RANGELANDS

Review of participatory rangeland management (PRM) process and implementation

RESEARCH REPORT 2

INTERNATIONAL LAND COALITION

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Research report no. 2

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Review of participatory rangeland management (PRM) process and implementation

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IFAD Investing in rural people
RECONCILE
CELEP Coalition of European Lobbies on Eastern African Pastoralism
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ABBREVIATIONS AND ACRONYMS

AI	artificial insemination
BRACED	Building Resilience and Adaptation to Climate Extremes and Disasters
CAHW	community animal health worker
CELEP	Coalition of European Lobbies for Eastern African Pastoralism
CRP	Collaborative Research Project
EU	European Union
ha	hectare
HH	household
IFAD	International Fund for Agricultural Development
IGAD	Intergovernmental Authority for Development
ILC	International Land Coalition
ILRI	International Livestock Research Institute
KII	key informant interview
LULC	land use/land cover
m	metre(s)
M&E	monitoring and evaluation
MOU	memorandum of understanding
NGO	nongovernmental organization
No.	number(s)
NRM	natural resource management
PFM	participatory forest management
PIM	CGIAR Research Program on Policies, Institutions and Markets

PLI	Pastoralist Livelihood Initiative
PNRM	participatory natural resource management
PRIME	Pastoralist Areas Resilience Improvement and Market Expansion
PRM	participatory rangeland management
PRRA	participatory rangeland resource assessment
RECONCILE	Resource Conflict Institute
RC	rangeland council
RMA	rangeland management agreement
RMC	rangeland management council
RMCoop	rangeland management cooperative
RMP	rangeland management plan
RMU	rangeland management unit
SHARE	Supporting the Horn of Africa Resilience
TNRF	Tanzania Natural Resource Forum
USA	United States of America
USAID	United States Agency for International Development
USFS	United States Forest Service
WPLUP	woreda participatory land use planning
WRI	World Resources Institute

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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 or IFAD.

EXECUTIVE SUMMARY

This study was undertaken between 2017–19 with support from the EU-funded project, 'Piloting the use of participatory rangeland management (PRM) in Tanzania and Kenya', the PIM CRP Flagship 5 on governance of natural resources, the Livestock CRP Flagship 4 on environment, and the WRI. The objective of the study was to learn from the experiences of PRM implementation in Ethiopia in order to inform future piloting and upscaling of PRM in Kenya and Tanzania. This report provides the key results of the study, more details of which can be found in the working paper (Flintan et al. 2019).

The review used several approaches to collect data including a household (HH) survey, a physical assessment of changes in rangeland conditions, remote sensing to measure physical change (in collaboration with WRI) and interviews with key actors. The main analytical framework used is documented by Robinson et al. (2018) and is recommended for further analysis of PRM and its impacts: https://cgspace.cgiar.org/handle/10568/97916.

Data analysis revealed that overall, the implementation of PRM has been positive in terms of impacts on strengthening inclusive governance institutions, management of resources and improving productivity of rangelands. PRM also contributed to stronger perceived land and resource security, willingness to invest in sustainable land management and opportunities for improving livelihoods. Key lessons learned from the review, together with gaps and opportunities for strengthening PRM in further applications include:

i) There is a need to implement PRM at multiple scales: Organisations have supported the implementation of PRM at different scales—the Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) approach focusing first and foremost at the landscape/rangeland scale, and the SOS Sahel/Farm Africa approach focusing first and foremost at the local level with the kebele or part of the kebele (a rangeland block) being the unit of management. Both approaches have their benefits but also their challenges and pitfalls; by only focusing on one particular level i.e. landscape/wider rangeland or local/kebele/block rather than both, problems have resulted. There seems to be a trade-off within and between the two approaches: 'landscape level' means greater coverage and more comfortably follows traditional patterns of grazing managed by customary institutions and governance but has poor participation of individuals and communities across the area and less concentrated interventions; while the 'block' or kebele approach means less geographical coverage, less role for customary institutions but significantly greater participation of communities in those smaller, concentrated areas and greater results in terms of activities. To overcome these challenges, greater effort is needed to work at multiple scales taking a more holistic and multi-level approach focusing on all levels as appropriate and ensuring both horizontal and vertical linkages between scales and levels.

ii) PRM should be embedded in wider development processes and an enabling policy environment: To date, PRM as implemented in Ethiopia has not been fully integrated into local development planning, but rather stands alone as a separate component. This means that it is still operating as a 'project' supported by nongovernmental organizations (NGOs), without the full 'buy-in' of local, regional and national government. There is still no policy or legislation that supports or legitimizes PRM at national or regional levels (unlike participatory forest management (PFM)). This compromises the sustainability of the approach, and PRM plans and activities; local community commitment (and limited government commitment) is currently relied upon to take PRM forward once the projects

stop. In addition, the absence of PRM inclusion in district (woreda) development and/or woreda land use planning (WPLUP)[1] processes means that no funds are allocated to its implementation through woreda government budgeting. Furthermore, there is a risk of duplication of activities if new NGOs come into the area and start developing their own plans.

Therefore, it is recommended that in any further application of PRM, greater attention is given to working at different levels in a complementary manner. This will should include embedding PRM in wider development processes and plans by working more closely with government at local and national levels to foster a more favourable view of rangelands and their contribution to local livelihoods. In addition, work needs to be carried out to influence policymakers to develop a more enabling environment for PRM, and ultimately policy and legislation that provides for PRM to be fully enacted, appropriate institutions established, plans implemented, and agreements developed and enforced.

iii) PRM is not a rigid linear process: Though PRM can be viewed as a series of steps to a functioning rangeland management plan (RMP), it should be recognized that there are linkages between the steps that are not linear, and there are a number of cross-cutting issues such as capacity building and developing an enabling environment for PRM that allows for development of secure agreements and their enforcement; these issues require attention all the way through the process. Conflict resolution is another cross-cutting issue that should be considered. PRM is best facilitated when it is accompanied by reflective processes including feedback and adaptation mechanisms.

iv) PRM is a means of empowering communities including women: The implementation of PRM has clearly contributed to an improvement in management and governance of rangelands in terms of structures, presence and engagement with multi-stakeholders. This has been an important step in a context of increasing lack of management of rangelands, and an increasing number of multiple stakeholders and interests. PRM has contributed to a strengthening of the commitment to rangeland management processes and activities, roles and responsibilities, and has discouraged dependency on external assistance. Moreover, spaces have been created through PRM where people who have been empowered with knowledge can come together to discuss, share and generate meaningful information deemed important by them.

In general, those community members interviewed who knew about and/or participated in PRM were happy with the consultations and opportunities to participate in the planning and the various activities. This included women, with a high ranking of women's improved participation in decision-making processes and rangeland management as a positive outcome of PRM. PRM can provide opportunities for a better valuing of women's knowledge and role in rangeland management, improving women's understanding of natural resource management (NRM) challenges and potential solutions, and increasing women's participation in decision-making processes. Benefits include meeting attendance and participating in discussions regarding rangeland problems with fellow community members, receiving information during planning meetings that can be shared with others, improvement in rights and empowerment within the rangeland management setting and homestead context, and practical interventions that reduce women's workload and/or improve men's contribution to tasks that previously were carried out mainly or only by women (for example, grass cut-and-carry for young or weak animals).

It was indicated that the participation of women was less in the higher-level governance bodies than in the lower ones and where women were not involved this was said to be due to heavy workloads, long distances to meetings and cultural barriers such as perceptions that women do not have the capacity to assume higher-level management responsibilities. Women indicated that they were satisfied with the PRM processes; two of the top six impacts of PRM is first, improving the participation of women in rangeland management, and second, improving their access to rangeland resources. These outcomes are a result of the positive steps taken by NGOs to include women as well as men through women-targeted activities and training though in some cases this was rather ad hoc.

[1] For more information on woreda participatory land use planning (WPLUP) in pastoral areas see a government manual and complementary toolkit on the approach: https://hdl.handle.net/10568/99262 and https://hdl.handle.net/10568/99457

The most common challenge to ongoing implementation of PRM was said to be lack of funding, highlighting the communities' reliance on external support for PRM implementation. As such, it is recommended that significant attention be given to promote local government and community 'buy-in' and 'ownership' of the approach and activities, including exploring to what degree communities can contribute to PRM and its implementation in terms of cash, time, labour and/or 'in-kind' contributions.

v) PRM contributes to improving rangeland condition, and the importance of good monitoring and evaluation (M&E) including a physical baseline to measure outcomes is highlighted: The HH survey indicated that the most significant impact seen as a result of PRM was 'improved rangeland condition'. Where baselines were available, this was backed up by the physical assessment that was undertaken as part of this review which concluded that in some areas (particularly in Bale), there had been positive improvements in the rangeland condition (improved ground vegetation coverage etc.). Considering that these areas have only been under PRM implementation for 2–4 years, this is a promising result. Respondents also indicated that improved rangeland condition was one of the first results seen, likely due to interventions supported such as bush clearing. These quick, visible results help to show how beneficial PRM can be, creating some incentives for communities to continue investing in the process while longer term impacts are realized.

It is recommended that in any further application of PRM, a simple physical baseline assessment should be conducted with communities prior to or in the early stages of PRM interventions so that physical changes resulting from PRM can be effectively measured. Though this is a step in the PRM process, some organisations did not make a baseline and therefore it was impossible to measure physical impacts in a robust scientific manner. Further the baseline is an information-collection activity for the development of the RMP. Measuring change by remote sensing and other tools are a good technical back-up to the community monitoring activities.

1. INTRODUCTION

1.1 Context and background

Tenure security in the drylands, including rangelands of Ethiopia, is poor. Because of the collective and multi-dimensional characteristics of land use and access in these areas, rights (ownership, access and use) are difficult to define and protect; policies and legislation if they exist, fail to adequately address these issues. Planning has been top-down with decisions made about drylands without the knowledge, input and support of dryland communities. Migration into drylands by nonlocals, as well as out-migration by the youth in particular has become common, meaning that groups and communities are more diffuse and fluid than previously. The authority of customary governance institutions is being increasingly undermined and opposed as a result.

Within this context, in 2010 Save the Children USA in Ethiopia developed the PRM approach in an effort to offer and potentially test a model for better securing rights to resources and improving rangeland management in pastoral areas (Flintan and Cullis 2010). The approach drew heavily from and builds on the process of PFM which at that time was being mainstreamed across the country.

Farm Africa and SOS Sahel Ethiopia were the first organizations to pilot the PRM approach in the lowlands of Bale zone, Oromia region with some modifications to the steps (see below) and their implementation. This was then replicated in the Afar region. At the same time, Save the Children USA started piloting PRM in Borana, Oromia through the United States Agency for International Development (USAID)-funded Pastoralist Livelihoods Initiative (PLI) II. Using the PRM Introductory Guidelines as a starting point, the approach was slightly adapted with two steps added (including a 'do no harm' analysis) and then called participatory natural resource management (PNRM). The process commenced in 2009 and continued for around three years until the end of PLI II in 2012. Save the Children USA estimates that the process involved more than 30,000 pastoralists and agro-pastoralists. For more information on this implementation, see Kebede et al. (2013).

Learning from the experiences of these two sets of pilots, the Pastoralist Areas Resilience Improvement and Market Expansion (PRIME), a five-year project working in Ethiopian's pastoral areas funded by USAID and implemented by a consortium led by Mercy Corps sought to upscale the approach within their NRM component; this component was led by CARE. Originally focused on Borana and the Afar region, PRIME also expanded the program to the Somali region. A summary of key milestones in the development of PRM is provided in Box 1.1.

In short, PRM is made up of three key stages: Understanding, Planning and Implementation. The process as it was introduced in 2010 focused on defining an appropriate unit for rangeland management (such as a traditional grazing area) with the community and other stakeholders, the documentation of rangeland resources and their statues, and the strengthening or setting-up of a governing community association or institution. Once these are in place, an RMP will be developed based on an in-depth rangeland inventory and community action planning. Access to resources is improved through the drawing up of a legally binding rangeland management agreement (RMA) between the community and local government, with rules and regulations (by-laws) defined, based on the RMP.

Box 1.1 A timeline of key milestones in the development of PRM

1994 PFM piloted and then scaled-up including in Borana (by SOS Sahel and others)

2010 Publication of introductory guidelines (Save the Children USA, USAID Enhanced Livelihoods in the Mandera Triangle)

2009–13 Save the Children USA implemented PNRM in Oromia (Borana) through PLI II (USAID-funded)

2007–12 Bale Eco-Region Sustainable Management Project by Farm Africa and SOS Sahel implemented PFM (i.e. forest focused)

2012 PRM included in the Government of Ethiopia's Country Programming Paper for Ending Drought Emergencies (supported by the Intergovernmental Authority for Development)

2012–13 Farm Africa and SOS Sahel piloted PRM in Bale Mountains (Cordaid-funded)

2013 Pilot of PRM in Afar region by Farm Africa

2014 Review of PRM by Tezera Getahun as input to design of Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) for Farm Africa (see below)

2014–18 CARE started implementing PRM though PRIME in Oromia, Afar, Somali regions (USAID-funded)

2014–17 Supporting the Horn of Africa Resilience (SHARE) project in the Bale Eco-Region implemented PRM by the International Water Management Institute, Farm Africa, Population, Health and Environment and Frankfurt Zoological Society and SOS Sahel—main actor in PRM is Farm Africa

2015 onwards Farm Africa scaling up PRM through BRACED in Afar, Oromia and Southern Nations, Nationalities and Peoples Region (Department for International Development-funded)

2015 onwards PRM included in World Bank-Regional Pastoral Resilience Livelihoods Project being implemented in Afar, Somali and Oromia as part of Ethiopia's Country Programming Paper to End Drought Emergencies developed under the framework of IGAD (Intergovernmental Authority for Development)

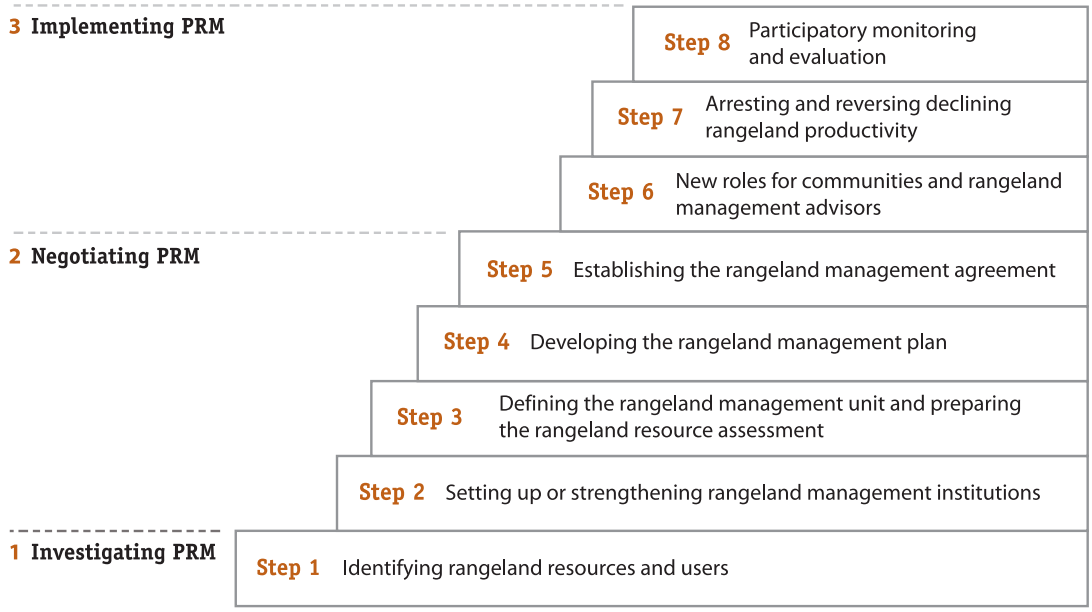
2016 Publication of mapping guidelines for PRM (PRIME)

2016 Experiences of PRM (under PRIME) shared at World Bank Conference on Land and Poverty in Washington, D.C.

2018–22 EU-funded project through the International Land Coalition (ILC) and the Coalition of European Lobbies for Eastern African Pastoralism (CELEP) piloting PRM in Kenya and Tanzania learning from Ethiopia

Recognizing the opportunity of PRM for other countries in the region, in 2018, the EU provided a grant to the ILC in partnership with CELEP to work with local NGOs including RECONCILE and TNRF with technical support from ILRI to pilot PRM in Kenya and Tanzania. In order to inform this project as well as other initiatives, a study was carried out to understand the advantages and disadvantages of different approaches to implementing PRM, the challenges and opportunities that have arisen during implementation and to analyse the impacts (social and physical). This report documents the outcomes of this study.

Figure 1.1 Main stages and steps of PRM



Source: Flintan and Cullis (2010)

1.2 Study overview

This study was undertaken between 2017–19 with support from the EU-funded project 'Piloting the use of participatory rangeland management (PRM) in Tanzania and Kenya', the PIM CRP Flagship 5 on governance of natural resources, the Livestock CRP Flagship on environment, and WRI. The objective of the study was to learn from the experiences of PRM to date in Ethiopia in order to inform future piloting and upscaling in Kenya and Tanzania.

A range of tools were used to collect information and data including a review of project documents and reports, a HH survey in case study intervention areas with particular attention to gender issues, a physical study using a baseline of vegetation status at project inception, use of remote sensing to assess vegetation change and key informant interviews (KIIs). For the HH survey, a research protocol developed by Robinson et al. (2018) was used. Research was carried out in pastoral areas of Oromia and Afar regions where PRM interventions had been undertaken: two areas in Oromia (Bale and Borana/Guji zones) and one in Afar. Five kebeles were selected in each area, three intervention kebeles and two control (i.e. where no direct intervention had taken place). Where possible, projects working in these areas were asked to suggest the kebele or case study area where they felt that their positive impact had been strongest.

This report provides the key results of the study, more details of which can be found in the working paper (Flintan et al. 2019).

2. DIFFERENT APPROACHES TAKEN IN THE IMPLEMENTATION OF PRM

2.1 Farm Africa and SOS Sahel Ethiopia

Farm Africa and SOS Sahel Ethiopia were the first organizations to pilot the PRM approach in the lowlands of Bale zone, Oromia region with some modifications to the steps and their implementation. The pilot kebeles were divided into blocks encompassing around 80 HHs of between 8–20,000 hectares (ha) per block depending on population density. These blocks were the starting point for data collection (rangeland inventory through a participatory rangeland resource assessment (PRRA)) and strengthened management. An RMA was drawn up and signed by the rangeland management cooperative (RMCoop) and the local government. Building on the experience in Bale, Farm Africa then piloted the approach in the Afar region taking a similar approach with the kebele as the entry point.

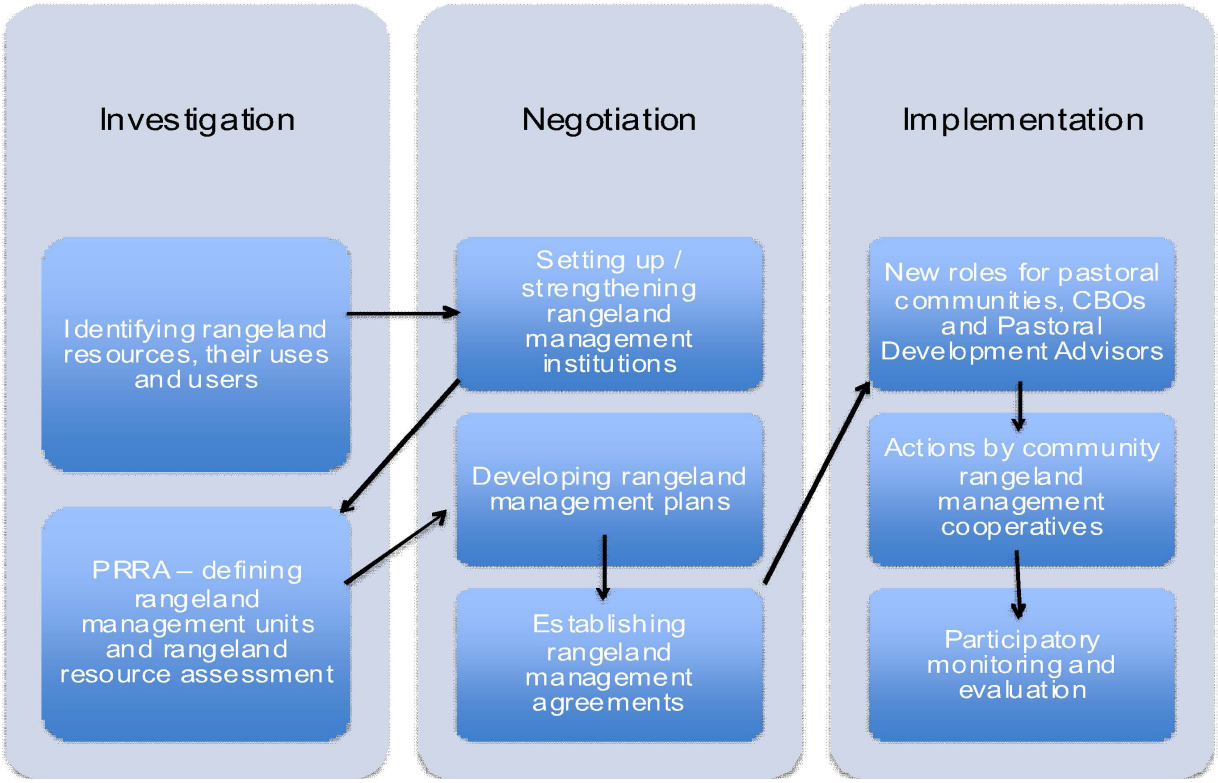
Adaptation of the PRM process

The area where Farm Africa and SOS Sahel were working is part of a wider landscape ecosystem encompassing lowland areas as well as the Bale Mountains including the Bale Mountains National Park. There is a strong connection between the lowland and highland areas, with people and livestock moving across the two areas during the different seasons, often with family members (including wives in polygamous relations) living at different altitudes. The area has seen several natural resource, conservation and development projects over the years, including the development of a large REDD+ (Reversing deforestation and degradation) project with support from Farm Africa and SOS Sahel in the significant areas of forest found there. As such, it was not surprising that Farm Africa and SOS Sahel built on that experience and adapted the PRM steps to something more similar to forest management than rangelands management (i.e. a 'block and cooperative' approach). The main PRM activities and steps remained the same, though it was emphasized that the process was not linear and rather involved additional linkages across stages and between steps than described previously. A manual delineating the process that Farm Africa and SOS Sahel used was developed (see Farm Africa and SOS Sahel Ethiopia 2014a).

