International Water
Management Institute

Training Manual

Management Options to Sustaining Landscape Restoration Measures: the Case of Exclosures

Wolde Mekuria

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Introduction

There is growing awareness regarding the potential for forest and landscape restoration to generate numerous benefits for people and support progress toward multiple national development and environmental goals, including the Sustainable Development Goals (SDGs), such as food security (SDG2) (Djenontin et al. 2015), poverty reduction (SDG1) (Sim et al. 2004), water security (SDG6) and climate resilience (SDG 13) (Braatz 2012). Within this context, Ethiopia has made commitments to restore 15 million hectares of deforested and degraded lands by 2030 as part of global and regional restoration initiatives, including the New York Declaration on Forests, the Bonn Challenge, and AFR100. Out of the 15 million hectares, more than 7 million hectares will be restored through establishment of exclosures (Mekuria et al. 2020).

Exclosures are communal areas that were traditionally 'open access', but where wood cutting, grazing and other agricultural activities are now forbidden or strictly limited to promote restoration and natural regeneration. The overall area covered by exclosures is currently increasing by 2%/year and could reach 5-7 million ha by the early 2030s. Similar rehabilitation of degraded rangelands has been fostered by establishing exclosures (sometimes referred to as enclosures; the case in Kenya) in different parts of Africa and Asia. This trend in exclosure expansion is attributable to their many benefits: restoring degraded landscapes, increasing carbon sequestration, and improving other ecosystem services (Box 1).

Meeting these targets and commitments (e.g. restoring 7 million hectares of land through the establishment of exclosures) requires a holistic approach that support local communities to adopt exclosures. However, one of the key lessons learned through the work of the International Water Management Institute (IWMI) and partners on exclosures is that the establishment of exclosures is mainly driven by a conservation agenda, rather than a livelihoods agenda. Local communities are led to question the worth of exclosures due to the current lack of focus on the potential economic benefits of exclosures. Without expectations of short-term, economic benefits, local communities have little incentive to adopt exclosures. Therefore, developing and implementing management plans that serve local communities' needs and interests will be critical to ensuring sustainable and wider adoption of exclosures in the Central Rift Valley (CRV) as well as other parts of Ethiopia, thereby achieving global commitments and SDGs. This in turn requires understanding the different management options that support the sustainability of exclosures. In this line, this training module is designed to inform practitioners about the various management options and build their capacity in implementing and managing the options.

Box 1. Benefits of exclosures

» Increase vegetation cover and biodiversity (Asefa et al. 2003; Mengistu et al. 2005; Mekuria and Veldkamp 2012).

» Enhance ecosystem carbon stock (Mekuria et al. 2011b, 2015; Aynekulu et al. 2017)

» Reduce soil erosion (Mekuria et al. 2009; Girmay et al. 2009).

» Restore soil fertility (Descheemaeker et al. 2009; Damene et al. 2013; Mekuria and Aynekulu 2013; Mekuria et al. 2017).

» Increase dry season water flow; decrease runoff and sediment load; increase groundwater recharge (Aynalum et al. 2016; Descheemaeker et al. 2006; Girmay et al. 2009; Anwar et al. 2016).

» Increase incomes and improve livelihoods of smallholder farmers over the medium to long term (Tilahun et al. 2007; Babulo et al. 2009; Mekuria et al. 2011a).

Objective

The objective of this course is to provide an overview of management options that can enhance the ecological and economic benefits of exclosures, promote local ownership and support communities to adopt exclosures.

Why the course material

The success of an exclosure depends on it being designed to fit locally specific factors, including environmental features such as the composition of vegetation, soil quality and climate; specific community concerns; and potential uses of the exclosure. Therefore, management of an exclosure requires the development of a plan that addresses these challenges and that involves all relevant stakeholders, including government, non-governmental organizations (NGOs), private sector actors and local communities. This training offers the best available knowledge on practices and technologies that can be integrated within exclosures. It also assists users in addressing different considerations when developing or implementing a management plan.

The process

This training material was prepared based on: (a) action research by the International Water Management Institute (IWMI) and its partners, (b) national and international experience related to restoring degraded landscapes through establishing exclosures, and (c) end users or target audience consultation.

