

Participatory rangeland
management toolkit
for Kenya



RESEARCH
PROGRAM ON
Livestock

Participatory rangeland management toolkit for Kenya

First edition



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PART ONE

INTRODUCTION

Acknowledgments

The participatory rangeland management toolkit for Kenya is a collaborative effort drawing on contributions from various partners, projects and donor agencies. This first edition was compiled by Lance W Robinson, Fiona Flintan, Sarah Kasyoka, Irene N Nganga, Ken Otieno and Jason Sircely. The ideas and materials in the toolkit draw on the experiences of these and many other people who have been supporting community rangeland management efforts for many years. This toolkit particularly borrows from *Introductory guidelines to participatory rangeland management in pastoral areas* (Flintan and Cullis 2010).

It is expected that over time, the toolkit will be further developed by adding more tools and involving an expanding range of partners. The development of this first edition of the toolkit was led by the International Livestock Research Institute (ILRI) with funding support from the CGIAR Research Program on Livestock and the United States Agency for International Development's Feed the Future Kenya Accelerated Value Chain Development (AVCD) program.

CGIAR is a global partnership that unites organizations engaged in research for a food-secure future. The CGIAR Research Program on Livestock provides research-based solutions to help smallholder farmers, pastoralists and agropastoralists transition to sustainable, resilient livelihoods and to productive enterprises that will help feed future generations. It aims to increase the productivity of livestock agri-food systems in sustainable ways, making meat, milk and eggs more available and affordable across the developing world. The program thanks all donors and organizations who globally supported its work through their contributions to the CGIAR Trust Fund.

The AVCD program seeks to widely apply technologies and innovations for livestock, dairy and staple crop (root crops and drought-tolerant crops) value chains in order to competitively and sustainably increase productivity, contributing to inclusive agricultural growth, nutrition and food security in 23 counties in Kenya. Supported by the United States Agency for International Development as part of the US government's Feed the Future initiative, its main goal is to sustainably reduce poverty and hunger in the Feed the Future zones of influence in Kenya. The livestock component of AVCD is led by ILRI.

Additional support was provided by the Rangelands Initiative of the International Land Coalition; and by 'Restoration of degraded land for food security and poverty reduction in East Africa and the Sahel: Taking successes in land restoration to scale' project, led by the World Agroforestry Centre (ICRAF) and funded by the International Fund for Agricultural Development with support from the European Union.

Disclaimer

The contents of this toolkit do not necessarily reflect the views or policies of ILRI, the CGIAR, other organizations that contributed to it, or donor agencies whose financial support made the toolkit possible.

Acronyms

AVCD	Accelerated Value Chain Development program
CBNRM	Community-based natural resource management
ILRI	International Livestock Research Institute
IPAL	Integrated Project in Arid Lands
M&E	Monitoring and evaluation
PRM	Participatory rangeland management
RMP	Rangeland management plan

Background

Rangelands make up more than 80% of the Kenyan landmass and a similar proportion of red meat in the country is produced primarily on rangelands. Rangelands provide livelihoods for millions of pastoralists and agropastoralists and are the backbone of Kenya's wildlife tourism industry. The vast majority of these rangelands are situated on communal rather than private land and are managed collectively by the people who live there. While pastoral and agropastoral communities have had traditional institutions and practices for managing their resources, these traditional systems have been eroding in most communities. That erosion dates back to the colonial period.

Customary systems of communal land management were for the most part invisible to colonial administrators; and lands that were not being farmed were seen as 'waste and unoccupied land'. Over time, the colonial administration placed greater and greater restrictions on herd mobility, although this varied in different parts of the country. In the north, 'tribal grazing areas' that separated ethnic communities, restricted movement and reduced interaction amongst them, were created. Within some of these tribal grazing areas, certain areas were periodically closed off to grazing, sometimes for a season, sometimes for a few years (Robinson 2009). In the centre and south of the country, the colonial administration was much more interventionist and took active steps to transform the pastoral way of life. Large areas of pastureland were lost to these communities as they were converted to agricultural land or handed over to private ranchers. Assumptions about the need for private land ownership were eventually codified in the Swynnerton Plan, which aimed at improving agriculture by providing secure individual private tenure to farmers (Swynnerton 1954). In the same period, various grazing schemes that attempted to push pastoral systems to take on more of the features of private ranching were attempted and abandoned.

In the post-independence era, attitudes about the superiority of private land tenure were carried over from the colonial period. However, the group ranch system represented a compromise that attempted to secure ownership of land while recognizing, if only minimally, the extensive nature of livestock production in arid and semi-arid areas. The group ranch system was not implemented in all pastoralist areas. In the north, beyond its reach, various programs for management of rangelands were attempted. In the northeast, a system of grazing blocks evolved from the colonial tribal grazing area approach. Boundaries were identified and support given in the form of water points and veterinary care (Mohamed 1999). The system promoted offtake of young cattle for fattening elsewhere to feed into the national market. A different approach was attempted in Marsabit beginning in the late 1970s with the UNESCO Integrated Project in Arid Lands (IPAL). IPAL aimed at reversing 'desertification' by promoting increased levels of livestock offtake and reduced herd sizes (Fratkin and Roth 2005). Common threads in all of these efforts were assumptions that there was rampant overgrazing and the haphazard attention given to developing interventions that were adapted to pastoralist management systems.

During this time, a variety of factors have continued to slowly undermine the authority of customary institutions and resource management systems, although this has varied from place to place and from one ethnic group to another. Where pastoralists have settled and become less mobile, traditional grazing systems such as those which included a well-understood distinction between rainy season, dry season and drought reserve pastures have broken down. Even where the traditional systems remain strong, they face an array of challenges today including climate change, invasive species, growing population, conflict fueled by the proliferation of small arms and shifting institutional and legal frameworks.

The International Livestock Research Institute (ILRI) has been contributing to the development of participatory rangeland management (PRM), a means for policymakers and change agents from governmental and nongovernmental organizations to support communities to manage their rangelands. ILRI does this by drawing on both its own research and the growing body of experience of many partner organizations and communities.

People familiar with community-based natural resource management (CBNRM) will recognize some of the principles and methods used in PRM. However, PRM also has important differences from CBNRM. In pastoralist rangeland settings, resources tend to be extremely variable across time and space. The response of pastoralist peoples to this variability has been production systems based on mobility—moving with herds, sometimes great distances, to where forage is available. Traditional pastoralist systems of resource management have also adapted to these conditions. Territorial borders in traditional pastoralist systems tend to be fuzzy, flexible and porous. Traditional pastoralist governance systems involve multiple levels of decision making and multiple, overlapping centres of authority.

PRM, like traditional pastoralist governance systems, involves planning and decision making at different levels. While a PRM approach typically works through a community organization made up of representatives of all the people within a specified geographic area—a rangeland unit—it also comprises activities for planning and management at larger and smaller scales. This toolkit refers to larger and smaller spaces as “landscapes” and “neighbourhoods”, respectively.

At the rangeland unit level, a rangeland management institution which represents the community works on behalf of that community to manage resources within the whole rangeland unit. There are different organizational forms that the rangeland unit may take: it may be, for example, a group ranch, a community conservancy or a territory defined according to some customary criteria. The community organization for the rangeland unit; therefore, will have different names in different settings. Therefore, where we refer in this toolkit to a “rangeland management institution”, you can substitute “group ranch committee”, “conservancy board of directors”, “traditional council of elders”, or something else depending on how the community that you are working with is organized.

The implementation of PRM typically involves four intermediate outcomes:

- A governance structure for the rangeland unit that belongs to the community and is responsive to it; and that is capable of effective planning for, and management of, the rangeland unit.
- A rangeland management plan developed by the community which guides the actions of the rangeland management institution.
- A set of joint plans and/or negotiated agreements with communities beyond the rangeland unit addressing how pastures and other rangeland resources will and will not be shared, and how the ecosystem and resources will be managed at a landscape scale.
- Recognition by government, and where applicable customary institutions, for the rangeland management institution and the rangeland management plan.

In combination, these will help to achieve the overall objective of healthy rangelands that support wildlife and livestock, and ultimately, prosperous livelihoods.

Introduction to the toolkit

Purpose of the toolkit

The purpose of this toolkit is to introduce the essential elements of participatory rangeland management to county government personnel and others who are supporting communities in their rangeland management efforts. It is meant to provide guidance on steps they may take with these communities.

Who the toolkit is for

The toolkit is targeted primarily at county government personnel who are facilitating PRM with livestock keeping communities. However, staff of nongovernmental organizations and anyone else supporting natural resource management in a rangeland setting, including community members themselves, may also find it useful.

PRM supports community leadership and inclusiveness in land use planning policy and practice. It takes into account the interests, positions and needs of all rangeland users in pastoral areas and offers opportunities for negotiations to be carried out between these different stakeholders to come to agreement over the future of pastoral land use. It provides a suitable and legitimizing process of communal land and resource tenure that fits with both the priorities of pastoralists as well as government bodies.

Flintan and Cullis (2010)

Terminology conventions in the toolkit

Terminology used to describe key aspects of community organization, different levels of planning and so on can vary from county to county and among different implementing organizations. Some working definitions of key terms as used in this toolkit are provided below.

Community – The totality of the people who live within a rangeland unit and are represented by a rangeland management institution. As it corresponds to the rangeland unit, a “community” will often include several settlements rather than just one.¹

Facilitating organization – An organization, often a department of the county government, supporting participatory rangeland management and building the capacity of communities to plan for and manage their rangelands.

Landscape – A geographic area united by some social and/or ecological features and larger than any single rangeland unit. For instance, a cluster of rangeland units whose communities sometime plan and manage resources together may be considered a “landscape”.

Neighbourhood – One section of a rangeland unit. Often, some elements of planning and managing pastures and other resources are done at a level lower than the whole rangeland unit, especially when there are different settlements within the unit.

¹Note: Occasionally, the toolkit refers to “communities” as defined under the Community Land Act (2016). The Community Land Act has its own definition of a “community”. Where the toolkit discusses “communities” in this sense, the distinction is made clear.

Rangeland unit – A geographic area that is the main management unit for PRM. This may be a ward, a location, a sub-location, a traditional territory, or a territory defined some other way. Rangeland units may also work together in clusters at a landscape level, sometimes having sub-units (neighbourhoods) where more localized and detailed planning is done.

Rangeland management institution – The main community council or committee for a rangeland unit. This may be a community-based natural resource management (CBNRM) committee, a ward rangeland management council, a conservancy board of directors, a group ranch committee, etc.

Rangeland management plan – A plan developed by the community for management of natural resources within the rangeland unit. It usually includes, but is broader than, a grazing plan.

Photo 1: Reviewing grazing maps with community members



Photo credit: ILRI/Jason Sircely

Overview of the toolkit

Organization of the toolkit

Central to this toolkit is the idea that participatory rangeland management has four key aspects or dimensions referred to here as four “Legs”. Referring to each of the dimensions as “Legs” implies that rangeland management, like an animal that walks on four legs, must have all four legs healthy and strong if it is to be effective.

The First Leg relates to the establishment and governance of a rangeland unit and includes aspects such as establishing and strengthening the community organizational structures, supporting effective decision making and ensuring meaningful and inclusive representation of community members. The Second Leg comprises the physical practices of grazing land management. This may include relatively straightforward practices such as establishing a grazing plan and more complex interventions such as pasture reseeding and other methods of land restoration. The Third Leg involves looking beyond the borders of the rangeland unit to foster constructive relations with neighbouring communities and implement a landscape approach. The Fourth Leg is concerned with relations with government and customary institutions, including securing institutional recognition of a community’s rangeland governance structures and its rules and plans for managing its pastures and other natural resources.

We referred above to four intermediate outcomes of a PRM process. These correspond to the Four Legs (see Table 1), and the activities under each leg are meant to contribute to the corresponding outcome.

Table 1: The Four Legs and their intermediate outcomes

The “Legs” of PRM	Intermediate outcome
First Leg – establishment and governance of the rangeland unit	A governance structure for the rangeland unit that belongs to the community and is responsive to it; and that is capable of effective planning for, and management of, the rangeland unit.
Second Leg – management of the rangeland unit	A rangeland management plan developed by the community which guides the actions of the rangeland management institution.
Third Leg – using a landscape approach	A set of plans and/or negotiated agreements with communities beyond the rangeland unit addressing how pastures and other rangeland resources will and will not be shared, and how the ecosystem and resources will be managed at a landscape scale.
Fourth Leg – relations with government and customary institutions	Recognition by government and, where applicable, customary institutions, of the rangeland management institution and the rangeland management plan.

The tools in the toolkit are divided into five sections: one for each of the Four Legs and one general section for tools that unite the Four Legs. Tools are numbered according to the sections: 1-1, 1-2, etc. for the First Leg; 2-1, 2-2, etc. for the Second Leg; and so on. The general/cross-cutting tools are numbered with a ‘G’ for ‘general’: e.g. G-1, G-2, etc.

As you read through the toolkit and begin to use it, you will see that some of the tools relate to actions that need to take place within the rangeland unit. However, some tools relate to actions that need to happen in partnership with other stakeholders beyond the rangeland unit. Horizontal partnerships with other communities are emphasized in the Third Leg and vertical partnerships with government are emphasized in the Fourth Leg, although in reality, partnerships permeate the entire practice of PRM.

How to use the toolkit

An attempt has been made to put the tools in a logical sequence within sections, with some of them building on earlier tools. However, each tool can stand alone. The modular design of the toolkit means that, depending on your circumstances and needs for any particular situation, you can pick whichever tool or tools you may need.

For suggestions on sequencing activities in a PRM program, see Tools G-2 and G-3.

Treat the tools as suggestions and guides, not as detailed blueprints. Each community, ecosystem and situation will have its own unique characteristics. Adapt your approach to suit the circumstances.

Table 2: Tools included in the first edition

General tools	
G-1	The “Four Legs” of participatory rangeland management
G-2	Steps in participatory rangeland management
G-3	Scanning and appraisal for planning interventions in a new community
The First Leg: establishment and governance of the rangeland unit	
I-1	Guiding principles for community rangeland governance
I-2	Annual work planning for the rangeland management institution
The Second Leg: management of the rangeland unit	
2-1	Grazing plan basics for rangeland management
2-2	Rapid community rangeland monitoring tool: guide to start monitoring
2-3	Rapid community rangeland monitoring tool: guide for ongoing monitoring
2-4	Participatory scoring of rangeland condition
The Third Leg: using a landscape approach	
3-1	Appreciating the Third Leg of PRM: using a landscape approach
The Fourth Leg: relations with government and customary institutions	
4-1	Appreciating the Fourth Leg of PRM: relations with government and customary institutions
4-2	Rangeland management and the 2016 Community Land Act

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The main goal of the Kenya Accelerated Value Chain Development (AVCD) program under the Feed the Future initiative is to sustainably reduce poverty and hunger in the Feed the Future zones of influence in Kenya.



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PART TWO

TOOLS



Tool G-1

The Four Legs of participatory rangeland management

November 2018

Tool G-1

The Four Legs of participatory rangeland management

Objective

To assist members of the rangeland management institution to appreciate the different dimensions (the Four Legs) of their role

Anticipated output

The rangeland management institution applies the concept of the Four Legs of participatory rangeland management to its planning and interventions.

Participants in this activity

- Members of the rangeland management institution
- Other county, sub-county and community stakeholders: e.g. ward administrators, influential elders, traditional leaders, chiefs, etc.