Understanding rangeland resources uses and users

As a first step, Farm Africa and SOS Sahel supported communities to undertake a participatory mapping of the area and use other participatory tools to understand the rangelands resources, their distribution and the users of them and how these have changed over time. This led to the defining of the rangeland management unit (RMU).

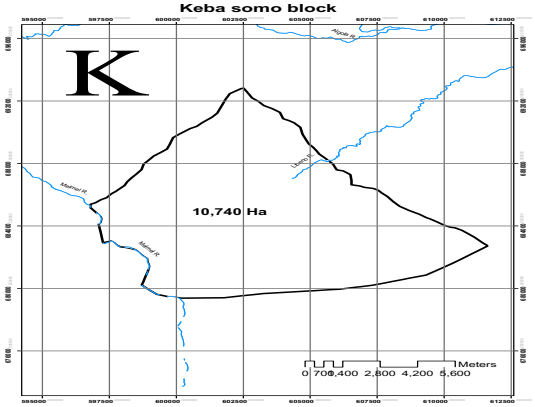
Figure 2.1 PRM process used by Farm Africa and SOS Sahel (Source: Farm Africa and SOS Sahel Ethiopia 2014a).

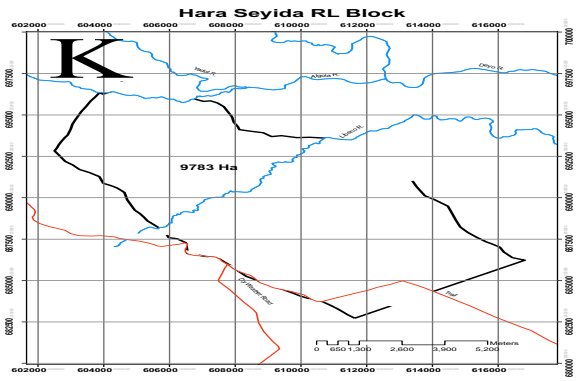


Defining the RMU

The initial pilot in Bale zone was implemented in four kebeles which were divided into fourteen blocks of rangeland: three in Naniga Dera, four in Berak, three in Kele Golba and four in Hora Kore, ranging from 8–20,000 ha to a total of 227,948 ha. It was known that livestock keepers moved in and out of these blocks at different times of the year to use resources at higher and/or lower altitudes, as well as moved into forest areas during the hot summer months. Community representatives took the lead in establishing the blocks influenced by the size of the area, the major resources found there, the settlement pattern and the current use of the land and resources. The field team and government technical staff facilitated this process. Maps of the rangeland blocks were produced (Farm Africa and SOS Sahel 2013).

Figure 2.2 Example of a map of rangeland blocks (Source: Farm Africa and SOS Sahel 2013)





PRRA

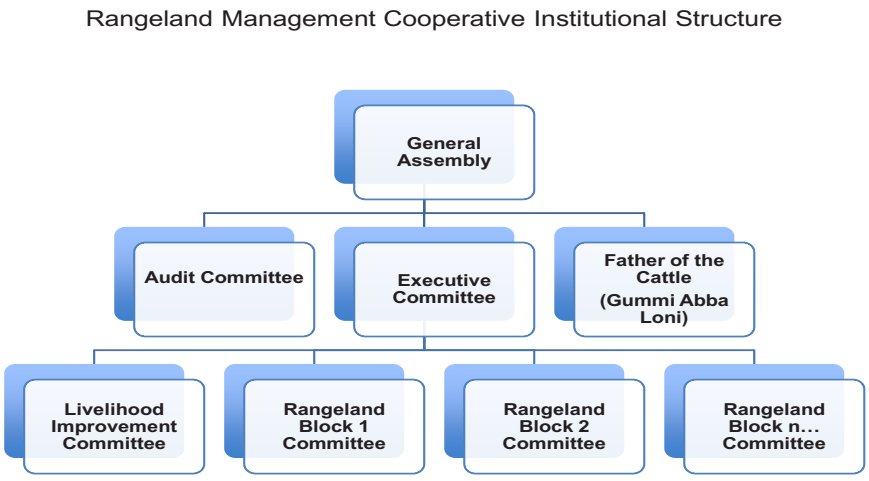
As suggested in the PRM Introductory Guidelines, Farm Africa and SOS Sahel undertook a detailed physical baseline in each block from which to measure the impacts of the project as well as to collect data that would feed into the rangeland management planning process. As such, they developed the PRRA (see Farm Africa and SOS Sahel Ethiopia 2014b). This PRRA was used to collect data on rangeland resources (vegetation, soils, water) and their quantity, distribution and condition. The process was developed so that both local government and the community could collect the data, and indeed, both were involved in this. ILRI repeated the data collection exercise in Bale as part of this review in order to assess the impact of PRM on the physical rangeland (see Section 5.0).

Establishment of RMCoops

RMCoops were established to manage the blocks[2]. Farm Africa and SOS Sahel have long experience with PFM in which it is common for cooperatives to be established for management and enterprise development. Therefore, they believed that cooperatives were the most appropriate unit for the rangeland management body, not least because of the potential ease in gaining legitimacy and support from the government (including establishment of an RMA) as the cooperative is a formally recognized legal body in Ethiopia. A cooperative can be formed by a group of community members, usually for developing a business or enterprise, which is registered with the zonal cooperative office. Rules and regulations guide the operation of the cooperative.

Farm Africa and SOS Sahel assisted community members to establish a RMCoop at the kebele level (see Figure 2.2). As can be seen, the RMCoop included an Audit and Executive Committee, as well as representatives from local customary institutions. A committee was also established for each rangeland block, together with a cross-cutting committee responsible for livelihood development.

Figure 2.3 Cooperative structure adopted during the PRM pilot program (Source: Farm Africa and SOS Sahel Ethiopia 2014a).



Gender, women and PRM

The project also had a strong emphasis on mainstreaming gender issues within PRM, promoting and practicing development initiatives that have equal involvement of and impact upon both men and women. From the pilot phase to upscaling, gender training was carried out to raise awareness on women's rights and equal opportunities for both men and women to be involved in activities. This increased the number of women involved in activities, though the number of women was still below that of men (see Table 2.1)

[2]This approach differed from that described in the PRM Introductory Guidelines in that it would work within government administrative boundaries rather than across them and would support cooperatives as the management body rather than customary institutions.

Table 2.1 Number (no.) of men and women participating in different PRM activities as supported by the piloting of PRM in Bale

Types of meeting/training	No. of male	No. of female	Total
Conducting introductory meeting	850	127	977
Training on concepts of PRM	109	20	129
No. of beneficiaries from community to community extension on PRM	1,010	298	1,308
Visit experience exchanges	31	2	33
PRRA training	70	14	84
Resource assessment field	65	11	76
Community training on RMP preparation	104	28	132

Source: Farm Africa and SOS Sahel 2013

Not only were women encouraged to participate in PRM institutions and activities, but they were also targeted with livelihood activities including incense and gum production and milk processing undertaken by three groups (total members 76 women). One of the groups of around 30 members in Meda kebele produced 1,000 kilograms of incense in 2017 and generated 30,000 Ethiopian Birr (around USD1,000) (Farm Africa and SOS Sahel 2018).

Results from PRM implementation on natural resources and livelihoods

Following the successful pilot, PRM was included in a regional project, SHARE, funded by the EU. This involved a consortium of partners with Farm Africa and SOS Sahel taking the lead for the PRM component. The project established PRM in eleven kebeles in three woredas covering 344,712 ha. As described above, RMCoops were established and registered. Altogether, the RMCoops had 3,060 members, of which around 30% were women. Rangeland management activities such as bush clearing and rehabilitation of water points was carried out across the area.

Table 2.2 No. of RMCoops by woreda and the rangeland area under management

Woreda	No. RMCoops	Area in ha	Registered members		
			Male	Female	Total
Dello Mena	4	272,939	1,007	255	1,262
Medda Wolabu	4	27,146	767	227	994
Berbere	3	44,627	402	402	804
Total	11	344,712	2,176	884	3,060

Source: Farm Africa and SOS Sahel ND

The key objective of the PRM interventions was to protect rangeland resources and reverse rangeland degradation. As part of this, Farm Africa supported investments in livestock husbandry based on the rationale that if livestock health was improved then there would not be a need for such large herds, while also improving local livelihoods. Smaller herds translate into less reliance upon forest resources. Interventions included supporting improvement of animal health facilities (see Box 2.1), building on interventions in the pilot stage which supported community members to purchase goats using loans, and forage development (in 90 HHs in 3 selected kebeles) to increase milk production. In addition, four ponds, each with an average capacity of 8,000 metres (3)[3] volume were constructed in four kebeles at Meda Welabu, Delo Mena and Berbere woredas. The water from the ponds is used for livestock and HH (Farm Africa and SOS Sahel ND).

A pastoralist forum was established at the zonal level. The members of the forum included government representatives from the kebele, woreda and zone together with local community members to discuss pastoralist issues, contribute to decision-making and address any conflicts (Farm Africa and SOS Sahel 2013).[3]

[3] The Centre for International Forestry Research (CIFOR) is currently undertaking a review of this multi-stakeholder platform.

Box 2.1 Support for animal health facilities

Twenty-five individuals were identified from eight kebeles in the three woredas and were provided with two rounds of theoretical and practical training as community animal health workers (CAHWs) by certified CAHW training from the Bale zone pastoralist development office. They were also given a veterinary start-up kit of necessary equipment and drugs. Once qualified, they were able to participate in a vaccination campaign and provide health services in their own kebele including treatment of parasites and wounds, vaccination and dehorning or hoof cutting. They were overseen by the woreda animal health technicians. Overall, it is estimated that they treated around 96,000 animals from approximately 3,550 HHs over the course of the project. In addition, Farm Africa provided veterinary equipment and medicine to the health posts, including drugs to respond to an outbreak of foot and mouth disease. Farm Africa also facilitated twenty-one Boran bulls brought from the Borana zone to use for breeding with local cattle to improve the stock, as well as introduced an artificial insemination (AI) program and pregnancy detection tests. This led to improved breeding practices and better-quality stock; 91 calves were born through the AI program and 60 as a result of the Boran bull introductions. Borana goats were also introduced.

A review of the SHARE project concluded that PRM improved the participation of local communities in the management of natural resources in the area, and benefit sharing including more secure access and income from alternative income generation activities, improvements in local livelihoods from increased productivity and economic returns of more sustainable rangeland management and conservation agriculture. In addition, the awareness of the need for management increased with heightened feelings of ownership and commitment of local communities for sustainable use and management of forest and biodiversity resources (Motuma et al. 2016).

2.2 PRIME/CARE and scaling up of PRM

Introduction

Learning from the experiences of the piloting of PRM by Farm Africa, SOS Sahel and others, PRIME, a five-year project working in Ethiopia's pastoral areas funded by USAID and implemented by a consortium led by Mercy Corps, sought to upscale the approach within their NRM component. Originally focused on Borana and the Afar region, PRIME also expanded the program to the Somali region. PRIME's NRM component was led by CARE Ethiopia.

PRIME's interventions were based on a set of principles including:

- Begin with what's there: customary institutions are an entry point;
- Communities evaluate, revise and legitimize their institutions;
- Communities define the scope of resources they use—boundaries are not prescribed.
- Close involvement of local government provides legitimacy and support to the process; and
- Process is specifically designed to support legitimization of both community institutions, and community agreements around land use and management.

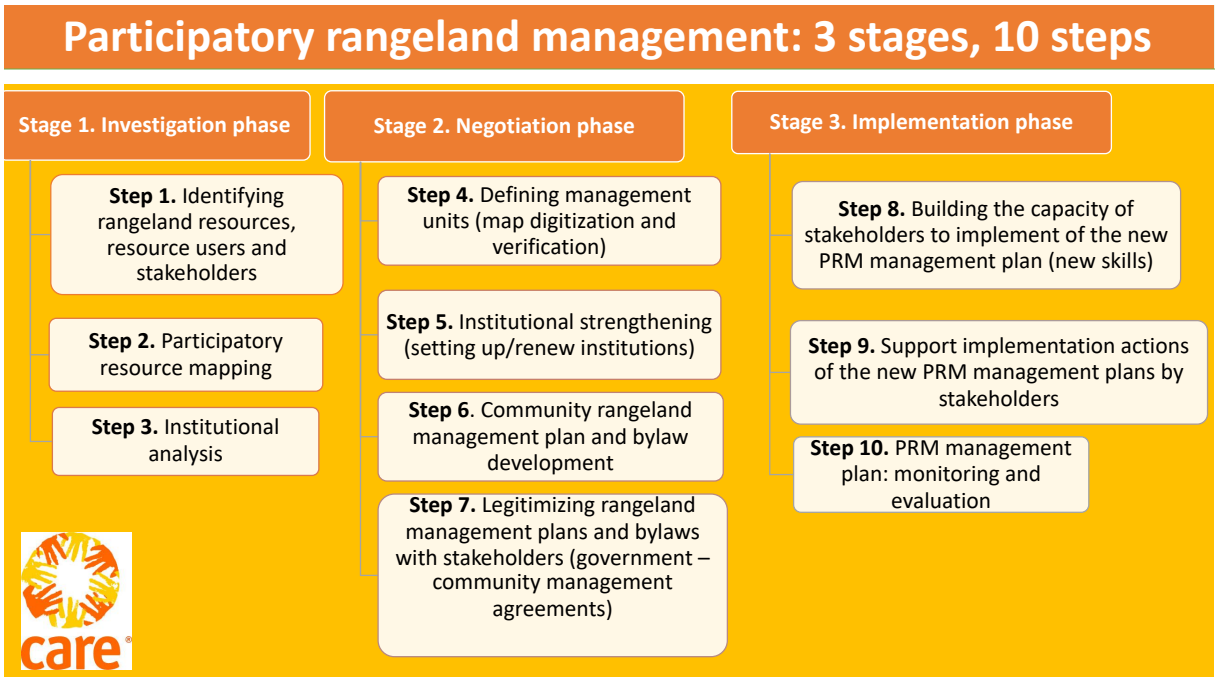
This was supported by an ecosystem approach of working using current pastoral land use practices to define the RMU. It also supported a multi-stakeholder approach working with community, governmental organizations and NGOs 'to address the multifaceted natural and human induced problems that are affecting the rangelands resources and the livelihoods of pastoral communities at large'. (PRIME undated-a). This was achieved by supporting multi-stakeholder dialogues on different issues and helping customary institutions to revitalize weakened systems of resource governance and increased intercommunity relationships. 'PRIME integrates both traditional knowledge and modern techniques in its approach.' (ibid)

PRIME aimed to work across 24 rangeland systems encompassing 8.8 million ha of land in the Afar, Somali and Oromia regions. Though PRIME did indeed map these areas, in many parts, this was as far as interventions went; further interventions were limited to a somewhat smaller area (see below). Over time, PRIME adapted the PRM approach, with a greater emphasis on the 'Negotiation stage' (see Figure 2.4).

Key steps in the PRM process: mapping

The mapping of the rangeland unit and rangeland resources remained a key early step in the PRM process, and CARE invested significant time and resources in this with the process taking almost two years to complete across the Borana zone. When possible, neighbouring communities carried out mapping next to each other to identify conflicting claims, which were then discussed, negotiated and agreed upon.

Figure 2.4 Stages of PRM as interpreted by PRIME



CARE took the approach of completing this step right across the Borana zone, before moving to the next. This meant that in those areas that were mapped first, there was a significant gap between the mapping activity and the next step(s). The maps are a significant output and resource from the project, though to date are not publicly accessible. More information on the mapping process is presented in the full research report and two mapping manuals produced by PRIME (https://www.prime-ethiopia.org/wp-content/uploads/2016/06/Mapping%20Guidelines_PRM.pdf and https://www.prime-ethiopia.org/wp-content/uploads/2016/06/PRM%20practitioner%27s%20guide.pdf).

Mapping was done at different levels including mapping of the whole Borena rangelands system, that was then verified by more detailed mapping in each grazing land system (see figures below).

Lessons learned from the mapping process included:

- Understand the social set-up before mapping is undertaken. For example, in some cases where youth challenge the authority of elders, this may cause problems in the mapping process and so discussions with elders may need to take place separately.
- Take into account the season and timing of the mapping in order not to take people away from their work at busy times of the year and/or day. Mapping may need to be done in the evening.

- Mapping itself can raise tensions and even conflicts between participants and particularly where there are different groups of users and/or clans or ethnicities. There may also be a perception that the project and facilitators have some ulterior motive for undertaking the mapping like taking away land. In areas where administrative boundaries such as between regions or woredas are not clearly defined, mention of these can raise conflicts.
- Staff and facilitators need to be well trained and prepared to clarify complex issues, as well as know about the culture and context.

Figure 2.5 Hand-drawn map of the Borena rangelands system

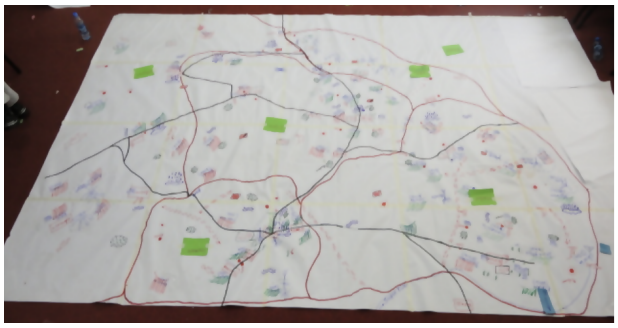


Figure 2.6 Digitized map of the Borena rangelands system

Figure 2.7 Dirre rangelands system, Oromia, showing the smaller 'reera' grazing units

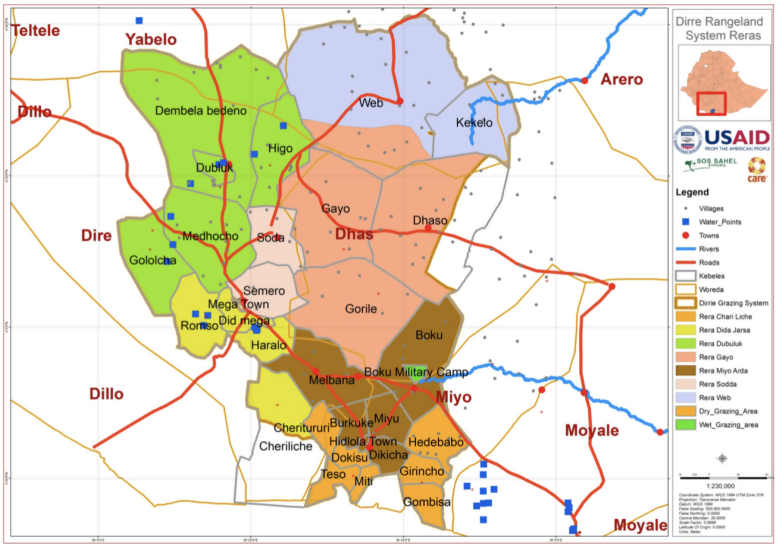
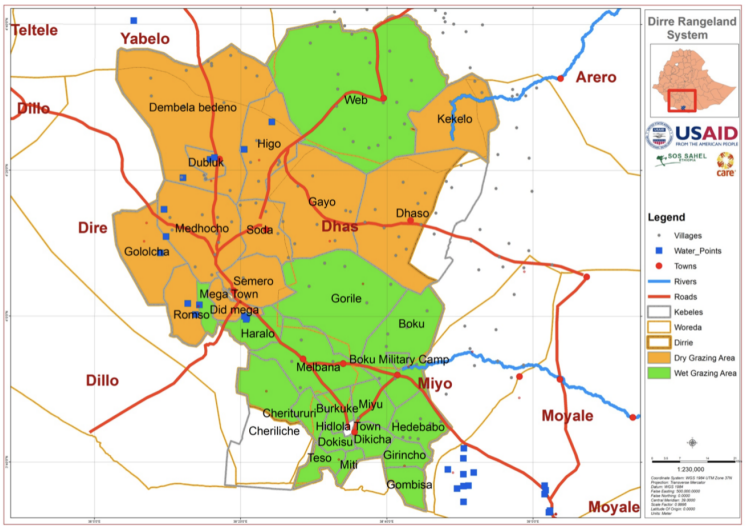


Figure 2.8 Dirre rangelands system, Oromia, showing major wet and dry season grazing areas



Following the PRM steps (as above) and seeking to strengthen customary institutions at the same time, the management entry point for the PRM process were current land use units (namely, grazing areas) rather than administrative units such as kebele. The project also supported the development or strengthening of rangeland management institutions and communities to develop plans and agreements. Rangeland management councils (RMCs) were established at the RMU level following customary governance structures but expanded in order to establish a more representative multi-stakeholder group.

Key steps in the PRM process: institutional analysis

PRIME also undertook a number of other participatory tools in what they called a process of 'system profiling'. Of secondary importance to the mapping was the institution and stakeholder analysis including primary and secondary (and tertiary) users, 'external' actors and other stakeholders. An analysis of their roles, responsibilities, revenue (benefits) and relationships (4Rs) as well as their capacities, was carried out. Previously, the stakeholder analysis was performed later in the process, but it was moved to directly after the mapping so that stakeholders could be involved earlier in the PRM process and their capacity built based on gaps identified. The institutional analysis was also an opportunity for reviewing gender dynamics.

Though the information collected is of interest and use to others working in these areas, there has been no systematic sharing of the profiles or maps. A copy of the RMP was left with local government on signature but collected background information has not been shared. Further, PRIME did not establish any database of the information, for example, at the national level, which might be of interest to various levels of government. Further, the PRIME website does not have up-to-date information on the project, its achievements or the data and maps that it collected and/or produced.

Other tools included understanding local livelihoods, mapping of livestock routes, understanding access and decision-making through creating a profile, an analysis of resource trends and condition of resource areas in the grazing system, seasonal calendars and vision mapping (i.e. for the future and to make improvements).

In order to facilitate input from women as well as men, it was common for separate sessions to be held, one for men and one for women, and then the two presented back to both groups and combined in a report. In the early project sites, participants were split into groups to focus on different tools and activities in parallel. However, it was decided that it worked better if all participants participated in all tools and activities and the same group participates all the way through the steps (Awgichew personal communication 2016).

