the pilot phase was an important action for creating the capacity of PRM implementers, community leaders and rangeland management units.

- » **Coordination and networking meetings** with the key government and other actors and report sharing have kept them informed on the project progress and enhanced accountability to the government and a sense of ownership by the government.
- » **Community contribution** by members of the RMUs is expected to enhance sustainability. RMUs that received funds from CRIF in Kenya set aside in-kind community contributions in form of donating land for PRM activities, labour and locally available materials (such as seedlings, building posts, building stones). In Tanzania, there was limited community contribution to CRIF.
- » **Effective Partnerships.** Working with local governments (district or county) and other stakeholders enhances the sustainability of the PRM interventions.
- » **Effectiveness of project's exit strategy.** A critical dimension of long-term sustainability is how well PRM will develop and implement an exit strategy for its interventions. Despite good practice in informing beneficiaries on the limitations of the project (both time and funding), there is little 'warning' to beneficiaries on the closeout.
- » **Application and or retention of acquired skills.** Sustainability of PRM interventions to date will largely depend on beneficiaries' ability to retain and utilize the skills learnt to improve the livestock sub-sector.

4 Conclusions and reflections

4.1 Conclusions

Generally, piloting PRM in Tanzania and Kenya exhibited a positive trajectory towards better and more productive rangelands. PRM was undertaken in the shared grazing areas of four clusters of villages in Kiteto district in Tanzania, while an additional two sites located in Longido districts were explored as possible scale-up areas though limited activities were undertaken. In Kenya, PRM was implemented in four sub-counties/conservancies in Baringo County. Through the PRM project, rangeland management units and their governance structures have either been established or strengthened through various training.

At the time of this independent impact assessment, each of the 8 RMUs was functioning with management committees and sub-committees. The rangeland management units (RMUs) have well-marked out boundaries, and some already have title to land or are in the process of obtaining land titles. It was notable that the rangeland management units and their governance structures were established through a participatory process. Rangeland management plans are in place with corresponding bylaws. These plans comprise the identified activities that RMUs have already undertaken or will continue to undertake going forward. However, it was worrying that 31% of the members of the community were not aware or not sure of the existence of rangeland management plans. It was also notable that some had not read the rangeland management plans because of lack of interest and high illiteracy levels. It was also noted that delayed funding, lack of community interest and agreements not being easily reached are major challenges in developing the RMUs and rangeland management plans.

Among the activities included in the rangeland management plans mentioned by a majority of members were bush clearing (68.1%), strengthening of governance structures (59.2%), seeding of pastures (57.3%), improvement of grasses (55.7%), tree planting (37.8%), and water conservation measures (37.1%). While not all the proposed activities were expected to be fully implemented during the pilot phase, key implementation challenges were delayed funding, insufficient funds, delays in reaching agreements, low interest by community members, Covid 19 restrictions, low rainfall that affected the growth of the pastures, changes in government staff in the Technical Working Group, and high illiteracy levels among community members. Strengthening the capacities of local and national governments and pastoral communities to implement PRM was a key PRM piloting intervention in Kenya and Tanzania. The key capacity-building interventions implemented included enhancing coordination capacity through establishing coordination platforms; improving

government and community representatives understanding of PRM through sensitizations and training; developing of PRM guidelines/toolkits. A majority of the community members (over 80%) had received training through the PRM. The main topics trained were pasture conservation; resource mobilization; institutional strengthening; water and soil conservation; community land registration; climate change adaptation and resilience; financial management and reporting; participatory monitoring and evaluation; marketing and value addition; proposal review and development and grazing land management plans. PRM guidelines and toolkits were developed in Kenya and Tanzania.

Improved rangeland condition was a major impact reported by 96.1% and 93.4% of the communities who benefitted from the PRM piloting in Kenya and Tanzania respectively. This may be attributed to the fact that PRM piloting increased the area of rangelands undertaking activities to improve productivity by 412,610 ha against a target of 200,000 ha, including 85,629 ha in Kenya and 326,981 ha in Tanzania. This led to more productivity because more pasture was grown and conserved, water conservation measures have been established and forest and wildlife were being protected.

Improved community participation in governance and management of rangelands was a key outcome of the PRM piloting as reported by over 90% of the community members participating in PRM in Kenya and Tanzania. Improved community participation in rangelands governance and management through the PRM process led to improved access to resources for the whole community and an increased feeling that the rangelands belong to the whole community. There were also fewer cases of resource-based conflicts.

Improved management of and access to rangeland resources through the PRM contributed to the increase in livestock numbers and improved livestock body conditions as indicated by 91% and 93% of the community members respectively. Adoption of crossbreed cows especially in Kabarion Community Conservancy and Koitegan Community Forest Association in Kenya and Allolle cluster in Tanzania led to healthier livestock and more productivity. A notable unintended outcome is the establishment of livestock markets in the PRM piloting areas in Tanzania because of improved animal health.

An important indicator of the PRM piloting in Kenya and Tanzania was that by the end of the project implementation in 2021, at least 10 rangeland management committees should be established, with at least 30% women and youth representation. By the time of the impact assessment, there are eight fully functional rangelands management institutions with almost 45% women representation. The community however is still patriarchal in nature. Men still make most of the decisions while the male youth enforce them. However, due to sensitization and capacity-building on the need for gender parity in the process, the community has welcomed the involvement of women in decision making and livestock production activities.

Direct beneficiaries of the PRM piloting in Kenya and Tanzania (over 80%) indicated that PRM contributed to improved livelihoods, improved food and nutrition security, increased incomes, and enhanced community capacity to cope with drought or other crises. A notable impact of the PRM is that the annual income from livestock sales in Tanzania increased from approximately US\$ 650 during the baseline to US\$ 1,097 during the impact assessment. Annual income from the sale of livestock products more than doubled from approx. US\$ 7 during the baseline to US\$ 16 during the impact assessment.

The sustainability of project results is likely because of the implementation model of working in close collaboration and partnerships with key stakeholders. This is because there is enhanced institutional knowledge and capacities in PRM among a myriad of stakeholders involved in PRM. Intensive capacity-building of the government agencies, project beneficiaries, and rangeland management committees gave them knowledge and skills to be able to sustain and expand the project outcomes and impacts. This should be continuous. The existence of functional inter-and intra-country PRM coordination platforms is important in ensuring the sustainability of PRM. Working closely with relevant government agencies ensures that PRM is well institutionalized in the government structures and extension services. Members of the rangeland management committees could be included in the work plans of extension officers.