Target audience

This training presents a set of modules and sessions which could be presented in a two to three days training course. It is intended for regional and district-level practitioners, of both government and non-governmental institutions, involved in restoration of degraded lands and establishment or management of exclosures.

The structure

This training material is comprising of three modules. The first module presents the relevant stakeholders, their roles, and responsibilities and discuses multi-stakeholder approaches for managing exclosures. The second module highlights the nine management options or revenue streams, their relevance, benefits, and risks. The third module presents guidance on implementing management options.

The training tools

The training tools comprises of lectures, brainstorming, experience sharing, working group discussions, as well as learning from relevant examples and case studies. A set of questions and exercises leading to discussions and small group presentations are also included in each module. These questions and/or exercises further provide a basis to think through problems and solutions related to available options for sustaining exclosure land management. The exercises can also be assigned as homework which can be done between sessions or classroom assignments.

Module 1: Multi-stakeholder approach for exclosure manage

1.1. Key concepts and definition

This sub-section focuses on describing some of the terms and concepts in the context of the management of exclosures. Accordingly, the key concepts and definition of terms used in this manual are summarized in table 1.

Table 1: Key concepts and terms used in the manual.

Terms or phrases	Definitions or descriptions
Community watershed team (CWT)	A CWT is a committee that represents the watershed community. It is responsible for the planning, implementation and management of integrated watershed development activities such as the establishment and protection of exclosures as well as construction of soil and water conservation (SWC) structures.
Exclosures	Exclosures are areas closed off or otherwise protected from interference from people and domestic animals, with the goal of promoting natural regeneration of plants and reducing land degradation in formerly degraded communal grazing lands (Mekuria et al. 2020). The size of an exclosure ranges from as small as 1 hectare to 700 hectares in Ethiopia (Nedessa et al. 2005).
Exclosure management plan	An exclosure management plan is a document that guides the day-to-day and long-term management of an exclosure. The intended end result of an exclosure management plan is to enhance the economic benefits local communities obtain from exclosures (i.e. both short- and medium-term benefits), while restoring degraded lands.
Sustainability	In the context of the management of exclosures, sustainability refers to enhancing the short-term economic benefits of exclosures to incentivize local communities to adopt, manage and protect exclosures in the long term.

1.2. Importance of collaboration

The sustainable management of exclosures requires a multidimensional and multi-institutional engagement and demands collective analysis, design, and implementation (Amede et al. 2007). It requires support from a wide range of stakeholders, including community level institutions (e.g. the CWT, village or kebele-level administrative bodies), government agencies, local and international NGOs, national and international research institutes, and private sector actors (Mekuria et al. 2017; Rossiter et al. 2017; Mekuria et al. 2020). No single agency can effectively implement any of the different management options presented in this training material on its own.

Different stakeholders have different roles and mandates, so it is critical to ensure that they can work together effectively (Amede et al. 2007). In addition, they must be able to agree on the management options or revenue streams that are most relevant or best suited to different areas. For example, hosting beekeeping will only work in exclosures that generate sufficient bee forage. In many locations, no management option will fully address a local community's needs and therefore a suite of options is required. The goal is for all stakeholders to contribute their specific expertise to implementing a management plan that combines the options that best serves the community's livelihood aspirations while reversing environmental degradation.

1.3. Stakeholder's roles and responsibilities

As discussed in section 1.2, collaboration and involvement of several stakeholders and actors is key for the success of the management of exclosures. The stakeholders and their roles are summarized in Table 2.

Table 2: Roles and responsibilities of stakeholder in managing exclosures (Mekuria et al. 2020).