Introduction

Effective participatory rangeland management stands on Four Legs, which are as follows:

1. Establishment and governance of the rangeland unit
2. Management of the rangeland unit
3. Using a landscape approach
4. Relations with government and customary institutions

If a sheep or goat is to walk, all four of its legs must be strong. In the same way, weakness in any one of these four areas can undermine a community's efforts. For example, if the First Leg pertaining to the establishment and governance of the rangeland unit is weak—if systems for making decision-making are not

For participatory rangeland management to be effective, all Four Legs need to be strong.

transparent, segments of the community feel they are not included and there is no plan for financial sustainability—then plans for management may lose community support or the committee may make unwise decisions. The Second Leg comprises the physical practices of grazing land management. Without tangible actions on the ground and even with only the implementation of basic seasonal grazing plans, rangeland conditions may not be maintained, let alone improved.

It is pastoralist mobility that makes the Third Leg of practicing a landscape approach vital to participatory rangeland management. If herders and livestock owners from neighbouring communities and the wider landscape do not understand a community's efforts or feel they have not been part of the planning process for grazing land that has traditionally been shared, then they may disregard grazing plans or other rules, or even try to actively undermine the efforts. Finally, if the Fourth Leg—relations with government and customary institutions—is weak, then the rangeland management institution is likely to find it difficult to enforce any plans and rules that are developed.

This tool provides tips for conveying the idea of the Four Legs of participatory rangeland management to community members and other stakeholders.

Training option: Four Legs graphics

The concept of the Four Legs of participatory rangeland management can be conveyed using a picture of a goat. Each of the Four Legs of the goat represent one of the Four Legs of rangeland management. Typically, the front legs are used to represent Leg 1 and 2 while the back legs are used to represent Leg 3 and 4.

Each of the dimensions or legs is also represented by a symbol. The most appropriate symbol to use for each leg may differ depending on the culture and social circumstances of the people being trained, but some suggestions are provided here. The symbol for Leg 1, which deals with issues of local governance, can be a group of people who represent the community holding hands to form a circle to show the importance of coming together and working in harmony. Leg 2 deals with issues of grazing land management and is represented by pictures of livestock grazing in lush fields. Leg 3 deals with issues of relation to neighbours and the wider landscape, including negotiation and conflict resolution, and can be represented by a picture showing two stylized human figures shaded differently and shaking hands to symbolize people from different communities coming to an agreement over rangeland management issues. Leg 4 deals with issues of relating to and involving local and other government authorities and institutions and can be symbolized by the Kenyan flag.

Steps

Step 1: In a discussion with participants, explore the challenges that arise when one or more of an animal's legs are injured.

Questions for engaging participants might include the following:

- What happens to a goat when one of its legs is injured? Engage the audience to see their thoughts on this. The kind of question and expected response could be: would the goat be able to move? Yes, but not as easily as it does with all its four legs.
- What happens to a goat when two of its legs are injured? Moving around becomes even harder for the goat than it was with three legs. Some might say depending on which two legs are broken, the goat could hop along.
- How about when three of its legs are injured or weak? In such a case, the goat becomes stranded, unable to move around and graze and incapacitated to some level.

Step 2: Pin the picture of the goat on the wall

- Explain that a well-functioning rangeland management institution is like a goat or some other four-legged animal—to be healthy and function properly all four legs must be strong.
- Without one leg, or two legs; or without good function in three legs, a committee becomes inefficient in delivering its mandate. For this reason, a well-functioning committee needs all its four legs to be strong because each has its importance and all are important and interdependent for efficient delivery of the committee's mandate.

Step 3: One by one, explain each of the Four Legs and pin up the appropriate symbol with an arrow pointing to one of the legs.

Step 4: Begin more detailed training on each of the legs (see below for other suggested methods).

Training option: role plays

One effective approach to explore the concepts with participants is through skits and role plays.

Steps

Step 1: Introduce the idea of one leg being weak.

- After introducing the concept of the Four Legs to participants, you can choose one of the four legs to highlight and then ask them to imagine that three of the four legs are strong but this leg is weak.
- Taking the Third Leg of building relations with neighbours as an example, you can say something like:

'Imagine that three of the Four Legs are strong. The first leg of local governance is in place, the community has been fully involved in planning and the committee structure is working effectively. The second leg is also good. There is a grazing plan and it is being enforced, community members are monitoring the condition of pastures and activities are underway to rehabilitate some pastures. The fourth leg is also strong. The committee has consulted with officials such as the ward administrator, the chief of the area, the member of the county assembly and the county government livestock production officers. Government is supporting the efforts. But the third leg has been neglected. Livestock owners from neighbouring communities have not been consulted and know little about the community's grazing plan.'

Step 2: Present a skit showing what might happen.

Before the training workshop, the training team can prepare a short drama no more than five or six minutes long presenting a scenario of what might happen. In the example of the third leg being weak, the skit might have local community members being very proud of their accomplishments. Then livestock owners from another place arrive with their livestock and refuse to follow the local grazing plan. Committee members visit them, but the visitors refuse to follow local rules because they have not been consulted.

Step 3: Discuss the skit.

Lead a discussion on what happened. Questions to ask participants might include some of the following:

- What happened in this drama?
- What other kinds of things might happen if the third leg is weak?
- How could the committee have avoided this problem?
- Can this weak leg start to affect the other ones?

Step 4: Introduce the idea of one of the other legs being weak.

Choose one of the other Four Legs to highlight and ask participants to think about what might happen if one of the other legs is also weak.

Step 5: Get participants to quickly prepare a role play on that leg.

Rather than the trainers presenting a prepared skit, you can get a group of volunteers from among the participants to quickly prepare a role play. Those volunteers can move off to the side or to another room to take five minutes to plan their role play on one other leg being weak. While one trainer continues the discussion with most of the participants, another trainer can assist the group preparing the role play.

Time permitting, you might do a prepared skit or a role play for each of the Four Legs.

Training option: Q&A sessions

This training option can be used to begin shaping a discussion around a certain topic or all topics of the training. Questions can help the trainer gain an understanding of the committee's knowledge on the training topics and to know the level of training they require. Questions could also be used before starting the training to gain an idea of what areas participants require further training on or after a topic by topic training has been completed to gauge how well the participants understood the concepts.

Steps

Step 1: Ask participants a set of general questions around the Four Legs, with multiple-choice answers.

- Examples of such questions and the multiple-choice answers are given below.
- In preparing the questions and answers, the possible multiple-choice answers to each question could range from similar and easily confused answers for certain questions, to more clear-cut answers.
- Having one humorous answer among the multiple-choice answers can help make the training more lively.

Step 2: Allow several participants to share what they think before the trainer confirms the answer.

- After the series of questions or after each question, the trainer can use the opportunity to kickstart a discussion or to raise some key points about the topic that was being covered in the question.

- The trainer can use the number of correct responses from the committee members as a guideline to know which topics require more emphasis during the training.

Some examples of questions and answers

Clarify that you're speaking about the committee itself, who are the people selected by the community to represent them on the committee. Ask the participants a series of questions on the role of the committee:

- A question about the 1st leg. Regarding accountability and relations with the community, who is the rangeland management institution accountable to?
 - A. The county government
 - B. NGOs
 - C. The national government
 - D. All the residents of community X
- A question about the 1st leg. Regarding income generation and fundraising, is the role of the rangeland management institution:
 - A. To develop ways of generating income for the committee's operations and seek ways for community members to earn a sustainable livelihood from pastures and other natural resources?
 - B. To develop ways of generating income to improve the livelihoods of the committee members?
 - C. To find a way to get as much "posho" and "rushwa" as possible before they remove you to put someone else on the committee?
- A question about the 1st and 2nd legs. For grazing plans and management of the pastures, is the role of the committee:
 - A. To make a grazing plan for the community?
 - B. To work with the community to develop a grazing plan?
 - C. To wait for NGOs to make the grazing plan and then enforce it in the community?
- A question about the 3rd leg. Regarding sharing of pastures with herders from other communities, is the role of the rangeland management institution:
 - A. To stop livestock owners from other wards and other places from ever coming into community X's grazing areas?
 - B. To plan with the neighbouring communities, to make sure they are aware of the grazing plans and come to agreement with them on how pastures in each other's areas will be shared?
 - C. To stop doing any grazing planning, because we know that neighbours will bring their livestock and will never follow community X's grazing rules?
- A question about the 4th leg. Regarding relation with government, should the rangeland management institution:
 - A. Ignore chiefs, ward administrators and county government because now the rangeland management institution is here and it will decide everything?
 - B. Engage with government to ensure that that the committee's actions are recognized and legal?
 - C. Sit and wait for government to tell the committee how its grazing plans and rules will be?
- A question about all Four Legs. As the committee tries to strengthen all Four Legs [briefly summarize them again if necessary], which one of the following will you say?

- A. 'We the committee will just do it—strengthening all Four Legs will be easy.'
- B. 'We should only focus on one or two legs because the other parts are too difficult.'
- C. 'It will sometimes be difficult, but we have to try to work on all four parts.'

Training option: guided questions

This training option is useful for opening discussions around a topic of interest. This option can be used before beginning the training on a topic or after training on a topic is completed. This option is useful in:

- getting participants to share their thoughts on the subject;
- allowing an opportunity for the audience to seek clarification and ask questions related to the topic in question;
- setting the ground for a trainer to know what the audience knows regarding the topic and what areas need further reinforcement; and
- through its open-ended nature, allowing the audience to think freely on all features that the topic might entail.

Some examples of guiding questions

- How can we ensure that we pay attention to all the Four Legs of rangeland management?
- What is our plan to ensure strong participation of women?
- What is our plan to keep the community informed? How often will we hold general meetings open to the whole community?
- What is our organizational structure, including what sub-committees exist?
- What elements of rangeland management will be our priority this year?
- How will we ensure a strong Fourth Leg of rangeland management?
- How will we enable the community members to hold the committee accountable?

Checklist

- Ensure you read the mood of the audience during the training to better understand the mode of training that triggers more reactions and responses than others.
- Tailor each training to the audience for increased effectiveness in delivery of the training notes.
- Guide the discussions that arise from any of these options to ensure relevance to the training is maintained.

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Photo credits: ILRI/Jules Mateo (Goat); TUPADO/Silvester Sulu (meeting of elders)

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Tool G-2

Steps in participatory rangeland management

November 2018

Tool G-2

Steps in participatory rangeland management

Objective

Develop an understanding of the stages and steps in participatory rangeland management (PRM).

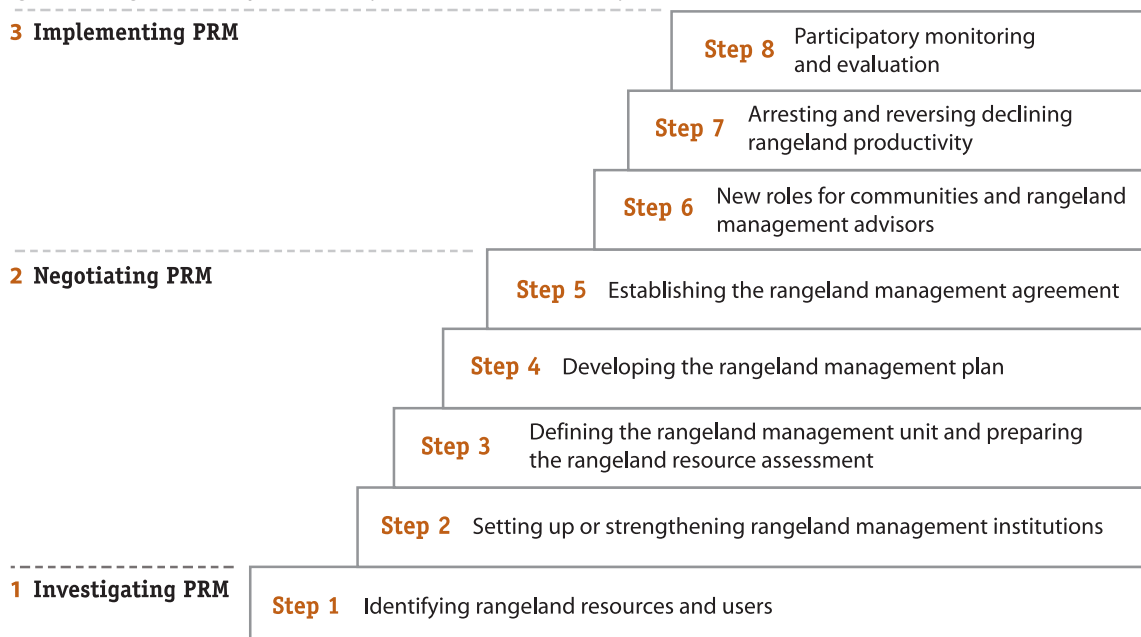
Anticipated output

Members of the rangeland management institution and personnel of government and nongovernment organizations develop an understanding of the three main stages and eight steps involved in promoting PRM.

Introduction

PRM is made up of three key stages—investigating, negotiating and implementing. These three stages can be further broken down into eight steps. The process begins (stage one) with the identification or confirmation of the appropriate unit for rangeland management: a traditional grazing area, for example. The stakeholders involved need to understand the rangeland resources of the area as well as both local and distant users of those resources.

Figure 1: Stages and steps of PRM (Flintan and Cullis 2010)



Then a governing community association or institution is strengthened or created if one does not already exist (stage two). A rangeland management plan (RMP) is developed based on an in-depth rangeland inventory and community action planning. Stage three is implementation of rangeland management. This stage includes agreeing on roles for the community rangeland management institution and community members at large, as well as roles of government and other external stakeholders. As the community and its rangeland management institution move forward, they go beyond the rangeland management plan they have developed and implement a variety of measures for restoring and maintaining the rangelands. The implementation stage also includes participatory monitoring and evaluation.

The Four Legs and the steps of PRM

The Four Legs are the foundation on which participatory rangeland management is built. The stages and the steps of PRM and the Four Legs are complimentary. The Four Legs highlight some particular tools that can be incorporated into the PRM process at different phases and steps.

Table 1: How the PRM steps relate to the Four Legs

PRM steps	Relation to the Four Legs
Step 1: Identifying rangeland resources and users	The task of understanding who the users of rangeland resources are relates both to people who live within the rangeland unit but also to others who live elsewhere and may bring their livestock to the area from time to time. It is important for ensuring that the community's different interests, needs and values are reflected in the rangeland management institutions (First Leg), as well as building constructive relationships with neighbours and people from the wider landscape (Third Leg). It is also important to understand the rangeland resources that are to be managed (Second Leg).
Step 2: Setting up or strengthening rangeland management institutions	This relates primarily to the First Leg and is concerned with issues such as community buy-in and support, clear understanding of how decisions are to be made and accountability to the community at large. However, recognition by government and, where applicable, by traditional institutions (Fourth Leg) is also important.
Step 3: Defining the rangeland management unit and preparing the rangeland resource assessment	This step relates primarily to the Second Leg—grazing land management. However, social and cultural considerations are also important here since the rangeland unit is not only a physical space but also a social one in which people will need to work together (First Leg). The outer boundaries of the rangeland unit also need to be accepted by neighbouring communities (Third Leg).
Step 4: Developing the rangeland management plan	This step relates primarily to the Second Leg.
Step 5: Establishing the rangeland management agreement	This step adds weight to the community's rangeland management plan (Second Leg) by securing support from government (Fourth Leg).
Step 6: New roles for communities and rangeland management advisors	PRM usually implies a shift in roles for communities, their leaders and government. By clarifying and enacting these new roles, this step strengthens community governance of the rangelands (First Leg) and channels support from government and other external stakeholders (Fourth Leg).
Step 7: Arresting and reversing declining rangeland productivity	With this step, the community develops and implements a variety of measures for restoring and maintaining the rangelands (Second Leg).
Step 8: Participatory monitoring and evaluation	A system of monitoring and evaluation helps the community to continually learn and improve its efforts. It should include elements of monitoring all aspects of the PRM process such as internal decision making and governance, relationship between the rangeland management institution and the community as a whole, grazing land management, rangeland condition, relations with neighbours and other stakeholders in the wider landscape and relations with government and traditional institutions (all Four Legs).