The key lessons learnt are that implementing the project through collaborative efforts of various stakeholders such as local government, county and national governments, policymakers and non-state actors is a key ingredient in the success of the project. Project implementation through the group approach and strong, independent RMUs governance units were noted to be vital for project successes. Implementing projects and activities that respond to the community felt needs with full involvement of the community members and have immediate outcomes and impacts (results) are likely to be successful. Incorporation of livelihood activities that have direct impacts on households and rangelands was also noted as a suitable strategy for community involvement and are easy to upscale. To achieve this, community support through approaches such as CRIF is an important catalyst to investments in the rangelands. The provision of funds through CRIF was noted to be a catalyst for community contributions (in-kind or in cash) for rangeland investments. Sustained intensive consultations, sensitizations and capacity-building should be enhanced for the project benefits to continue accruing to the community. This is because the adoption of PRM needs behavioural and cultural changes that require time to adopt. Effective partnerships and collaboration, and a good business environment are important aspects for the success of PRM activities.

Finally, the opportunity for scaling up PRM in Kenya and Tanzania is immense. This is because there is increased knowledge and skills of the PRM process among the stakeholders including government, NGOs and RMUs. The impacts accrued to the communities as a result of PRM are catalysts of encouraging the communities exposed to PRM to continue implementing the interventions and to recommend PRM to other communities.

References

- » Deepali Gohil and Preetika Bhanderi (2011)
Kenya Rangelands Coalition 1st Launch Meeting Synthesis Report, 2008.
Nairobi. Kenya
- » Flintan, F., B. Eba, and A. Assefa (2019) *Baseline Report for the Participatory Rangeland Management Project in Tanzania*. Addis Ababa: ILRI.
- » Flintan, F. and Cullis, A. 2010. *Introductory guidelines to participatory rangeland management (PRM)*. Addis Ababa, Ethiopia: Save the Children.
- » Flintan, F., A. Ebro, B. Eba, A. Assefa and Y. Getahun (2019) *Participatory rangeland management: Process and implementation*. Research Report No 2. Addis Ababa: ILRI.
- » International Land Coalition Secretariat (2019)
Piloting the use of Participatory Rangeland Management (PRM) in Tanzania and Kenya Project. Interim Narrative Report. IFAD, Via Palo Di Dono Rome -IT
- » International Land Coalition Secretariat (2021)
Piloting the use of Participatory Rangeland Management (PRM) in Tanzania and Kenya Project. Year 3 Narrative Report. IFAD, Via Palo Di Dono Rome -IT
- » Mwilawa A J, Komwihangilo D M and Kusekwa M L 2008 *C onservation of forage resources for increasing livestock in traditional forage reserves in Tanzania*. African Journal of Ecology, 46: 85-89.
- » PRM Logframe (2020).

Annex 1

Data collection tools

Household survey questionnaire

A. RESPONDENT AND HOUSEHOLD DEMOGRAPHIC AND SOCIO-ECONOMIC INFORMATION

No.	Question	Response
A1	Date of interview (DD/MM/YYYY) (Automated)	
A2	Start time (HH:MM) Automated	
A3	Name of Enumerator	
A4	GPS coordinates (astings: Northings) (EEE:NNN) Automated	
A5	Country (Indicate ONE appropriate answer) 1= Kenya; 2= Tanzania	
A6	County/Region (Indicate ONE appropriate answer) 1= Manyara; 2= Baringo	
A7	District/Sub-County (Indicate ONE appropriate answer) to be linked to County/Region Manyara: 1=Kiteto, 2= Longido, 3=Simanjiro Baringo: 1=Baringo Central, 2=Baringo North, 3=Baringo South 4=Tiati	
A8	Cluster/Conservancy (Indicate ONE appropriate answer) to be linked to County/Region Manyara: 1=Olengapa, 2=Allole , 3= Kimbo, 4=Napalai, 5=Oltepesi 6=Ruvuremiti/Lemuro Baringo: 1=Irong, 2=Kabarion, 3=Koitegan 4=Paka	
A9	Respondent Sex (Pick ONE) 1= Male; 2= Female, 3= Other	
A10	Age of respondent (Fill in the age)	
A11	Marital status (circle ONE appropriate answer) 1= Single, 2= Married, 3= Widowed 4= Separated, 5= Divorced	
A12a	If married, Ask, Are you in a polygamous relationship? (circle ONE appropriate answer) 1= Yes, 2=No,	
A12b	If yes, how many wives are there?	
A13a	Are you the HH head? (circle ONE appropriate answer) 1= Yes, 2=No, If yes, skip to A14	
A13b	If no, who is the HH head? (circle ONE appropriate answer) 1=My husband 2=my father 3=my brother 4=my uncle 5= my child 6= my wife 7=other – please specify	
A14	Highest Level of education for respondent (Select ONE answer) 1 = Primary school; 2= Secondary 3 = Higher Education (not university) 4= Higher Education (university) 5= Adult literacy program 6= Other literacy program (specify) 7=None	

No.	Question	Response
A15	Main Occupation of Household (Select ONE) 1= Pastoralist, 2= Agro pastoralist 3= Agro (crop farmer) 4= Others (specify)	
A16	What is the number of members who reside and eat from the same pot in the household ?	
A17	Livestock Numbers in Household	
	S/no	Type of Livestock
		Number owned now by all members of the HH (include those who live in this household)
	1	Oxen/bulls
	2	Local mature cows
	3	Crossbred Cows
	4	Sheep
	5	Goats
	6	Donkeys
	7	Camels
	8	Chicken
	9	Bee hives
A18	What is the average annual income (Kshs/TZS) for the household? (This is income from all members of the household)	
A18a	What is the average annual income (Kshs/TZS) for the household for the sources below?	
	Source of income	Amount of income (Kshs/TZS)
	1. Livestock sales	
	2. Livestock product sales	
	3. Agricultural produce (crops, fruit etc).	
	4. Labour or wage employment	
	5. Income generation and businesses	
	6. Remittances or gifts of money	
	7. sale of forest products	
	8. Other – list other major sources here:	