Key steps in the PRM process: defining management units

The map produced through the mapping exercise formed the basis for defining the RMU. Once a map was digitized it was returned to the community for verification and adjustments made. Ground truthing was done if thought necessary. Often, a rangeland unit would flow across two or three woredas; if this was the case, then all woreda governments (or all those that had substantial parts in the rangeland unit) would be represented in discussions and development of PRM, as well as being part of the RMA. In order to work with more manageable units, the rangeland systems were divided into subrangeland systems—again based on traditional use. In the Somali region, defining the RMU was particularly challenging as often these areas could be very large, with one clan or group controlling several units. As such, it took time to reach an agreement.

PRIME did not undertake a PRRA even though this was recommended in the Introductory Guidelines. Without this, it was not possible to measure the impact of any physical changes caused by the project, and also meant that there was a lack of scientific data (collected by communities) feeding into the RMP.

Key steps in the PRM process: institutional strengthening

Step 4 in PRIME's PRM is 'Institutional Strengthening'. As above, PRIME's approach was to 'begin with what exists'. That is, customary institutions in the traditional rangeland management system are the entry points. In all cases where the PRM process was followed, rangeland councils (RCs) were established in order to provide oversight to the development of the RMP and its implementation. Council members were nominated and voted by community members based on their experience as customary rangeland managers. In addition, PRIME introduced inclusion criteria in order to ensure representation of youth and women, the latter being 25% of the RCs (Irwin personal communication 2019).

At the core of the RCs are customary leaders. In Afar, this tended to be clan leaders, whereas in Borana, Oromia, they were the traditional rangelands managers including the Aba dheeda among others. In Borana, additional members were drawn from the lowest customary land management level, olla (three people from each olla, usually an elder, a kebele officer, and a woman) of which there are about six in each reera. With 6–10 reera in a dheeda (the largest RMU) it resulted in around 180 local community members in the RC. As such, PRM greatly relied upon the legitimacy and the effectiveness of the customary institutions, and the assumption was that this adequately represented the interests of the wider community. PRIME also strongly relied upon the traditional communication systems to raise awareness on PRM and did not organize separate local community or rangeland user meetings.

Beyond community members, make-up of the RCs reflected the challenges and/or needs of the local communities. In some cases in Borana, RCs included government representatives, namely kebele chairmen, because community leaders felt that if their actions and activities were to receive support (and some legitimacy) from government, then it was important to have government there as one of the decision-makers. It also provided an opportunity to synergize government and customary systems. The kebele chairman provided legal and official support which contributed to the enforcement of the RMP, for example, stopping encroachment of farming lands in the grazing areas. In the Somali region, a new institution as a rangeland management body needed to be set up that would cut across clan boundaries. Institutions that existed in the past to play this role were not currently functioning or functioning effectively.

In Afar, communities decided against clan leaders being part of the RC to avoid favouritism and/or the opportunity of a clan leader to take advantage of his position. Instead, some chose to include the woreda natural resource expert as an RC member, serving as secretary. In Afar, a government rangeland management expert is part of the RC, namely pastoralist development officers and/or land administration officers. In the Somali region, there are also subgrazing unit committees.

Local security forces/police are also included in the RC in Borana to ensure that decisions are implemented. Though this was criticized by some external actors, communities argued that having security forces/police on the RC was enabling and they were needed to sustain PRM. Commitments of RC leaders to take up roles and responsibilities varied. RC members were not paid for their time, but their travel expenses and a per diem were covered by PRIME.

Key steps in the PRM process: RMP and by-law development

The next step in the PRM process for PRIME was to develop an RMP. PRIME facilitated this process through a series of consultations and discussions over several months and in some cases years, working with community members to jointly identify, analyse and prioritize problems in the rangelands, and proposed management actions. The RC led the process.

The development of the plan included creating and strengthening a common vision including a 'vision map' for the rangelands amongst stakeholders which was considered vital if a conducive environment for effective management of the rangelands and its resources was to be achieved. Further, the process of developing a common vision helps to link stakeholders and build consensus and solidarity between them as a strong basis for developing the RMP. There may be a need to spend time improving understanding of the rangelands, identifying different interests, positions and needs, and negotiating commonalities.

Plans were relatively short-term—for a period of five years—but with the understanding that they would then be revised and/or further developed. Thinking in terms of a twenty-five-year vision was encouraged.

An RMP included the following:

- A description of the grazing unit including major features, resources, such as livestock routes, problems and challenges, and a set of maps (drawn from the community drawn maps and maps of administrative boundaries);
- Objectives (see below);
- Management actions (see below);
- By-laws for compliance and enforcement of actions; and
- M&E.

An overall objective for the RMP was common across all RMPs i.e. 'to provide management guidance for improved utilisation of pastureland, water, and other rangeland resources for sustainable pastoralist livelihoods.' Specific objectives were developed for each rangeland area. Proposed actions included addressing challenges, which were then discussed and agreed upon between the stakeholders. These actions formed the basis of by-laws for compliance and enforcement (building on already established local by-laws, and customary rules and regulations). The by-laws remain rather broad in nature allowing some flexibility in interpretation and as such, in enforcement; there are both advantages and disadvantages of this (Irwin personal communication 2019). Planning encompassed future scenarios including taking account of climatic risks.

RMPs were not translated into local languages, but action plans were. A copy was shared with RCs and the woreda. There was no formal or structured consultation process implemented down to local levels; rather, it was anticipated that dissemination of the plan would happen through traditional communication processes such as dagu in Afar. Any feedback was considered and if agreed upon, incorporated. It was anticipated that the RMPs would be integrated into woreda development plans.

Sixteen grazing systems established an RMP for a total of 5.56 million ha, though the PRIME target was 8.6 million ha. This included approximately 4.2 million ha in Borana/Guji, 930,000 ha in Afar, and 330,000 ha in the Somali region (Abera 2018). This area includes towns, other residential locations and villagers, crop area, roads etc. (Dafa Gudina personal communication 2018). Therefore, the area being used for grazing purposes is considerably less than this.

Key steps in the PRM process: legitimizing RMPs, RMAs and by-laws

Legitimizing and/or endorsing RMPs is an important next step if PRM is to be sustainable. A key process in this regard is having the close involvement of and/or working with government institutions. In Oromia, for example, formal institutional relationships were established at zonal and regional levels through Oromia Pastoral Advisory Committees.

The RMPs were formally endorsed by relevant government departments/offices and council members at a signing ceremony. Seventeen plans were endorsed (signed) (Gudina 2018). Copies of the plans were provided to all signatories. More detailed action plans were then developed at lower levels including timelines, days to be worked, manpower allocation, mobilization of materials and other resources.

RMA

RMAs were developed once the RMP had been approved. The RMA was between what was called the 'Participatory customary institution of the relevant rangeland system' of the community of the relevant region (later clarified to be the RC , PRIME—Mercy Corps, CARE and/or the local implementing NGO, and a list of woreda level offices including environment, land use and administration, pastoral areas development, agriculture development, water, minerals and energy, and justice—with 5–6 offices involved in each RMP.

The RC took responsibility for developing and agreeing to the RMA (with PRIME facilitation), represented by important elders and government officers. The RMAs were not systematically shared with local rangelands users; rangeland users relied on their views being represented by RCs. Information sharing occurred through traditional communication channels.

The RMA was signed in the form of a memo of understanding (MOU) between the main government offices (e.g. Pastoral Areas Development Office and/or Land Administration and Use office or similar) responsible for pastoral areas in the woreda and the RC (represented by the head). If a substantial portion of a rangeland system or unit cut across two or three woredas, all of these woredas would be part of the RMA.

The RMA confirms that management of the rangeland should be carried out jointly between 'the community' (represented by the RC) and the relevant woreda government. That is, government still maintains a strong degree of control in decision-making processes. The main advantage to the community is that their use is formalized or 'legitimized,' which offers them a greater degree of protection for their use rights than previously experienced, as well as possibilities to access technical and potentially financial support from the woreda government and other actors. The agreement does not, however, give the communities the full rights to access and manage their lands. The MOU focuses on the direct and indirect community benefits that is derived from management and utilization of resources.

Key steps in the PRM process: building the capacity of stakeholders to implement the management plan

As the PRM process developed, PRIME increasingly recognized the importance of investing in building and strengthening an enabling environment. Activities included supporting the establishment of a Rangeland Management Platform led by the Ministry of Livestock which included sessions on PRM and the problem of Prosopis juliflora invasion, leading to the national strategy on the latter. In addition, PRIME worked with another USAID-funded project called Land Administration to Nurture Development which piloted a communal land tenure system for pastoralist areas. However, little attempt was made to influence the development of a policy and legislation to support PRM either at federal or regional levels, an important component of PRM upscaling that is still missing.

Neither the community nor the government provided any funds for the implementation of PRM beyond their in-kind contributions, but rather relied solely on PRIME to cover all costs. Though this is understandable in terms of piloting and implementing a relatively new process and set of activities, it does limit the sustainability of PRM and perhaps compromises community and government buy-in and commitment. Further, the implementation of RMPs would have been made more effective if they were incorporated into local government development plans as intended.

Once the RMP had been developed and agreement reached, roles and responsibilities for implementation of the plan were confirmed. Managers of the rangelands were identified and their roles and responsibilities discussed and agreed upon. Throughout the PRM process, the capacity of communities, government and other stakeholders was being built through training, joint problem solving and exposure to new ideas and innovations.

Key steps in the PRM process: implementation actions of the new RMPs

Though PRIME had limited funds to support the implementation of the new RMPs, it was agreed that certain activities could be given some support if communities also made contributions. PRIME discussed with the communities what activities should be prioritized with the RMP as guidance. Support included training in bush clearing, the provision of hand tools at reera level and coordinating government offices for provision of technical input (for more details see Figures 2.9 and 2.10). It was expected that communities provide their labour for free for activities such as bush clearing and in the majority of cases, communities were happy to do so. Refreshments/lunch were provided.

Figure 2.9 Map of activities supported by PRIME through RMPs in 2017

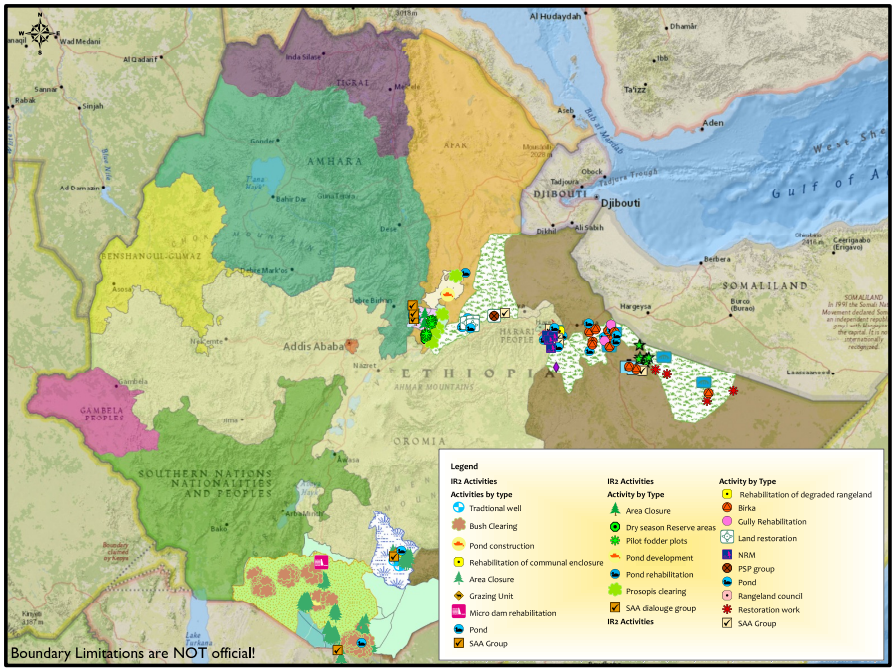
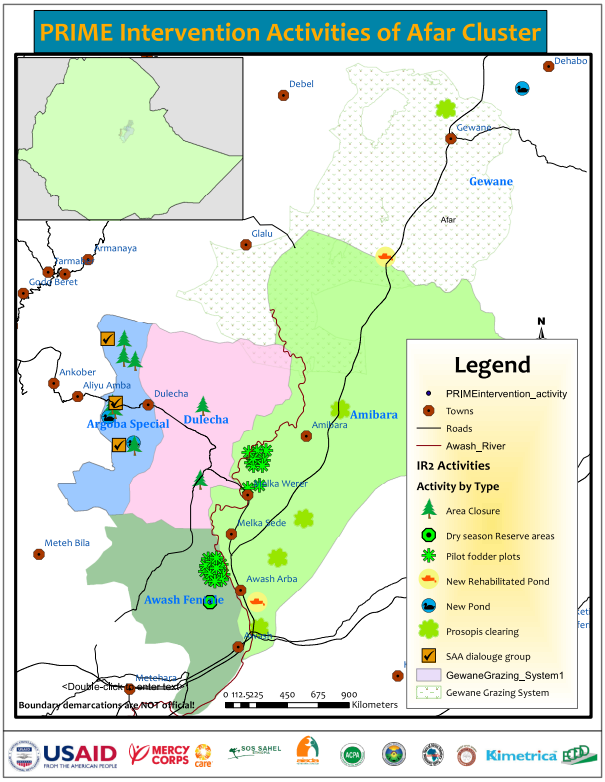


Figure 2.10 PRIME-supported interventions through RMPs in Afar



Two activities that worked particularly well in terms of uptake was the rehabilitation of water points (wells, ponds etc.), and enhancement of dry season pasture, both of which required minimal investments (including minimal/no paid incentives) from PRIME (Awgichew personal communication 2016). On the other hand, bush clearing proved to be more problematic than expected because communities proved unwilling to invest their time and labour to do this without paid incentives because of the history of other NGOs and/or government providing payment. Indeed, ensuring resource mobilization from communities is an important part of the implementation of the RMPs. It is anticipated that management actions after the PRIME project has finished will be coordinated by RCs normally led by the Abba dheeda and woreda sector offices, with relevant reera leaders taking responsibility for activities in their jurisdiction. However, it is likely that problems will arise in mobilizing the communities.

Key steps in the PRM process: M&E

It was anticipated that M&E of plans would commence with the collection of range monitoring baseline data prior to implementation; however, no baselines were carried out by CARE. It was anticipated that this would be coordinated by the Pastoral Development Office; but given that PRIME's objectives were not clearly focused on improving rangeland productivity as livelihoods, the baselines were not considered a priority. This was unfortunate, as the baseline data could then have been used to generate indicators from which changes over time could be measured.

PRIME did work closely with the United States Forest Service (USFS) to implement rangeland health monitoring and range condition mapping, including the informing of future rangeland management planning, land classification and tenure. Using the manual on rangeland health produced by Riginos and Herrick (2010), 149 plots (some treatment, some control) were used to measure the impact of PRM activities (such as establishment of exclosures or treatment of invasive species) on vegetation change. Results showed that sites excluded from grazing (area exclosures) had higher site stability, less bare ground, more basal vegetation cover and greater perennial grass cover—hardly surprising results and it was a missed opportunity that CARE did not invest in more detailed monitoring of impacts.

Challenges and constraints

A number of challenges and constraints in the PRM implementation were noted by PRIME staff. There remain encroachments, in many cases increasing encroachments, on pasture lands by farmlands, private enclosures and settlements, not least due to a continued lack of clear land tenure security. In some parts, this is coupled with increasing competition over resources and territorial tension and conflicts between neighbouring ethnic groups (Gudina 2018). Government plans for commercial farms and investments are not readily available or shared, and thus it makes planning with communities for rangeland management difficult, particularly in the long term.

Competing institutions remain on resource governance (customary institutions, formal government structure—kebele) (PRIME undated-a), different interests (e.g. commercial land investments or state farms) (Abera 2018), and a lack of recognition for RCs as an NRM governance body. The establishment of a management group for new water points is particularly challenging. It has proven difficult to sustain RC meetings at the grazing system level, and poor transportation and communication between heads of system-level RCs and subrangeland-level RCs exist.

Implementation and enforcement of RMPs including restriction of resource use is another key challenge; though communities are happy to make/write plans, actually changing behaviour to implement those plans is much more difficult to achieve (Irwin personal communication 2019). The size of the RMU is very large making management and monitoring of impact challenging, as well as requiring several layers of meetings to link the upper level of governance with actual rangeland users. This can be politically challenging too as RMUs may not match administrative boundaries (Gudina 2018). There is a lack of legal enforcement at the local level not least due to the weak capacity of the customary institutions to enforce their decisions as well as a failure of government offices as a partner in the RMP to commit resources pledged, and low financial capacity of RCs to implement activities including on a cost-sharing arrangement. This is not helped by high government staff turnover and lack of coordination within and among government sectors (Gudina 2018).

At higher levels, there has been a lack of attention to improving an enabling political environment for PRM. Government has failed to mainstream PRM including at the local level where local government is not using the RMPs within their own NRM or development planning. RMPs have not been well disseminated and shared, and thus when a new project starts in the rangeland area, it is more often the case that a new plan will be developed with the same communities that PRIME has worked with. Further, sometimes NRM approaches supported by other NGOs are in direct conflict with PRIME's approach in intervention areas; there is no joint platform bringing all actors—including government—together to agree and harmonize approaches.

Discussion and conclusions: PRIME

The implementation of PRM by PRIME has clearly contributed to an improvement in management and governance of rangelands in terms of structures, presence and engagement with multi-stakeholders (evidence can also be found in the sections below). This has been an important step in the context of addressing the lack of rangeland management and an increasing number of multiple stakeholders and interests. However, questions arise about the legitimacy of decision-making by a few 'elite' customary leaders (as members of the RC) who are at a distance from the majority of the population in these areas. Further, the investment in PRM is high with PRIME investing approximately USD1.8 million in direct costs in the PRM process and establishment and capacity building of RMCs, plus approximately USD1 million in staff time and travel costs over the five years. When divided by the 19 RMCs/plans supported this equates to around USD147,000 each (Ben Irwin, personal communication 2019).

PRIME-generated documents state that 'customary institutions are weakening' and 'Aba dheedas are less effective in general'. The documents also highlight the need for traditional governance institutions such as the Gadaa to address issues of gender and youth representation as well as power sharing and rebuilding and sustaining interethnic relationships. As such, it appears that PRIME still remains undecided about the place of customary institutions in the governance of the rangelands, the degree of authority that they should have and their relationship with other stakeholders including government.

Another key thrust of PRM and the RMPs was to halt the trend of land and other resources privatization while re-instilling communal and collective practices regarding decision-making processes and rangelands management, which it was anticipated would lead to securing of collective rights. For example, actions such as the removal of private fences and private enclosures and the banning of farming plots in rangelands were positively encouraged, and communal dry season grazing reserves were set up. Further, water infrastructure development was based on facilitating grazing and mobility, not to limit it. In addition, a number of RMPs included 'correcting settlement locations' as an action (see for example Dirre RMP), which involves voluntarily relocating settlements from inside to outside of grazing areas. In Dirre, there are 45 villages in the grazing areas, which should be moved according to the management plans. Meanwhile, the RC with the woreda Land Use, Land Administration and Environment office will monitor the rangelands to make sure no more villages are established there.

A second key underlying objective was to improve community buy-in and ownership over the process of rangeland management and for government to support (and ultimately legitimize) this. Some community consultation processes were carried out during RMP development; however, this was not well structured and relied upon local communication processes to spread the word. Customary institutions were a starting point for engagement on PRM, and their roles and responsibilities were built up through the RC, while addressing skills gaps and inclusiveness issues (Abera 2018). As much as possible, traditional rights were upheld, and any changes to behaviour such as settlement relocations identified in the plan were considered voluntary. An important factor for keeping communities engaged in and committed to the process was PRIME contributing some resources to begin implementation of the plan, so that communities could start to see results. It was also vital, of course, to get government buy-in and support for the plan, and as described above, a number of steps were taken that contributed to this. As mentioned above, government did not contribute any direct funds to the process and only made in-kind contributions such as staff effort. This meant a high investment from PRIME which was considered worthwhile to ensure government support.

A third underlying objective of PRM has always been to improve security of local community rights to their land and resources. As it is, the PRM process includes the establishment of a MOU between local (woreda) offices and the RC to jointly manage the RMU. Multi-stakeholder inclusive management worked through building consensus, awareness and understanding of the natural resource base and how it could be sustainably managed (Abera 2018). As such, this is not an agreement that gives the community full access and use rights to their lands, but rather government still maintains a strong degree of control in decision-making processes, management activities and compliance or enforcement. As suggested above, a key advantage of PRM to the community is that their use is formalized or 'legitimized,' which offers them a greater degree of protection of their use rights than previously experienced, as well as possibilities to access technical and potentially financial support from woreda government and other actors. However, is this enough? And is this application of PRM compromising the ability of rangeland users to achieve a higher level of tenure security to which some would argue they have as much right to as other individual/private land users e.g. through a communal land tenure holding registration or certification? By aiming for the lower-hanging fruit of PRM with its 'agreements', is the opportunity for a higher degree of security being missed?

PRM has been a key building block for the provision of communal 'landholding' certificates, now provided to three different RCs covering the RMUs. However, these certificates do not define 'ownership' as some PRIME documents declare (see PRIME undated), but rather are a formalizing of the use rights that communities previously held. It is not yet clear how such rights will hold out in a situation where, for example, land is required by government for a public project or investment, nor whether the RC is indeed an appropriate and effective governance body that has the full support of all rangeland users.

Poor land use and development planning were identified as constraining factors and challenges in PRM (e.g. in relation to the work of Save the Children USA/PNRM/PLI) (PRIME 2014). However, PRIME made limited progress in getting RMPs taken up by woreda development offices and integrated into woreda development or wider land use plans. As such, RMPs remain detached from woreda development plans and their implementation is unlikely to receive either technical or financial support from the woreda office/budget. Further, they remain a rangeland intervention and are not linked to wider issues such as disaster risk management (DRM), livestock management, service delivery etc.

Mapping is a key step in the participatory rangeland management process (photo credit: Save the Children/Kelley Lynch)

3. ANALYSIS OF PRM INTERVENTIONS: RESULTS OF HH SURVEY[4]

3.1 Overall sustainability of PRM

In order to understand the impact of PRM on communities and perceptions of impacts on the physical environment, during 2017–18, a HH survey was conducted in the treatment kebele about decision-making processes, participation of communities in the process and activities, degrees of satisfaction, and impacts. In all, 40 HHs were interviewed in each treatment kebele with female-headed HHs making up around 20% of the respondents.