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Flintan, F. and Cullis, A. 2010. *Introductory guidelines to participatory rangeland management in pastoral areas*. Addis Ababa: Save the Children USA. Available at <https://hdl.handle.net/10568/99430>

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Tool G-3

Scanning and appraisal for planning interventions in a new community

December 2018

Tool G-3

Scanning and appraisal for planning interventions in a new community

Objective

To assist personnel from county government or other facilitating organizations to scan rangeland management processes and activities that may already be taking place in a community and to appraise the level of organization and capacity of any institution and system that the community may have for managing resources. Anticipated output

Anticipated output

An outline of what kinds of interventions the facilitating organization should prioritize in any particular rangeland community

Participants in this activity

Staff from the facilitating organization (consulting with local stakeholders)

Introduction

There is a logical sequence of stages and steps to the participatory rangeland management (PRM) process (see Tool G-2). However, these must always be adapted to the local context. When beginning activities in a new community, you should not assume that there is no community organization responsible for managing resources or that there are no rangeland management activities taking place. The PRM process should build on good practices and existing systems that a community may already have. This means that first you need to know what practices and systems exist.

Build on the systems that communities already have.

This tool is meant to guide personnel from the facilitating organization to scan rangeland activities and processes that are already taking place and to appraise the level of organization and capacity of community organizations that are engaged in rangeland management. These may have been supported by earlier projects and programs or they may be traditional management systems. This kind of appraisal can be thought of as part of the first step of PRM (see Tool G-2).

Carrying out a scan and appraisal will typically involve discussions with a wide range of local stakeholders in a community, as well as with personnel from government and nongovernment organizations who are familiar with the area. It may also involve community workshops, mapping and other kinds of investigations that would be part of the first step of the PRM process.

Key appraisal questions

This tool is based on a series of questions organized according to the Four Legs of PRM. The answers to the questions will suggest what kinds of interventions the facilitating organization should prioritize in the target community. Because it is important that all four legs are strong, the questions help to identify what kinds of interventions aimed at strengthening one or another of the legs need to be prioritized. See also Worksheet G-3-I below, which contains a checklist to help you summarize your findings.

Early stages: getting the community standing on four legs

First Leg main appraisal question: Is there a representative community rangeland management institution in place?

Do not assume that you need to help the community to create a new rangeland management institution. There may already be a community conservancy, a group ranch committee, a water resource users association or some other organization or system in place that is managing resources or could be assisted to do so.

The word representative in this question is important. If there is already a community organization in place, but it is not democratic—if, for instance, it excludes women or excludes any ethnic minorities that are in the community—then it is not a good candidate for the rangeland management institution that the facilitating organization will work with.

If the answer to this question is ‘no’, then the facilitating organization should work with the community to help establish a representative rangeland management institution, either by creating a new one, or helping to ensure that existing organizations become more inclusive.

Second Leg main appraisal question: Is there a system of planned grazing, zoning or other form of rangeland management that is understood by the community?

This question asks whether there is a basic grazing plan, or some other basic rangeland management system, already in place. This may involve, at the most basic level, a categorization of pastures into wet and dry season grazing areas and some rules for enforcing the grazing pattern. It is important, too, that the community at large is aware of the grazing plan and rules.

If the answer to this question is ‘no’, then the facilitating organization should help the rangeland management institution, and the community generally, to develop at least a basic grazing plan that is understood and owned by the community.

Third Leg main appraisal questions: Has the rangeland unit been defined and agreed with neighbouring communities? Are neighbouring communities aware of what the target community is doing and that it has a rangeland management institution that is managing resources on behalf the community?

Before moving on to more elaborate rangeland management and restoration interventions it is important that channels of communication with neighbouring communities have been established. Communications with neighbouring communities should have been initiated, and the extent of the rangeland unit should be more or less clear and understood by target community and by neighbours. If this has been done, then the foundation for a landscape approach to rangeland management is being built.

If the answer to either of these questions is 'no', then the facilitating organization should work with the community on activities to begin strengthening the Third Leg of rangeland management.

Fourth Leg main appraisal questions: Are the relevant government authorities aware of the rangeland management institution? Is the form and organizational structure of the rangeland management institution such that it could qualify to be recognized by county or national government?

It may not be that the rangeland management institution has completed some process for formal recognition by government. However, at this stage it is important at least that the relevant government authorities are aware of the institution. The facilitating organization should have a plan for identifying under which legal framework the community institution would eventually be recognized: e.g. the 2016 Community Land Act, or county rangeland management legislation, or the Water Resource Users Association framework, etc. Each of these frameworks has certain minimal requirements such as having a constitution, having a minimum number of women on the committee/board of directors, having an annual general meeting for the whole community, etc. The appraisal should identify whether the rangeland management institution will be able to meet these criteria.

If the answer to either these questions is 'no', then the facilitating organization should support the rangeland management institution to make contact with the relevant government authority and to prepare itself to meet the criteria for recognition.

If the answer to all of the above question is 'yes', then you can assume that the community and its PRM activities are standing on all four legs. If so, next you can focus on building the community's capacity and strengthening each of the four legs.

Later stages: building capacity and strengthening the four legs

First Leg main appraisal question: Is the rangeland management institution autonomously carrying out its management and governance responsibilities?

Effective governance by the rangeland management institution is an important element in PRM. This question revolves around the capacity of the institution. Is it meeting regularly? Does it organize general meetings for the whole community annually or even more often? Does it have an annual work plan? Is it proactively addressing any problems that arise? Are there systems of accountability of the institution to the community in place? For the First Leg of rangeland management, once a rangeland management institution has been established, the next level is to consider whether it is standing on its own. This appraisal question is concerned with the capacity of the institution and whether it is standing on its own.

If the answer to the above question is 'no', then the facilitating organization should plan interventions that build the capacity of the rangeland management institution and strengthen community governance, including ensuring that the institution is accountable to the community.

Second Leg main appraisal question: Are the community's grazing plans and other rangeland management interventions being enforced and implemented?

For the Second Leg of rangeland management, once a basic grazing plan is in place, the next aspect of the appraisal considers to what extent it is being implemented and enforced. Neither the implementation nor the enforcement is likely to be perfect—they seldom are—but you want to know if the community is at least attempting to implement its plans. In other words, this question considers whether the community the grazing plans or any other rangeland management interventions, are more than just pieces of paper.

If the answer to the above question is 'no', then the facilitating organization should help the rangeland management institution to assess what obstacles there are to implementation and enforcement and assist them to plan how to remove the obstacles.

Third Leg main appraisal question: Have constructive relations been established with communities and rangeland users in the wider landscape?

For the Third Leg, the appraisal question considers whether relations and planning in the broader landscape have gone beyond mere awareness to establish effective collaboration. This may be in the form of a landscape management plan, intercommunity agreements about stock routes and shared grazing areas, or agreeing on mechanisms for resolving disputes among different communities.

If the answer to the above question is 'no', then the facilitating organization may prioritize activities that involve inter-community planning and implementation of a landscape approach.

Fourth Leg main appraisal question: Has the government formally recognized the rangeland management institution, and any grazing plans or other elements of its rangeland management system?

The key appraisal question here is whether the rangeland management institution has received formal recognition from government giving it the authority to manage resources within the rangeland unit.

If the answer to the above question is 'no', then the facilitating organization can include in its program activities to help the community to go through the formal processes of registration and recognition.

Appraisal

Worksheet G-3-1

Checklist for Scanning and Appraisal

Stage	Main appraisal questions	Yes/No	Comments
Early stages: Getting the community standing on four legs	1 st leg: Is there a representative community rangeland management institution in place?		
	2 nd leg: Is there a system of planned grazing, zoning or other form of rangeland management that is understood by the community?		
	3 rd leg: Has the rangeland unit been defined and agreed with neighbouring communities? Are neighbouring communities aware of what the target community is doing and that is has a rangeland management institution that is managing resources on behalf the community?		
	4 th leg: Are the relevant government authorities aware of the rangeland management institution? Is the form and organizational structure of the rangeland management institution such that it could qualify to be recognized by county or national government?		
Later stages: Building capacity and strengthening the four legs	1 st leg: Is the rangeland management institution autonomously carrying out its management and governance responsibilities?		
	2 nd leg: Are the community's grazing plans and other rangeland management interventions being enforced and implemented?		
	3 rd leg: Have constructive relations been established with communities and rangeland users in the wider landscape?		
	4 th leg: Has the government formally recognized the rangeland management institution, and any grazing plans or other elements of its rangeland management system?		

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Tool I-1

Guiding principles for community rangeland governance

November 2018

Tool I-1

Guiding principles for community rangeland governance

Objective

To assist personnel from county government and other facilitating organizations to appreciate the fundamental principles for governance of community rangelands

Anticipated output

Personnel from county government, nongovernment organizations and other facilitating organizations assist communities to strengthen the First Leg of rangeland management—building the capacity of their democratic governance structures and decision-making processes

Participants in this activity

Personnel from county government and/or other facilitating organizations

When to use this tool

This tool describes principles that are important throughout the entire participatory rangeland management (PRM) process. However, it will be particularly important at step two of the PRM process—setting up or strengthening rangeland management institutions. (See Tool G-2 for a description of the stages and steps in PRM.)

Introduction

The establishment and/or strengthening of functional community-based rangeland management institutions is fundamental to the success of participatory rangeland management (PRM). The rangeland management institution is the body or group that will take on the roles and responsibilities of rangeland management on behalf of the community. The strength of the rangeland management institution is therefore critical. This includes strong skills and capabilities of members of the institution for carrying out the duties assigned to them.

PRM takes place primarily on community land. While in some situations there may be private land and/or public land within a rangeland unit that is being managed, normally most or all of the land will be community land. This implies that any rangeland management institution or other community organization that is making decisions about the use of that land is doing so on behalf of the entire community. The rangeland management institution is accountable to the community and representatives on the institution are there to serve the community as a whole.

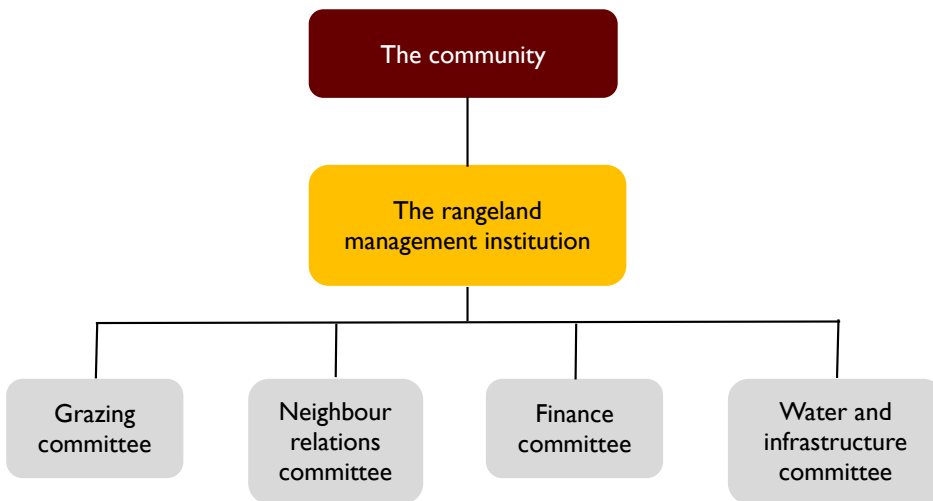
While considering representation and accountability, it can be helpful to think in terms of an organogram. With these kinds of community organizations, often you may see an organogram showing the community at the bottom. This is incorrect. An organogram gives a visual representation of lines of authority, with each group or actor in the organogram accountable to a group or actor above it. This means that the community should be at the top. The rangeland management institution reports to the community (see Figure 1-1-1). This accountability to the community often takes the form of an annual general meeting.

A related principle is inclusivity. It is important that women, youth, minority ethnic groups and other segments of the community that might be marginalized are represented in the community governance institutions and have the ability and opportunity to express their views. When a variety of perspectives are able to inform the community's collective decision-making processes, it enriches the decision making. A simple example is the creation of grazing plans and rules. If these are developed solely by elders without the participation of young people who do most of the actual herding work, the plans and rules may be unrealistic or may not be supported by those young herders. Inclusivity is also a question of fairness.

Fundamental principles for governance of community rangelands

- The primary right to manage rangelands on community land belongs to communities.
- PRM is built on a foundation of democratic and accountable community governance structures and processes. This includes some kind of rangeland management institution which serves and is accountable to the community as a whole.
- Inclusivity is a key to both the fairness and the effectiveness of the rangeland management institution.
- The main task of PRM is to build the capacity of the rangeland management institution and related community governance processes.

Figure 1-1-1: A simplified organogram for community rangeland governance.



Another implication of the fact that the rangelands are mostly located on community land is ownership and the right to make decisions for managing the land belongs to the community; not national government, not county government, but communities. The Constitution of 2010 and the Community Land Act of 2016 make this very clear. Government has a role to play and responsibilities for oversight, regulation and promotion of the public good; but the primary responsibilities for managing community land belong to communities. The primary role of personnel from facilitating organizations is to support the community's own planning and action, not to impose ideas on the community. See Tool 4-2 for further elaboration of the relationship between PRM and the Community Land Act.

Capacity development

It is likely that the capacities of the rangeland management institutions will need to be strengthened to build the knowledge and skills required for managing the rangelands in modern times. In order to do this, facilitating organizations need to develop their own capacities and training skills in both community engagement and inclusiveness, and in promoting adaptive management of rangeland resources by a community-led management institution.

The rangeland management institution will need to build recognition and understanding of itself and its status in relation to the other institutions with which it will work. Central to its role is the ability to make decisions about rangeland management and to take action to follow up on those decisions. Good decision making will determine the success of the overall rangeland management system.

The process described above is complex. To help keep the process on track, it will be important to ensure clear communication between all parties throughout using local language and ensuring step-by-step information dissemination to all PRM parties.

Customary institutions and community rangeland governance

The rangelands have historically been managed according to customary governance systems. The advantage of working with a customary system is that it recognizes and endorses the well-established roles and rights of different members of a community. It also incorporates the existing management mechanisms that prevent overexploitation of resources and promote sustainable use and availability of resources for all community members, as well as occasional visitors. However, customary systems also have their limitations, as not all have a history of inclusiveness. Certain groups within communities may feel, and indeed be, excluded and marginalized. Support may be needed so that excluded groups can be accommodated, and/or linkages made with forums and institutions where these groups can be fully represented and involved.

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Tool 1-2

Annual work planning for the rangeland management institution

November 2018

Tool 1-2

Annual work planning for the rangeland management institution

Objective

To assist members of the community rangeland management institution to prepare an annual work plan

Anticipated output

An annual work plan

Participants in this activity

- Members of the rangeland management institution (for developing the work plan)
- Community members (for reviewing the plan)

Introduction

An annual work plan is one of the ways of ensuring accountability and transparency, which are pillars of fair governance. It also contributes to effective governance by helping avoid the problem of decisions being made without any follow up action.

Steps

The following steps will usually be undertaken after wide ranging consultations among the rangeland management institution and the community at large about challenges, objectives, grazing plans, etc. Those discussions will identify actions that need to be carried out. The process of creating the annual work plan focuses attention on moving from these discussions of opportunities and challenges to tangible, practical actions and responsibilities.

An annual workplan can help a community to hold its rangeland management institution accountable.

Step 1: Review the existing work plan

Establish whether the rangeland management institution has an existing work plan. If it does, review it based on the guidelines to achieve a more effective work plan. You will then work with the rangeland management institution to either revise the existing plan or develop a new one.

Step 2: Review and establish major goals and objectives

In a meeting of the rangeland management institution and members of its sub-committees, discuss the overarching objectives for the year. If the institution has developed a vision for itself and for the rangeland unit, participants should refer back to this. Facilitate a discussion to develop consensus on a small number of overarching objectives.