No.	Question	Response																																																
A19	What other assets does your household own and how many?	what other things does your household own and how many?																																																
	<table border="1"> <thead> <tr> <th>S/no</th> <th>Type of Asset</th> <th>Number of assets owned</th> </tr> </thead> <tbody> <tr><td>1</td><td>Mobile phones</td><td></td></tr> <tr><td>2</td><td>TV</td><td></td></tr> <tr><td>3</td><td>Satellite TV</td><td></td></tr> <tr><td>4</td><td>Radio</td><td></td></tr> <tr><td>5</td><td>Fridge</td><td></td></tr> <tr><td>6</td><td>Gas/Electric cooker</td><td></td></tr> <tr><td>7</td><td>Bicycle</td><td></td></tr> <tr><td>8</td><td>Motorcycle</td><td></td></tr> <tr><td>9</td><td>Car</td><td></td></tr> <tr><td>10</td><td>Truck</td><td></td></tr> <tr><td>11</td><td>Tractor</td><td></td></tr> <tr><td>12</td><td>Shop</td><td></td></tr> <tr><td>13</td><td>House in town</td><td></td></tr> <tr><td>14</td><td>Private land for crop production (acres)</td><td></td></tr> <tr><td>15</td><td>Private land for livestock grazing (acres)</td><td></td></tr> </tbody> </table>	S/no	Type of Asset	Number of assets owned	1	Mobile phones		2	TV		3	Satellite TV		4	Radio		5	Fridge		6	Gas/Electric cooker		7	Bicycle		8	Motorcycle		9	Car		10	Truck		11	Tractor		12	Shop		13	House in town		14	Private land for crop production (acres)		15	Private land for livestock grazing (acres)		
S/no	Type of Asset	Number of assets owned																																																
1	Mobile phones																																																	
2	TV																																																	
3	Satellite TV																																																	
4	Radio																																																	
5	Fridge																																																	
6	Gas/Electric cooker																																																	
7	Bicycle																																																	
8	Motorcycle																																																	
9	Car																																																	
10	Truck																																																	
11	Tractor																																																	
12	Shop																																																	
13	House in town																																																	
14	Private land for crop production (acres)																																																	
15	Private land for livestock grazing (acres)																																																	
A20	On a scale of 1-10, how do you rate the nutrition of the HH, with 1 being very low, and 10 being very high?																																																	
A21	On a scale of 1-10, how do you rate the food security of the HH, with 1 being very low, and 10 being very high?																																																	
A22	On a scale of 1-10, how do you rate the resilience of the HH to drought, with 1 being very low, and 10 being very high?																																																	

B. AWARENESS OF PRM

No.	Question	Response
B1	Have you heard of the initiative/project or intervention called Participatory Rangelands Management (PRM) Project? (circle ONE appropriate answer) 1= Yes, 2=No, If yes, continue, if no end the interview	
B2	Have you participated in any PRM intervention, planning and activities? (circle ONE appropriate answer) 1= Yes, 2=No, If yes, continue, if no end the interview.	
B3a	Did the PRM intervention take place in your village? (circle ONE appropriate answer) 1= Yes, 2=No If no, ask B3b else skip to B3c	
B3b	If no, where did the PRM intervention take place? (Multiple responses allowed) 1=in a neighboring village 2=in another far village 3=in the district/sub-county 4=in another district/sub-county 5=in another region/County 6=Other (specify)	
B3c	If yes in 3a, which year did the PRM project start in your village?	
B4	Which organization supported the PRM intervention? (Multiple responses allowed) 1=TNRF 2=RECONCILE 3=ILRI 4=County/District government 5= Ministry of Livestock 6=Government (no name given) 7=Another NGO 8=Other (specify)	
B5	Which PRM activities have you been involved in? (Multiple responses allowed) 1= Identification of resources and resource institutions through resource mapping 2= Develop a rangeland management plan 3= Development of community action plans 4= Practical interventions including fencing of enclosures and water point rehabilitation 5= Determining membership of participatory rangeland management governing body 6= Participatory monitoring and evaluation 7= Contributing to the Community Rangelands Investment Fund (CRIF) 8= Others (Specify)	

No.	Question	Response
B6	Are these activities still ongoing? (circle ONE appropriate answer) 1= Yes, 2=No, if no continue & if yes skip to C1	
B7	If no, when did they stop in number of months after the introduction of PRM? [Year]	
B8	Why did the PRM activities stop? (Multiple responses allowed) 1=because the Project finished 2=because the funding finished 3=because the management or governance organisation stopped functioning 4=because there was disagreement in the management or governance organization 5=because the government told us to stop 6=because the land was converted to another use 7=because there was conflict 8=because there was drought 9= because of Covid 19 10=Other (specify)	

C GOVERNANCE OF PRM

No.	Question	Response
C1	What is the name of the main committee/body/organization that manages/ governs and makes decisions about PRM in your area? (circle ONE appropriate answer) 1= Olongapa Livestock Keepers Association (OLKA) 2= Allole Livestock Keepers Association (ALKA) 3= Napalai Livestock Keepers Association (NALKA) 4= Kimbo Livestock Keepers Association (KILKA) 5= Irong Conservancy Management Committee 6= Kabarion Conservancy Committee 7= Koitegan Community Forest Association Executive Committee 8= Paka Hills Rangeland Management Committee 9= Others (Specify)	
C2	Which of the following best describes how the committee/body/ organization was established?(circle ONE appropriate answer) 1. by consensus of all community members 2. by majority vote of community members 3. by the rangeland management/governance committee or organization 4. by government 5. by the project NGO 6. by men only 7. by customary institutions 8. Other (specify)	