Across the kebele where PRM had taken place, a clear majority of all respondents interviewed said that they had heard of the initiative; however, in some kebeles, a much smaller number said that they had participated in a PRM intervention, planning or activities. Only those that answered positively to this second question continued with the rest of the survey, and those who answered 'No, they did not participate in any PRM intervention, planning or activity' were filtered out. In Mugayo kebele, Borana, where Save the Children USA worked some years back supporting PRM, no respondents indicated that they had participated in PRM, so all HH were excluded from the rest of the survey. In Siminto Korati, where PRIME built upon the previous work of Save the Children USA, there was only one respondent who answered positively regarding PRM participation; 13 respondents completed the entire survey in Harowayu. There was also a smaller percentage of women answering positively regarding PRM participation. In Borana-Guji, only a few completed the entire survey, mainly men. In Afar and Bale, there were a much greater number of positive responses regarding PRM participation including from women, particularly in the Bale zone where Farm Africa has been supporting PRM to the present through the EU-funded SHARE project; 37 HH completed the survey in the Berak kebele. This indicates that the PRM approach taken by Farm Africa had greater long-term sustainability in terms of activities on the ground than the interventions of Save the Children USA.

In order to discern the reasons for the small number of positive responses in Borana-Guji, Mugayo and Siminto, follow up KIIs were carried out with informants who were working or had worked on the PRM projects and/or with members of what were or had been the RMC. It was found that in Mugayo, there had been frequent conflicts over land use (water, grazing and cultivation) within the woreda and with the neighbouring woreda and region (Somali region). This is an ongoing conflict stirred up by lack of clarity and at times enforcement of what has been, until recently, a changing administrative boundary between the two regions. In addition, members of what had been the RMC said that the PRM that Save the Children USA established had not worked well from the beginning and had gradually weakened. Once Save the Children USA left the kebele, conflict arose between Save the Children USA and other NGOs on the ownership of the work done (RMC in Siminto personal communication).

[4] A selected number of graphs and tables have been included here; the full set of graphs and tables can be found in the full research report.

Table 3.1 Response to the question: Have you heard of the initiative/project or intervention called Participatory Rangelands Management (PRM)? (no. and per cent)

Kebele	Responses	Sex of the HH head		Total
		Male	Female	
Bale zone, Oromia region				
Berak	Yes	29 (93.5)	7 (77.8)	36 (90)
	No	2 (6.5)	2 (22.2)	4 (10)
Naniga Dera	Yes	36 (94.7)	2 (100)	38 (95)
	No	2 (5.3)	0 (0)	2 (5)
Hara Haji	Yes	28 (100)	12 (100)	40 (100)
Borana and Guji zones, Oromia region				
Harowayu	Yes	30 (100)	9 (90)	39 (97.5)
	No	0 (0)	1 (10)	1 (2.5)
Mugayo	Yes	30 (100)	10 (100)	40 (100)
Siminto Korati	Yes	30 (96.8)	9 (100)	39 (97.5)
	No	1 (3.2)	0 (0)	1 (2.5)
Afar region				
Kurkura	Yes	28 (93.3)	10 (100)	38 (95)
	No	2 (6.3)	0 (0)	2 (5)
Tachemetekleye	Yes	30 (100)	9 (90)	39 (97.5)
	No	0 (0)	1 (10)	1 (2.5)
Halidege	Yes	30 (100)	10 (100)	40 (100)
	No	2 (6.7)	0 (0)	2 (5)

Table 3.2 Have you participated in any PRM intervention, planning and activities? (no. and per cent)

Kebele		Sex of the HH head		Total
		Male	Female	
Berak	Yes	20 (69)	2 (28.6)	22 (61.1)
	No	9 (31)	5 (71.4)	14 (38.9)
Naniga Dera	Yes	28 (77.8)	0 (0)	28 (73.7)
	No	8 (22.2)	2 (100)	10 (26.3)
Hara Haji	Yes	26 (92.9)	11(91.7)	37 (92.5)
	No	2 (7.1)	1(8.3)	3 (7.5)
Harowayu	Yes	12 (40)	1 (11.1)	13 (33.3)
	No	18 (60)	8 (88.9)	26 (66.7)
Mugayo	No	30 (100)	10 (100)	40 (100)
Siminto Korati	Yes	0 (0)	1(11.1)	1(2.6)
	No	30 (100)	8 (88.9)	38 (97.4)
Tachemetekleye	Yes	21(70)	6 (66.7)	27 (69.2)
	No	9 (30)	3 (33.3)	12 (30.8)
Halidege	Yes	17 (56.7)	8 (80)	25 (62.5)
	No	13 (43.3)	2 (20)	15 (37.5)
Kurkura	Yes	14 (50)	6 (60)	20 (52.6)
	No	14 (50)	4 (40)	18 (47.4)

In Siminto, where PRIME has been working more recently, interviewers were told by project representatives that in Oromia, PRIME had intensely focused on the landscape or rangeland-level interventions and activities i.e. at the 'dheeda' level, rather than physical activities on the ground. Project staff in Liben and Yabello woredas said that the

main activities undertaken were the identification of resources and resource institutions through resource mapping, community gatherings over several months for dialogue on the PRM process, planning and strengthening of resource governance, development of community action plans and some limited practical interventions including fencing of exclosures and water point rehabilitation. It was further suggested that as the RMC is formed at dheeda level, which includes up to six woredas, local communities in each kebele may not know about or participated in PRM—seemingly the case here as indicated by the HH survey answers regarding knowledge of PRM. This approach taken by PRIME of focusing interventions and support at the landscape level and seeming disconnect with the local level including practical activities on the ground is discussed further below.

When asked if activities are still ongoing, the response was more encouraging in Oromia than in Afar. In Bale zone, Oromia, where Farm Africa has been supporting activities, the clear majority of respondents in all three kebele said that activities were still ongoing. In Borana-Guji there was a more mixed response; in Mugayo kebele where PRM interventions were piloted five years ago, there were no positive responses. In Harawayu kebele, where PRIME has been supporting PRM, there was a 100% positive response from those that said they were involved in PRM activities (n=13). In Siminto, however, where PRIME should have been implementing PRM (building on the work of Save the Children USA) only one respondent said that the interventions were continuing. In Afar, where Farm Africa and PRIME had been working, across all kebeles the positive response was low—only 12 positive responses compared to 60 negative. Where responses were negative, reasons given included disagreement in the management or governance organization (Kurkura), project or funding finished (Kurkura, Halidege, Tachemetekleye) and because there was drought in a few cases.

Table 3.3 Are these activities still ongoing? (no. and per cent)

Kebele	Responses	Sex of the HH head		Total
		Male	Female	
Berak	Yes	18 (90)	2 (100)	20 (90.9)
	No	2 (10)	0 (0)	2 (9.1)
Naniga Dera	Yes	25 (89.3)		25 (89.3)
	No	3 (10.7)		3 (10.7)
Hara Haji	Yes	26 (100)	11 (100)	37 (100)
Harowayu	Yes	12 (100)	1 (100)	13 (100)
Siminto Korati	Yes	0 (0)	1 (100)	1 (100)
Tachemetekleye	Yes	2 (9.5)	0 (0)	2 (7.4)
	No	19 (90.5)	6 (100)	25 (92.6)
Halidege	Yes	5 (29.4)	4 (50)	9 (36)
	No	12 (70.6)	4 (50)	16 (64)
Kurkura	Yes	1 (7.1)	0 (0)	1 (5)
	No	13 (92.9)	6 (100)	19 (95)

3.2 Governing body and institutions

A key step in the PRM process is the establishment or strengthening of a rangeland management body, committee or institution. In some parts of Ethiopia, customary institutions remain strong and as such, they are the starting point. However, in other areas of Ethiopia, these organizations have weakened or given that a greater mix of stakeholders are now involved in rangeland management, may not be considered to be appropriate for the role of implementing PRM in their current state. In this case, it may be considered appropriate to assist communities and other stakeholders to set up a new management body.

As described in Section 2.0, NGOs supported different governance structures and bodies when implementing PRM. Farm Africa and SOS Sahel supported the establishment of cooperatives and a RMC at kebele level, and PRIME strengthened customary institutions and established a higher level (traditional rangeland unit) multi-stakeholder RMC.

Across all kebeles (excluding Siminto and Mugadayo in Borana/Guji), the majority of respondents said that the governance body established (or strengthened) could be best described as being 'based on customary institutions and decision-making procedures'. Between 6–20% responded that it could be better described as a mix of customary and new institutions, with the highest numbers of these in the Afar region. Here too were found the most responses that the governance body did not include customary institutions.

When communities were given a list of options to describe the way that the committee/body organization had been established, the clear majority said that it had been established either by 'consensus of all community members' or by 'majority vote of community members'. In some cases, it was said that the project/NGO set up the body and one or two respondents said 'government'. This highlights the fact that communities were at the forefront of the establishment of the governing body, particularly in the Oromia region where traditional institutions remain relatively strong. Similar results were found for the question, 'Which best describes the body/organization?' where again in Oromia the majority of answers were 'based on customary institutions' while in Afar it was more mixed.

Additional questions considering the level of participation in PRM processes and decision-making including who was involved in decisions about membership in the government body also showed that participation in PRM in Oromia and more specifically in the Bale zone was higher than in other areas. Additionally, when participants were asked if they held a position in the governing body, between 89–96% of respondents in Bale said that they were a member or a leader. Nine respondents stated this in Afar.

Table 3.4 Were you involved in the decision about who should be a member of the participatory rangeland management governing body? (no. and per cent)

Kebele	Responses	Sex of the HH head		Total
		Male	Female	
Berak	Yes	17 (85)	2 (100)	19 (86.4)
	No	3 (15)	0 (0)	3 (13.6)
Naniga Dera	Yes	26 (92.9)		26 (92.9)
	No	2 (7.1)		2 (7.1)
Hara Haji	Yes	25 (96.2)	9 (81.8)	34 (91.9)
	No	1 (3.8)	2 (18.2)	3 (8.1)
Harowayu	Yes	6 (50)	1 (100)	7 (53.8)
	No	6 (50)	0 (0)	6 (46.2)
Siminto Korati	Yes		1 (100)	1 (100)
Tachemetekleye	Yes	5 (23.8)	0 (0)	5 (18.5)
	No	16 (76.2)	6 (100)	22 (81.5)
Halidege	Yes	3 (17.6)	0 (0)	3 (12)
	No	14 (82.4)	8 (100)	22 (88)
Kurkura	Yes	3 (21.4)	1 (16.7)	4 (20)
	No	11 (78.6)	5 (83.3)	16 (80)

Concerning satisfaction of the governing body/organization, the majority of respondents said that they were either 'very satisfied' or 'satisfied'. Respondents were asked how they described the authority and governance powers of the rangeland units' governance structures and processes. In Bale zone and Harawayu, Borana-Guji, the majority of respondents (63–89%) said that the governance unit has 'full governance and management powers'. However, in Afar, only 30–40% said this while a greater number said that the governance body has 'a framework-setting mandate but little authority for actual management'. An additional 11–16% said that the body has 'only an advisory/coordination function' as did 18% in Berak Bale and 3.6% in Naniga Dera. This suggests that in Oromia, the governance body has greater authority than in Afar. In the absence of community management, it is commonly the government that steps in and makes decisions.

Table 3.5 What position do you or did you hold in this body/organization? (no. and per cent)

Kebele	Positions	Male	Female	Total
Berak	member	19 (95)	2 (100)	21 (95.5)
	no position	1 (5)	0 (0)	1 (4.5)
Naniga Dera	member	25 (89.3)		25 (89.3)
	no position	3 (10.7)		3 (10.7)
Hara Haji	leader	1 (3.8)	1 (9.1)	2 (5.4)
	member	25 (96.2)	10 (90.9)	35 (94.6)
Harowayu	secretary	1 (8.3)	0 (0)	1 (7.7)
	member	7 (58.3)	1 (100)	8 (61.5)
	no position	4 (33.3)	0 (0)	4 (30.8)
Siminto Korati	member	0 (0)	1 (100)	1 (100)
Tachemetekleye	member	5 (23.8)	4 (66.7)	9 (33.3)
	no position	16 (76.2)	2 (33.3)	18 (66.7)
Halidege	secretary	1 (5.9)	0 (0)	1 (4)
	member	2 (11.8)	0 (0)	2 (8)
	no position	14 (82.4)	8 (100)	22 (88)
Kurkura	member	1 (7.1)	1 (16.7)	2 (10)
	no position	13 (92.9)	5 (83.3)	18 (90)

Table 3.6 What is your level of satisfaction in how the governing body/organization of the PRM was established? (no. and per cent)

Kebele	Level of satisfaction	Sex of the HH head		Total
		Male	Female	
Berak	very satisfied	6 (30)	0 (0)	6 (27.3)
	satisfied	10 (50)	2 (100)	12 (54.5)
	unsatisfied	3 (15)	0 (0)	3 (13.6)
	not satisfied at all	1 (5)	0 (0)	1 (4.5)
Naniga Dera	very satisfied	6 (21.4)		6 (21.4)
	satisfied	22 (78.6)		22 (78.6)
Hara Haji	very satisfied	10 (38.5)	5 (45.5)	15 (40.5)
	satisfied	16 (61.5)	6 (54.5)	22 (59.5)
Harowayu	very satisfied	1 (8.3)	1 (100)	2 (15.4)
	satisfied	11 (91.7)	0 (0)	11 (84.6)
Siminto Korati	satisfied	0 (0)	1 (100)	1 (100)
Tachemetekleye	very satisfied	3 (14.3)	0 (0)	3 (11.1)
	satisfied	16 (76.2)	6 (100)	22 (81.5)
	unsatisfied	2 (9.5)	0 (0)	2 (7.4)
Halidege	very satisfied	3 (17.6)	0 (0)	3 (12)
	satisfied	13 (76.5)	6 (75)	19 (76)
	unsatisfied	1 (5.9)	2 (25)	3 (12)
Kurkura	very satisfied	0 (0)	1 (16.7)	1(5)
	satisfied	8 (57.1)	4 (66.7)	12 (60)
	unsatisfied	5 (35.7)	1 (16.7)	6 (30)
	not satisfied at all	1 (7.1)	0 (0)	1 (5)

In Bale zone too, the majority of members said that the governance body is registered with the government. Similar results were found in Tachemetekleye kebele. Lower results were found in Halidege and Kurkura in Afar, and Harowayu in Borana/Guji. In addition, there were greater 'don't know' responses in these latter three kebeles (around 30–40%).

Table 3.7 Which of the following best describes the authority and governance powers of the rangeland unit's governance structures and processes? (no. and per cent)

Kebele	Responses	Sex of the HH head		Total
		Male	Female	
Berak	Has full governance and management powers	12 (60)	2 (100)	14 (63.6)
	Has a framework-setting mandate but little authority for actual management	2 (100)	0 (0)	2 (9.1)
	Has only an advisory/coordination function	4 (20)	0 (0)	4 (18.2)
	Governance powers are contested	2 (10)	0 (0)	2 (9.1)
Naniga Dera	Has full governance and management powers	25 (89.3)		25 (89.3)
	Has a framework-setting mandate but little authority for actual management	2 (7.1)		2 (7.1)
	Has only an advisory/coordination function	1 (3.6)		1 (3.6)
Hara Haji	Has full governance and management powers	22 (84.6)	10 (90.9)	32 (86.5)
	Has a framework-setting mandate but little authority for actual management	2 (7.7)	1 (9.1)	3 (8.1)
	Has only an advisory/coordination function	2 (7.7)	0 (0)	2 (5.4)
Harowayu	Has full governance and management powers	8 (66.7)	1 (100)	9 (69.2)
	Has a framework-setting mandate but little authority for actual management	4 (33.3)	0 (0)	4 (30.8)
Siminto Korati	Has full governance and management powers	0 (0)	1 (100)	1 (100)
Tachemetekleye	Has full governance and management powers	8 (38.1)	2 (33.3)	10 (37)
	Has a framework-setting mandate but little authority for actual management	10 (47.6)	3 (50)	13 (48.1)
	Has only an advisory/coordination function	2 (9.5)	1 (16.7)	3 (11.1)
	Don't know	1 (4.8)	0 (0)	1 (3.7)
Halidege	Has full governance and management powers	8 (47.1)	2 (25)	10 (40)
	Has a framework-setting mandate but little authority for actual management	6 (35.3)	2 (25)	8 (32)
	Has only an advisory/coordination function	2 (11.8)	2 (25)	4 (16)
	Governance powers are contested	1 (5.9)	2 (25)	3 (12)
Kurkura	Has full governance and management powers	4 (28.6)	3 (50)	7 (35)
	Has a framework-setting mandate but little authority for actual management	5 (35.7)	1 (16.7)	6 (30)
	Has only an advisory/coordination function	1 (7.1)	0 (0)	1 (5)
	Governance powers are contested	4 (28.6)	2 (33.3)	6 (30)

Between 45–70% of respondents said that either 'all of the community' and/or 'some of the community' were involved in planning PRM, with local government, NGOs and customary institutions. Overall, the involvement of women and youth was good: in Bale zone in most cases (100% in two kebeles) both women and youth were involved, though their participation was patchier in Harowayu (Borana/Guji) and Afar. Decision-making processes in the PRM planning process in Oromia were mainly 'by majority vote of community members' and/or by 'the consensus of community members'. However, in Afar, the majority said that decisions were made by 'the management or governance committee or organization', government or by the project NGO (excluding Halidege). When asked about their level of satisfaction in the PRM planning process, the majority replied either 'very satisfied' or 'satisfied'. On discussing challenges, the majority of respondents (just over 50%) said that there were no problems or challenges. Where challenges were mentioned, the most common was 'There was a delay in funding.'

3.3 RMU

The majority of respondents said that they knew the location of the boundaries of the RMU; the only kebele which had more negative responses than positive ones was Harowayu (Borana-Guji). In Bale zone, the majority of respondents said that the RMU is based on nontraditional units of grazing land; whereas in Harowayu in Borana-Guji and in all kebeles in Afar, the majority said that it is based on the traditional unit. This reflects the different approaches taken by the NGOs supporting the process in the different areas (as described in the previous section). In the majority of cases, the respondents indicated that 'all community members' or 'some community members' defined the boundaries of the RMU, with the project NGO also taking a central role along with government in some cases (particularly in Afar). In the majority of cases, youth and women participated though less so in Harowayu (Borana-Guji). Across the kebeles, there was a large number of respondents who said that they were involved in the decisions about the boundaries themselves. Most respondents were satisfied or very satisfied with how the boundaries of the RMU were defined. The main challenge was 'There was a delay in funding' (as above), while some mentioned community was not involved, interested and/or agreement could not be reached. The majority of respondents said that they agreed with the boundaries of the RMU, with most negative responses (albeit small) from Halidege kebele, including area being too small, does not reflect traditional use and breaks up the traditional rangeland.

Table 3.8 What is your level of satisfaction in the PRM planning processes? (no. and per cent)

Kebele	Level satisfaction	Sex of the HH head		Total
		Male	Female	
Berak	very satisfied	9 (45)	0 (0)	9 (40.9)
	satisfied	10 (50)	1 (50)	11 (50)
	unsatisfied	1 (5)	1 (50)	2 (9.1)
Naniga Dera	very satisfied	11 (39.3)	N/A	11 (39.3)
	satisfied	17 (60.7)	N/A	17 (60.7)
Hara Haji	very satisfied	13 (50)	5 (45.5)	18 (48.6)
	satisfied	13 (50)	6 (54.5)	19 (51.4)
Harowayu	very satisfied	2 (16.7)	0 (0)	2 (15.4)
	satisfied	10 (83.3)	1 (100)	11 (84.6)
Siminto Korati	satisfied	N/A	1 (100)	1 (100)
Tachemetekleye	very satisfied	1 (4.8)	0 (0)	1 (3.7)
	satisfied	16 (76.2)	6 (100)	22 (81.5)
	unsatisfied	3 (14.3)	0 (0)	3 (11.1)
	not satisfied at all	1 (4.8)	0 (0)	1 (3.7)
Halidege	very satisfied	0 (0)	1 (12.5)	1 (4)
	satisfied	17 (100)	6 (75)	23 (92)
	unsatisfied	0 (0)	1 (12.5)	1 (4)
Kurkura	very satisfied	0 (0)	1 (16.7)	1 (5)
	satisfied	11 (78.6)	5 (83.3)	16 (80)
	unsatisfied	3 (21.4)	0 (0)	3 (15)

N/A = not applicable

Table 3.9 What problems or challenges existed in the PRM planning process? (multiple responses; no. and per cent)

Kebele	Challenges	Sex of the HH head		Total
		Male	Female	
Berak	Community was not involved	4 (20)	0 (0)	4 (18.2)
	It was not participatory	1 (5)	0 (0)	1 (4.5)
	There was a delay in funding	9 (45)	2 (100)	11 (50)
	The NGO did not assist us	1 (5)	0 (0)	1 (4.5)
	The government did not agree	1 (5)	0 (0)	1 (4,5)
	There were no problems or challenges	7 (35)	0 (0)	7 (21.8)
Naniga Dera	Community was not involved	7 (25)	N/A	7 (25)
	Community was not interested	3 (10.7)	N/A	3 (10.7)
	It was not participatory	4 (14.3)	N/A	4 (14.3)
	Agreement could not be reached	4 (14.3)	N/A	4 (14.3)
	There was a delay in funding	18 (64.3)	N/A	18 (64.3)
	The NGO did not assist us	5 (17.5)	0 (0)	5 (17.9)
	The government did not agree	6 (21.4)	N/A	6 (21.4)
	There were no problems or challenges	9 (32.1)	N/A	9 (32.1)
Hara Haji	Community was not involved	1 (3.8)	1 (9.1)	2 (5.4)
	It was not participatory	0 (0)	1 (9.1)	1 (2.7)
	Agreement could not be reached	1 (3.8)	1 (9.1)	2 (5.4)
	There was a delay in funding	15 (57.7)	3 (27.3)	18 (48.6)
	The NGO did not assist us	2 (7.7)	0 (0)	2 (5,4)
	The government did not agree	0 (0)	1 (9.1)	1 (2.7)
	There were no problems or challenges	11 (42.3)	8 (72.7)	19 (51.9)
Harowayu	Community was not involved	2 (16.7)	0 (0)	2 (15.4)
	It was not participatory	3 (25)	0 (0)	3 (23.1)
	Agreement could not be reached	2 (16.7)	0 (0)	2 (15.4)
	There was a delay in funding	1 (8.3)	0 (0)	1 (7.7)
	There were no problems or challenges	8 (66.7)	1 (100)	9 (69.2)
Siminto Korati	Community was not involved		1 (100)	1 (100)
	It was not participatory		1 (100)	1 (100)
Tachemetekleye	Community was not involved	2 (9.5)	0 (0)	2 (7.4)
	Community was not interested	3 (14.3)	0 (0)	3 (11.1)
	It was not participatory	4 (19)	0 (0)	4 (14.8)
	Agreement could not be reached	2 (9.5)	0 (0)	2 (7.4)
	There was a delay in funding	3 (14.3)	2 (33.3)	5 (18.5)
	The government did not agree	1 (4.8)	0 (0)	1 (3.7)
	There were no problems or challenges	12 (57.1)	5 (83.3)	17 (63)