Step 3: Develop a first draft of an action-oriented plan

- Divide the participants into breakout groups. Typically, this would be done according to any sub-committee that the rangeland management institution may have: e.g., the grazing committee will form one group, the finance committee another group, the executive committee another, etc.
 - Each committee or group should identify the challenges and needs that it will help to address, its main areas of action and how it will contribute to the overarching objectives.
 - Each committee or group identifies an action plan answering the question of what actions need to be taken and the who, when, how and why for that action. See Worksheet 1-2-1 on p. 4 of this tool for a template that can be used.
 - The “Who?” question is very important. The annual work plan is a plan of action for the rangeland management institution, not a list of what other stakeholders should do. Where a task or action is identified for some external stakeholder—for instance, an action that the community members would like the county government to take—then the question ‘what will the rangeland management institution do to ensure that stakeholders takes action?’ should be asked.
- Each element of an annual work plan answers these questions: **what** is the action that will be taken? **Who** will do it? **When** will they do it? **How** will they do it and what resources are needed? **Why** it is being done?
- Plans should consider the resources required, possible constraints and strategies to address these constraints.
 - Plans for working collaboratively with other organizations such as government, nongovernment organizations, etc., can be included.
 - Capture the plan on flip chart paper (see Worksheet 1-2-1 for a template that can be followed).

Step 4: Share and revise the draft plans

- Each breakout group shares the content of its discussion.
- The whole group reviews and edits any unsatisfactory areas.
- Create a final document summarizing the agreed work plan.

Step 5: Share with community members

- The work plan should be shared at an annual general meeting or other meeting or workshop where the entire community is invited.

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Photo credit: International Land Coalition Rangelands Initiative

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Tool 2-1

Grazing planning basics for rangeland management

November 2018

Tool 2-1

Grazing planning basics for rangeland management

Objective

To determine feasible options for rangeland management and how they can be implemented towards creating a suitable grazing management plan

Anticipated output

A grazing plan for the rangeland unit, which serves as a living document to be modified as conditions and objectives change. Initial plans produced are shared with communities in the rangeland unit for feedback, modified in response and finalized for implementation. The grazing plan typically includes one or more maps showing different grazing zones and a document describing bylaws and other actions for implementing and enforcing the plan.

Participants in this activity

- Members of community rangeland management institutions and other pastoral community leaders actively involved in rangeland management
- Personnel from the facilitating organization
- Other stakeholders actively involved in rangeland management in the county, sub-county or community, such as livestock experts from county government and other government agencies, nongovernment organizations, influential elders, chiefs and traditional leaders

When to use this tool

This tool relates to step eight of the participatory rangeland management (PRM) process—developing the rangeland management plan. See Tool G-2 for a description of the stages and steps in PRM.

Introduction

The outcomes of PRM come from decisions taken to improve grazing management and the implementation of these decisions through on-the-ground management actions. This is the Second Leg of PRM.

Since every rangeland landscape is unique, local knowledge plays a large role in informing rangeland management. Different landscapes often benefit from different rangeland management strategies only when those strategies match the local context. Several important aspects of local context can influence rangeland management strategies and whether those strategies succeed or fail to produce benefits to the community. Livestock keepers can have different livelihood objectives, with some focusing more on livestock, others on crops, or a combination of livestock and crops. Cropping, fodder farming (cut-and-carry and haymaking), grazing exclosures and wildlife conservation can all be complementary to grazing if they are carefully located and managed to maintain the productivity of the larger grazing system. Otherwise, they can cause degradation by displacing grazing. Different livestock species have different grazing needs, and grazing strategies to produce milk for home consumption can be very different from grazing strategies for production of live animals for meat or sale. Where community institutions have high legitimacy and strength, rangeland management strategies can be more detailed; where they do not, feasibility should be the primary concern.

Rangeland management always involves costs and trade-offs for pastoral herders: grazing lost because of resting or bylaws (opportunity costs); and the costs of planning, meetings, community engagement and the management of conflicts within the community and with neighbouring communities (transaction costs). The landscape surrounding the rangeland determines the risk of conflicts or invasions by outside herders, which reduce the benefits of grazing management. Each of these costs and risks can be high or low depending on the local context. Where they are high, they should be taken seriously in the planning process (see tools under the Third Leg of PRM for ideas on managing landscape level conflicts).

Finally, agroecological conditions such as rainfall, temperature, elevation, soil type, topography, type and severity of degradation, primary forage and browse species, and invasive species threats (e.g. ‘mathenge’—*Prosopis juliflora*) are key elements of the local context.

As a general rule, grazing management and restoration (re-seeding, etc.) in rangelands should complement the local context of the area, and not ignore or work against it. This tool may be considered a “primer” in fitting grazing management options to rangeland contexts. It describes a process for developing a basic grazing plan for a rangeland unit.

Effective grazing planning complements the social and ecological context of the area.

Such a grazing plan is one element—usually the first element—of a holistic and comprehensive rangeland management plan. Even if the first step a community takes is very simple, the eventual results can be revolutionary. First, the community rangeland management institution can gain legitimacy in the eyes of the community members seeing new benefits from better grazing management. Next, a stronger community institution may be more willing and able to visualize long-term plans and to implement more detailed or more costly strategies that produce greater benefits. If these more sophisticated strategies prove effective and feasible and institutional strength continues to grow, a process of sustainable intensification of rangeland management is already well underway. The endpoint of sustainable intensification is achieved when rangeland landscapes are producing at their maximum long-term potential and providing robust livelihoods community-wide.

Steps

The rangeland management institution, in consultation with community members and with guidance from personnel from facilitating organizations if necessary, can go through the following steps to prepare a grazing plan.

Step 1: Characterize existing seasonal patterns of grazing

- Where and when does grazing happen?
- Are there bylaws or rules regulating these patterns?
- Can and should any of these regulations be formalized or strengthened to improve land management?

Asking these questions first enables the institution to work within the system by understanding it first.

Step 2: Assess opportunities and limitations of the current grazing strategy

- What advantages does the current grazing system (existing grazing patterns and rules) provide that should not be neglected? Can any of these advantages serve as a motivation for better organisation?
- What disadvantages does the current system bring about that should not become worse? Are there any major challenges that need special attention?

Step 3: Agree on degradation causes and management objectives

- Assess and document the major root causes of rangeland degradation and the primary objectives to improve livelihoods and environmental condition. Examples of degradation root causes include:
 - a. Heavy grazing and droughts cause the loss of preferred, high-quality grasses in important pastures.
 - b. Heavy grazing and droughts create bare ground, soil erosion and reduce grass growth.
 - c. Invasive species (such as mathenge) reduce grass growth.
- Discuss and prioritize key management objectives that can successfully reverse the root causes of degradation over large areas of the rangeland. Examples of management objectives (to address the root causes above) include:
 - a. Improve the quality of grasses in important pastures.
 - b. Heal bare ground to reduce soil erosion and improve grass growth.
 - c. Remove invasive species (such as mathenge) to slow its spread and improve grass growth.
- These decisions guide the remainder of the grazing planning process. If at any time it becomes clear that the causes of degradation are incorrect; or the livelihoods and environmental or management objectives are inappropriate or need to be changed, the grazing planning process may need to be started again from this step.
- Understanding the root causes of degradation can be challenging. Two key sources of knowledge can be of critical assistance to avoid adopting a strategy that is likely to fail:
 - a. *Local knowledge and experience*: this is essential for understanding trends in rangeland condition over many decades, especially in the local area. Consult a wide audience of stakeholders knowledgeable about the local area, especially herders, community leaders and other experts. Methods for these consultations can include:
 - Focus group discussions and key informant interviews
 - Participatory trend analysis
 - b. *Rangeland monitoring*: this is critical for assessment of trends in rangeland condition, especially for adapting to changing climatic conditions, drought, and the long-distance incursions that commonly follow drought. Methods for monitoring can include:
 - Field data collection
 - Photo monitoring
 - Satellite remote sensing analysis

For guidance on monitoring, see Tools 2-2, 2-3, and 2-4 in this toolkit.

Step 4: Improve the seasonal grazing system, taking the most feasible steps first

- Formalize existing areas as seasonal pastures.
 - a. Starting from the existing grazing system, community control over the various seasonal pastures is formalized in community bylaws or rules to:
 - Limit excessive grazing in seasons when it can damage the rangeland;
 - Allow resting and recovery of heavily grazed areas; and
 - Protect severely degraded areas for major restoration, such as gullies.
 - b. Dry season grazing areas are often closer to rivers, swamps and other water bodies, and often the best pastures in the rangeland. In many cases a buffer distance from these water bodies is enough to draw its boundaries but the distance should be decided with all stakeholders to ensure it is not too large or too small. The distance from water is likely to be between 1 km and 10 km with different sites having different distances.
 - c. Wet season grazing areas are often far from rivers, swamps and other water bodies, and often the worst pastures in the rangeland. The buffer distance from these water bodies marking out the dry season grazing area boundary also provides the boundary for wet season grazing areas (i.e. most of the rangeland).
 - d. Drought reserves are used as a last resort when rain has failed and the forage in wet and dry season grazing areas has been exhausted. In many rangelands, a traditional “drought pasture” of some kind already exists, has been used this way for many years and can be regulated with little difficulty. Though easy to manage, drought reserves can benefit from community bylaws which state when to open, when to close, who decides the timing, minimum distance from water points, etc.
- Decide whether seasonal grazing will be complete, partial, etc.
 - a. Complete seasonal grazing is when the community decides that dry season areas are grazed only during the dry season and all animals are restricted from grazing during the wet season (and wet season areas are grazed only during the wet season).
 - Strict rules like complete grazing restrictions may be necessary to make enforcement more feasible in some rangelands.
 - However, in many rangelands, strict rules may not be necessary—100% grazing prohibition is never a technical requirement and it can encourage growth of invasive species, noxious weeds and undesirable woody plants.
 - Strict rules are impossible in some rangelands due to the locations of settlements, water and grazing resources, especially where most or all water points and settlements are located inside dry season grazing areas.
 - b. Partial seasonal grazing is when most but not all animals are restricted from grazing, with some animals allowed at any time. For example, a community could decide:
 - During the dry season, 80% of animals graze the dry season area while 20% remain in the wet season area.
 - Then, during the wet season, 80% of animals graze the wet season area and 20% remain in the dry season area.
 - In this case, there is low intensity of grazing in all areas for all of the year, which is unlikely to cause problems. Partial resting is much better than free access. The main problem with free access is that rangelands are never rested, leading to their rapid degradation.
 - If invasive species, noxious weeds and undesirable woody plants are a problem in your rangeland, you may prefer partial resting and not complete resting.

- Decide the seasonal timing and process for animal movements.
 - a. Some communities use specific and inflexible dates that are pre-announced so that all herders know which rules are in effect, where and when. These dates may be the same every year. Since rainfall patterns are somewhat different every year, lack of flexibility can be a disadvantage especially in very dry rangelands. The seasons should be clear to all stakeholders as part of the grazing plan.
 - b. Other communities make decisions more flexibly so that livestock can be moved according to the availability of grass in response to the rain that has fallen. This flexibility is an advantage in dry rangelands with extremely variable and unpredictable rainfall. Using flexible dates for changing the grazing pattern has the disadvantage of requiring extensive discussions throughout the community to coordinate in a participatory manner. As part of the grazing plan, it should be clear to all stakeholders who will decide to take the decision and the process this person or group of people will follow.
- Decide means of regulation.
 - a. There are many ways to create community bylaws or rules to implement seasonal grazing. The choice selected should be agreeable to community residents and should be enforceable. A rule that cannot be enforced is a rule that does not exist.
 - b. Each approach has its strengths and weaknesses, requiring careful selection of bylaws. Some common examples of bylaws in communal rangelands include:
 - *Grazing-focused rules*: grazing access is decided for each area and season, and penalties are given for grazing in the wrong area at the wrong time. Enforcing grazing rules can be difficult in rangelands with large herds or long distances.
 - *Settlement-focused rules*: areas where permanent and temporary settlements can be located during each season are agreed. The number of animals that can be kept by each household in each settlement may need to be decided for each season. Settlement rules may be difficult to implement where herders are not familiar with such rules.
 - *Water-focused rules*: access to each water point is decided for each season and penalties are given for using the wrong water point at the wrong time. Enforcing water point rules can be useful in areas where pasture cannot be grazed without access to water, especially in wet season pastures, and other areas far from other water sources.
 - *New rules*: if these types of rules will not serve your community, what would? Think broadly and creatively and consider different financial mechanisms. For example, most communities select punishments such as fines for grazing or settling in the wrong location at the wrong time.

A few successful tests have used community financial institutions (savings and credit co-operatives, community trust funds, etc.) to improve rangeland management. If anyone does not follow the rules, they may be denied access to community finances.

- c. Assess the connection between grazing and other land uses and livelihood priorities.
 - In many rangelands, herders are increasingly adopting new sources of livelihoods in addition to livestock. Some of them are:
 - Growing annual crops for food and livestock feed
 - Fodder farming and haymaking
 - Grazing exclosures (private or communal)
 - Conservation to improve wildlife habitat and attract ecotourism
 - Depending on where in the landscape these additional sources of income and livelihoods are located, they can be either complementary or competitive with grazing management.

- Cropping, fodder farming, haymaking and grazing exclosures are usually placed on some of the best grazing land in the rangeland. Small areas of these land uses can support grazing management by providing alternative sources of feed during dry seasons and especially during droughts. If these land uses cover large areas, they are likely to disrupt livestock movements and cause localized overgrazing and rangeland degradation.
 - Wildlife conservation and ecotourism are a major source of income in some communities. These activities support grazing management when they are located in drought reserves, pastures being rested, or other areas the community does not graze heavily on a regular basis. However, if conducted in critical pasture areas, these activities would conflict with grazing management.
- d. Once community bylaws are accepted and implemented by the community, the community will have a different grazing system. From this point forward, progress may come more easily, because the grazing system becomes more organised. A larger set of options becomes potentially feasible.

After seasonal grazing is in motion and most community members are following bylaws, the rangeland management institution can assess a wide variety of options for improving or building upon seasonal grazing and developing a more comprehensive rangeland management plan. Some of these options will be addressed in other tools in this toolkit.

This document is part of the Participatory rangeland management toolkit for Kenya, an initiative led by the International Livestock Research Institute (ILRI). This tool was developed by ILRI, with financial assistance from the United States Agency for International Development Feed the Future Kenya Accelerated Value Chain Development (AVCD) program.

Photo credit: ILRI/Jason Sircely

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Tool 2-2

Rapid community rangeland monitoring tool: guide to starting monitoring

November 2018

Tool 2-2

Rapid community rangeland monitoring tool: guide to starting monitoring

Objective

This tool describes the steps for launching a simple approach for rapid collection of rangeland monitoring data useful in tracking rangeland degradation and restoration.

Anticipated output

A set of monitoring sites with basic site information (site IDs, latitude and longitude of locations) created, the first (baseline) rangeland monitoring data recorded, and the first (baseline) monitoring photos taken and archived.

Participants in this activity

- Members of the rangeland management institution and other community members
- Personnel from the facilitating organization

Introduction

Monitoring rangeland condition and evaluating the effectiveness of management are important aspects of strengthening the Second Leg of rangeland management and will ultimately determine the success of the participatory rangeland management (PRM) process. Communities need to develop their own monitoring and evaluation (M&E) systems as part of taking up or strengthening their rangeland management roles. Rangeland monitoring provides data that is useful for a variety of purposes. The most common use of rangeland monitoring data is to know whether rangeland quality is declining (degradation) or improving (restoration). Since livestock production (milk, meat and sales of live animals) depends on the resources animals consume from rangelands, rangeland quality or condition—how much biomass is produced and the forage quality of the biomass—is an important concern for any livestock producer.