No.	Question	Response
C3	Were you involved in the decision about who should be a member of the participatory rangeland management governing body? (circle ONE appropriate answer) 1= Yes, 2=No,	
C4	What position do you or did you hold in this body/organization? (circle ONE appropriate answer) 1= Ordinary Member, 2=Official/leader (Chairperson, Secretary, Treasurer) 3= no position 4= Others (specify)	
C5	What is your level of satisfaction in how the governing body/ organization of the PRM was established? (circle ONE appropriate answer) 1= Very Dissatisfied 2= Dissatisfied 3=Neutral 4=Satisfied 5= Very Satisfied	
C6	Which of the following best describes the authority and governance powers of the rangeland unit's governance structures and processes? (Multiple responses allowed) 1= Has full governance and management (powers (has full uncontested authority that have been agreed upon by members of the community and other stakeholders) 2=Has a framework-setting mandate but little authority for actual management 3=Has only an advisory/coordination function 4=Governance powers are contested 5= Don't know	
C7	When rangeland unit's governance structure/processes have weak authority, who makes the decisions? (Multiple responses allowed) 1. District/Sub County government 2. Regional/County government 3. Zonal government 4= Provincial administration/National Government 5. Village government 6. Customary institutions 7. Elders 8. Other (specify)	
C8	Were the following involved in the PRM planning decision-making processes? (Multiple responses allowed) 1=All community members 2=Some community members 3=Local/County government 4=The rangeland management/governance committee or organization 5=Project NGO 6=Customary institutions 7=Women 8=Youth 9=ILRI 10= Provincial administration/National Government 11=Other (specify)	

No.	Question	Response
C9	<p>Please say which of the following best describes how decisions were made in the PRM planning process? (Multiple responses allowed)</p> <p>1=Based on customary institutions and decision-making procedures</p> <p>2=is a mix of customary and new institutions</p> <p>3=Involved elders or customary leaders as members of decision-making bodies but do not otherwise include customary institutions</p> <p>4=Did not include customary institutions and decision-making procedures</p> <p>5=Are gender equitable</p> <p>6=Are not gender equitable</p> <p>7=Other (specify)</p>	
C10	<p>Are women involved in making decisions on the PRM planning process? (circle ONE appropriate answer)</p> <p>1= Yes, 2=No,</p>	
C11	<p>Are youth involved in making decisions on the PRM planning process? (circle ONE appropriate answer)</p> <p>1= Yes, 2=No,</p>	
C12a	<p>What problems or challenges existed in the PRM planning process? (Multiple responses allowed)</p> <p>1=Community was not involved</p> <p>2=community was not interested</p> <p>3=it was not participatory</p> <p>4=agreement could not be reached</p> <p>5=there was a delay in funding</p> <p>6=the NGO did not assist us</p> <p>7=the government did not agree</p> <p>8=there were no problems or challenges</p> <p>9= Covid 19</p> <p>10=Other (specify)</p>	
C12b	<p>What could be done to enhance the PRM planning process? (Multiple responses allowed)</p>	
C13	<p>Do you know where the boundaries of the rangeland management unit are? (circle ONE appropriate answer)</p> <p>1= Yes, 2=No,</p>	
C14	<p>Is the rangeland management unit based on a traditional unit of grazing or is it based on a non-traditional unit or block of grazing? (circle ONE appropriate answer)</p> <p>1= Traditional 2= Non-traditional</p>	

No.	Question	Response
C15	<p>Were the following involved in defining the boundaries of the rangeland management unit? (Multiple responses allowed)</p> <p>1=All community members 2=Some community members 3=Local/County government 4=The rangeland management/governance committee or organization 5=Project NGO 6=Customary institutions 7=Women 8=Youth 9=ILRI 10= Provincial administration/National Government 11=Other (specify)</p>	
C16	<p>Please say which of the following best describes how decisions were made about the boundaries of the rangeland management unit? (circle ONE appropriate answer)</p> <p>1=By consensus of all community members 2=by majority vote of community members 3=by the rangeland management/governance committee or organization 4=by government 5=by the project NGO 6=by men only 7=by customary institutions 8=Other (specify)</p>	()
C17	<p>Were you involved in the decision about the boundaries of the rangeland management unit? (circle ONE appropriate answer) 1= Yes, 2=No,</p>	()
C18	<p>What is your level of satisfaction in how the boundaries of the rangeland management were decided? (circle ONE appropriate answer)</p> <p>1= Very Dissatisfied 2= Dissatisfied 3=Neutral 4=Satisfied 5= Very Satisfied</p>	()
C19	<p>What problems or challenges existed in the defining of the rangeland management unit? (Multiple responses allowed)</p> <p>1=Community was not involved 2=community was not interested 3=it was not participatory 4=agreement could not be reached 5=there was a delay in funding 6=the NGO did not assist us 7=the government did not agree 8=there were no problems or challenges 9=Other (specify)</p>	

No.	Question	Response
C20a	Do you agree with the boundaries of the rangeland management unit? (circle ONE appropriate answer) 1= Yes, 2=No, if Yes skip to C21	
C20b	If not, why not? (Multiple responses allowed) 1=Because it does not reflect traditional use of the rangeland 2=because it breaks up tradition use or unit of the rangeland 3=because it is too small 4=because it is too big 5=because it is too far 6= Other (Specify)	
C21	Does a rangeland management plan exist for the rangeland management unit? (circle ONE appropriate answer) 1= Yes, 2=No, if Yes skip to C27	(_____)
C22	Please say which of the following best describes how decisions were made as to which activities were included in the rangeland management plan? (circle ONE appropriate answer) 1=By consensus of all community members 2=by majority vote of community members 3=by the management/governance committee or organization 4=by government 5=by the project NGO 6=by men only 7=by customary institutions 8=Other (specify)	(_____)
C23	Were you involved in the decision about the rangeland management plan? (circle ONE appropriate answer) 1= Yes, 2=No,	(_____)
C24	What is your level of satisfaction in how decisions were made in establishing the rangeland management plan? (circle ONE appropriate answer) 1= Very Dissatisfied 2= Dissatisfied 3=Neutral 4=Satisfied 5= Very Satisfied	(_____)
C25	What problems or challenges existed in establishing the rangeland management plan? (Multiple responses allowed) 1=Community was not involved 2=community was not interested 3=it was not participatory 4=agreement could not be reached 5=there was a delay in funding 6=the NGO did not assist us 7=the government did not agree 8=there were no problems or challenges 9=Other (specify)	
C26a	Have you read the rangeland management plan? (circle ONE appropriate answer) 1= Yes, 2=No,	