Kebele	Challenges	Sex of the HH head		Total
		Male	Female	
Halidege	Community was not involved	5 (29.4)	4 (50)	9 (36)
	Community was not interested	2 (11.8)	2 (25)	4 (16)
	It was not participatory	1 (5.9)	2 (25)	3 (12)
	Agreement could not be reached	4 (23.5)	2 (25)	6 (24)
	There was a delay in funding	7 (41.2)	3 (37.5)	10 (40)
	The NGO did not assist us	3 (17.6)	1 (12.5(	4 (16)
	The government did not agree	1 (5.9)	0 (0)	1 (4)
	There were no problems or challenges	7 (41.2)	2 (25)	9 (36)
Kurkura	Community was not involved	3 (21.4)	2 (33.3)	5 (25)
	Community was not interested	5 (35.7)	0 (0)	5 (25)
	It was not participatory	0 (0)	2 (33.3)	2 (10)
	Agreement could not be reached	1 (7.1)	0 (0)	1 (5.4)
	There was a delay in funding	2 (14.3)	1 (16.7)	3 (15)
	The government did not agree	2 (14.3)	0 (0)	2 (10)
	There were no problems or challenges	8 (57.1)	4 (66,7)	12 (60)

N/A = not applicable

Table 3.10 Do you know where the boundaries of the rangeland management unit are? (no. and per cent)

Kebele	Responses	Sex of the HH head		Total
		Male	Female	
Berak	Yes	14 (70)	0 (0)	14 (63.6)
	No	6 (30)	2 (100)	8 (36.4)
Naniga Dera	Yes	22 (78.6)	N/A	22 (78.6)
	No	6 (21.4)	N/A	6 (21.4)
Hara Haji	Yes	23 (88.5)	7 (63.6)	30 (81.1)
	No	3 (11.5)	4 (36.4)	7 (18.9)
Harowayu	Yes	3 (25)	1 (100)	4 (30.8)
	No	9 (75)	0 (0)	9 (69.2)
Siminto Korati	No	N/A	1 (100)	1 (100)
Tachemetekleye	Yes	20 (95.2)	5 (83.3)	25 (92.6)
	No	1 (4.8)	1 (16.7)	2 (7.4)
Halidege	Yes	14 (82.4)	4 (50)	18 (72)
	No	3 (17.6)	4 (50)	7 (28)
Kurkura	Yes	10 (71.4)	6 (100)	16 (80)
	No	4 (28.6)	0 (0)	4 (20)

N/A = not applicable

Table 3.11 Is the rangeland management unit based on a traditional unit of grazing or is it based on a nontraditional unit or block of grazing? (no. and per cent)

Kebele	Grazing types	Sex of the HH head		Total
		Male	Female	
Berak	traditional	8 (40)	0 (0)	8 (36.4)
	nontraditional	12 (60)	2 (100)	14 (63.6)
Naniga Dera	traditional	12 (42.9)	N/A	12 (42.9)
	nontraditional	16 (57.1)	N/A	16 (57.1)
Hara Haji	traditional	13 (50)	7 (63.6)	20 (54.1)
	nontraditional	13 (50)	4 (36.4)	17 (45.9)
Harowayu	traditional	10 (83.3)	1 (100)	11 (84.6)
	nontraditional	2 (16.7)	0 (0)	2 (15.4)
Siminto Korati	traditional	N/A	1 (100)	1 (100)
Tachemetekleye	traditional	19 (90.5)	5 (83.3)	24 (88.9)
	nontraditional	2 (9.5)	1 (16.7)	3 (11.1)
Halidege	traditional	14 (82.4)	6 (75)	20 (80)
	nontraditional	3 (17.6)	2 (25)	5 (20)
Kurkura	traditional	10 (71.4)	6 (100)	16 (80)
	nontraditional	4 (28)	0 (0)	4 (20)

N/A = not applicable

3.4 RMP

In Oromia, the majority of respondents said that there is an RMP for the rangeland unit, with 100% responses in Berak and Hara Haji, Bale. In Afar, there were a greater number of negative responses (between 25–40%). The majority of those that said that there was an RMP said it was developed either by 'consensus of all community members' or by 'the majority vote of community members'. Fifty to seventy per cent of respondents said that they were involved in the development of the RMP. The clear majority of respondents said that they were 'very satisfied' or 'satisfied' with how decisions were made in the development of the RMP. Once again, 'delay in funding' was given as the biggest challenge. In Harowayu, Borana-Guji, it was also said that the community was not involved and it was not participatory. In Bale zone, between 36–41% of respondents across kebeles said that they had read the RMP. In Harowayu, all respondents had not read the RMP.

All respondents agreed with the activities in the management plan in Oromia and Halidege, but only a small number agreed in Tachemetekleye and Kurkura; Afar disagreed, with reasons given that other activities should have been prioritized, there were too many activities, community was not involved, there was disagreement and there were no funds to implement. Concerning level of satisfaction with the RMP, the clear majority were either 'very satisfied' or 'satisfied'.

Activities agreed upon in the RMP focused both on technical aspects (the most popular being clearance of bush and invasive species) as well as community mobilization and capacity building including strengthening of governance structures. Respondents said that most activities have been fully implemented (25% across all regions) or well implemented (40% across all regions). This is a high percentage, particularly considering that in some places there has not been a recent or consistent presence of an NGO supporting the implementation. There was a more complete implementation in Oromia than in Afar. There was a greater level of satisfaction in Oromia than in Afar.

Table 3.12 Were you involved in the decision about the rangeland management plan? (no. and per cent)

Kebele	Responses	Sex of the HH head		Total
		Male	Female	
Berak	yes	12 (60)	1 (50)	13 (59.1)
	no	8 (40)	1 (50)	9 (40.9)
Naniga Dera	yes	16 (66.7)	N/A	16 (66.7)
	no	8 (33.3)	N/A	8 (33.3)
Hara Haji	yes	19 (73.1)	6 (54.5)	25 (67.6)
	no	7 (26.9)	5 (45.5)	12 (32.4)
Harowayu	yes	6 (54.5)	N/A	6 (54.5)
	no	5 (45.5)	N/A	5 (45.5)
Tachemetekleye	yes	12 (75)	2 (50)	14 (70)
	no	4 (25)	2 (50)	6 (30)
Halidege	yes	4 (36.4)	4 (80)	8 (50)
	no	7 (63.6)	1 (20)	8 (50)
Kurkura	yes	4 (50)	3 (75)	7 (58.3)
	no	4 (50)	1 (25)	5 (41.7)

N/A = not applicable

It was said that the implementation of the RMP can be best described as being undertaken by 'consensus of all community members' or 'by majority vote of community members', with a higher level of positive responses in the Oromia region than in Afar. In Afar, a significant number said that the RMP is implemented by government or the project NGO. In Bale zone, Berak 91%, 70% in Naniga Dera and 100% in Hara Haji (n=37) said that they had been involved in RMP implementation activities. In Afar, positive responses were given by 78% in Tachemetekleye, 60% in Halidege and 55% % in Kurkua. In Harowayu (Borana/Guji), 53% said that they had been involved in activities (remember the number here is small). The majority of respondents said that they were either 'very satisfied' or 'satisfied' with the implementation of activities. Concerning challenges and problems, the most mentioned were 'not having funds to carry out activities', 'there was a delay in funding', 'no tools to carry out activities', and 'no skills to carry you the activities'.

Table 3.13 What is your level of satisfaction in how decisions were made in establishing the rangeland management plan? (no. and per cent)

Kebele	Level of satisfaction	Sex of the HH head		Total
		Male	Female	
Berak	very satisfied	9 (45)	0 (0)	9 (40.9)
	satisfied	11 (55)	2 (100)	13 (59.1)
Naniga Dera	very satisfied	8 (33.3)	N/A	8 (33.3)
	satisfied	16 (66.7)	N/A	16 (66.7)
Hara Haji	very satisfied	13 (50)	3 (27.3)	16 (43.2)
	satisfied	13 (50)	8 (72.7)	21 (56.8)
Harowayu	very satisfied	2 (18.2)	N/A	2 (18.2)
	satisfied	8 (72.7)	N/A	8 (72.7)
	unsatisfied	1 (9.1)	N/A	1 (9.1)

Kebele	Level of satisfaction	Sex of the HH head		Total
		Male	Female	
Tachemetekleye	very satisfied	2 (12.5)	0 (0)	2 (10)
	satisfied	13 (81.3)	4 (100)	17 (85)
	unsatisfied	1 (6.3)	0 (0)	1 (5)
Halidege	very satisfied	2 (18.2)	0 (0)	2 (12.5)
	satisfied	8 (72.7)	5 (100)	13 (81.3)
	not satisfied at all	1 (9.1)	0 (0)	1 (6.3)
Kurkura	very satisfied	2 (25)	1 (25)	3 (25)
	satisfied	6 (75)	3 (75)	9 (75)

N/A = not applicable

Table 3.14 Have you read the rangeland management plan? (no. and per cent)

Kebele	Responses	Sex of the HH head		Total
		Male	Female	
Berak	yes	7 (35)	1 (50)	8 (36.4)
	no	13 (65)	1 (50)	14 (63.6)
Naniga Dera	yes	8 (33.3)	N/A	8 (33.3)
	no	16 (66.7)	N/A	16 (66.7)
Hara Haji	yes	13 (50)	2 (18.2)	15 (40.5)
	no	13 (50)	9 (81.8)	22 (59.5)
Harowayu	no	11 (100)	N/A	11 (100)
Tachemetekleye	yes	3 (18.8)	0 (0)	3 (15)
	no	13 (81.3)	4 (100)	17 (85)
Halidege	yes	2 (18.2)	2 (40)	4 (25)
	no	9 (81.8)	3 (60)	12 (75)
Kurkura	yes	1 (12.5)	0 (0)	1 (8.3)
	no	7 (87.5)	4 (100)	11 (91.7)

Table 3.15 What are the major activities included in the rangeland management plan? (multiple responses; no. and per cent)

Kebele	Major activities	Sex of the HH head		Total
		Male	Female	
Berak	strengthening of governance structures	14 (70)	1 (50)	15 (68.2)
	clearance of bush	20 (100)	2 (100)	22 (100)
	clearance of invasive species	18 (90)	1 (50)	19 (86.4)
	development of water points	10 (50)	0 (0)	10 (45.5)
	seeding of pastures	12 (60)	0 (0)	12 (54.5)
	improvement of grasses	19 (95)	2 (100)	21 (95.5)
	irrigation	4 (20)	0 (0)	4 (18.2)
	soil conservation measures	20 (100)	1 (50)	21 (95.5)
	water conservation measures	14 (70)	1 (50)	15 (68.2)
	tree planting	9 (45)	0 (0)	9 (40.9)
	community mobilization	15 (75)	2 (100)	17 (77.3)

Kebele	Major activities	Sex of the HH head		Total
		Male	Female	
Naniga Dera	strengthening of governance structures	13 (54.2)	N/A	13 (54.2)
	clearance of bush	17 (70.8)	N/A	17 (70.8)
	clearance of invasive species	10 (41.7)	N/A	10 (41.7)
	development of water points	6 (25)	N/A	6 (25)
	seeding of pastures	10 (41.7)	N/A	10 (41.7)
	improvement of grasses	16 (66.7)	N/A	16 (66.7)
	Irrigation	5 (20.8)	N/A	5 (20.8)
	soil conservation measures	10 (41.7)	N/A	10 (41.7)
	water conservation measures	5 (20.8)	N/A	5 (20.8)
	tree planting	5 (20.8)	N/A	5 (20.8)
	community mobilization	16 (66.7)	N/A	16 (66.7)
	don't know	5 (20.8)	N/A	5 (20.8)
Hara Haji	strengthening of governance structures	21 (80.8)	9 (81.8)	30 (81.1)
	clearance of bush	25 (96.2)	11 (100)	36 (97.3)
	clearance of invasive species	24 (92.3)	10 (90.9)	34 (91.9)
	development of water points	14 (53.8)	6 (54.5)	20 (54.1)
	seeding of pastures	16 (61.5)	7 (63.6)	23 (62.2)
	improvement of grasses	26 (100)	11 (100)	37 (100)
	Irrigation	7 (26.9)	1 (9.1)	8 (21.6)
	soil conservation measures	23 (88.5)	9 (81.8)	32 (86.5)
	water conservation measures	12 (46.2)	6 (54.5)	18 (48.6)
	tree planting	14 (53.8)	6 (54.5)	20 (54.1)
	community mobilization	20 (76.9)	11 (100)	31 (83.8)
	don't know	2 (7.7)	1 (9.1)	3 (8.1)
Harowayu	strengthening of governance structures	10 (90.9)	N/A	10 (90.9)
	clearance of bush	10 (90.9)	N/A	10 (90.9)
	clearance of invasive species	3 (27.3)	N/A	3 (27.3)
	development of water points	6 (54.5)	N/A	6 (54.5)
	seeding of pastures	5 (45.5)	N/A	5 (45.5)
	improvement of grasses	9 (81.8)	N/A	9 (81.8)
	soil conservation measures	3 (27.3)	N/A	3 (27.3)
	water conservation measures	4 (36.4)	N/A	4 (36.4)
	community mobilization	7 (63.6)	N/A	7 (63.6)

Kebele	Major activities	Sex of the HH head		Total
		Male	Female	
Tachemetekleye	strengthening of governance structures	4 (25)	1 (25)	5 (25)
	clearance of bush	11 (68.8)	0 (0)	11 (55)
	clearance of invasive species	9 (56.3)	0 (0)	9 (45)
	development of water points	5 (31.3)	0 (0)	5 (25)
	seeding of pastures	4 (25)	0 (0)	4 (20)
	improvement of grasses	12 (75)	4 (100)	16 (80)
	soil conservation measures	11 (68.8)	2 (50)	13 (65)
	water conservation measures	7 (43.8)	0 (0)	7 (35)
	tree planting	4 (25)	0 (0)	4 (20)
	community mobilization	2 (12.5)	0 (0)	2 (10)
	don't know	1 (6.3)	0 (0)	1 (5)
Halidege	strengthening of governance structures	2 (18.2)	2 (40)	4 (25)
	clearance of bush	10 (90.9)	5 (100)	15 (93.8)
	clearance of invasive species	11 (100)	4 (80)	15 (93.8)
	development of water points	7 (63.6)	4 (80)	11 (68.8)
	seeding of pastures	5 (45.5)	3 (60)	8 (50)
	improvement of grasses	11 (100)	3 (60)	14 (87.5)
	irrigation	1 (9.1)	0 (0)	1 (6.3)
	soil conservation measures	2 (18.2)	0 (0)	2 (12.5)
	water conservation measures	4 (36.4)	1 (20)	5 (31.3)
	tree planting	1 (9.1)	0 (0)	1 (6.3)
	community mobilization	3 (27.3)	0 (0)	3 (18.8)
	don't know	1 (9.1)	0 (0)	1 (6.3)
Kurkura	clearance of bush	5 (62.5)	3 (75)	8 (66.7)
	clearance of invasive species	3 (37.5)	2 (50)	5 (41.7)
	development of water points	1 (12.5)	1 (25)	2 (16.7)
	seeding of pastures	0 (0)	1 (25)	1 (8.3)
	improvement of grasses	3 (37.5)	3 (75)	6 (50)
	soil conservation measures	1 (12.5)	1 (25)	2 (16.7)
	water conservation measures	1 (12.5)	0 (0)	1 (8.3)
	community mobilization	1 (12.5)	0 (0)	1 (8.3)
	don't know	2 (25)	2 (50)	4 (33.3)

N/A = not applicable

The majority of respondents (67%) said that by-laws had been established to enforce the implementation of activities. The majority said that these were established through 'consensus of all community members' or 'by majority vote of community members'. In the Afar region, between 15–22% said the government developed the by-laws and a smaller number said it was the project NGO. The majority of respondents reported that they were either 'very satisfied' or 'satisfied' with how decisions were made in establishing the by-laws.

In response to the question about what best describes the degree to which the by-laws have been implemented, respondents said that by-laws had been 'fully implemented' (29%) or 'well implemented' (29%). Thirty-one per cent of respondents said that they had only been 'partly implemented' and 9% indicated that 'only one or two activities implemented'. The highest number of respondents replying positively was found in Hara Haji (33 persons) and negatively in Berak (14 persons) and Tachemetekleye (12 persons). The majority of respondents said that they had been involved in by-law implementation. It would seem that the implementation of by-laws was the most challenging step thus far. The level of satisfaction of the implementation of by-laws was in the majority of cases either 'satisfied' or 'very satisfied'–87% across all kebeles with the highest satisfaction responses found in the Bale zone.

In the Bale zone, the majority of respondents (79–91%) said that there is a written agreement between the local government and the rangeland management governance body for the management of the rangeland. A significantly lower percentage responded positively in Harowayu (Borana/Guji) (46%), and in Afar—Tachemetekleye (19%), Halidege (16%) and Kurkura (30%), with between 40–55% here saying that they did not know. This suggests that a) there has been a more positive achievement in this regard in Bale zone than in other areas, and/or b) there is greater community knowledge concerning this issue.

3.5 Impacts of the PRM intervention

Overall, there was a high level of satisfaction with the whole PRM intervention, with between 65–100 % either 'very satisfied' or 'satisfied' across all survey areas. Highest levels of satisfaction were found in Bale, Borana/Guji zones, Oromia and in Tachemetekleye kebele in the Afar region. The only relatively significant number of 'unsatisfied' or 'not satisfied at all' responses were found in Halidege and Kurkura.

Table 3.16 Overall level of satisfaction about the whole PRM intervention (no. and per cent)

Kebele	Degree of satisfaction	Sex of the HH head		Total
		Male	Female	
Berak kebele	very satisfied	7 (35.0)	0 (0.0)	7 (31.8)
	satisfied	12 (60.0)	2 (100.0)	14 (63.6)
	unsatisfied	1 (5.0)	0 (0.0)	1 (4.5)
	Total	20 (100.0)	2 (100.0)	22 (100.0)
Naniga Dera	very satisfied	8 (28.6)	N/A	8 (28.6)
	satisfied	19 (67.9)	N/A	19 (67.9)
	unsatisfied	1 (3.6)	N/A	1 (3.6)
	Total	28 (100.0)	N/A	28 (100.0)
Hara Haji	very satisfied	16 (61.5)	4 (36.4)	20 (54.1)
	satisfied	10 (38.5)	7 (63.6)	17 (45.9)
	Total	26 (100.0)	11 (100.0)	37 (100.0)
Harowayu	satisfied	12 (100.0)	1 (100.0)	13 (100.0)
	Total	12 (100.0)	1 (100.0)	13 (100.0)
Siminto Korati	satisfied	N/A	1 (100.0)	1 (100.0)
	Total	N/A	1 (100.0)	1 (100.0)
Tachemetekleye	very satisfied	6 (28.6)	0 (0.0)	6 (22.2)
	satisfied	14 (66.7)	6 (100.0)	20 (74.1)
	unsatisfied	1 (4.8)	0 (0.0)	1 (3.7)
	Total	21 (100.0)	6 (100.0)	27 (100.0)

Kebele	Degree of satisfaction	Sex of the HH head		Total
		Male	Female	
Halidege	very satisfied	1 (5.9)	0 (0.0)	1 (4.0)
	satisfied	11 (64.7)	6 (75.0)	17 (68.0)
	unsatisfied	2 (11.8)	0 (0.0)	2 (8.0)
	not satisfied at all	3 (17.6)	2 (25.0)	5 (20.0)
	Total	17 (100.0)	8 (100.0)	25 (100.0)
Kurkura	very satisfied	1 (7.1)	1 (16.7)	2 (10.0)
	satisfied	7 (50.0)	4 (66.7)	11 (55.0)
	unsatisfied	6 (42.9)	0 (0.0)	6 (30.0)
	not satisfied at all	0 (0.0)	1 (16.7)	1 (5.0)
	Total	14 (100.0)	6 (100.0)	20 (100.0)
Total	very satisfied	39 (28.3)	5 (14.3)	44 (25.4)
	satisfied	85 (61.6)	27 (77.1)	112 (64.7)
	unsatisfied	11 (8.0)	0 (0.0)	11 (6.4)
	not satisfied at all	3 (2.2)	3 (8.6)	6 (3.5)
	Total	138 (100.0)	35 (100.0)	173 (100.0)

N/A = not applicable

It was also very encouraging to hear communities state that there are numerous positive ecological/environmental and social impacts seen as a result of PRM across the intervention areas, with the highest number of positive responses in the Bale zone. The impact most commonly seen was 'improved rangeland condition' with 157 respondents mentioning this. Second with 138 positive mentions was 1) 'improved participation of women in the management of rangelands' and 2) 'improved capacity to cope with drought or other crises', closely followed by 3) 'improved participation of the community in the governance and management of the rangelands' (133 mentions) and 4) 'improved ways that people work and interact together' (125 mentions). Another very important impact was 'increased feeling that the rangelands belong to us as a community' (122 mentions), together with 'improved access to rangeland resources for the whole community' (115) and women in particular (111). Improvement in livestock body condition (118) and livelihoods (115) were also highlighted, together with improved social status of people/groups (109), reduced number of conflicts over resources in the kebele (104) and with people outside the kebele (90), improved livestock mobility (97) and increased livestock numbers (95). In terms of negative impacts, the highest score was 'increased numbers of conflicts with people from outside the kebele' (19) and 'reduced feeling that the rangelands belong to us as a community' (15) spread across all kebeles. The full list is found below. These are significant achievements for PRM in those kebeles where communities have known about PRM and participated in the process and activities.