Rangeland monitoring is helpful because it addresses some of the important challenges in managing rangelands through grazing management and other approaches. These challenges include: (i) slow change; (ii) high variability; and (iii) the importance of a long-term management strategy. Rangeland quality changes slowly over many years, which is difficult to observe. Collecting even a little data over two or more years can show changes that cannot be observed by the eye alone. Rangelands are variable in space with each place is slightly different from other areas even nearby; and time with

each year having a different rainfall pattern. This variation also makes observation of changes difficult. To overcome the first two challenges, a long-term management strategy is needed and monitoring is required to know whether the strategy is working or failing. If degradation goes on for many years, solutions will become more difficult and more costly with each year that passes.

There are many different types of data used in monitoring rangelands and each has its own advantages and disadvantages. The most commonly used approaches are collection of detailed field data and use of satellite remote sensing. These approaches are useful but they require highly trained scientific staff. While detailed field data focuses on only a few areas (many areas are needed to be effective), remote sensing is less accurate than field data and often cannot be used to make useful management recommendations on the ground.

For these reasons, this tool takes a different approach more useful to communities: simple, rapid, robust field data collection in combination with photo monitoring. The main advantage of this approach is that rapid collection of robust and slow-changing indicators of rangeland quality is much faster, cheaper, easier and more reliable and precise than alternative monitoring approaches. Photo monitoring has the added advantage of being easily interpreted even by non-technical persons, making monitoring information more accessible and useful to stakeholders ranging from donors to community members.

After this protocol has been completed and all baseline monitoring data and photos are safely recorded and archived, use the next protocol, “Tool 2-3: Rapid community rangeland monitoring tool: Guide for ongoing monitoring” for the second, third and subsequent visits to each monitoring site.

Steps

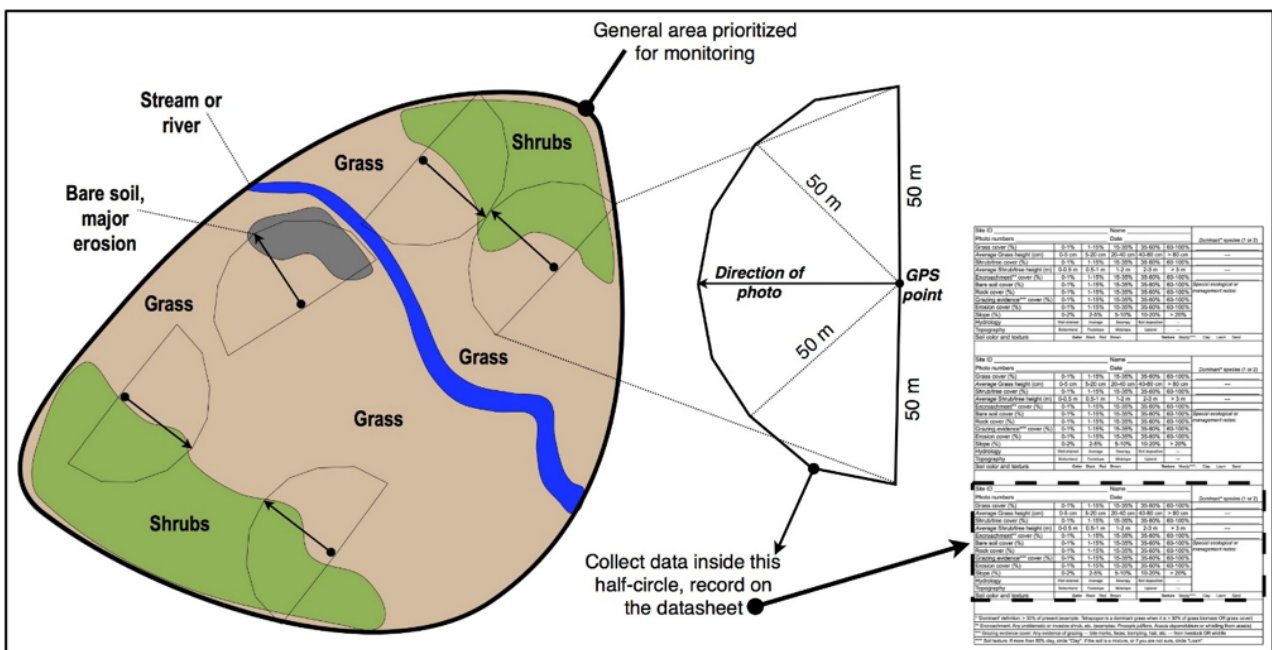
Step 1: Select the monitoring sites

- Consult community members to prioritize a “general area” for rangeland monitoring. You must locate monitoring sites in important rangeland areas. Ask the community members where it is useful and important to monitor rangelands. For example:
 - a. Important pastures used for intense grazing
 - b. Degraded areas where good grasses have been lost, grass cover is decreasing, soil erosion is increasing, etc.
 - c. Areas the community is restoring through planned grazing, resting, re-seeding, etc.
- It is best to locate monitoring sites in transition areas in rangelands since being on a transition lets you see the change directly through photography over time. For example:
 - a. Where a shrubby area meets a grassy area
 - b. Where an area with good grass or shrubs meets an area with severe erosion
 - c. Where different soil types meet, for example, where red soil meets black soil
 - d. Where areas with different hydrology meet, for example, where a swamp meets a grassland or shrubland
 - e. See Figure 2-2-1 for an example of a complex “general area” prioritized for monitoring by a community showing the best locations for monitoring sites.
- Do not locate monitoring sites in “sacrifice zones” with major degradation such as:
 - a. Bomas or settlements: a minimum distance of 200 metres from any boma or settlement is recommended.
 - b. Water points: a minimum distance of 200 metres from any pond, borehole, dam, river, etc. should be kept.

A community can manage what it monitors.

- Do not locate monitoring sites outside of rangelands.
 - a. Crops: sites close to crops are okay. However, a minimum distance of 50 metres from crops should be kept. Also, do not include crops in the photos or the data.
 - b. Private enclosures and fenced areas: sites close to fenced private grazing enclosures are okay (minimum distance of 50 metres from enclosures or fences is recommended). Do not include private areas in the photos or the data. Note: if you are monitoring enclosures or paddocks, ignore this rule.
 - c. Streams: sites close to streams are okay (no minimum distance) but do not include streams in the photos or the data.
- Do locate monitoring sites in different areas. It could be that only one or two of the sites in Figure 2-2-1 would be monitored. If you can monitor several areas, place them some distance from each other (>10 km).

Figure 2-2-1. The best locations for monitoring sites in a general area the community has prioritized as important for monitoring changes in rangeland condition



Step 2: Record basic site information for the monitoring site

- After you have selected a good site for monitoring, use a Global Positioning System (GPS) device to save the location of the monitoring site.
- Make a new site ID for the monitoring site. Make the site ID using:
 - a. the name of the local area or the name of the closest settlement/village/town/hill/etc.; and
 - b. the number of the monitoring site in the local area.
- c. For example, if you have created three new monitoring sites in an area named Maji, the site IDs would be as follows:
 - For the first site, the site ID is: Maji 1
 - For the second site, the site ID is: Maji 2
 - For the third site, the site ID is: Maji 3

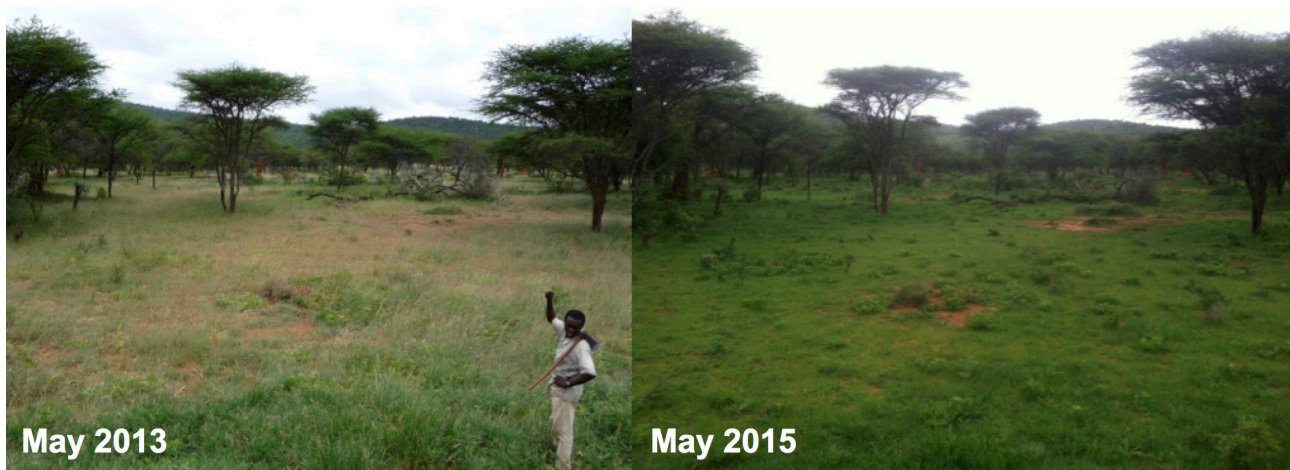
- List the GPS waypoint numbers and site IDs. After you GPS the location point of a monitoring site and give it a site ID, make a list on paper with the waypoint number saved on the GPS, and the site ID.
 - a. For example, for the 3 new monitoring sites, Maji 1, Maji 2, and Maji 3:

<u>Waypoint number</u>	<u>Site ID</u>
001	Maji 1
002	Maji 2
003	Maji 3
 - b. As you continue to add more monitoring sites, make sure you write all monitoring site IDs and waypoint numbers on the list. If you do not do this, or you lose the list, all monitoring data will be lost. Keep the list safe and make a second copy to keep in the office or at home.

Step 3: Take photos of the monitoring site

- Stand at the GPS point. If you are standing in a transition area, take the photo along the transition (see Figure 2-2-1). For example, in an area where grass meets shrubs (see Figure 2-2-1), take the photo so that it includes both the grass and the shrubs.
- If it is not a transition area, take the photo in a direction to include a landmark; for example, a special large or dead tree, a large termite mound, a special or large hill in the distance.
- Hold the tablet horizontally, with a very small portion of the sky at the top of the photo.
- Check that the tablet is fully zoomed out as wide as possible.
- Keeping your hands still, take two photos.
- For an example of a photo taken like this, see Figure 2-2-2.

Figure 2-2-2. Change in grassland condition over two years near Dida Hara, Borana Zone in Ethiopia in a site restored by thinning excess shrubs and prescribed fire. This site was bush-thinned in 2006 and burned in 2007.



Note that the grass is expanding in cover and the trees and shrubs have grown taller. The live and dead trees and the hills in the distance were used as landmarks to take the exact same photo two years later.

Step 4: Record rangeland data for the monitoring site

- After you have taken the photos, record rangeland data using Worksheet 2-2-1 found on p. 7 of this tool.
- For most variables, circle the correct response. For dominant plant species, write the name(s) of one or two dominant species. Local names are acceptable.

- *Measuring cover*: for all cover measurements (cover of grass, shrubs/trees, encroachment, bare soil, rocks, grazing evidence and erosion), think like a raindrop. For example, if rain falls on a shrub, some raindrops fall on the leaves or wood and some raindrops pass through to the soil. If 25% of the raindrops fall on the leaves and 75% falls through to the soil, the cover of that shrub is 25%, so on the datasheet you will circle the appropriate value, which is 15–35%.
- *Average height*: for all vegetation height measurements (height of grass and shrubs) write the average height, not the maximum height. Therefore, if you measured the height of each and every grass plant and then calculated the average, the number you would get is what should be recorded. On the worksheet, circle the category that most closely matches the average height.
- *Erosion*: record the cover (%) of visible erosion, including sheet erosion, gullies and rills (small gullies) and pedestals (the roots stand above the soil because of soil loss).
- *Slope*: circle 0–2% for very flat areas and 2–5% for almost flat; >20% is a very steep slope, 10–20% is steep but not very steep, and 5–10% is in the middle. Note that more detailed methods such as a clinometer or the string method can also be used.
- *Hydrology*: circle “well-drained” for sandy or rocky areas where rain passes quickly through the soil and rocks, the land drying quickly; circle “swampy” for very wet areas that hold water for some time, the land drying slowly; circle “soil deposition” for areas where erosion is depositing soil from a hill above; and circle “average” for all other areas.
- *Topography*: circle “bottomland” for the lowest areas of the landscape (flat areas at the bottom of a hill or close to streams and swamps); circle “footslope” for areas where the slope of a hill begins (close to bottomlands); circle “midslope” for areas in the middle of the slope of a hill; and circle “upland” for the highest areas of the landscape.
- *Encroachment*: encroachment species include shrubs or trees that invade rangelands quickly or that cause serious problems for grazing of rangelands. Common examples include:
 - a. *Prosopis juliflora* or mathenge
 - b. *Acacia depanelobium* or whistling thorn acacia
 - c. *Solanum incanum* or sodom apple

Note: encroaching shrubs are also included in the shrub/tree cover and average shrub/tree height measurements)

- *Dominant*: dominant species for grass, shrubs, and encroachment species have >30% of the biomass or cover of those present. Species with low cover or biomass cannot be dominants. For example:
 - a. *Cenchrus ciliaris* is a dominant grass when it is >30% of grass biomass or grass cover
 - b. *Indigofera spicata* is a dominant shrub/tree when it is >30% of shrub/tree biomass or shrub/tree cover
 - c. *Acacia tortilis* is a dominant shrub/tree when it is >30% of shrub/tree biomass or shrub/tree cover
 - d. *Prosopis juliflora* (mathenge) is a dominant encroachment species when it is >30% of encroachment species biomass or encroachment species cover
- *Grazing evidence*: includes % cover of any evidence of grazing—bite marks, feces, trampling, hair, etc.—from livestock or wildlife.
- *Soil texture*: if the soil is more than 50% clay, circle “clay”; if the soil is more than 50% sand, circle “sand”; if the soil is a mixture, or if you are not sure of the percentage of clay, silt and sand, then circle “loam”.

Step 5: Daily wrap-up

- At the end of every day, download photos from the tablet to a computer so that the photos are not lost.
- Change the filename of each photo on the computer every day to:
 - Site_number_date.jpg

- For example, if on July 15, 2018 you took photos at three monitoring sites in an area named Maji, and with site IDs Maji 1, Maji 2 and Maji 3, after you download the photos for that day you would change the photo filenames to:
 - Maji_1_20180715.jpg
 - Maji_2_20180715.jpg
 - Maji_3_20180715.jpg

Equipment

- GPS unit
- Tablet for taking photos (photos are easier to frame with a tablet than a camera)
- Datasheets (one sheet can record data from three monitoring sites)

Reporting/mapping format

- Basic information on monitoring site: excel spreadsheet (.xlsx) with site ID and latitude and longitude
- Latitude and longitude of monitoring sites (from GPS): GPS exchange format (.gpx) or Google Earth format (.kml or .kmz)
- Photos: store in .jpg format, with filenames formatted as Site_number_date.jpg
- Rangeland data: enter into Excel spreadsheet (.xlsx) after site ID and latitude and longitude, with one row for each monitoring site and all variables in columns.