Structural levels	Roles and responsibilities
National level	The Ministry of Agriculture, Environment, Forest, and Climate Change (MoEFCC) commission and Ministry of Water, Energy and Electricity (including basin development authority) are the key stakeholders at the national level. These three organizations mainly involve in capacity building and developing policies and strategies.
Regional level	Regional Agriculture and Natural Resources, Land Administration Bureaus and River Basin Development Offices are the key stakeholders at the regional level. The Bureau of Agriculture and Natural Resources, in collaboration with district Agriculture and Natural Resources Offices, has a mandate to plan, design, implement and monitor and evaluate interventions. The regional Land Administration Bureaus can play a critical role in designing policies and strategies related to the distribution of exclosures to landless youth.
District level	Stakeholders at the district level include the Agriculture and Natural Resources Office, the Environment, Forest and Climate Change Office, and the Land Administration Office. Each office has a particular role to play. For example, the Agriculture and Natural Resources Office raises seedlings of high-value plant species (e.g. fruit trees, fuelwood, timber, medicine, fodder production), which can be used to establish woodlots in exclosures. The Environment Forest and Climate Change Office, and the Land Administration Office help to administer the exclosures and design strategies to open these to landless youth and women's groups.
Village level	The key village-level stakeholders include the kebele/ village administrative bodies and CWT. The CWT and kebele/village administrative bodies typically raise awareness about exclosures; identify and provide information to address the concerns of local communities; and support the implementation of SWC measures, the informal institutions, and bylaws. The CWT serves as a permanent contact between development agents and the communities. It liaises with other communities within the same watershed, collects baseline data (income, livelihood mechanisms, status of natural resources), plans all sub-watershed interventions, and coordinates the selection of beneficiaries.
Stakeholders with supporting roles	Local and international NGOs, national and international research institutes, and higher academic institutes operate at all levels. NGOs often involve in capacity building and providing financial support. Research and academic institutes support through generating evidence on best-practices and providing capacity building trainings.
Private sectors	The private sector has an essential role to play in supporting the integration of livelihood activities with exclosures. It supplies inputs such as beehives, improved livestock breeds and seedlings of high-value plant species. The private sector can enhance the efficiency of markets through public-private partnerships.

1.4. Facilitating multi-stakeholder dialogue

Natural resource management program planning and implementation frequently confront challenges of environmental resource competition and conflict, particularly where common pool resources, the case in exclosures, are a major component of rural livelihoods (Ratner and Smith 2014). This section presents an approach to multi-stakeholder dialogue called “Collaborating for Resilience” (CORE) to address the roots of such competition and conflict. The approach includes principles and guidance on building a shared understanding of risks and opportunities, weighing alternative actions, developing action plans, and evaluating and learning from the outcomes (Ratner and Smith 2014).

1.4.1. Overview of the principles of CORE

The principles summarized by Ratner and Smith (2014), are organized around the purpose, the people, and the process (Ratner and Smith 2014). This same author indicated that collaborating for resilience requires transforming social relationships, and that clarity of purpose is the most fundamental of the conditions for transformation. People make the CORE approach work. This implies that participation of key influential people from the wide range of stakeholder groups is necessary to address the orienting purpose. In conditions of natural resource competition, the case in exclosures, this means going beyond a sector to address the root causes of the problem. And it means bridging several geographic and institutional scales - engaging community, local, subnational, and sometimes national or even regional actors. This aspect of the CORE approach shares the principles of participatory land use planning as discussed in the training manual on participatory land use planning (Rediet et al. 2020).

Process in the CORE approach aims at continuous development of institutional capacity to address the roots of resource competition and build resilience. The thinking in this principle is that complex challenges require multifaceted responses over time. This means that action, reflection and learning from experience are embedded in the process (Ratner and Smith 2014). The overall goal of these principles is to transform stakeholder relationships in ways that promote collaboration, learning and ultimately resilience. The approach offers a route to tackling the common obstacles of poor local ownership, fragmented and sector-based planning, and domination by certain powerful groups that obstruct so many efforts at rural development and natural resource management.

1.4.2. Overview of the process

The process adopted in the CORE approach can be applicable in small as well as very large groups, and entails active listening, dialogue (i.e. sharing and debating competing points) and choice (i.e. narrowing in on the realm) (Fig. 1). The CORE process aims to assist diverse, multi-stakeholder groups in addressing seven key questions (Fig. 1). The most fundamental, orienting question is, “What is the purpose?” Following from the orienting purpose are questions that help all participants listen to and understand each other’s views on possible futures, as well as the realities that constrain progress. Further questions frame a dialogue about priorities for action, and lead to individual and group choices on actions that contribute to the shared purpose (Fig. 1).