No.	Question	Response
C26b	<p>If no, why have you not read the rangeland management plan? (Multiple responses allowed)</p> <p>1= Not interested</p> <p>2=Not involved in developing the rangeland management plan</p> <p>3= It is written in a difficult language to understand</p> <p>4= I cannot read</p> <p>5= Our leaders told us about the plan so no need to read</p> <p>6= Another family member told me about the plan</p> <p>7 =The NGO told me about the plan</p> <p>8= The Government told me about the plan</p> <p>4= Others (Specify)</p>	
C26c	<p>What are the major activities included in the rangeland management plan? (Multiple responses allowed)</p> <p>1=strengthening of governance structures</p> <p>2=clearance of bush</p> <p>3=clearance of invasive species</p> <p>4=development of water points/Structures</p> <p>5=seeding of pastures</p> <p>6=improvement of grasses</p> <p>7=Irrigation</p> <p>8=soil conservation measures</p> <p>9=water conservation measures</p> <p>10=tree planting</p> <p>11=community mobilization</p> <p>12=bylaws on wet and dry grazing areas</p> <p>13= marketing and value addition</p> <p>14= Breed improvement</p> <p>15= Establishment of disease control centres</p> <p>16=Other (specify)</p>	
C26d	<p>Do you agree with the activities in the rangeland management plan? (circle ONE appropriate answer) 1= Yes, 2=No,</p>	
C26e	<p>If no, why not? (Multiple responses allowed)</p> <p>1=Because there are other activities that should be prioritized</p> <p>2=because there are too many activities</p> <p>3=because there are too few activities</p> <p>4=because community members were not involved in the decision-making process</p> <p>5=because there is disagreement about activities</p> <p>6=because these activities are not the priority of the community</p> <p>7=because the activities are unrealistic</p> <p>8=because there is no funds to implement the activities</p> <p>9=Other (specify)</p>	
C26f	<p>What is your level of satisfaction in the activities included in rangeland management plan? (circle ONE appropriate answer)</p> <p>1= Very Dissatisfied 2= Dissatisfied 3=Neutral</p> <p>4=Satisfied 5= Very Satisfied</p>	

No.	Question	Response
C26g	What could be done to improve the rangeland management plan? (Multiple responses allowed)	
C27	If there is no rangeland management plan how are decisions made about activities in the rangeland? (Multiple responses allowed) 1=Village councils 2= Rangeland management committees 3=government decides 4=there is no control 5=no one decides 6=I decide 7=the NGO decides 8= Customary institutions 9= Elders 10=Other (specify)	
C28	What are the major activities included in the rangeland management plan that have been implemented? (Multiple responses allowed) 1=strengthening of governance structures 2=clearance of bush 3=clearance of invasive species 4=development of water points/structures 5=seeding of pastures 6=improvement of grasses 7=Irrigation 8=soil conservation measures 9=water conservation measures 10=tree planting 11=community mobilization 12=bylaws on wet and dry grazing areas 13= marketing and value addition 14= Breed improvement 15= Establishment of disease control centres 16=Other (specify)	
C29	Which of the following do you think best describes how activities have been implemented? (circle ONE appropriate answer) 1. Fully implemented 2. Well-implemented 3. Partly implemented 4. Only one or two activities implemented 5. Not implemented at all	

No.	Question	Response
C30	<p>Please say which of the following best describes how the rangeland management plan has been implemented? (Multiple responses allowed)</p> <p>1=By consensus of all community members 2=by majority vote of community members 3=by the rangeland management/governance committee or organization 4=by government 5=by the project NGO 6=by men only 7=by customary institutions 8=Other (specify)</p>	
C31	<p>Have you been involved in the implementation of activities? (circle ONE appropriate answer) 1= Yes, 2=No,</p>	
C32	<p>What is your level of satisfaction in the implementation of activities? (circle ONE appropriate answer)</p> <p>1= Very Dissatisfied 2= Dissatisfied 3=Neutral 4=Satisfied 5= Very Satisfied</p>	
C33	<p>Which of the following problems or challenges existed in the implementation of activities in the rangeland management plan? (Multiple responses allowed)</p> <p>1=Community was not involved 2=community was not interested 3=it was not participatory 4=agreement could not be reached 5=we did not have funds to carry out the activities 6=there was a delay in funding 7=we did not have the tools to carry out the activities 8=we did not have the skills to carry out the activities 9=the NGO did not assist us 10=the NGO did not give us advice 11=the government did not agree 12=there have been conflicts with our neighbours over the activities 13=there were no problems or challenges 14= Other (specify)</p>	
C34	<p>What could be done to improve implementation of the activities in the rangeland management plan? (Multiple responses allowed)</p>	
C35	<p>Have by-laws been established to enforce the implementation of activities in the rangeland management plan? (circle ONE appropriate answer) 1= Yes, 2=No,</p>	
C36	<p>Please say which of the following best describes how decisions were made about bylaws? (Multiple responses allowed)</p> <p>1=By consensus of all community members 2=by majority vote of community members 3=by the management/governance committee or organization 4=by government 5=by the project NGO 6=by men only 7=by customary institutions 8=Other (specify)</p>	

No.	Question	Response
C37	<p>What is your level of satisfaction in how decisions were made in establishing the bylaws? (circle ONE appropriate answer)</p> <p>1= Very Dissatisfied 2= Dissatisfied 3=Neutral 4=Satisfied 5= Very Satisfied</p>	
C38	<p>What problems or challenges existed in establishing the bylaws? (Multiple responses allowed)</p> <p>1=Community was not involved 2=community was not interested 3=it was not participatory 4=agreement could not be reached 5=there was a delay in funding 6=the NGO did not assist us 7=the government did not agree 8=there were no problems or challenges 9=Other (specify)</p>	
C39	<p>Which of the following do you think best describes the degree to which the bylaws have been implemented? (circle ONE appropriate answer)</p> <p>1=Fully implemented 2=Well-implemented 3=Partly implemented 4=Only one or two activities implemented 5=Not implemented at all</p>	
C40	<p>Please say which of the following best describes how the by-laws have been implemented? (Multiple responses allowed)</p> <p>1=By consensus of all community members 2=by majority vote of community members 3=by the management/governance committee or organization 4=by government 5=by the project NGO 6=by men only 7=by customary institutions 8=Other (specify)</p>	
C41	<p>Have you been involved in the implementation of bylaws? (circle ONE appropriate answer)</p> <p>1= Yes, 2=No,</p>	
C42	<p>What is your level of satisfaction in the implementation of bylaws? (circle ONE appropriate answer)</p> <p>1= Very Dissatisfied 2= Dissatisfied 3=Neutral 4=Satisfied 5= Very Satisfied</p>	