Rapid community rangeland monitoring

Worksheet 2-2-1

Datasheet for recording rangeland data

Site ID _____		Name _____				Dominant* species (List the names of 1 or 2 species)	
Photo numbers _____		Date _____					
Grass cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	_____	
Average Grass height (cm)	0-5 cm	5-20 cm	20-40 cm	40-80 cm	> 80 cm	—	
Shrub/tree cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	_____	
Average Shrub/tree height (m)	0-0.5 m	0.5-1 m	1-2 m	2-3 m	> 3 m	—	
Encroachment** cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	Special ecological or management notes:	
Bare soil cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
Rock cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
Grazing evidence*** cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
Erosion cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
Slope (%)	0-2%	2-5%	5-10%	10-20%	> 20%		
Hydrology	Well-drained	Average	Swampy	Soil deposition	—		
Topography	Bottomland	Footslope	Midslope	Upland	—		
Soil color and texture	Color Black Red Brown			Texture Mostly****: Clay Loam Sand			
Site ID _____		Name _____				Dominant* species (List the names of 1 or 2 species)	
Photo numbers _____		Date _____					
Grass cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	_____	
Average Grass height (cm)	0-5 cm	5-20 cm	20-40 cm	40-80 cm	> 80 cm	—	
Shrub/tree cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	_____	
Average Shrub/tree height (m)	0-0.5 m	0.5-1 m	1-2 m	2-3 m	> 3 m	—	
Encroachment** cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	Special ecological or management notes:	
Bare soil cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
Rock cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
Grazing evidence*** cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
Erosion cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
Slope (%)	0-2%	2-5%	5-10%	10-20%	> 20%		
Hydrology	Well-drained	Average	Swampy	Soil deposition	—		
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Soil color and texture	Color Black Red Brown			Texture Mostly****: Clay Loam Sand			
Site ID _____		Name _____				Dominant* species (List the names of 1 or 2 species)	
Photo numbers _____		Date _____					
Grass cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	_____	
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Average Shrub/tree height (m)	0-0.5 m	0.5-1 m	1-2 m	2-3 m	> 3 m	—	
Encroachment** cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	Special ecological or management notes:	
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Erosion cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
Slope (%)	0-2%	2-5%	5-10%	10-20%	> 20%		
Hydrology	Well-drained	Average	Swampy	Soil deposition	—		
Topography	Bottomland	Footslope	Midslope	Upland	—		
Soil color and texture	Color Black Red Brown			Texture Mostly****: Clay Loam Sand			
Instructions: For most variables, circle the correct response. For 'dominant' plant species, write the name(s) of one or two dominant species. Local names are acceptable but can become problematic.							
* 'Dominant' definition: > 30% of present (example: <i>Tetrapogon</i> is a dominant grass when it is > 30% of grass biomass OR grass cover)							
** Encroachment: Any problematic or invasive shrub, etc. (examples: <i>Prosopis juliflora</i> , <i>Acacia depanolobium</i> or whistling thorn acacia)							
*** Grazing evidence cover: Any evidence of grazing — bite marks, feces, trampling, hair, etc. — from livestock OR wildlife							
**** Soil texture: If more than 50% clay, circle "Clay". If the soil is a mixture, or if you are not sure, circle "Loam"							

This document is part of the Participatory rangeland management toolkit for Kenya, an initiative led by the International Livestock Research Institute (ILRI). This tool was developed by ILRI, with financial assistance from the United States Agency for International Development Feed the Future Kenya Accelerated Value Chain Development (AVCD) program.

Photo credit: ILRI/Jason Sircely

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Tool 2-3

Rapid community rangeland monitoring tool: guide for ongoing monitoring

November 2018

Tool 2-3

Rapid community rangeland monitoring tool: guide for ongoing monitoring

Objective

This tool describes the steps for continuous rangeland monitoring using a simple approach for rapid collection of data useful in tracking rangeland degradation and restoration.

Anticipated output

Rangeland monitoring data recorded and monitoring photos taken and archived for a set of monitoring sites created previously, for the second, third and subsequent visits to each monitoring site (all visits after the first baseline visit).

Participants in this activity

- Members of the rangeland management institution and other community members
- Personnel from the facilitating organization

When to use this tool

This tool relates primarily to step eight of the participatory rangeland management (PRM) process—participatory monitoring and evaluation—but can also be useful at step three for carrying out the rangeland resource assessment (See Tool G-2 for a description of the stages and steps in PRM).

Introduction

Rangeland monitoring provides data that is useful for a variety of purposes. The most common use of rangeland monitoring data is to know whether rangeland quality is declining (degradation) or improving (restoration). Since livestock production (milk, meat and sales of live animals) depends on the resources animals consume from rangelands, rangeland quality or condition—how much biomass is produced and the forage quality of the biomass—is an important concern for any livestock producer.

Rangeland monitoring is helpful because it addresses some of the important challenges in managing rangelands through grazing management and other approaches. These challenges include: (i) slow change; (ii) high variability; and (iii) the importance of a long-term management strategy. Rangeland quality changes slowly over many years, which is difficult to observe. Collecting even a little data over two or more years can show changes that cannot be observed by the eye alone. Rangelands are variable in space with each place is slightly different from other areas even nearby; and time with each year having a different rainfall pattern. This variation also makes observation of changes difficult. To overcome the first two challenges, a long-term management strategy is needed and monitoring is required to know whether the strategy is working or failing. If degradation goes on for many years, solutions will become more difficult and more costly with each year that passes.

There are many different types of data used in monitoring rangelands and each has its own advantages and disadvantages. The most commonly used approaches are collection of detailed field data and use of satellite remote sensing. These approaches are useful but they require highly trained scientific staff. While detailed field data focuses on only a few areas (many areas are needed to be effective), remote sensing is less accurate than field data and often cannot be used to make useful management recommendations on the ground.

For these reasons, this tool takes a different approach more useful to communities: simple, rapid, robust field data collection in combination with photo monitoring. The main advantage of this approach is that rapid collection of robust and slow-changing indicators of rangeland quality is much faster, cheaper, easier and more reliable and precise than alternative monitoring approaches. Photo monitoring has the added advantage of being easily interpreted even by non-technical persons, making monitoring information more accessible and useful to stakeholders ranging from donors to community members.

Use this protocol only after the previous protocol, 'Tool 2-2: Rapid community rangeland monitoring tool: Guide for ongoing monitoring' has been completed and all baseline monitoring data and photos are safely recorded and archived. Use this protocol for the second, third and other subsequent visits to each monitoring site.

Monitoring of rangeland condition helps a community to know whether its management strategy is working or failing.

Steps

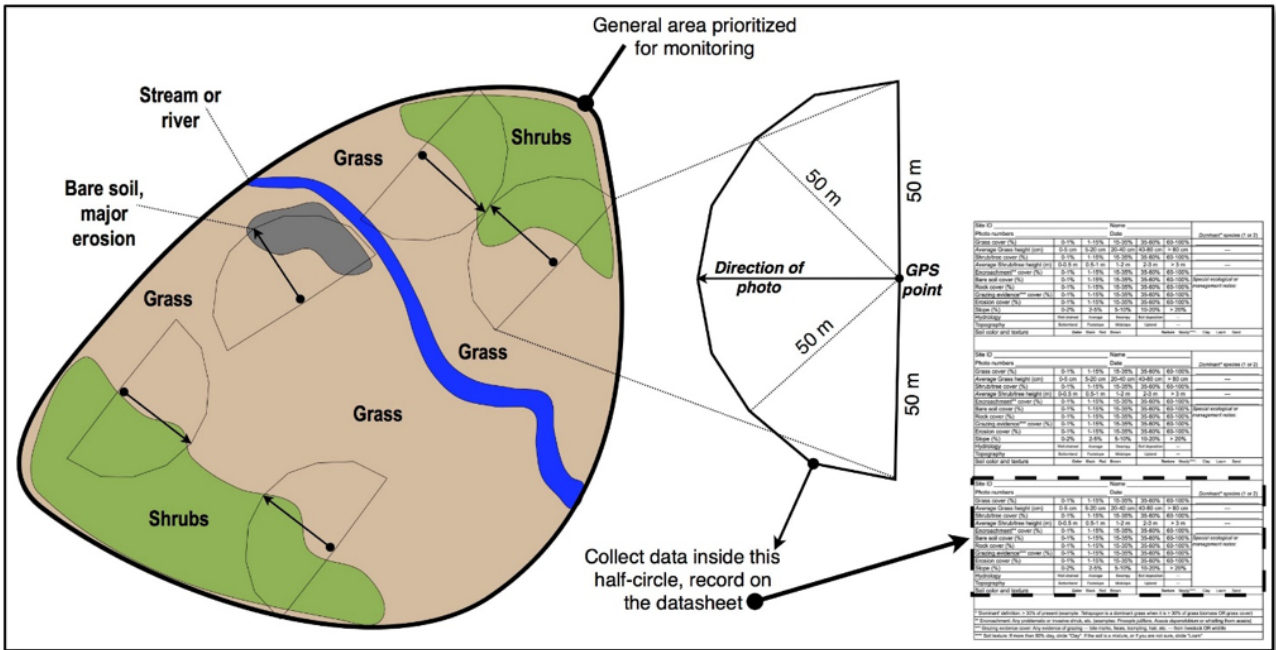
Step 1: Preparation

- Print photos from the first visit to each monitoring site, with the site IDs for the monitoring sites printed or written on the photos. Make sure you carry the photos with you.
- Load the locations of monitoring sites onto your GPS device and carry it with you.

Step 2: Find the monitoring site

- Use the GPS device to find the location.
- Read site ID from the GPS (pre-loaded onto GPS), and record the site ID on the datasheet.
- Stand at the GPS point (close to the point is okay).
- Use the printed photo for the monitoring site to find the correct direction for the photos and data recording. Look for landmarks in the printed photos. For example, a special large or dead tree, a large termite mound, or a special or large hill in the distance (see Figure 2-3-2 for an example).

Figure 2-3-1. The best locations for monitoring sites in a general area the community has prioritized as important for monitoring changes in rangeland condition

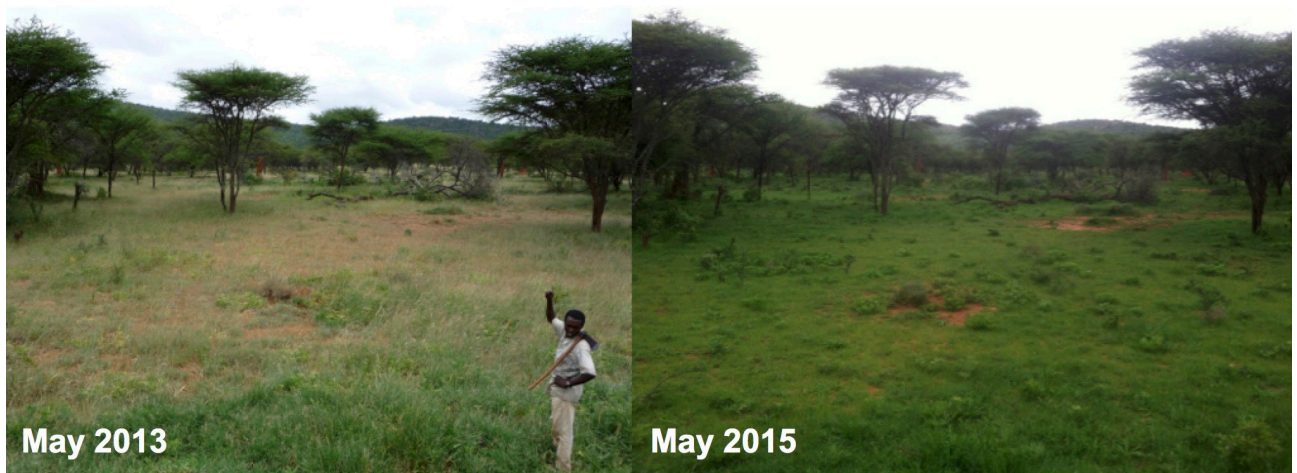


Step 3: Take photos of the monitoring site

- Standing at the GPS point, use the printed photo to correctly take new photos. The new photo should be exactly the same as the first photo.
- Hold the tablet horizontally, with a very small portion of the sky at the top of the photo.
- Check that the tablet is fully zoomed out as wide as possible.
- Keeping your hands still, take two photos.
- For an example, see Figure 2-3-2.

Figure 2-3-2. Change in grassland condition over two years near Dida Hara, Borana Zone in Ethiopia in a site restored by thinning excess shrubs and prescribed fire (this site was bush-thinned in 2006 and burned in 2007).

Note that the grass is expanding in cover, and the trees and shrubs have grown taller. The live and dead trees and the hills in the distance were used as landmarks to take the exact same photo two years later.



Step 4: Record rangeland data for the monitoring site

- After you have taken the photos, record rangeland data using Worksheet 2-3-2 found on p. 6 of this tool.
- For most variables, circle the correct response. For “dominant” plant species, write the name(s) of one or two dominant species. Local names are acceptable.
- *Measuring cover*: for all cover measurements (cover of grass, shrubs/trees, encroachment, bare soil, rocks, grazing evidence and erosion), think like a raindrop. For example, if rain falls on a shrub, some raindrops fall on the leaves or wood and some raindrops pass through to the soil. If 25% of the raindrops fall on the leaves and 75% falls through to the soil, the cover of that shrub is 25%, so on the datasheet you will circle the appropriate value, which is 15–35%.
- *Average height*: for all vegetation height measurements (height of grass and shrubs) write the average height, not the maximum height. Therefore, if you measured the height of each and every grass plant and then calculated the average, the number you would get is what should be recorded. On the worksheet, circle the category that most closely matches the average height.
- *Erosion*: record the cover (%) of visible erosion, including sheet erosion, gullies and rills (small gullies) and pedestals (the roots stand above the soil because of soil loss).
- *Slope*: circle 0–2% for very flat areas and 2–5% for almost flat; >20% is a very steep slope, 10–20% is steep but not very steep, and 5–10% is in the middle. Note that more detailed methods such as a clinometer or the string method can also be used.
- *Hydrology*: circle “well-drained” for sandy or rocky areas where rain passes quickly through the soil and rocks, the land drying quickly; circle “swampy” for very wet areas that hold water for some time, the land drying slowly; circle “soil deposition” for areas where erosion is depositing soil from a hill above; and circle “average” for all other areas.
- *Topography*: circle “bottomland” for the lowest areas of the landscape (flat areas at the bottom of a hill or close to streams and swamps); circle “footslope” for areas where the slope of a hill begins (close to bottomlands); circle “midslope” for areas in the middle of the slope of a hill; and circle “upland” for the highest areas of the landscape.
- *Encroachment*: encroachment species include shrubs or trees that invade rangelands quickly or that cause serious problems for grazing of rangelands. Common examples include:
 - a. *Prosopis juliflora* or mathenge
 - b. *Acacia depanelobium* or whistling thorn acacia
 - c. *Solanum incanum* or sodom apple

Note: encroaching shrubs are also included in the shrub/tree cover and average shrub/tree height measurements)

- *Dominant*: dominant species for grass, shrubs, and encroachment species have >30% of the biomass or cover of those present. Species with low cover or biomass cannot be dominants. For example:
 - a. *Cenchrus ciliaris* is a dominant grass when it is >30% of grass biomass or grass cover
 - b. *Indigofera spicata* is a dominant shrub/tree when it is >30% of shrub/tree biomass or shrub/tree cover
 - c. *Acacia tortilis* is a dominant shrub/tree when it is >30% of shrub/tree biomass or shrub/tree cover
 - d. *Prosopis juliflora* (mathenge) is a dominant encroachment species when it is >30% of encroachment species biomass or encroachment species cover
- *Grazing evidence*: includes % cover of any evidence of grazing—bite marks, feces, trampling, hair, etc.—from livestock or wildlife.
- *Soil texture*: if the soil is more than 50% clay, circle “clay”; if the soil is more than 50% sand, circle “sand”; if the soil is a mixture, or if you are not sure of the percentage of clay, silt and sand, then circle “loam”.