A follow-up question, 'What was the first impact seen?' resulted in a majority response by a significant margin across all regions as 'improved rangeland condition'. This is likely to be because a key intervention was bush clearing (and/or invasive species clearing), which has a quick and visual impact. For those areas that were cleared some time ago (i.e. where interventions/project was some time ago), it is encouraging that according to the responses given by the respondents, these areas still seem to be well managed and in better condition than previously. Interestingly, in Harowayu, Borana-Guji, 5 of the 13 respondents said 'worsened rangelands condition' was the first impact seen. In all of the kebeles in the Afar region, a second impact that was closely behind the first was the improved participation of the community in the governance and management of the rangelands, perhaps more visible here due to less involvement previously. Impacts such as improved animal body condition took longer to be seen but were highlighted as being visible.

Table 3.17 Summary of impacts of PRM (what has PRM contributed to) across kebeles (no. of respondents that mentioned different impacts; multiple responses were allowed)

Impacts of PRM across all kebeles	No. of positive responses
Improved rangeland condition	157
Improved participation of women in the management of rangelands	138
Improved capacity of the community to cope with drought or other crisis	138
Improved participation of the community in the governance and management of the rangelands	133
Improved ways that people work and interact together	125
Increased feeling that the rangelands belongs to us as a community	122
Improved livestock body condition	118
Improved livelihoods	115
Improved access to rangeland resources for the whole community	115
Improved access to rangeland resources for women	111
Improved social status of people/groups	109
Reduced no. of conflicts over resources in the kebele	104
Improved livestock mobility	97
Increased livestock no.	95
Reduced no. of conflicts over resources with people from outside the kebele	90
Changes in types of livestock kept	89
Reduced livestock no.	25
Increased no. of conflicts over resources with people from outside the kebele	19
Reduced feeling that the rangelands belong to us as a community	15
Worsened rangeland condition	13
Increased no. of conflicts over resources in the kebele	12
Worsened livestock mobility	11
Worsened ways that people work and interact together	9
Worsened participation of the community in the governance and management of the rangelands	9
Worsened social status of people/groups	8
Worsened livestock body condition	7
Worsened access to rangeland resources for the whole community	5
Worsened participation of women in the management of the rangelands	4
Worsened access to rangeland resources for women	4
Worsened capacity to cope with drought or other crisis	3
Worsened livelihoods	1

The responses to the question, 'What impact took the longest to be seen?' was more mixed; 39 respondents, mainly in Afar, said 'improved rangelands condition' while across the kebeles, 26 said 'improved livelihoods' and 19 said 'improved capacity of the community to cope with drought and other crises'.

Table 3.18 Impacts that were seen first (across all kebeles)

Impacts that were seen first	No. of responses
Improved rangeland condition	71
Improved participation of the community in the governance and management of the rangelands	20
Improved capacity of the community to cope with drought or other crisis	10
Improved social status of people/groups	9
Improved livestock body condition	8
Increased feeling that the rangelands belongs to us as a community	8
Worsened rangeland condition	7
Improved livestock mobility	7
Improved participation of women in the management of rangelands	7
Improved livelihoods	5
Changes in types of livestock kept	5
Improved ways that people work and interact together	5
Increased livestock no.	4
Worsened livestock body condition	2
Reduced livestock no.	1
Worsened livestock mobility	1
Worsened ways that people work and interact together	1
Improved access to rangeland resources for the whole community	1
Improved access to rangeland resources for women	1

The most important impact for improving rangeland management across regions was identified as 'improved rangeland condition' (16% of respondents) and then 'improved livestock body condition', 'improved capacity of the community to cope with drought or other crises' and 'improved livestock mobility.'

Finally, the clear majority of respondents said that they would recommend PRM to other communities—a total of 90% of respondents. The only place where there were comparatively negative responses was in Kurkura with 35% saying no. 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' and 'because PRM is good for us'.

3.6 Conclusions

This survey indicates that that there are some key overall positive results of PRM in terms of its participatory and inclusive approach throughout the process, including youth and women, and in ecological (improved rangeland condition) and social impacts (participation) and not least, in providing a framework for improving land and resource governance and to some degree land and resource tenure too.

In general, PRM implementation appears to have had greater longevity, sustainability and impact in the Bale zone (and to some degree Borana-Guji, namely Harawayu) than in Afar region. In Oromia, there was more participation of community members throughout the process. Here the governance structure is more strongly based on

customary institutions, rather than a mixed newer body where new relationships need to be established which can take time. In Bale, the greater involvement of community members appeared to have been facilitated through the PRM approach that worked through smaller blocks of RMUs as part of a kebele rather than being based on larger landscape level traditional areas. This has allowed greater concentration of efforts with the communities living in those areas.

In the Borana-Guji zone, the approach taken by CARE/PRIME where the large landscape-level traditional unit is used has meant greater overall coverage but has appeared to have resulted in a disconnect between the landscape-level governance, planning and management activities, and activities (or rather lack of activities) on the ground. This is exemplified in the situation in Siminto, where though PRIME has carried out extensive work at the dheeda level, establishing an RC, carrying out planning etc., only one HH said that they had participated in PRM activities even though all HHs interviewed had heard about PRM. Conflicts over land and resource use with neighbours from the Somali region had further disrupted any management activities on the ground. And in Mugayo kebele where Save the Children USA had been working some time back, according to RC members, there had been additional conflicts among NGOs over 'ownership' of activities.

As such, there seems to be a trade-off within the two approaches: landscape levels means greater coverage, follows traditional patterns of grazing and supports customary institutions and governance but has poor participation of communities across the area and less concentrated interventions, and the 'block' or kebele approach means less geographical coverage, less role for customary institutions but significantly greater participation of communities in those smaller, concentrated areas and greater results in terms of activities. A further difference is that in the landscape approach, formalized agreements between communities and government allowing stronger rights for communities to manage/access/govern resources have been more difficult to achieve than in the 'block' or kebele approach. A major reason for this is the lack of legitimacy that the RC has, whereas in Ethiopia, an RMCoop is a legally recognized body with which a formal agreement can be made.

4 PASTORAL WOMEN AND PRM

4.1 Introduction

In pastoralist communities, customary rules and regulations govern access and ownership of clan assets including livestock. Ultimately, all property belongs to the clan, and decisions pertaining to it reflect the maximization of benefits for the clan. Access is not restricted by 'ownership': everyone is able to access much of the property of the others in the HH and indeed within the clan. It is unlikely that anyone within the clan (and usually outside the clan) will be denied access to resources in time of genuine need. Women, as men, are members of a clan. Though women's position may be viewed as subservient, marginalized and disempowered, the clan can offer many benefits including social protection.

Pastoralist culture can implicitly or explicitly exclude women from important roles, such as from community decision-making, which is often firmly in the hands of men. However, pastoralist women may work longer and harder than men (certainly on an everyday basis), fulfilling 'female' roles in the HH, as well as making money from tasks traditionally deemed to be 'women's work' including collecting firewood, and making and selling handicrafts. Increasingly as livelihoods have changed and diversified, women's workload has increased with women taking up new opportunities. In Ethiopia, gender-based inequality is still deep rooted in the country despite various measures attempting to address the problems. The problems are more pronounced in pastoralist areas, where women are often subjected to different gendered inequalities. Unilateral decisions concerning the use of resources, particularly common resources, are considered uncustomary. However, it has been known for women to be left out of decision-making processes and particularly community or 'public' decision-making processes where it is deemed to be the men's 'domain'. Such differences suggest that women may, have a lower level of knowledge of PRM than men, a lower level of participation and impacts and appreciations of PRM. Thus, it is important to understand gender and the representation, participation of and impacts of PRM on women. It should be remembered that the number of female-headed HHs who knew about PRM and thus participated in the HH Survey was between 9–12 in each kebele (with only two in Naniga Dera) compared to around 30 men.

4.2 Incorporation of gender issues into PRM

NGOs implementing PRM have taken different steps to address gender issues and to include pastoral women in PRM processes and activities. PRIME staff said that in order to make the right decisions about how best to do this, it is important to know the context. In Liben zone, Somali region, on commencement of the mapping exercise, it quickly became clear that there would need to be separate exercises for men and women; however, a female facilitator could not be found for the women's group, so women were not able to participate in the mapping exercise. If staff had better understood the context before commencing the mapping, they could have arranged for a female facilitator (Dheressa personal communication 2016).

PRIME did not instigate quotas for women to be involved in activities such as the RC, but rather they raised awareness through discussion on the importance of having women involved. In general, community leaders agreed that there were no cultural grounds for excluding women. One tool PRIME used was Social Analysis and Action. This establishes

a community-level dialogue group of men and women to discuss, analyse and make decisions on critical social, cultural, economic and other community issues and particularly those related to gender and other social inequities, challenging restrictive norms and other barriers to gender equity (CARE Ethiopia 2014). Women's economic empowerment was also supported through the establishment of village savings and loans associations. Both of these actions have been modelled from other CARE programs where such actions have proven to be successful.

Other steps taken included ensuring women are part of the PRM woreda coordinating committee and invited to meetings (Farm Africa and SOS Sahel), including the local government Office for Women and Children Affairs in discussions (Farm Africa and SOS Sahel), encouraging women to attend all planning meetings and take up places in the planning committee (Farm Africa and SOS Sahel), encouraging women to participate in PRM governance bodies at different levels (Save the Children USA, PRIME), raising awareness on the benefits of including women in management bodies (Save the Children USA, PRIME), finding ways for women to have their voices heard and to influence decision-making processes (PRIME), women-only dialogues (PRIME) and training on PRM, RMP preparation, PRRA and cooperative management (Farm Africa and SOS Sahel), and supporting women-targeted livelihood diversification activities alongside PRM (Farm Africa and SOS Sahel) including women-specific activities in RMPs and community-to-community experience sharing (Farm Africa and SOS Sahel). Though the list is impressive, some of these activities are broad and rather vague and it was challenging to pin down clear actions taken by NGOs to include women.

4.3 Involvement of women in the PRM process

Though there were some differences across kebeles, men and women participated in planning and activities with participation in the Afar region being higher for women than that of men, whereas in Oromia it was lower. This lower participation of women in Oromia was confirmed by consulting of PRM project documents from Berak and Naniga Dera kebeles in Bale (where Farm Africa and SOS Sahel Ethiopia first initiated the pilot). Where PRM has been undertaken more recently, for example in Hara Haji, Bale (by Farm Africa/EU-SHARE) and Tachemetekleye, Afar (by PRIME), the percentage of women and men respondents participating in PRM were 92.9 and 91.7, and 70 and 66.7, respectively. This was backed up by focus group discussants in Afar who said that the participation of men and women in activities was similar but lower in Borana. Reasons given for this was that women were busy with other activities, cultural barriers and lack of awareness.

Despite these seeming limitations to women's participation in PRM, results from the HH survey show that in general women felt that they had equal opportunity to be involved in decision-making processes, participate in governance structures and to participate in meetings and activities. Those women interviewed had a good understanding of the process of PRM and such things as the rangeland unit boundary and the RMP.

Respondents said that in general both men and women were involved in defining the boundaries of the RMU though slightly lower in Afar than in Oromia. Men and women had a similar level of satisfaction on the boundaries of the RMU.

In general, women were as satisfied with the PRM process as men. In most kebeles, the percent of men and women who read the RMP was low (<50%), though there was a more positive response from women than men in Berak (Oromia) and Halidege (Afar). Similar levels of women were involved in the implementation of PRM activities—100% of respondents in many cases—considering that the HH survey was undertaken randomly across the kebele population, this is a high level. In Afar, a slightly smaller percentage of women took part compared to men. There was also a high level of satisfaction with the implementation of activities. This is despite the fact that KII- kebele leaders (Simto, Haroweyu and Mugayo) said that women's participation in PRM activities was lower than men because their workload is heavy and some of the intervention areas are very far from home. There were high levels of satisfaction in the implementation of activities among those involved in the PRM process.

According to the HH survey, men's and women's involvement in the implementation of by-laws was similar in Berak, Hara Haji and Halidege, whereas in Haroweyu, Tachemeteklye and Kurkura, the involvement of men was greater than women.

4.4 Decision making status of women in PRM

In Oromia, some women responded positively to being involved in the decision about who should be a member of the PRM governing body and a number of women as well as men were themselves members of the governing body. In Hara Haji, one woman had been a leader; there appeared to be slightly more women involved in the governance in Oromia than in Afar. This is also reflected in the descriptions of the governance body; a number of respondents chose to describe it as 'gender equitable', though a few, mainly in Afar, described it as 'not gender equitable'. Women as well as men were generally happy with how the governing body/organization was established.

In all kebeles, the majority of respondents said that women were involved in the planning of PRM (Table 3.12). Women's satisfaction of the PRM planning process was similar to men's, 'very satisfied' or 'satisfied'. Similar results were found across the PRM process. The comparatively high level of women's involvement in the PRM process is illustrated in Table 3.2 which shows that a clear majority (100% in some places) said that women were involved in the decisions about PRM. A higher majority of respondents in Oromia responded positively than in Afar with the lowest response being in Tachemetekleye. This is a good rate of participation of women in the PRM process and indicates that where planning and decision-making processes were carried out at the local level, there was a high level of participation including of women.

4.5 Impact of PRM on women

Equal proportions of women and men observed the impact of PRM in improving livestock body condition, livelihood, livestock mobility, social status of people/groups, participation of the community in the governance and management of rangelands, capacity of the community to cope with drought and the perception that the rangelands belongs to a community. In addition and most importantly for women, there was a clear consensus that PRM has improved the participation of women in the management of the rangelands and has improved the access to rangeland resources for women (even more so than for the whole community in some places) with 138 respondents stating the former and 111 stating the latter (Table 3.17). These are some of the most popular impacts of the PRM process. Other impacts mentioned included reduced workloads and easier access to resources.

4.6 Conclusions

PRM has clearly been a success in improving the participation of community members in decision-making processes, governance and management of rangeland resources including that of women, though with a slightly lower number of women's participation in Afar than in Oromia. Further it was indicated that the participation of women was less in the higher-level governance bodies than in the lower ones. Where women were not involved, this was said to be due to high workloads, long distances to meetings and cultural barriers such as perceptions that women do not have the capacity to assume higher-level management responsibilities.

Though the number of female-headed HHs participating in the HH survey was relatively small in number, it is felt that this was a reasonable representation backed-up by statements by men, KIIs and focus group discussions that women, in general, were involved in the PRM process including in decision-making. This is most clearly seen in women themselves saying that they were satisfied with the PRM processes, and two of the top six impacts of PRM being firstly, improving the participation of women in rangeland management and secondly, improving their access to rangeland resources. This positive result has been influenced by the steps taken by NGOs to include women as well as men (though in some cases this was rather vague) and in some cases through the provision of women-targeted activities and training.

5. PHYSICAL IMPACT OF PRM INCLUDING ON RANGELAND CONDITION

5.1 Introduction

Two PRRAs as developed by Farm Africa and SOS Sahel were carried out using baselines from 2012, 2014 or 2016. This allowed an indication of the physical impacts of PRM. The assessments were undertaken in i) Amibara woreda and ii) Bale zone. Only Farm Africa and SOS Sahel carried out the important step of undertaking a PRRA at the beginning of PRM implementation as an input to the RMP and as a baseline. Others such as PRIME relied on external organizations such as USFS to undertake studies on physical aspects and impacts; however, these were not participatory and did not feed into the RMP. This not only risked compromising the community ownership of the M&E aspects of PRM but meant there was no baseline that ILRI could use to measure physical impact.

The PRRA process included the collection of data on vegetation including species, ground cover, animal diseases, uses of the land, minerals and water sources, settlements, problems and/or challenges and the condition of the rangeland (see Table 5.1). The same methodology, parameters, sites and almost the same data collection teams were used in 2017–18 as were used in 2012, 2014 and 2016.

Table 5.1 Assessment parameters

No.	Parameter description	Material, tool or method used
1	Basal cover of grass species by per cent	Quadrant
2	Basal area of woods/trees	Chain relascope
3	Vegetation description/composition of plant species: vegetation types and proportion of abundance	Visual assessment from fixed point of the plot within 25m radius
4	Description of shrubs and woody species	Listing and indicating desirability/invasiveness
5 a & b	Important plant species in the plot	Listing and recording within 25m radius
6	Dominant species	Listing and recording within 25m radius
7	Grazing/browsing intensity (high, medium, low)	Observation of signs of grazing intensity based on community description and visual assessment
8	Soil exposure (high, medium, low)	Visual assessment within 25m radius
9	Use(s) of the rangeland in the plot	Community description
10	Animal health disease related to rangeland in the plot	Community description
11	Type of water source in the plot	Community description
12	Distance of water sources in the plot	Community and extension staff description
13	Estimating the no. of HHs using the water source	Estimation by the community
14	Mineral licks/water (hora) and soils (haya)	Community description

No.	Parameter description	Material, tool or method used
15	Distance of the mineral source from the nearest settlement	Community description
16	Estimate the no. of HH using the mineral source(s)	Community description
17	Estimate of the no. of settlements inside the plot area	Community description
18	Fire evidence	Community description and visual observation
19	Quality of the rangeland (high, medium, low/poor)	Government and community description
20	Problems and issues with the rangeland resources	Community description

5.2 Amibara woreda, Afar

In Amibara woreda, the PRRA was undertaken in selected sites in PRM blocks in Kurkura and Halidege kebeles. The baseline was undertaken in 2014.

In each kebele, there were two sub-blocks assigned for PRM interventions. In Kurkura kebele, the total targeted area for the PRM intervention was 1,200 ha (Block A = 600 ha and Block B = 600 ha). The total area targeted for the PRM intervention in Halidege kebele was 1,000 ha (Block A = 500 ha; Block B = 500 ha).

The same PRRA approach and parameters used in the 2014 assessment were used for the PRRA at the end of 2017 (as described in Farm Africa and SOS Sahel 2014b). Twenty parameters were measured (see Table 5.1). In Blocks A and B at the Kurakura kebele, five and four plots respectively were used for recording the measurements listed in Table 5.1. In Halidege, each block had five plots. Altogether, there were 19 plots from which field data was collected. The details of the measurement of each parameter are described in Table 6.1. For basal cover per cent of grass species and basal area of woods/trees, four measurements were taken per plot for each parameter (total Kurkura Block A = 20; Block B = 16; Halidege Block A and B = 20 each). For all other parameters measured (3–20), the number of measurements per plot for each parameter was one (total Kurkura Block A = 5; Block B = 4; Halidege A and B = 5 each). The field data for each plot was recorded in the predesigned PRRA Form 1 and the findings of each block were summarized and compared with the 2014 results.

In Kurkura and Halidege kebeles, Amibara woreda, it was shown that between 2017 and 2014 there was an overall decline in the condition or the rangeland with increased woody species including the invasive Prosopis juliflora and a decline in grasses. Soil exposure had reduced, indicating that despite still heavy grazing there is vegetation cover (albeit woody species in many areas).

The different plant species used for grazing/browsing, medicinal values and other community uses, and the dominant plant species were similar in 2014 and 2017, though in Halidege there was a greater number of woody species. In 2017, the communities in Kurkura reported no parasitic infestation, but one poisonous plant species locally called aro (Rhynchosia melacophylla) was found in Block A. In Halidege, ticks were mentioned as well as two poisonous plants.

In the 2014 assessment in Kurkura, there was no report of settlements inside the blocks studied, but in 2017 it was indicated that 70 HHs had settled in one plot during the rainy season, though these were not permanent settlements and it was only for one season. No settlements were found in the grazing area in either years in Halidege. No evidence of fire was observed.

Overall in both Halidege and Kurkura, community members stated that the condition of the rangeland had declined. In Kurkura, they expressed it as 'overgrazed because there are many bare lands', because 'It holds high population of livestock,' and 'It is near to the settlement.' In 2014 in Halidege, 100% of the rangeland was rated as high quality; however, in 2017, the community rated 20% as medium and 80% as low. Though some of these results could be attributed to drought, there is still an indication of an overall decline of rangeland quality in both kebeles, with a lower overall condition in Kurkura. Indeed, drought was highlighted as the greatest problem in 2017.

Regarding the technique and the parameters used in the PRRA, they were easy to understand and simple to execute by the extension system and the communities. Furthermore, they touch the different components that are to be addressed in a PRRA and provide good information for the RMP. However, it is difficult to measure the production and productivity of the rangelands particularly the herbaceous layer directly from these indicators as they do not directly measure or quantify production although some implications can be made. For instance, the higher the basal cover of the herbaceous vegetation, the better will be the production. Thus, in future it is recommended to include production parameters such as measures of biomass in a simple way so that it can be possible to calculate parameters like grazing/ browsing capacities through the dry weight rank method and use of allometric equation for browse production. In addition to this, some criteria relied on opinion, introducing a degree of subjectivity and possibility of human error or bias.

5.3 Bale zone, Oromia

In Bale, the PRRA was undertaken following the same methodology as above, in Nangida Dera, Dello Mena woreda and Hara Haji, Mada Welabu woreda. The baselines were undertaken in 2012 and 2016, respectively. In both kebele/ woreda, good improvements in rangeland condition were found across the kebele, even in Hara Haji kebele where PRM has only been implemented for two years.

In Nangida Dera, clear improvements in vegetation were seen; however, a higher grazing intensity was causing a degree of degradation. In Naniga Dera kebele, the establishment of PRM was six years ago, and though PRM is still playing a role, the governance structures have weakened due to many outsiders utilizing the rangelands. It was not clear whether attempts were being made to restrict or stop these outsiders. In Hara Haji kebele, the PRM was only established two years ago and cut-and-carry of grasses was encouraged in most of the blocks.

Figure 5.1 Grazing/browsing intensity in Naniga Dera

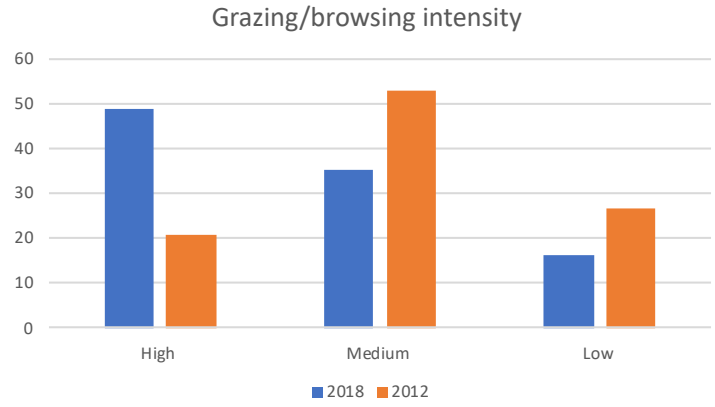
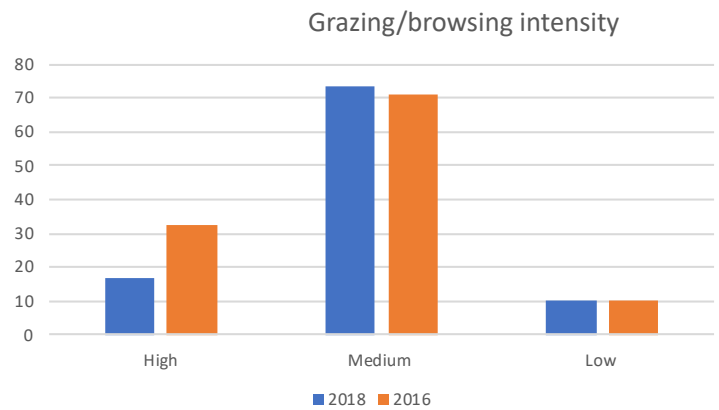


Figure 5.2 Grazing/browsing intensity in Hara Haji kebele



The results of the basal cover, vegetation types and proportional composition of vegetation types indicated a positive change in the composition of vegetation types in most of the blocks in each kebele as compared to the past assessment.