No.	Question	Response
C43	<p>Which of the following problems or challenges existed/exist in the implementation of bylaws? (Multiple responses allowed)</p> <p>1=Community was not involved 2=community was not interested 3=it was not participatory 4=agreement could not be reached 5=we did not have funds to carry out the activities 6=there was a delay in funding 7=we did not have the tools to carry out the activities 8=we did not have the skills to carry out the activities 9=the NGO did not assist us 10=the NGO did not give us advice 11=the government did not agree 12=there have been conflicts with our neighbours over the activities 13=there were no problems or challenges 14= Other (specify)</p>	
C44	<p>What could be done to improve implementation of the rangeland management bylaws? (Multiple responses allowed)</p>	
C45	<p>Does the rangeland management governance body have a written agreement with the local/county government to manage the rangeland (circle ONE appropriate answer)</p> <p>1= Yes, 2=No, 3=Don't know</p>	

D. CAPACITY BUILDING THROUGH PRM

No.	Question	Response
D1	Have you benefited from capacity development actions implemented through PRM? (circle ONE appropriate answer) 1= Yes, 2=No,	
D2	What capacity building actions have received through PRM? 1=Institutional Strengthening 2=Resource mobilization 3=Financial Management and reporting 4=Community Land registration 5=GLMPs development 6=proposal review, development 7=soil conservation 8=water conservation 9=climate change adaptation and resilience 10=marketing and value addition 11=pasture conservation 12=participatory monitoring and evaluation 13= action/work planning 14=Other (Specify_	
D3	If yes, why do you think you have benefited from capacity development actions implemented through PRM (Multiple responses allowed) 1=Because I have new skills 2=Because I have new knowledge 3=Because I know about PRM 4=Because I feel stronger 5=Because I have more confidence 6=Because I went to a training 7=Because know how to look after the rangeland 8=Other (Specify_	
D4	What is your level of satisfaction with the capacity building actions received through the PRM? (circle ONE appropriate answer) 1= Very Dissatisfied 2= Dissatisfied 3=Neutral 4=Satisfied 5= Very Satisfied	
D5	How could the capacity building actions be improved? (Multiple responses allowed)	

E. IMPACTS OF PRM

No.	Question	Response
E1	<p>What is your overall level of satisfaction about the whole PRM intervention? (circle ONE appropriate answer)</p> <p>1= Very Dissatisfied 2= Dissatisfied 3=Neutral 4=Satisfied 5= Very Satisfied</p>	
E2	<p>Which of the following do you think the PRM intervention has contributed to? Ask each of the following questions. Circle those indicated as Yes.</p> <p>1=Improved rangeland condition 2=Worsened rangeland condition 3=Increased livestock numbers 4=Reduced livestock numbers 5=Improved livestock body condition 6=Worsened livestock body condition 7=Improved livelihoods 8=Worsened livelihoods 9=Changes in types of livestock kept 10=Improved livestock mobility 11=Worsened livestock mobility 12=Improved social status of people/groups 13=Worsened social status of people/groups 14=Improved nutrition of your HH 15=Worsened nutrition of your HH 16=Improved nutrition of the community 17=Worsened nutrition of the community 18=Improved ways that people work and interact together 19=Worsened ways that people work and interact together 20=Improved participation of the community in the governance and management of the rangelands 21=Worsened participation of the community in the governance and management of the rangelands 22=Improved participation of women in the management of rangelands 23=Worsened participation of women in the management of the rangelands 24=Improved number of women in leadership positions in the community 25=Worsened number of women in leadership positions in the community 26=Improved capacity of the community to cope with drought or other crisis 27=Worsened capacity to cope with drought or other crisis 28=Improved access to rangeland resources for the whole community 29=Worsened access to rangeland resources for the whole community 30=Improved access to rangeland resources for women 31=Worsened access to rangeland resources for women 32=Reduced number of conflicts over resources in the village 33=Increased number of conflicts over resources in the village 34=Reduced number of conflicts over resources with people from outside the village 35=Increased number of conflicts over resources with people from outside the village 36=Increased feeling that the rangelands belongs to us as a community 37=Reduced feeling that the rangelands belong to us as a community 38= Increased household incomes</p>	
E3	<p>What other changes have been seen?</p>	
E4	<p>Which of the impacts you listed was the first impact to be seen? Choose from the check list from E2</p>	

No.	Question	Response
E5	Which one of the above impacts you listed took the longest to be seen? Choose from the check list from E2	
E6	Which of the impacts you listed has been the most important in terms of improving rangeland management? Choose from the check list from E2	
E7	Which of the above impacts you listed has been the least important in terms of improving rangeland management? Choose from the check list from E2	
E8	Would you recommend other communities to also implement PRM? (circle ONE appropriate answer) 1= Yes, 2=No,	
E9	Why do you give this answer? Allow multiple responses 1=Because PRM has helped to improve our rangeland 2=Because PRM has helped to improve our livelihoods 3=because PRM has not helped to improve our rangeland 4=Because PRM has not helped to improve our rangeland 5=because PRM has improved our livestock 6=because PRM has not improved our livestock 7=because PRM has helped improve our land and resource tenure security 8=because PRM has improved relations with our neighbours 9=because PRM has worsened relations with our neighbours 10=because PRM has caused conflicts 11=because PRM has helped resolve conflicts 12=because PRM is expensive 13=because PRM is good for us 14=because PRM has not been good for us 15= because PRM has improved our nutrition 16= because PRM has not improved our nutrition 15= Other (specify)	
E10	What are the key aspects of the PRM process that need improvement?	
E11	What are the key aspects of the PRM process that should be replicated or upscaled?	