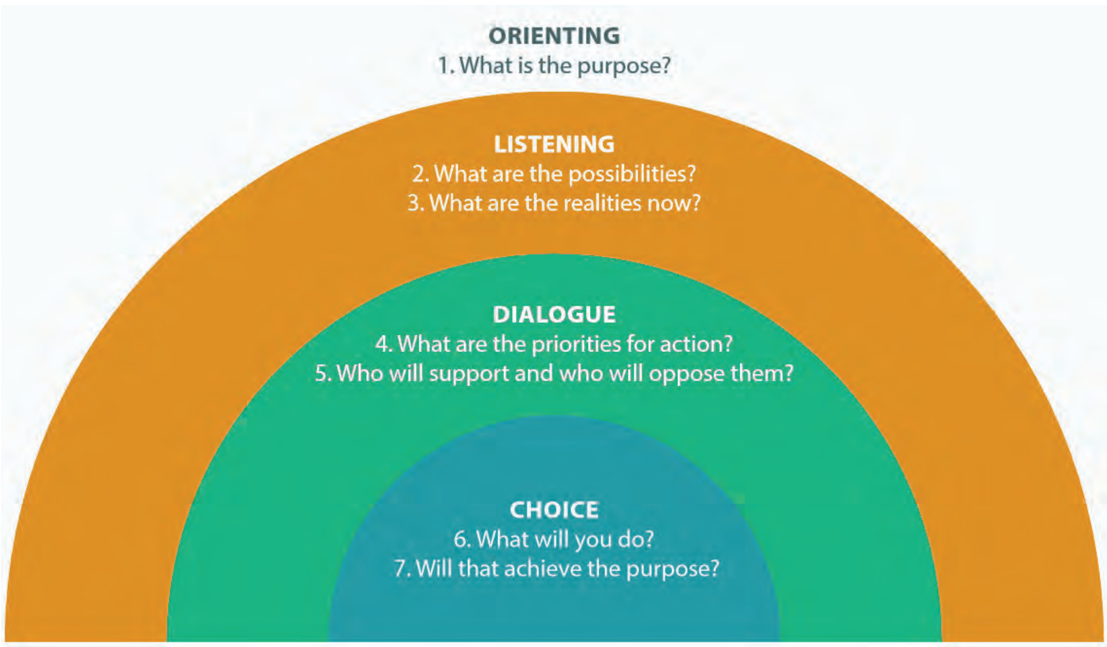


Figure 1: Seven key questions outlining the dialogue process (Ratner and Smith 2014).

1.5. Stages of CORE

The CORE approach is organized by three interactive/interrelated stages (Fig. 2). Figure 2 shows some of the questions that each stage helps address and illustrates how the approach is intended to foster a cycle of action and learning. This section focuses on describing each stages of the CORE approach.

Figure 2: Three stages of CORE shown as a cycle of action and learning (Ratner and Smith 2014).

1.5.1. Exploring the potential for collaboration

This stage of the CORE approach comprises of different steps including mapping the context of issues and stakeholders, defining a focus for dialogue, and forming a group to lead the process. Considering exclosures as one of the key landscape restoration measures in the Ethiopian highland and CRV, the key questions need to be addressed when mapping the context of issues are summarized in Box 2.

Box 2: Key questions to be addressed when mapping the context of issues

1. What are the key factors that influence current or potential conflicts related to exclosures land management and livelihoods?
2. Who are the key stakeholders? In what ways do their various interests, hopes or fears help explain current competition or potential conflict?
3. Who are the people who have lived through and most suffered from past conflict or actions of free riders?
4. Who are the people widely respected or seen as legitimate by different groups? How might they help articulate a set of shared interests or a sense of ideals that various groups would find compelling?

Once a satisfactory mapping has been completed and shared, organizers begin to experiment with different ways of communicating the purpose of a dialogue event that aims to build broader collaboration. At this point, many people who were consulted during the mapping exercise may be invited to participate in planning meetings alongside other stakeholder representatives. These discussions or “mini-design workshops” are designed to test the viability of the initiative by defining a focus for dialogue and sensing the degree of support from potential stakeholders. The key questions need to be addressed at this stage are summarized in Box 3.