Figure 5.3 Vegetation types in Naniga Dera kebele

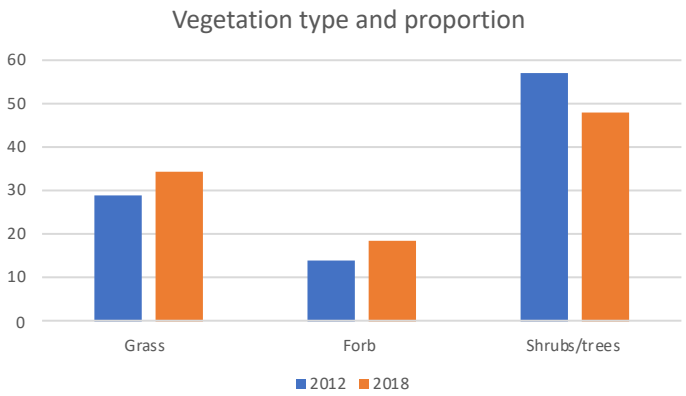
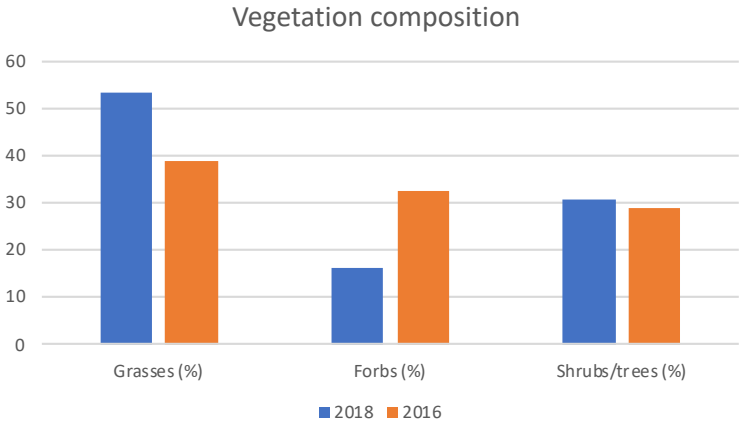


Figure 5.4 Vegetation types and proportions in Hara Haji



The results indicate that in the majority of the blocks, the grass composition has improved in condition and this indicates that the PRM approach has been instrumental in improving the management of the rangeland and restoring the poor condition of the rangeland blocks. The results also indicate that the woody plants proportion decreased in Naniga Dera, but slightly increased in Hara Haji kebele. The increments of woody species in Hara Haji may be due to lack of proper control mechanisms. There are two invasive woody plants that dominated during the assessment, and thus clearing of undesirable and invasive wood/shrub species is necessary to allow new growth of grasses and forbs to improve the range quality

In general, all blocks are serving as grazing and browsing sites, source of soil-mineral licks, sources of water, source of flora for honey production and habitat for wild animals. Local and vernacular names of different species are provided in the main report. Different groups of people rely on these resources for generation of income. Moreover, the overall quality of the rangeland in the blocks is considered as 'medium' as agreed by both the community and government technical staff. The quality of rangeland in the blocks in Naniga Dera is challenged, where many blocks are grazed by many livestock that come together from different kebeles and which have created additional grazing pressures on the land.

From the results, much of the vegetation recorded are important plant species for medicine, grazing and browsing and other uses in the blocks. Furthermore, since all the plant species listed above are important for different purposes, protecting and developing these plant species are vital to diversify the livelihood options of the community.

In some parts of the blocks across the kebeles, the grazing intensity was high to medium, which requires addressing. Though less soil erosion exposure was indicated from the result in most of the blocks across the kebeles, the assessment results imply that in areas where the exposure of the soil for erosion is higher, sowing of grass seed and applying soil and water conservation interventions could be carried out.

Parasite infestation and livestock disease are observed in the blocks in both kebeles. Two poisonous plant species were observed in most of the blocks. The result indicated that the number of settlements in the blocks in both kebeles had decreased slightly suggesting resettlement of some. Incidence of fire was indicated both controlled for bush clearing but also uncontrolled, spreading from honey production.

Generally, it is indicated that PRM has improved the condition of the rangeland in both kebeles in the Bale zone, though there exist problems in enforcing rules and regulations including limiting livestock numbers in Nangida Dera. Strengthened management is required to maintain and further improve rangeland condition and ensure its use is sustainable. More management and protection of desirable plants species is required to further improve the range quality of the blocks. There needs to be proper utilization of the rangeland with an acceptable number of livestock across seasons, and settlements in the grazing lands need to be avoided.

Though the PRRA method was simple and easy to use, there were challenges in using the chain relascope for measuring the woody plant basal cover as it is underestimating the cover of woody plants in the area. Though it might be good for big diameter plants, it is not so useful for shrub-like plants. In addition, the addition of objective parameters for rangeland assessment, like production through biomass estimation, will contribute useful data regarding rangeland condition.

Management of livestock and grazing practices is a fundamental part of PRM (photo credit: ILRI/Apollo Habtamu)

6. ASSESSING LAND COVER CHANGE ON PRM SITES USING ULTRA HIGH-RESOLUTION REMOTE SENSING IMAGERY: A PILOT ANALYSIS[5]

6.1 Introduction

This chapter presents the results of a remote-sensing based analysis of the change in biophysical conditions for a select group of kebeles in Ethiopia that have implemented PRM plans within the last five to ten years. The goal of this analysis was to determine the efficacy of using high-resolution remote sensing imagery and tools to monitor progress on PRM objectives. The analysis was performed by comparing land use/land cover (LULC) from the period near or just before development of the PRM plan with the LULC from the most recent imagery available. The results of the analysis can be used to provide a high-level interpretation of the extent of implementation of PRM objectives and/or adapt the PRM plan to address modified objectives based on evident changes in the landscape. A sample of control kebeles—areas of similar LULC characteristics, but where PRM had not been implemented—were also evaluated to elicit whether certain changes in the landscape could be attributed to PRM versus other factors.

This chapter presents the change in LULC for seven kebeles in two case study regions: Bale zone and Afar region. In each case study region, two PRM kebeles and one or two control kebeles were evaluated. In Bale zone, the two PRM kebeles evaluated were Hara Haji and Naniga Dera and the control kebele was Burkiti. In the Afar region, the two PRM kebeles were Kurkura and Tachemetekleye kebeles, and the two control kebeles were Asoba and Bortidasna Galifagi. Only one control kebele was evaluated in Bale zone due to a lack of available imagery at a sufficient resolution and/or during a time period consistent with the other kebeles.

6.2 Methodology to assess LULC change

Tool and approach

The imagery interpretation tool used in this analysis was Collect Earth. Collect Earth is a free and open source tool developed by the Food and Agriculture Organization of the United Nations in cooperation with Google Earth. It has been used in more than 30 countries to complement traditional remote sensing and wall-to-wall tree cover analyses particularly for drylands, scattered trees and trees outside forests. While Collect Earth has traditionally been used for estimating tree cover density, it is adaptable and customizable to different landscapes and therefore was chosen for this pilot analysis of rangelands.

[5] By Katie Reytar, WRI

For this analysis, the operator visually interpreted satellite images to categorize and quantify what is seen on the land for two points in time—the period near the beginning of PRM implementation (approximately 8 to 12 years prior, depending on kebele) and the most recent available images (within the last 1 to 2 years). The images were sourced from either Google Earth or the Digital Globe Cloud Services web portal. All images had a maximum resolution of 50 centimetres.

Sampling

Systematic grids were created to have sample plots of one ha every one kilometre. The survey cards were developed to capture the types of land cover and land uses associated with rangelands.

Statistics and map analysis

The operator used the program SAIKU to produce descriptive statistics and Google Earth Engine to produce maps. Certain map analyses were also conducted in ArcGIS by importing from Google Earth Engine.

6.3 LULC change in Bale zone

The results for Bale zone show that all kebeles have an overall trend towards more land dedicated to pastoralism and agro-pastoralism. The PRM kebeles, Hara Haji and Naniga Dera, demonstrated a net decrease in bush/shrub cover, which is consistent with PRM objectives, and the Burkiti kebele showed a net increase in bush/shrub cover. Hara Haji showed the most significant change in LULC over the time period, with significantly more pastoralism and agro-pastoralism, more enclosures and more settlements, thus demonstrating a trend towards diversification of livelihoods.

Figure 6.1 Distribution of LULC in 2010 and 2017 for Hara Haji kebele

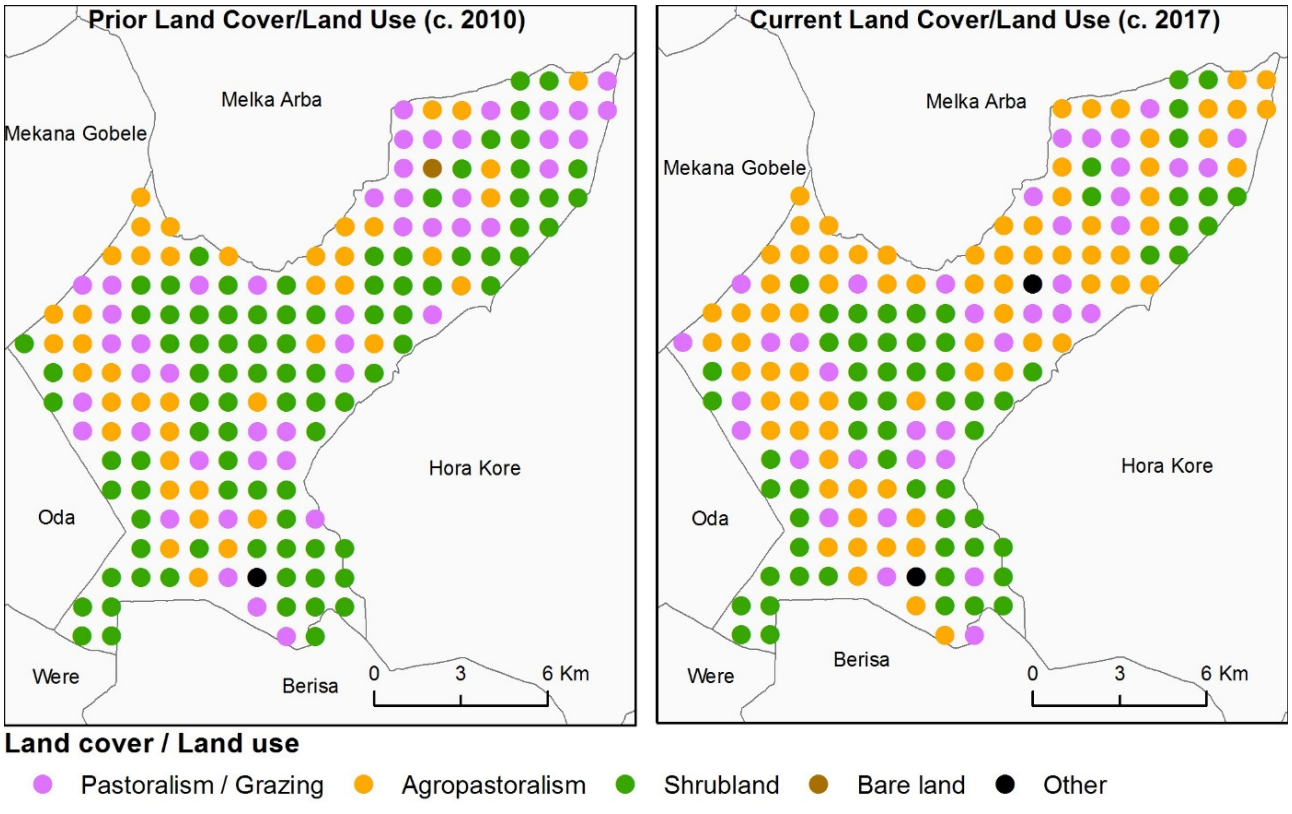


Figure 6.2 Summary of changes in LULC between 2010 and 2017 for Hara Haji kebele (note that one sample plot could have more than one type of change evident)

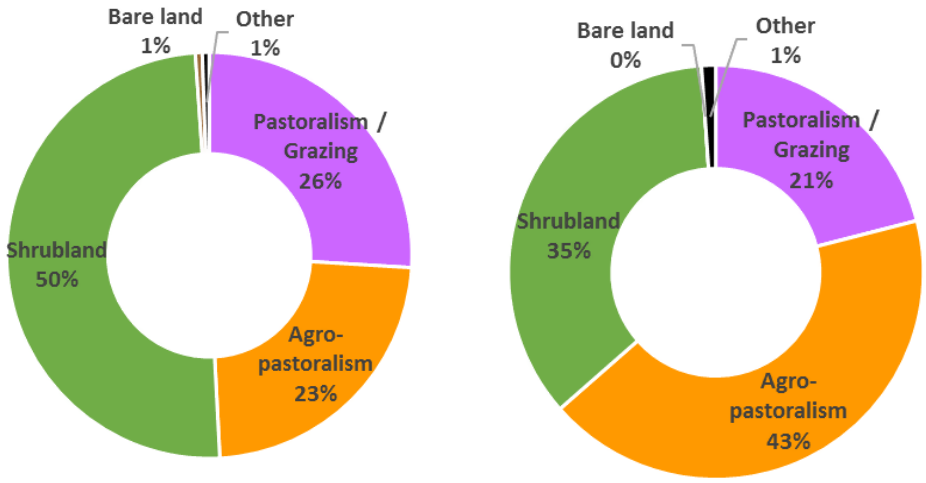


Figure 6.3 Distribution of LULC in 2008 and 2017 for Naniga Dera kebele

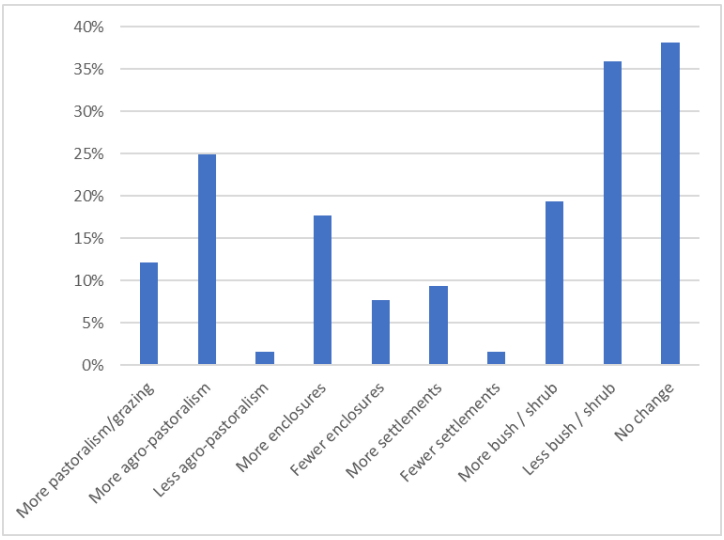
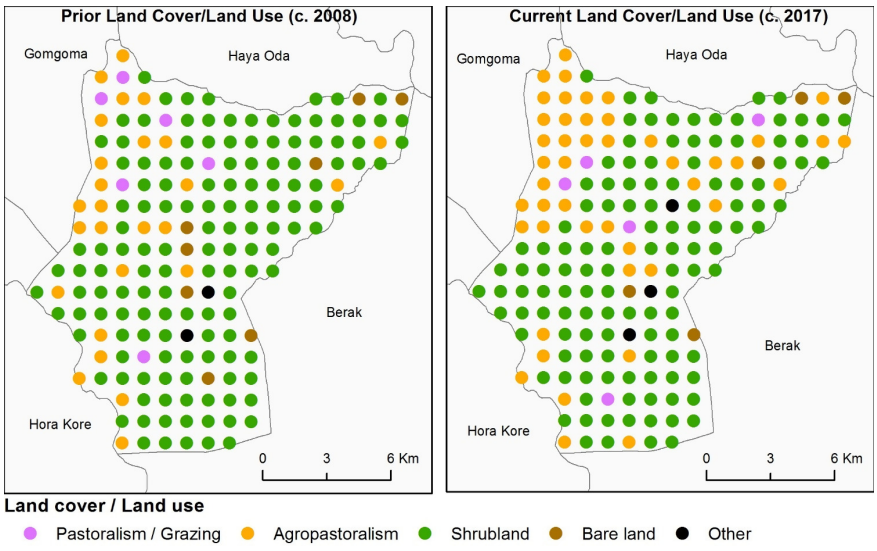


Figure 6.4 Summary of changes in LULC between 2008 and 2017 for Naniga Dera kebele (note that one sample plot could have more than one type of change evident)



6.4 LULC change in Afar region

The results for the Afar region show that the kebeles with PRM plans in place have an overall trend towards more land dedicated to pastoralism and agro-pastoralism, while the control kebeles both show a decrease in pastoral land and no presence of agro-pastoralism. Kurkura (PRM) showed the most significant decrease in bush/shrub cover, which is consistent with PRM activities, while Asoba (control) showed the most significant increase. The PRM kebeles of Tachemetekleye and Kurkura both showed an increase in enclosed areas, which is consistent with PRM objectives, while the control kebele of Bortidasna Galifagi also showed an increase in enclosures despite PRM not being active in that kebele. Tachemetekleye also showed a net increase in bush/ shrub cover, which may signify that more investment in shrub removal as part of PRM activities is needed. The significant area of industrial-scale crop-farming in Asoba district appears to be encroaching on pastoral grazing area and perhaps livestock movement, thus leading to conversion of pastoral land to shrubland and large increases in bush/shrub cover.

Figure 6.5 Distribution of LULC in 2008 and 2017 for Kurkura kebele

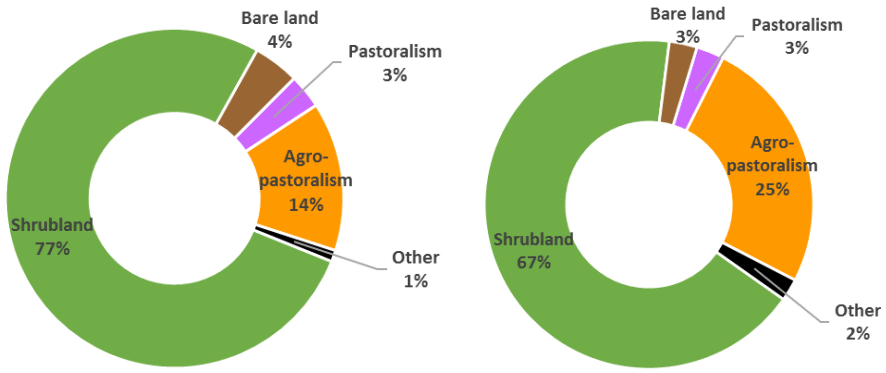


Figure 6.6 Summary of changes in LULC between 2007 and 2017 for Kurkura kebele (note that one sample plot could have more than one type of change evident)

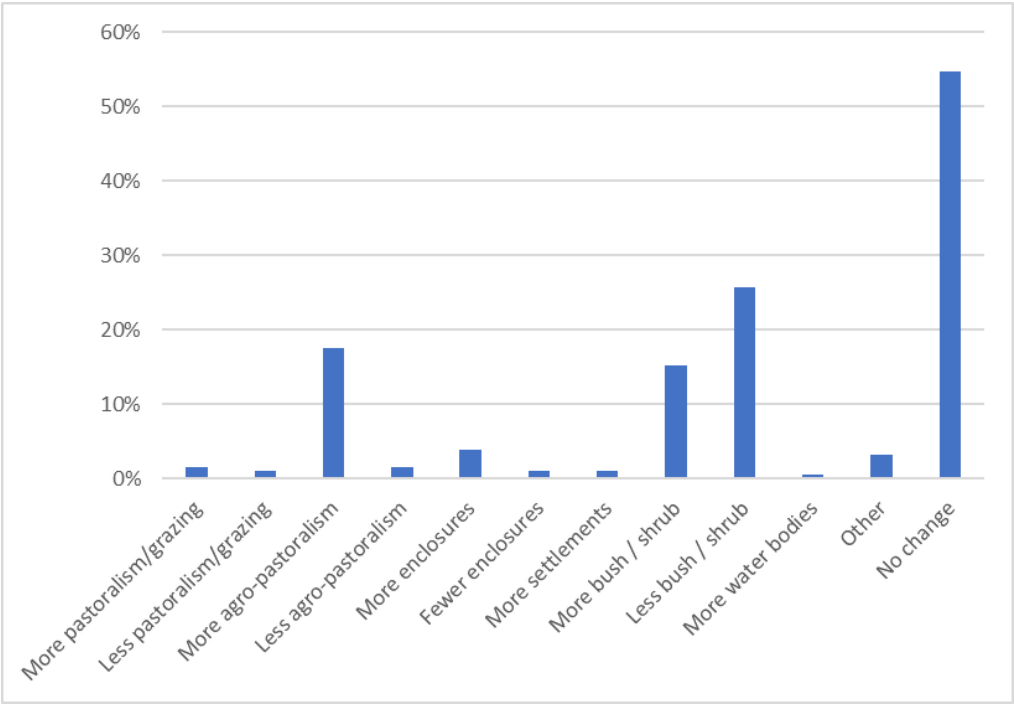


Figure 6.7 Distribution of LULC in 2009 and 2016 for Tachemetekleye kebele

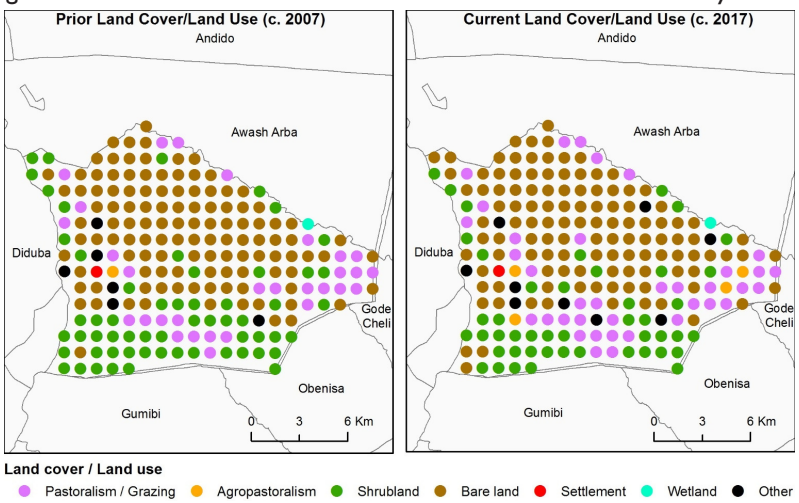
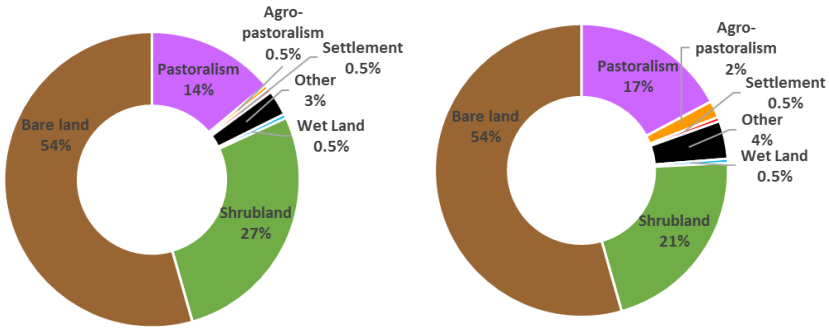


Figure 6.8 Summary of changes in LULC between 2009 and 2016 for Tachemetekleye kebele (note that one sample plot could have more than one type of change evident)



6.5 Conclusions

Overall, the results depict an overall trend towards more land dedicated to pastoralism and agro-pastoralism in all kebeles where PRM had been undertaken, whereas in Afar in particular, the control (nonPRM) kebele showed a decrease in pastoral land. In addition, in Bale zone PRM kebeles (Hara Haji and Naniga Dera) and in Kurkura kebele, Afar, there was a net decrease in bush/shrub cover, which is consistent with PRM objectives, and in the control kebele Burkiti (Bale) and Asoba (Afar) there was a net increase in bush/shrub cover. Hara Haji (Bale) showed the most significant change in LULC over the time period, with significantly more pastoralism and agro-pastoralism, more enclosures and more settlements, thus demonstrating a trend towards diversification of livelihoods. In Afar, all three kebeles (treatment and control) showed an increase of enclosures. As such, the results indicate that PRM are having a long-term impact on maintaining if not increasing pastoralism as a land use, and to a degree showing investment of sustainable land management activities to support this. In the nonPRM (control) kebele, there were few positive land use changes, and a number of significantly negative ones including conversion of rangelands to crop farming in Asoba kebele.