THANK YOU FOR YOUR PARTICIPATION

KII checklist

Tell us about the PRM by among others indicating the following

1. When was the PRM started in your area of operation?
2. How were the implementation areas selected? Why/what which selection criteria was used?
3. How were the beneficiaries selected? Why/what which selection criterion was used?
4. How are the beneficiaries organized currently? Type of groups?
5. What key activities do you or your organization play? What role does you or your organization play in the PRM project?
6. Among these activities what has been implemented? How well have they been implemented (fully? Partially? Successfully? Satisfactory?)
7. Which activities are yet to be implemented? Why?
8. What areas has so far been covered by the grazing unit identified through PRM (Ha?)
9. How is the grazing unit managed?

Key achievements and sustainability

10. How well would you say the project design was? Did the design address/ target the needs of the beneficiaries? Was it in line with national and local government policies?
11. What are the key project target impacts and outcomes?
12. Which would you say are the key achievements of the outcomes and impacts so far?
13. How has the targeted areas/rangelands changed because of the project?
14. How well has the capacity of communities changed with regard to rangeland management? / How well are communities now able to manage rangeland resources?
15. How has PRM benefited the targeted beneficiaries especially the rangeland users? What changes can be easily seen/observed? (probe for food and nutrition security, availability of pasture and water for livestock, improved productivity of rangelands, increased incomes for beneficiaries, gender equity; improved resilience and adaptation to climate change impacts etc)
16. Has PRM resulted to any unintended outcomes (positive or negative)? If yes which ones?
17. Do you think that PRM benefits/impacts will be sustained over time?
18. What sustainability measures have been incorporated in the project design and implementation?

19. Do you think that the beneficiaries are fully capacitated to continue with the PRM activities?
20. Are there other partners who are likely to support the beneficiaries even after the current support ends? If so which ones?

Gender mainstreaming and roles (men, women, youth)

21. Who among men, women, and youth are more active in the PRM project?
22. Which roles does each category play in the project?
23. Has the involvement of women in leadership positions changed as a result of the project? If yes how?
24. How well has PRM ensured participation men, women, and youth and other vulnerable populations (e.g., Persons living with disabilities) in the project?
25. What challenges still exist with regard to gender issues?
26. How have these challenges affected the implementation of the project?

Financial aspects

27. Are you involved in financial planning (eg annual activity budgets) of the project?
28. How are the funds absorption rates versus activity implementation?
29. How well do you think the project funds have so far been used?
30. What financial challenges has the project faced?
31. How can financial challenges be solved/minimized?

Partnerships, collaborations and policy Influence

32. Who are your major partners in the project?
33. What roles do the partners play?
34. How well do you think the partners have so far delivered on their roles?
35. Has the PRM attracted additional partners (national or international) since it started? if so which ones? How many?
36. What challenges still exist with regard to partnerships and collaborations?
37. How well do you think that the project has coordinated the activities of the partners and other stakeholders?
38. Where and how can improvements be made with regard to partnerships management and coordination?
39. Has there been policies generated or influenced because of the PRM? If so which ones? How many?
40. Has the capacity of the partners been improved because of the PRM? If yes which partners and how?

Overall challenges

- 41. What are the key challenges for the PRM project in the country?
- 42. How do you think these challenges have affected the implementation of PRM?
- 43. How can these challenges be addressed?

Lessons learnt and scalability

- 44. What would say are the key lessons learnt from project implementation so far?
- 45. Which models/approaches have worked better during PRM implementation?
Why?
- 46. What did not work well? Why?
- 47. Have any of these approaches/models/aspects of PRM been upscaled?
- 48. What models or approaches /aspects of PRM can be upscaled?

FGD checklist

This FGD is targeted at rangeland management committee members who have been involved in the PRM Process

About the Group

Tell us about this group by among others indicating the following:

1. Type of the group (rangeland management committee, Livestock keepers committee (LMA), conservancy management committee, etc
2. Name of the group (if any)
3. Composition of the group- who are the members of the group?
4. Period when the group has been in existence/when was the group established?
5. Main economic activities and income sources of community members (group members)

Major agricultural activities. Crop and livestock production

6. Type/nature of land ownership
7. Land use. (percent used for...)
 - » Crop production
 - » Animal production
 - » Fallow/ rotational farming
 - » Bushes & forests
 - » Housing/structures (including livestock)
8. Main type of livestock kept in the area?
9. Major sources of livestock water?
10. Major sources of livestock pasture?
11. What are the major livestock production challenges?
12. Major crops produced by the community members (if any)
13. Number of seasons for crop production in a year?
14. Crop production system (irrigated or rainfed)?
15. Are there instances of crop failure?
If so, what are the major causes of crop failure?
16. What are the other major challenges in crop production?

Community Resilience and food security

17. Have the community (the area) experienced prolonged droughts in the recent past? If yes, when?
18. Have the community (the area) experienced flooding in the recent past? If yes, when (year)?
19. What were the impacts of the drought or flooding to crop and livestock enterprises?
20. What are your views with regard to the ability to recover from droughts or floods? Is it possible? If so, how long does it take?
21. What are the major food items in this community?
22. Would you say that your community is food secure? (both food and nutritional security)
23. Are there times (months within the year) when the community suffers food insecurity most? During such times, where/how do community members get food?
24. What has the community done to improve its food security situation

GENDER ROLES - In Agriculture

25. What are the roles of men and women in livestock production and marketing in the community?
26. What are the roles of men and women crop production and marketing in the community?
27. What are the roles of men and women in ownership and access to land for crops and livestock production?
28. What are the roles of men and women in ownership livestock assets?

Participatory Rangelands Management (PRM)

29. What is your understanding of the Participatory Rangelands Management (PRM) project?
30. How did you hear about PRM?
31. Have you had any training on PRM?
32. If so, which ones?
33. Who trained you?
34. Which organization supported the PRM intervention?
35. Did the PRM intervention take place in your village/area?
36. Which year (period) did the PRM project start in your area?
37. Which PRM intervention, planning and activities were implemented in your area?
38. Are you aware if the community has a rangeland management plan?
39. What are the major activities included in the rangeland management plan?