Step 5: Daily wrap-up

- At the end of every day, download photos from the tablet to a computer so that the photos are not lost.
- Change the filename of each photo on the computer every day to:
 - Site_number_date.jpg
- For example, if on July 15, 2018 you took photos at three monitoring sites in an area named Maji, and with site IDs Maji 1, Maji 2 and Maji 3, after you download the photos for that day you would change the photo filenames to:
 - Maji_1_20180715.jpg
 - Maji_2_20180715.jpg
 - Maji_3_20180715.jpg

Equipment

- GPS unit, with the locations of all monitoring sites loaded onto the GPS
- Tablet (the same type used to take photos on the first visit to each monitoring site)
- Datasheets (one sheet can record data from three monitoring sites)
- Printed copies of photos from the first visit to each monitoring site, with the site IDs for the monitoring sites printed or written on the photos

Reporting/mapping format

- Basic information on monitoring site: excel spreadsheet (.xlsx) with site ID and latitude and longitude
- Latitude and longitude of monitoring sites (from GPS): GPS exchange format (.gpx) or Google Earth format (.kml or .kmz)
- Photos: store in .jpg format, with filenames formatted as Site_number_date.jpg
- Rangeland data: enter into Excel spreadsheet (.xlsx) after site ID and latitude and longitude, with one row for each monitoring site and all variables in columns.

Rapid community rangeland monitoring

Worksheet 2-3-1

Datasheet for recording rangeland data

Site ID _____		Name _____				<i>Dominant*</i> species (List the names of 1 or 2 species)	
Photo numbers _____		Date _____					
Grass cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	_____	
Average Grass height (cm)	0-5 cm	5-20 cm	20-40 cm	40-80 cm	> 80 cm	—	
Shrub/tree cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	_____	
Average Shrub/tree height (m)	0-0.5 m	0.5-1 m	1-2 m	2-3 m	> 3 m	—	
Encroachment** cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	_____	
Bare soil cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	<i>Special ecological or management notes:</i>	
Rock cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
Grazing evidence*** cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
Erosion cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
Slope (%)	0-2%	2-5%	5-10%	10-20%	> 20%		
Hydrology	Well-drained	Average	Swampy	Soil deposition	—		
Topography	Bottomland	Footslope	Midslope	Upland	—		
Soil color and texture	Color Black Red Brown			Texture Mostly****: Clay Loam Sand			
Site ID _____		Name _____					<i>Dominant*</i> species (List the names of 1 or 2 species)
Photo numbers _____		Date _____					
Grass cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	_____	
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Shrub/tree cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	_____	
Average Shrub/tree height (m)	0-0.5 m	0.5-1 m	1-2 m	2-3 m	> 3 m	—	
Encroachment** cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	_____	
Bare soil cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	<i>Special ecological or management notes:</i>	
Rock cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
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Shrub/tree cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	_____	
Average Shrub/tree height (m)	0-0.5 m	0.5-1 m	1-2 m	2-3 m	> 3 m	—	
Encroachment** cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	_____	
Bare soil cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%	<i>Special ecological or management notes:</i>	
Rock cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
Grazing evidence*** cover (%)	0-1%	1-15%	15-35%	35-60%	60-100%		
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Slope (%)	0-2%	2-5%	5-10%	10-20%	> 20%		
Hydrology	Well-drained	Average	Swampy	Soil deposition	—		
Topography	Bottomland	Footslope	Midslope	Upland	—		
Soil color and texture	Color Black Red Brown			Texture Mostly****: Clay Loam Sand			
Instructions: For most variables, circle the correct response. For 'dominant' plant species, write the name(s) of one or two dominant species. Local names are acceptable but can become problematic.							
* 'Dominant' definition: > 30% of present (example: <i>Tetrapogon</i> is a dominant grass when it is > 30% of grass biomass OR grass cover)							
** Encroachment: Any problematic or invasive shrub, etc. (examples: <i>Prosopis juliflora</i> , <i>Acacia depanolobium</i> or whistling thorn acacia)							
*** Grazing evidence cover: Any evidence of grazing — bite marks, feces, trampling, hair, etc. — from livestock OR wildlife							
**** Soil texture: If more than 50% clay, circle "Clay". If the soil is a mixture, or if you are not sure, circle "Loam"							

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Photo credit: ILRI/Jason Sircely

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Animal scientist, Nobel Prize Laureate for Physiology or Medicine—1996

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Tool 2-4

Participatory scoring of rangeland condition

November 2018

Tool 2-4

Participatory scoring of rangeland condition

Objective

The rangeland management institution develops a system for periodic assessment of rangeland condition using participatory scoring

Anticipated output

Regular and repeated assessments of rangeland condition documented in the rangeland management institution's records

Participants in this activity

- Knowledgeable community members representing different stakeholder groups in the rangeland unit (to do the scoring)
- Members of the rangeland management institution (to keep records and analyze the scoring)

When to use this tool

This tool relates primarily to step eight of the participatory rangeland management (PRM) process—participatory monitoring and evaluation—but can also be useful at step three for carrying out the rangeland resource assessment. (See Tool G-2 for a description of the stages and steps in PRM.)

Introduction

Monitoring rangeland condition and evaluating the effectiveness of management are important aspects of strengthening the Second Leg of rangeland management and will ultimately determine the success of the PRM process. Communities need to develop their own monitoring and evaluation (M&E) systems as part of taking up or strengthening their rangeland management roles. One relatively simple and inexpensive method is the use of participatory scoring. With this method, focus groups made up of different stakeholders within the community will assess rangeland condition based on the knowledge that they have. This approach becomes most useful when it is repeated at regular intervals.

The scoring can be done for the rangeland unit as a whole; or different zones within the rangeland unit can be identified, and each scored separately. The facilitator of the focus group discussions should ensure that all participants are clear on the geographical area(s) being assessed. These participatory scoring exercises can be further triangulated through other monitoring methods. See, for example, Tools 2-2 and 2-3.

Steps

Step 1: Identify indicators, scoring criteria and the unit(s) for assessment

- Develop a list of indicators of rangeland condition/pasture quality with the rangeland management institution or with a focus group of local experts.
- Establish scoring criteria for each indicator (e.g. what will a score of 1/5 mean? What will a score of 2/5 mean? etc.). If criteria are not elaborated for every score, they should at least be elaborated for the lowest and highest scores.
- Phrase all indicators positively so that the higher score is always better (e.g. not 'invasive species' but 'freedom from invasive species'). See Table 2-4-1 for an example.
- If the indicators and criteria are developed by a group of local experts, share the list with the rangeland management institution for their approval.
- The rangeland management institution should decide if the assessment will be done for the rangeland unit as a whole, or if different areas within the rangeland unit will be identified for each to be assessed separately.

Table 2-4-1: Sample list of indicators and scoring criteria

Indicator	Criteria for a...				
	Score of 1	Score of 2	Score of 3	Score of 4	Score of 5
Freedom from bushes/invasive species	The rangeland is dominated by undesirable species.				Bush encroachment and invasive species are rare.
Presence of most desirable species	The favoured forage species have completely disappeared from the rangeland.		The favoured forage species can be found but are not plentiful everywhere.		The favoured forage species are plentiful throughout the rangeland.
Overall assessment of quantity of forage	Forage is insufficient to feed moderate herds even in good rainfall years.		Forage is sufficient in the rainy season but not in the dry season.		Forage is plentiful in most of the rangeland, except in drought years.
Absence of bare ground	There are large areas of bare ground and most sections of the rangeland unit have significant bare areas.				Bare ground is rare across the rangeland.

Step 2: Identify and mobilize focus groups for the scoring based on stakeholder groupings within the rangeland unit

- Different groups within the rangeland unit may have different priorities, perceptions and knowledge. Therefore, it is preferable to have different groups carry out the rangeland condition assessment independently. For example, in a community where there are cattle-keeping pastoralists and camel-keeping pastoralists, each group may have different preferences for species of forage. Poorer people who have only small stock may have different preferences than someone who is rich and has a very large herd. Different zones or villages within a rangeland unit may also have different views.

- The rangeland management institution should have the final decision on what groupings to use.
- If the rangeland condition assessment is to be done for different areas within the rangeland unit, then it is important to be sure that the focus groups are knowledgeable about the area(s) being assessed. In some cases, it may be necessary to use different focus groups for different areas.
- Ideally, there should be three to four focus groups for each area being assessed.

Step 3: Hold the scoring focus groups

For each focus group:

- Explain the exercise.
- Explain the indicators chosen at step one and the scoring criteria for each.
- The group may add indicators to the list if they wish.
- If the rangeland management institution is using other observational methods of rangeland monitoring (see, for example, Tools 2-2 and 2-3). The focus group can review the findings of that monitoring exercise.
- Have the group discuss and agree upon a score for each indicator from 1 to 5 based on the scoring criteria.
- Record reasons for the scores and other comments.
- Discuss perceptions of changes in rangeland condition generally. Discussions should try to capture what aspects of change can be attributed to specific interventions.
- Take detailed notes.

Worksheet 2-4-2 provides a template for recording scores.

Step 4: Consolidate the scores from the different focus groups

Create a table summarizing all the scores, calculating an average for each indicator (see example in Table 2-4-2 below).

Table 2-4-2: Sample consolidation of focus group scores

Indicators	FG 1: Women	FG 2: Men	FG3: Minority tribe men	FG4: Elders	Average
Freedom from bushes/invasive species	$\frac{3}{5}$	$\frac{3}{5}$	$\frac{2}{5}$	$\frac{3}{5}$	$\frac{2.75}{5}$
Presence of most desirable species	$\frac{2}{5}$	$\frac{2}{5}$	$\frac{3}{5}$	$\frac{2}{5}$	$\frac{2.25}{5}$
Overall assessment of quantity of forage	$\frac{4}{5}$	$\frac{3}{5}$	$\frac{4}{5}$	$\frac{3}{5}$	$\frac{3.5}{5}$
Absence of bare ground	$\frac{3}{5}$	$\frac{2}{5}$	$\frac{3}{5}$	$\frac{3}{5}$	$\frac{2.75}{5}$
Overall score	$\frac{3.0}{5}$	$\frac{2.5}{5}$	$\frac{3.0}{5}$	$\frac{2.75}{5}$	$\frac{2.8}{5}$

If separate scoring is done for different monitoring areas within the rangeland unit, create a table like this one for each monitoring area.

Step 5: Repeat the scoring at regular intervals, keep all the records of the scores and comments and summarize the consolidated scores from each interval as in Table 2-4-3.

Table 2-4-3: Example of long term record of periodic assessments

Indicators	2010 Score	2014 Score	2018 Score		
Freedom from bushes/ invasive species	<u>2.75</u> 5	<u>2.4</u> 5	<u>3.0</u> 5		
Presence of most desirable species	<u>2.25</u> 5	<u>1.6</u> 5	<u>2.0</u> 5		
Overall assessment of quantity of forage	<u>3.5</u> 5	<u>3.0</u> 5	<u>3.4</u> 5		
Absence of bare ground	<u>2.75</u> 5	<u>3.0</u> 5	<u>3.2</u> 5		
Overall score	<u>2.8</u> 5	<u>2.5</u> 5	<u>2.9</u> 5		

If separate scoring is done for different monitoring areas within the rangeland unit, create a table like this one for each monitoring area.

The first time the scoring is done, focus groups could also be asked to score some historical period based on their memory of conditions at that time. The ability to assess changes in rangeland condition over time (including comparing to a time before the current PRM process began) is where the real value of this approach lies.

Strengths and weaknesses of participatory scoring

Participatory scoring of rangeland condition is most effective when combined with other methods. See Tools 2-2 and 2-3, for another method of rangeland method based on direct observation.

Table 2-4-4: Strengths and weaknesses of participatory scoring

Strengths	Weaknesses
Can be done very quickly	Can be subjective
Requires little effort and material resources	Tends not to generate new knowledge for community members as much as other approaches based on direct observation
Draws on existing knowledge of the community members	May not be accepted by outside stakeholders as valid

This document is part of the Participatory rangeland management toolkit for Kenya, an initiative led by the International Livestock Research Institute (ILRI). This tool was adapted from an earlier ILRI publication. Development of this tool benefited from financial assistance from the Restoration of degraded land for food security and poverty reduction in East Africa and the Sahel: taking successes in land restoration to scale project, led by the World Agroforestry Centre (ICRAF) with funding from the International Fund for Agricultural Development (IFAD) and the European Union; and from the United States Agency for International Development Feed the Future Kenya Accelerated Value Chain Development (AVCD) program.

Photo credit: ILRI

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The project, Restoration of degraded land for food security and poverty reduction in East Africa and the Sahel: taking successes in land restoration to scale, is led by the World Agroforestry Centre (ICRAF) and funded by the International Fund for Agricultural Development (IFAD) with support from the European Union.



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Tool 3-1

Appreciating the Third Leg of PRM: Using a landscape approach

November 2018

Tool 3-1

Appreciating the Third Leg of PRM: Using a landscape approach

Objective

To prepare members of the rangeland management institution and other stakeholders to plan and implement interventions that strengthen the Third Leg of participatory rangeland management

Anticipated output

The rangeland management institution collaborates with other communities and stakeholders to implement activities that go beyond the rangeland unit, adopting a landscape approach

Participants in this activity

- Members of the rangeland management institution
- Other county, sub-county and community stakeholders: e.g. ward administrators, influential elders and traditional leaders, chiefs, etc.

Introduction

The Third Leg of rangeland management is about using a landscape approach. This involves looking beyond the borders of the rangeland unit, engaging with neighbours and planning for the larger landscape together with neighbours and a wide variety of other stakeholders.

Two of the defining characteristics of Kenyan rangelands are that (a) key resources are spread heterogeneously across large landscapes, and (b) rainfall and the availability of forage vary greatly over time and space. In fact, it is these characteristics that make mobile livestock keeping a well-suited livelihood for these areas. But unevenly distributed resources, variability and the need for mobility have important implications for the planning and practice of rangeland management. At times, the resources that a livestock owner needs will lie beyond the borders of his/her own community. A herder may need to pass through another community's territory to access markets, water or other resources.

Even with the most effective management practices, there are few, if any, pastoralist or agropastoralist communities who will never need to move their livestock beyond their own territory. If herders from your community sometimes need to move their livestock to other places, it stands to reason that herders from other places will sometimes want to access your territory. Therefore, a rangeland unit cannot be treated as an island.

Three ingredients for strengthening the Third Leg

There are three main ingredients in a strategy for strengthening the Third Leg of rangeland management. The first is maintaining good relations with adjacent neighbours and with communities from the wider landscape. At the most basic level, this means ensuring that herders, livestock owners and other members of neighbouring communities, including leaders of those communities, are aware of the rangeland management activities. These neighbours should be aware that a rangeland management institution exists, that it represents the people of this rangeland unit, and that it is taking steps to coordinate grazing patterns and manage resources.

However, this engagement with neighbours should go beyond minimal awareness raising. Some of the decisions and activities implemented by a community will affect these neighbours and they (neighbours) should be part of the planning process for some aspects of planning. If herders and livestock owners from neighbouring communities and the wider landscape do not understand a community's efforts or feel they have not been included in the planning process for grazing land that has traditionally been shared, then they may disregard grazing plans or other rules, or even try to actively undermine the efforts. The need for maintaining good relations also involves mutual understanding between pastoralist and agricultural communities regarding borders and sharing of resources.

Three ingredients for strengthening the Third Leg:

- Maintaining good relations with neighbours
- Planning for mobility
- Management at the landscape scale

The second ingredient is planning for mobility. Ensuring that stock routes are well-planned and are protected, is a task that goes beyond any one rangeland unit. Ideally, mapping of stock routes and mobility planning is a process that will happen at multiple levels from the inter-community level for minor routes, to a sub-county or large landscape level, county-wide mapping and planning, and at the largest scales, across county and even international borders. Some of this kind of mobility planning may take place within government-led processes such as county spatial planning. However, a community rangeland management institution can be proactive, especially at the community-to-community level, by negotiating with adjacent communities.