7. KEY LESSONS LEARNED: GAPS AND OPPORTUNITIES FOR STRENGTHENING PRM

This review has been an opportunity to take stock and reflect on the piloting and implementation of PRM in Ethiopia. As has been described, there have been two main ways of implementing PRM: 1) focusing on customary use of the land and institutions as the entry point and strengthening these, particularly at a landscape/rangeland level (led by PRIME/CARE), and 2) an approach that is more similar to PFM, working at a block or smaller scale with local communities to establish cooperatives as the governance institution, of which members of customary institutions would be a part (led by Farm Africa and SOS Sahel).

The review used several approaches to collect data, including a HH survey, a physical assessment of changes in rangeland condition, remote sensing to measure physical change and interviews with key actors. The main analytical framework used is documented by Robinson et al. (2018) and is recommended to be used for further analysis of PRM and its impacts: https://cgspace.cgiar.org/handle/10568/97916.

Every one of these approaches concluded that overall, the implementation of PRM has been positive. This section focuses on the key lessons learned from the review, together with gaps and opportunities for strengthening PRM in further applications.

7.1 Need to work at multiple scales

The implementation of PRM has been undertaken at different scales. The PRIME approach focused first and foremost at the landscape/rangeland scale and the Farm Africa and SOS Sahel Africa approach focused at the local level—the kebele or part of the kebele being divided up into rangeland blocks. Both have had their benefits, challenges and pitfalls. For example, though PRIME implemented most of the steps of PRM across a significantly large area (including mapping, landscape-level rangeland management planning and in some places a rangeland management agreement), local community members were not involved and/or consulted in decision-making processes taken at landscape/rangeland level, many did not know about or were not aware of PRM or the decisions, plans and agreements that had been made by their 'representatives' and few had participated in any activities or had any clear incentive to do so. PRIME said that they relied on local community communication processes to share information, but clearly this did not work well with the majority of respondents on-the-ground in the PRIME intervention areas saying that they did not know about PRM and/or had not been involved in activities.

Alternatively, Farm Africa and SOS Sahel supported PRM at a smaller scale working much more directly with community members in a kebele or part of a kebele as a grazing area or block. This meant that when community members in intervention areas were interviewed about PRM, they answered positively that they had been consulted and/or participated in decision-making processes and activities, and generally had a good knowledge about it.

However, by focusing on only a relatively small area, which was in fact only part of the wider landscape/rangeland used by livestock keepers/pastoralists, it created problems between those in the project intervention area and those outside. For example, Berak kebele (in the project area in Bale) had an arrangement with Melka Arba kebele and Erba kebele (outside the project area) to share grazing, with Berak having good wet season and the others having good dry season grazing areas at higher altitude. When PRM was introduced in the Berak kebele, new rules and regulations were established to limit grazing there, including restricting of the secondary users from Melka Arba and Erba, without including them in the decision-making or negotiation process. This created friction between the two sets of communities, while potentially limiting Berak's use of the dry season grazing found in the other two kebeles. If Farm Africa and SOS Sahel had focused more on a landscape/rangeland-level approach to implementing PRM (i.e. including those living and using the whole rangeland system of dry and wet season grazing), this situation could have been avoided.

As such, by only focusing on one particular level i.e. landscape/wider rangeland or local/kebele/block, rather than both, problems have resulted. There seems to be a trade-off within and between the two approaches: landscape level means greater coverage and follows traditional patterns of grazing and supports customary institutions and governance but has poor participation of communities across the area and less concentrated interventions, while the 'block' or kebele approach means less geographical coverage, less role for customary institutions but significantly greater participation of communities in those smaller, concentrated areas and greater results in terms of activities. To overcome these obstacles, greater effort is required to work at multiple scales taking a more holistic and multi-level approach as appropriate and ensuring both horizontal and vertical linkages among them.

7.2 PRM should be embedded in wider development processes and an enabling policy environment

Rangelands and their resources are one component of a pastoralism system, together with livestock and people. The sustainable development of the pastoralism system as a whole requires all three components (or pillars). Rangeland management needs to be an integral part of local development decision-making, planning and implementation including investment. As has been shown, when attention is provided to this, there are positive impacts on both the physical rangeland and on local socioeconomics of communities. In addition, by looking after the rangeland and investing in it, a range of environmental services benefiting those beyond the local population can also be realized.

To date, PRM as implemented in Ethiopia has not been fully integrated into local development planning, but rather stands alone as a separate component. This has meant that it is still operating as a 'project' supported by NGOs, without the full 'buy-in' of local, regional and national government. There is still no policy or legislation that supports or legitimizes PRM at national or regional levels (unlike PFM). This compromises the sustainability of the approach and PRM plans and activities, relying mainly on local community commitment (and limited government commitment) to take PRM forward once projects stop. As this review has demonstrated, this tends to lead to a decline in implementation of PRM plans after projects finish, with communities seeing few incentives to maintain activities, particularly in the face of land and resource tenure insecurity. In addition, exclusion from district (woreda) development planning processes means that PRM misses out from the opportunity of having funds allocated to its implementation through woreda government budgeting, and also risks duplication of activities when new NGOs come into the area and start developing their own plans. It also means that government does not share local development plans with those developing and implementing PRM, leading to a situation experienced by CARE in the Afar region where they inadvertently supported community members to clear lands of Prosopis that had been identified for commercial investment by the regional government. This led to a difficult situation where the government accused CARE of working against local development plans, even though the government had not shared those plans with CARE. If PRM was a process embedded in local (woreda/regional) development planning, this situation could have been avoided.

Therefore, it is recommended that in any further application of PRM, greater attention should be given to embedding PRM in wider development processes and plans working more closely with government at different levels allowing rangelands to be viewed more favourably as part of, and their contribution recognized to, local development plans. This should be a two-way flow of information ensuring that PRM informs development plans, while development plans also inform PRM and local decision-making. This will increase incentives to invest in rangelands and improve their productivity as a means to improving livelihoods. In addition, work needs to be carried out to influence policymakers to develop a more enabling policy environment for PRM, and ultimately policy and legislation that provides for PRM to be fully enacted, appropriate institutions established, plans implemented, and agreements developed and enforced.

Another issue to consider is the push for financial, time, labour and/or 'in-kind' contributions from government and communities as a criteria for selecting areas/communities to invest or implement PRM. Though there is always a risk that government or communities will not invest in such processes, the likelihood of investment increases if they recognize the importance and the likely benefits gained. Other projects that demand community investment in order to build local infrastructure and services such as the Pastoralist Community Development Project have seen remarkable results in terms of financial, labour and materials provided by communities for cost-sharing of the building of schools, clinics, water points etc. in their villages. This has not only resulted in greater community 'ownership' of the infrastructure and likely investment in maintaining it, but also communities have appreciated being part of the decision-making and development process (Flintan et al. 2018).

7.3 PRM is not a rigid linear process

In the PRM Introductory Guidelines, the PRM process is illustrated as a set of stages and steps, however as the piloting and upscaling of PRM has shown, it is better regarded as a set of components that are linked at multiple points and is not taken to be a rigid linear process. In its implementation, PRIME/CARE did start working through each step one-by-one, but in time realized that, for example, capacity building needs to be carried out across the steps as does developing an enabling policy environment (see above). In addition, by only focusing on one step at a time, PRIME tended not to think about preparing for the other steps, which translated to a significant amount of time and investment made in the early step(s) such as rangeland resource mapping, but less time and investment in the later steps such as the development of the plan and its implementation.

Therefore, though PRM can be viewed as a series of steps to a functioning RMP, it should be recognized that there are linkages between the steps that are not linear, and there are a number of cross-cutting issues such as capacity building and developing an enabling environment for PRM that allows for development of secure agreements and their enforcement which require attention all the way through the process. Conflict resolution is another cross-cutting issue that must be considered. In addition, implementors should not wait for one step to be finished before attention is paid to the next; preparations for the next step can be made in parallel. Further, the process is best facilitated when it is accompanied by reflective processes including feedback and adaptation mechanisms; time and resources should be allocated to this.

7.4 PRM is a means of empowering communities including women

The implementation of PRM by PRIME has clearly contributed to an improvement in management and governance of rangelands in terms of structures, presence and engagement with multi-stakeholders. This has been an important step in a context of increasing lack of management of rangelands, and an increasing number of multiple stakeholders and interests.

PRM has contributed to a strengthening of the commitment to rangeland management processes and activities, roles and responsibilities and has discouraged dependency on external assistance. Moreover, spaces have been created through PRM where people who have been empowered with knowledge can come together and discuss, share and generate meaningful information deemed important by them.

PRM has been shown to improve collective ways of working and management, and reduce the trends towards individualization of resource use, management and 'ownership.' Where PRM has been implemented at the community level, it targets the community as a whole and avoids a focus on one particular group over another. Being part of a large and significant process supports societal growth including feelings of unity and reduces conflict (Kebede et al. 2013). In pastoral communities, it is often the case that immediate benefits from improved access to natural resources (grazing, water, minerals) may be more directly gained by those who are better off in the community i.e. those with larger herds. With affirmative action, PRM can provide a platform for ensuring that the poorer and more vulnerable groups also benefit. One way of doing this has been to use communal enclosures for cut-and-carry of grass and haymaking, which all community members can benefit from. PRM is more concerned with good management rather than a means of raising direct income for communities, so the benefit-sharing aspects (at least, those that are monetary based) are often less critical.

Where PRM has focused more on activities at a landscape level, working through RCs, questions have been raised about the legitimacy of a few to make decisions for a majority of the population in these areas and communities that are at a distance from these major decision-makers. This is particularly the case where customary institutions may not be functioning as well as they should be and so their legitimacy is challenged, and the structures that would have previously existed to allow local-level input and approval are missing.

Having said that, in general, those community members who had known about and/or participated in PRM were happy with the consultations and opportunities to participate in the planning and the different activities. In Bale zone in particular, where Farm Africa and SOS Sahel have been working, there were surprisingly high numbers of community members who said that they had read the RMP and been involved in implementing it, for example. In general, across all kebeles, respondents were 'very satisfied' or 'satisfied' with the steps in the PRM process. This included women, with a high ranking of 'women's improved participation in decision-making processes and rangeland management' as a positive outcome of PRM.

Women's participation in rangeland management including decision making processes has been improved by PRM (photo credit: Save the Children/Kelley Lynch)

PRM can provide opportunities for a better valuing of women's knowledge and role in rangeland management, improving women's understanding of NRM challenges and potential solutions, and increasing women's participation in decision-making processes. Benefits can include going to meetings and discussing problems with fellow community members, receiving information during planning meetings that can be shared with other community members, improvement in rights and empowerment within the rangeland management setting and homestead context, and practical interventions that reduce women's work load and/or improve men's contribution to tasks that previously were carried out mainly or only by women (for example, grass cut-and-carry for young or weak animals).

It was indicated that the participation of women was less in the higher-level governance bodies than in the lower ones, and where women were not involved this was said to be due to high workloads, long distances to meetings and cultural barriers such as perceptions that women do not have the capacity to assume higher-level management responsibilities. Though the number of female-headed HHs participating in the HH survey was relatively small in number, it is felt that this was a reasonable representation backed-up by statements by men, KIIs and focus group discussions that women, in general, were involved in the PRM process including in decision-making. This is most clearly seen through women themselves saying that they were satisfied with the PRM processes, and two of the top six impacts of PRM being firstly, improving the participation of women in rangeland management, and secondly improving their access to rangeland resources. This positive result has been influenced by the steps taken by NGOs to include women as well as men (though this was rather vaguely expressed) and in some cases, women-targeted activities and training.

As such, it is recommended that significant attention be given to instil local government and community 'buy-in' and 'ownership' of the approach and activities, including exploring to what degree communities can contribute to PRM and its implementation in terms of cash, time, labour and/or 'in-kind' contributions. The most common challenge to ongoing implementation of PRM was said to be lack of funding, highlighting once again the communities' reliance on external support for PRM implementation. There is often a perception that pastoralist communities are poor, but this is not necessarily the case and communities can mobilize resources if they have the incentive to do so. Creating those incentives and showing the long-term benefits of PRM is an important function for those supporting PRM.

7.5 PRM contributes to improving rangelands condition and the importance of good M&E including a physical baseline to measure outcomes

The HH survey in particular highlighted that the most significant impact seen as a result of PRM was 'improved rangeland condition' with 157 respondents mentioning this. Where baselines were available, this was backed up by the physical assessment that was undertaken as part of this review which concluded that in some areas (particularly in Bale) there had been positive improvements in the rangeland condition (improved ground vegetation coverage etc). Considering that these areas have only been under PRM implementation for 2–4 years, this is a good result. Respondents also said that improved rangeland condition was one of the first results seen, likely due to interventions supported such as bush clearing. These quick, visible results help to show how beneficial PRM can be, creating incentives for communities to keep on investing in the process while longer term impacts are realized.

However, due to the lack of physical baselines undertaken in PRIME intervention areas, it was not possible to measure physical changes in these areas, and though some monitoring of change has been carried out in PRIME intervention areas by USFS, it was not comprehensive. This was a lost opportunity for PRIME to show the physical impact of PRM, and particularly at the scale that PRIME worked.

Therefore, it is recommended that in any further application of PRM a simple physical baseline should be carried out prior to or in the early stages of PRM interventions so that physical changes resulting from PRM can be effectively measured. This will provide a sound basis for demonstrating the benefits of PRM and its scope for upscaling and investment in it from government and other development partners. It is further recommended that this baseline be simple enough to be undertaken by community members as part of the preparation and ongoing implementation (M&E) of the RMP, so that they have greater control and 'ownership' over the whole process. Indeed, the results of such a baseline can also directly feed into the RMP planning process as a rangeland resource assessment. Measuring change by remote sensing and other tools are a good technical back-up to the community monitoring activities.

REFERENCES

Abera, K. 2018. *PRM. Resilience in the drylands of Ethiopia. Lessons and experience from PRIME*. A presentation made at the 'Sharing of experiences on PRM - implementation in Ethiopia and potential piloting in Kenya and Tanzania' organized by RECONCILE-TNRF-ILRI. Addis Ababa, Ethiopia.

Adem, A. Undated. *Application of participatory scenario planning (PSP) approach in PRIME project*. Ethiopia: CARE.

CARE Ethiopia. 2014. *Facilitation manual: Social analysis and action for climate change adaptation in Ethiopia's pastoral communities*. (unpublished report). Addis Ababa, Ethiopia.

Farm Africa. undated (a). *Kurkura Kebele Rangeland Management Plan, Amibera woreda.* (unpublished report). Prepared with support of the PRM Project. Ethiopia: Farm Africa.

Farm Africa and SOS Sahel. 2013. *Participatory rangeland management (PRM) project, Bale zone*. Terminal report (unpublished).

Farm Africa and SOS Sahel Ethiopia. 2014a. *The key steps in establishing participatory rangeland management. A field manual to guide practitioners in Ethiopia*. Addis Ababa, Ethiopia.

Farm Africa and SOS Sahel Ethiopia. 2014b. *Participatory rangeland resource assessment (PRRA) methodology*. Addis Ababa, Ethiopia.

Farm Africa and SOS Sahel. 2018. *Bale Eco-region Sustainable Management Programme* (BERSMP): Annual report (unpublished).

Farm Africa and SOS Sahel. Undated. *Notes on SHARE-BER project implementation in the lowland woredas of Bale for high-level partners forum meeting & field visit programme*. (Unpublished report)

Flintan, F. and Cullis, A. 2010. *Introductory guidelines to participatory rangeland management (PRM)*. Addis Ababa, Ethiopia: Save the Children.

Flintan, F., Ebro, A., Eba, B., Assefa, A., Getahun, Y. et al. 2019. *Review of participatory rangeland management – Process and implementation.* (Unpublished report).

Flintan, F. 2014. *Securing rights to rangelands in Ethiopia: A review of initiatives that are taking steps in the right direction*. (Unpublished report). Addis Ababa, Ethiopia: Tetra Tech ARD Inc.

Getahun, T. 2014. *Epic note on Participatory Rangeland Management (PRM) in pastoral areas of Ethiopia: Approaches and synthesis*. (Unpublished report). Farm Africa.

Gudina, D. 2018. *Participatory Rangeland Management (PRM)*. A presentation made at the 'Sharing of Experiences on PRM—Implementation in Ethiopia and potential piloting in Kenya and Tanzania' organized by RECONCILE-TNRF-ILRI. Addis Ababa, Ethiopia.

Irwin, B., Cullis, A. and Flintan, F. 2015a. *Mapping guidelines for participatory rangeland management in pastoral and agro-pastoral areas*. Addis Ababa, Ethiopia: CARE. (Available from https://www.prime-ethiopia.org/wp-content/uploads/2016/06/Mapping%20Guidelines_PRM.pdf) (Accessed on 3 July 2019)

Irwin, B., Cullis, A. and Flintan, F. 2015b. *Practitioners' guide. Mapping guidelines for Participatory Rangeland Management in pastoral and agro-pastoral areas*. Addis Ababa, Ethiopia: CARE. (Available from https://www.prime-ethiopia.org/wp-content/uploads/2016/06/PRM%20practitioner%27s%20guide.pdf) (Accessed 3 July 2019)

Kebede, A., Weiser, A. and Flintan, F. 2013. *Participatory Natural Resource Management (PNRM): Guidelines for practitioners based on experiences shared*. (Unpublished report). Addis Ababa, Ethiopia: Save the Children USA.

Motuma, T., Melaku, B., Yibeltal, T. and Banteyihun, S. 2016. *Land use changes, optimization strategies and the role of institutions for sustainable natural resources management in Bale Eco-Region; a research project report*. (Unpublished). Wondo Genet, Ethiopia.

Petryniak, O. 2014. *Overview of PRM and mapping undertaken under PRIME*. Presentation made at the Ministry of Livestock Rangeland Management Platform, 21 July 2014. Addis Ababa, Ethiopia.

PRIME. undated (a). *PRIME's Participatory Rangeland Management approach: Processes, best practices and results*. Ethiopia: CARE.

PRIME. 2014. *Learning workshop on Guji lowland grazing management— Dheda Dida, Dheda Golba Genale and Dheda Golba Dawa*. (Unpublished report)

PRIME .2017. *Participatory Rangeland Management (PRM)*. A presentation (venue not mentioned).

Riginos, C. and Herrick, J. 2010. *Monitoring Rangeland Health*. (Available from http://www.mpala.org/Monitoring_Guide.pdf) (Accessed on 2 July 2019)

Robinson, L.W., Abdu, N.H., Nganga, I.N. and Ontiri, E. 2018. *Protocol for characterizing community-based rangeland management cases: Restoration of degraded land for food security and poverty reduction in East Africa and the Sahel—Taking successes in land restoration to scale project*. ILRI Manual 33. Nairobi, Kenya: ILRI. (Available from https://cgspace.cgiar.org/handle/10568/97916) (Accessed on 2 July 2019)

USFS. 2018. Monitoring for rangeland health: Summary of US Forest Service mapping and monitoring results in Ethiopia. (Unpublished report). Addis Ababa, Ethiopia: PRIME:

Yehualashet, H. 2018. *SHARE Bale-Eco Region Project Results Lessons*. A presentation made at the "Sharing of Experiences on PRM - Implementation in Ethiopia and Potential Piloting in Kenya and Tanzania" organized by RECONCILE-TNRF-ILRI: Addis Ababa, Ethiopia.

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