40. Do you agree with the activities in the rangeland management plan?
41. What are the major activities included in the rangeland management plan that have been implemented?
42. How was the community involved in the implementation of these activities?
43. Are there rules, by-laws or guidelines set out to ensure that the activities are implemented?
44. Who sets such by-laws? How was the community involved?
45. What could be done to improve the rangeland management plan?
46. What is the name of the main committee/body/organization that manages/ governs and makes decisions about PRM in your area?
47. How is the structure of the rangeland management committee?
(Probe for registration, officials, sub committees)
48. How are women, youth, and other special groups such as persons with disabilities involved in the PRM activities?
49. Would you say that the committees are well governed?
Please explain why. (Probe for establishment, functionality, decision making, leadership, transparency, etc)
50. What would you say are the key challenges for the main PRM committees?
51. How do you think these challenges can be solved (or minimized)?
52. How well do you think PRM has worked with regard to the following (explain why):
 - » Delineation of the rangeland boundaries?
 - » Improvement of the overall rangeland condition (rangeland health)?
 - » Reduction of intercommunity conflicts?
 - » Improvement of crop and/or livestock production?
 - » Improvement of food and nutritional security?
 - » Improvement of household incomes?
 - » Promotion of gender equity/inclusivity?
53. What benefits has the community accrued from the PRM project?
54. Would you recommend other communities to also implement PRM? Why?
55. What are the key aspects of the PRM process that need improvement?
56. What are the key aspects of the PRM process that should be replicated or upscaled?

Annex 2

Lists and codes of FGD respondents

S/No	Code	Groups	Country	Cluster/ Conservancy	Number of FGDs	No of Participants
1.	KF001	Irong Community Conservancy–Women FGD	Kenya	Irong Community Conservancy	1	5 Female-5 Male-0
2.	KF002	Irong Community Conservancy – Men FGD	Kenya	Irong Community Conservancy	1	11 Female-0 Male-11
3.	KF003	Kabarion Conservancy – Women FGD	Kenya	Kabarion Conservancy	1	7 Female-7 Male-0
4.	KF004	Kabarion Conservancy – Men FGD	Kenya	Kabarion Conservancy	1	10 Female-0 Male-10
5.	KF005	Koitagen Women FGD	Kenya	Koitagen Community Forest	1	10 Female-10 Male-0
6.	KF006	Koitagen Men FGD	Kenya	Koitagen Community Forest	1	11 Female-0 Male-7
7.	KF007	Paka Hills Conservancy – Women FGD	Kenya	Paka Hills	1	9 Female-9 Male-0
8.	KF008	Paka Hills Conservancy – Men FGD	Kenya	Paka Hills	1	9 Female-0 Male-9
9.	TF001	Committee and board members	Tanzania	Olengapa	1	8 Female-1 Male-7
10.	TF002	Members of Olengapa Women Forum (“Jukwaa la akina Mama”)	Tanzania	Olengapa	1	14 Female-14 Male-0
11.	TF003	Committee and board members	Tanzania	Alolle	1	14 Female-0 Male-14
12.	TF004	Committee and board members	Tanzania	Kimbo	1	14 Female-0 Male-14

S/No	Code	Groups	Country	Cluster/ Conservancy	Number of FGDs	No of Participants
13.	TF005	Committee and board members	Tanzania	Napalai	1	13 Female-0 Male-13
14.	TF006	Village Chairmen and community leaders	Tanzania	Loltepesi	1	6 Female-0 Male-6
15.	TF007	Women membership in the committee and board	Tanzania	Alolle, Kimbo and Napalai	1	11 Female-11 Male-0
Total					15	148 Female-57 Male-91

Annex 3

Other Programmatic Recommendations by AFREDEC

Arising from the findings of this study, the following recommendations from AFREDEC are given for consideration by PRM implementers and key partners.

- » **Stakeholder engagement and coordination.** The project should enhance the inter- and intra-country engagement forum for stakeholders including governments, NGOs, research institutions, community elders and leaders, politicians and community members and other partners nationally, regionally, and continentally with common interest. This will create synergy and collaboration and ensure horizontal and vertical information exchanges. This diverse involvement leads to community awareness, cooperation, mobilization, and ownership of the program. Thus, long-term sustainability will be achieved. The cooperation will also bring about better financial management, reduce bureaucracy in financial disbursement and minimize delays during implementation of activities.
- » **Leveraging on the community engagement approach.** The project explored various modalities to enact community engagement and mobilization. This creates sense of ownership and trust for PRM. Community ownership and responsibility are basic prerequisites for sustainable development. Therefore, to achieve sustainable development, the community are understood as active holders of the project, owners and responsible for their own grazing land development, and accountable for this development.
- » **Considering unique needs of beneficiaries.** There is need to consider the educational level of the community members when developing Rangeland Management Plans and PRM guidelines and toolkits. Some of these and other policy documents should be translated into local languages for ease of understanding and adoption.
- » **Leveraging on development partners.** There is need to intensify engagement of development partners who have the capacity and are willing to support the PRM process.
- » **Capacity-building.** There is need to invest in capacity-building for the community and project executants to fully internalize the intended project outcomes. This will aid a paradigm shift from business-as-usual towards focusing on resilient building.

- » **Supporting functions of rangeland management.** Focus is needed on supporting functions in the rangeland management as drivers of scaling. Supporting functions include infrastructure, financial services, leadership and coordination, research and development, extension and (market) information services and skills and capacity development.
- » **Diversification of livelihoods.** The communities in PRM piloting areas should be encouraged to diversify their livelihoods by engaging in climate resilient livelihood options such as bee keeping; commercial pasture and fodder production; tourism activities; breed improvement; tree nurseries. These are important in building the communities resilience in climate change.
- » **Leverage on County Development Planning.** The upscaling of the PRM towards the end of the current CIDPs (2018-2022) gives an opportunity to the PRM to be adequately anchored on the CIDPs of (2023-2027).
- » **Upscaling Women and youth empowerment in PRM.** Although from the findings women are involved in in the PRM. These gains need to be guarded and enhanced thorough intensive sensitization and capacity-building on gender mainstreaming. It is important to note that there are no explicit strategies of enhancing involvement of other vulnerable groups such as youth and Persons living with disabilities in the PRM process.