The third ingredient relates to management at the landscape scale. Ecosystems do not stop at the borders of a rangeland unit. Landscape scale management involves planning not only for grazing by livestock but also for wildlife conservation and management of water catchments. If the human beings living within an ecosystem wish to care for that ecosystem, then they need to look beyond any human-created boundaries. Different communities and various other stakeholder groups need to work together at a landscape scale.

Examples of activities to strengthen the Third Leg

The following list is not exhaustive, but merely gives some examples of activities and interventions that can help strengthen the Third Leg. In the near future, some of these will be elaborated as additional tools to be added to this toolkit.

- Participatory border mapping: representatives from the rangeland unit and from communities adjacent to the rangeland unit agree on and map their mutual borders.

-
- Regular, informal meetings of neighbouring grazing committees: often, the rangeland management institution will have a sub-committee, a group of elders, or team of rangers managing the details of seasonal grazing plans including enforcing rules about where to graze at what times of year. It can be very helpful for the grazing sub-committee of the rangeland unit to regularly meet with its counterparts from neighbouring communities. These are small, informal, regular meetings of this grazing sub-committee with the equivalent sub-committee or group from adjacent communities.
 - Inter-community/landscape forums: from time to time, large forums can be held involving the entire rangeland management institution from several neighbouring communities/rangeland units as well as other community members and stakeholders to review the plans and activities of each rangeland unit, discuss challenges related to inter-community relations, observe each other's grazing plans and rules and coordinate activities.
 - Livestock route mapping: livestock route mapping involves bringing together local experts to map past, current and possible future stock routes, as well as other features such as conflict hotspots, shared pasture areas, etc., and then validating the mapping with a wider group of local experts and community members. This information can feed into a rangeland unit's planning as well as into larger planning processes such a county spatial plan. One of the contributions of this kind of livestock route mapping, aside from the maps themselves, is that it can help to create mutual understanding among the communities within a landscape.
 - Interacting with incoming herders from other locations: it is inevitable, especially if a community is managing its resources well, that herders from beyond the community will bring their livestock to graze. Whether out of ignorance of a community's seasonal grazing rules or from a conscious decision to try to circumvent those rules, some will try to graze their livestock in attractive pastures out of season. It is important that the rangeland management institution and its representatives (rangers, grazing managers, etc.) know how to peacefully handle such situations.
 - Reciprocal grazing agreements: one approach to managing mobility and inter-community relations is to negotiate reciprocal grazing agreements among different communities or rangeland units.
 - Activities for analyzing and resolving conflicts: even with the best of multi-stakeholder, landscape-level planning and proactive engagement with neighbouring communities, disputes, disagreements and misunderstandings with neighbours and other stakeholders are likely. Rangeland management institutions, county government personnel and other actors should be ready to bring disagreeing parties together to address such conflicts.

This document is part of the Participatory rangeland management toolkit for Kenya, an initiative led by the International Livestock Research Institute (ILRI). This tool was developed by ILRI, with financial assistance from the United States Agency for International Development Feed the Future Kenya Accelerated Value Chain Development (AVCD) program.

Photo credit: ILRI/Dave Elsworth

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Tool 4-I

Appreciating the Fourth Leg of PRM: Relations with government and customary institutions

November 2018

Tool 4-1

Appreciating the Fourth Leg of PRM: Relations with government and customary institutions

Objective

To prepare members of the rangeland management institution and other stakeholders to plan and implement interventions that strengthen the Fourth Leg of participatory rangeland management

Anticipated output

The rangeland management institution engages with government and, where applicable, customary institutions:

- to secure recognition for itself as a representative body of the community and for the community's rangeland management activities; and
- to build strong and constructive relationships with authorities at higher levels.

Participants in this activity

- Members of the rangeland management institution
- Other county, sub-county and community stakeholders: e.g. ward administrators, influential elders and traditional leaders, chiefs, etc.

Introduction

The Fourth Leg of participatory rangeland management (PRM) is concerned with the community's and the rangeland management institution's relationships and interactions with government and customary institutions. The rangeland management institution as an organization needs to have relationships with governance bodies at higher levels. These authorities at higher levels—national government, county government, and in some cases, customary institutions—have roles to play in confirming the legitimacy of a community rangeland management institution. These kinds of vertical relationships connect not only community and government organizations from

different levels, but also the rules and processes such as grazing plans and bylaws and constitutions of a rangeland management institution that are embedded within a larger framework of laws and regulations. These include policy, legislation and regulations at both the county and national level, the constitution of Kenya and international law. Legitimization and, at times, enforcement of a rangeland management institution's grazing plans and other rules depends on these relationships.

Formal recognition

Formal recognition of a community rangeland management institution is often based on county legislation that spells out the processes and requirements for rangeland management institutions to be recognized. The provisions of the 2010 constitution regarding community land and the Community Land Act (2016) provide a legal foundation for community management of rangelands (see Tool 4-2 for further elaboration on the implications of the Community Land Act for PRM). In some cases, PRM may take place through organizations established under other frameworks such as wildlife policy and legislation (for community conservancies) or water policy and legislation (for water resource user associations).

When a community rangeland management institution receives its formal recognition from one of these frameworks, it will typically receive a certificate or some other formal documentation. While such formal recognition from government is not nearly as important as the informal legitimacy that comes from the bottom up—people within and outside of the rangeland unit recognizing the institution as being legitimate and accepting its role—formal recognition is nevertheless very important. Government actors such as chiefs, ward administrators, and the Kenya Wildlife Service will normally require a rangeland management institution to have this recognition if they are to assist in any way with enforcement of its plans and rules.

Aside from the formal recognition of the rangeland management institution itself, its grazing plans and rules around land use can also be legitimized through processes such as strategic environmental assessments and county spatial planning.

Relations with customary institutions

In some pastoralist communities in Kenya, traditional governance systems still have a significant degree of authority. These traditional governance systems, which are more than simply the elders of a particular settlement or local area, often involve systems of councils and traditional meetings at different levels, various categories of pastures and other land, rules around mobility and resource use and shared understanding on how rangelands are to be managed at a landscape scale. Establishing a strong working relationship with the traditional system, including recognition of the rangeland management institution by that system, is a key aspect of earning legitimacy in the eyes of community members and goes a long way towards strengthening the Fourth Leg of rangeland management.

One approach to strengthen relations with traditional institutions is for the rangeland management institution to be a hybrid institution that incorporates elements of both the traditional system and modern organizational forms. This strategy is particularly appropriate where the rangeland unit corresponds with a traditionally defined territory of some sort. Where there are traditional institutions such as a clan or section council that operates at a scale larger than the rangeland unit, for example, the Gabra Yaa council or the Rendille Naabo council, acceptance and recognition of the rangeland management institution by the customary governance body will make the work of the rangeland management institution much easier.

The “soft side” of relations with authorities

The Fourth Leg of rangeland management relates not only to formal recognition by authorities but more generally to maintaining strong and constructive relationships with authorities. This requires frequent and ongoing communication with officials, participation in public forums and other platforms where community organizations interact with authorities and proactively involving officials in the activities and interventions of the community’s rangeland management system. This helps to ensure officials are aware of the rangeland management institution and what the community is doing in terms of rangeland management, and encourage their support, sometimes financially from the county government budget or other sources.

The Fourth Leg of rangeland management also has a “soft side”: frequent informal communication with government and traditional authorities.

Examples of activities to strengthen the Fourth Leg

The following list is not exhaustive, but merely gives some examples of the kinds of activities and interventions that can help strengthen the Fourth Leg. In the near future, some of these will be elaborated as additional tools to be added to this toolkit.

- Obtaining formal recognition for the rangeland management institution: this may be under a framework established by county legislation or through other frameworks such as wildlife policy and legislation (for community conservancies) or water policy and legislation (for water resource users associations).
- Registration under the Community Land Act (2016): see Tool 4-2 for ideas on the relationship between community rangeland management institutions and the Community Land Act.
- Embedding grazing plans and rules around land use with government processes such as county spatial planning: the county spatial planning process can help ensure connections between land use planning at different levels. Incorporating community plans into the county spatial plan gives added weight to the community plans.
- Frequent informal communication with authorities: these include chiefs and sub-chiefs, ward administrators, members of the county assembly, staff of national and county government agencies and members of customary institutions.

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Photo credit: ILRI/Dave Elsworth

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ILRI's scientist David Nkedianye and the chairman of the innovation land lease program Ogeli Ole Makui discuss fencing issues in the Kitengela.

Tool 4-2

Rangeland management and the 2016 Community Land Act

November 2018

Tool 4-2

Rangeland management and the 2016 Community Land Act

Objective

To assist members of the rangeland management institution, community members in general, and other stakeholders to understand key elements of the Community Land Act (2016) and how it relates to management of rangelands by communities

Anticipated output

Community members and other stakeholders have a basic understanding of the Community Land Act, how communities register under the Act, and different options for how registered communities might relate to the rangeland unit

Participants in this activity

- Members of the rangeland management institution
- Community members
- Other county, sub-county and community stakeholders: e.g. ward administrators, influential elders and traditional leaders, chiefs, etc.

Introduction

The Community Land Act 2016 is premised on three key pillars: registration, protection and recognition of communities and their land. The law in essence reinforces the notion that communities have the capacity to manage their resources, particularly land and natural resources. As part of the community land registration process, a certificate of registration is issued to communities by the community land registrar.

The Fourth Leg of participatory rangeland management is about how a rangeland unit, the community or communities within that unit, and

Three pillars of the Community Land Act:

Registration, protection and recognition of community land.

their planning processes relate to government and where applicable, traditional governance systems. Strengthening the Fourth Leg includes ensuring communities have legal recognition for their governance structures and their management efforts. Success in undertaking the registration process under the Community Land Act will strengthen the security of tenure over rangelands and the resources therein, and can be key to a strong Fourth Leg.

Key elements in registration, protection and recognition

1. General understanding of the legislation, policy and plans for the management of rangelands and resources at community levels in a partnership framework.
2. Registration (concepts and terms)
 - a. Defining a registration process, composition and nature of the community.
 - b. Defining the community in their institutions, types and composition.
 - c. Developing key guiding principles, values, norms and practices.
3. Preparing the community members
 - a. Creating awareness to foster better understanding of the process.
 - b. Facilitating a dialogue process towards confirmation and consensus on the individual roles, shared roles etc.
 - c. Defining capacity development frameworks and tools.
4. Institutional development
 - a. Involving both traditional and elected leadership (noting both want recognition and ownership) to facilitate growth of the diplomatic skills that are needed.
 - b. Building on existing institutions and identifying local initiatives to build on.
 - c. Building capacity within the institutional framework to ensure stakeholders are continually involved in all activities to secure support. This can be a foundation for resources and sustainability.
5. Resolution of disputes
 - a. Working with the communities on the role of the traditional institutions and mechanisms for conflict management.
 - b. Taking into account existing legislation, policies and institutions.
 - c. Generating an understanding of local-level conflict sources and trends (participatory conflict mapping and identification of solutions).

Steps

Step 1: Laying the groundwork

- *Defining the community*: an initial step would be to consult with relevant government officials and community members about how best to define and determine the level of “community” that will undertake the community identification for registration activities.

Community visioning

The community defines:

- their institutions;
- the structures, formation and leadership of these structures;

- *Community visioning*: community members reflect, visualize and analyse their situation.
- *Establishing expectations and terms of engagement*.
- *Defining the responsibilities of the community and the facilitating organization*: this includes clarifying how the community and the facilitating organization will interact throughout the community identification, defining and registration process, and their roles in protection of natural resources.

- systems of management in the past and present; and
- conditions of the past and present for rangelands and other natural resources.

Then the community begins its plan for a thriving and prosperous future.

The facilitating organization and the community

- Define specific roles and responsibilities.
- Establish clear expectations to reduce confusion, inefficiencies and delays.

Step 2: Documenting community lands

- Participatory community mapping
 - Identify groups of people to talk to about community lands and their perceptions of their local resources.
 - Cluster the groups as defined for the process of community mapping.
 - Define the areas and locations by geography and size.
- Boundary harmonization
 - Communities meet with their neighbours to negotiate and agree on shared boundaries.
- Shared resources
 - Identify and define resources for mapping, documenting and recording.
 - Identify and agree on the shared and cross-boundary resources.
- Dispute and conflict resolution
 - Define the different conflicts, trends and causes.
 - Train community members to resolve land conflicts peacefully and supported by respected and trusted local leaders, mediate disputes that communities cannot resolve on their own.
- Documentation of agreed boundaries.
 - Communities hold large ceremonies to draft and sign memoranda of understanding with their neighbours to formally document all boundary agreements.
 - They also plant boundary trees or lay down other locally accepted markers to indicate the limits of their lands.
 - Facilitators support communities to take technical measurements of their boundaries using coordinates collected with a Global Positioning System (GPS) device, by using high resolution satellite imagery, or through a land survey completed by a licensed surveyor.

Points to note when documenting community lands

Decisions related to identifying and documenting community lands will be based on the community's objectives and on the depth of information required. For example, separate groups of men and women might be useful because women and men might use different resources; women will map the resources they think are important (such as water and firewood sources) and men will map the resources they think are important (such as grazing land and infrastructure). However, it might be necessary to break down the population into further categories (such as ethnicity, well-being, or caste). Groups of five to ten local analysts should reflect any relevant and important social divisions.

Factors to consider in defining a community

Community self-definition is challenging because of a range of complex, interacting factors:

- Overlapping definitions of authority, territory and identity.
- The nested quality of rural social organization, in which small spatial or social units of organization are contained within larger units, which themselves may make up components of even larger units.
- The structure of decentralized government, which may not always align with traditionally or locally recognized social structures.
- Differences between locally recognized or customary boundaries and boundaries recognized by the state or government administration.
- Historical fracturing and division of social units often based upon intra- and inter-family conflict or scarcity of resources.
- The existence of common areas shared between populations that identify themselves as separate communities.
- Historical migration patterns, ecological changes and infrastructure development.
- Competition over valuable or scarce natural resources.

The “community” and the rangeland unit

The Community Land Act is flexible regarding what may constitute a “community”. As described above, the geographic extent of the community is to be determined by the community members themselves in consultation and negotiation with their neighbours. In this toolkit, on the other hand, we refer to a rangeland unit which is to be the main geographic unit for the planning and implementation of rangeland management activities.

In some cases, it may be appropriate for the rangeland unit and the community to be the same thing. That is to say, where a group of people have already begun working together to manage a rangeland unit and have established a collective rangeland management institution, they may decide that the next step will be to register as a community under the Community Land Act. The other way around also works: if a community has registered under the Community Land Act, they may decide to treat their community as a rangeland unit and manage their resources according to the principles and methods described in the toolkit.

In many cases; however, the most effective scale for rangeland management may be larger than communities under the Community Land Act. Certain provisions of the Community Land Act require regular general meetings at which a minimum percentage of all adults in the community attend. It may be difficult to consistently adhere to provisions such as this if the community’s territory is very large, encompassing many settlements spread over a large area. Yet in some settings, large scale might be the ideal level for decision making on rangeland management. In such cases, the rangeland unit may be made up of several “communities” and the rangeland management institution could be made up of representatives from each community.

This is something to be decided on a case by case basis by the communities themselves based on their circumstances. Some of the factors to consider in deciding on the scale of the community and the the rangeland unit are listed in the text box above.

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Photo credit: ILRI/Dave Elsworth (rangeland landscape); ILTI/Stevie Mann (land use map)

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The International Land Coalition (ILC) is a global alliance of civil society and intergovernmental organisations working together to put people at the centre of land governance. The Rangelands Initiative of the ILC is a program seeking to make rangelands more secure through mobilizing and connecting stakeholders, and positively influencing policy and legislation. For more information see: <http://www.rangelandsinitiative.org>.



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CGIAR is a global agricultural research partnership for a food-secure future. Its research is carried out by 15 research centres in collaboration with hundreds of partner organizations. cgiar.org

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