Box 3: Questions to be addressed
» What priority issues will define the focus for the dialogue workshop or workshops? What is the overall purpose? » Which key stakeholders must be involved to reflect the whole system? In other words, who are the groups that influence decisions concerning the resource system at hand or that are directly affected by those decisions? » What ongoing or upcoming decision-making processes should be targeted? Examples include local planning exercises; basin, or watershed planning. » What outcomes might be achievable? Specific changes in behavior might include improved relations between certain actors, collaboration on certain issues or resolution of certain disputes.articulate a set of shared interests or a sense of ideals that various groups would find compelling?

The next step is forming a working group to lead the process. Questions to address at this stage are summarized in Box 4.

Box 4: Questions to adress when forming working group
» Who else would be most suitable to take part in a working group to plan and organize the dialogue events? It's important to have each broad type of stakeholder group — civil society organizations, local community groups, the government and the private sector — represented, though not necessarily each organization. » Are these individuals ready to commit? It's important that the group maintain consistency during the planning process for the dialogue event. Consistency makes the process more efficient and helps build trust. » What preparations are needed? Be alert to the need for local consultations prior to a national or sub-regional event, background research on certain issues, or preparatory sessions with key groups to help them be ready to articulate their perspectives and participate effectively » What is the most appropriate convening platform? While logistically it may be simplest to have a single convening organization, it is typically most effective if a dialogue event is presented as a joint undertaking, co-organized by a cross section of organizations such as those represented in the working group.

1.5.2. Facilitating dialogue and action

This stage is mainly organized around the seven framing questions discussed above (see Fig. 1, page 11). The essential task of facilitation is to establish the conditions for participants to answer the seven questions most effectively. The roles of facilitators and participants, therefore, changes in each phase (Table 3). The composition of groups also changes in each phase (Table 4).

Table 3: Roles of facilitators and participants in each phase

Phase	Roles of facilitator	Roles of participants
Listening	Actively establish conditions in which all participants feel equal, are treated equally, and have opportunity to express their appreciation of the situation without being judged.	Express your sense of the whole situation – the potential and current reality. Listen without comment to other participants as they express their appreciation of the situation.
Dialogue	Create an environment for open dialogue, helping participants to explore the implications of different options.	Speak to the issues you are passionate about. Your job is to discover the debate options – not yet decide which option is best.
Choice	Ensure participants have the resources they need to make decisions and plan. Encourage reflection back toward the orienting purpose.	Make clear commitments you can follow through on and encourage others to do the same. Discuss how each action contributes toward the overall purpose.

Table 4: Composition of groups in each phase.

Phase	Composition of groups
Listening phase	Intentionally organize groups representing a mix of stakeholders to be sure everyone has an equal chance to listen to and be listened to by everyone in the meeting or workshop.
Dialogue phase	Organize groups based on common interests or values rather than knowledge or responsibility. This is to ensure that a wider perspective than professional knowledge or technical experience is brought to bear on the initiative.
Choice phase	Participants join groups from their own organization, profession, or area of responsibility. Ultimately, it is commitments from those responsible that mobilize actions to achieve the purpose.

Group exercise or discussion one:

Assumption: Exclosures are to be established in a landscape in your working area.

Task: Discuss, summarize and share the purpose, possibilities of establishing xclosures, the reality at the moment, priorities, stakeholders who support and oppose the idea of establishing exclosures, what will you do, and describe whether the actions achieve the purpose.

Type: Group discussion

Materials: Flip chart, markers, etc.

1.5.3. Monitoring and Evaluation

Many multi-stakeholder dialogue or collaborative planning efforts quickly lose momentum after a main event or focused series of interactions because relatively few resources are devoted to follow-through. Yet, a major workshop is only as valuable as the actions it catalyses and the outcomes these yield over time. Recognizing this, the CORE process is designed as a cycle of reflection, action, and learning. The CORE approach follows a participatory monitoring and evaluation approach and provides some guiding questions when preparing monitoring and evaluation activities (Box 5).

Box 5: Guiding questions

» What do we want to learn?

» Who needs to be informed? How will the information be used?

» What do people sense are the most significant changes to explore and document?

» What are the opportunities for institutional development or new partnerships that an evaluation exercise could promote?

1.6. Possible interactions between the different stakeholders

Mekuria et al. (2020) showed possible interactions among the key stakeholders in exclosure management (Fig. 3). Based on the stakeholder analysis conducted by this same study, higher and lower level practitioners are more important in managing exclosures than national and international research systems and Universities (Table 5).

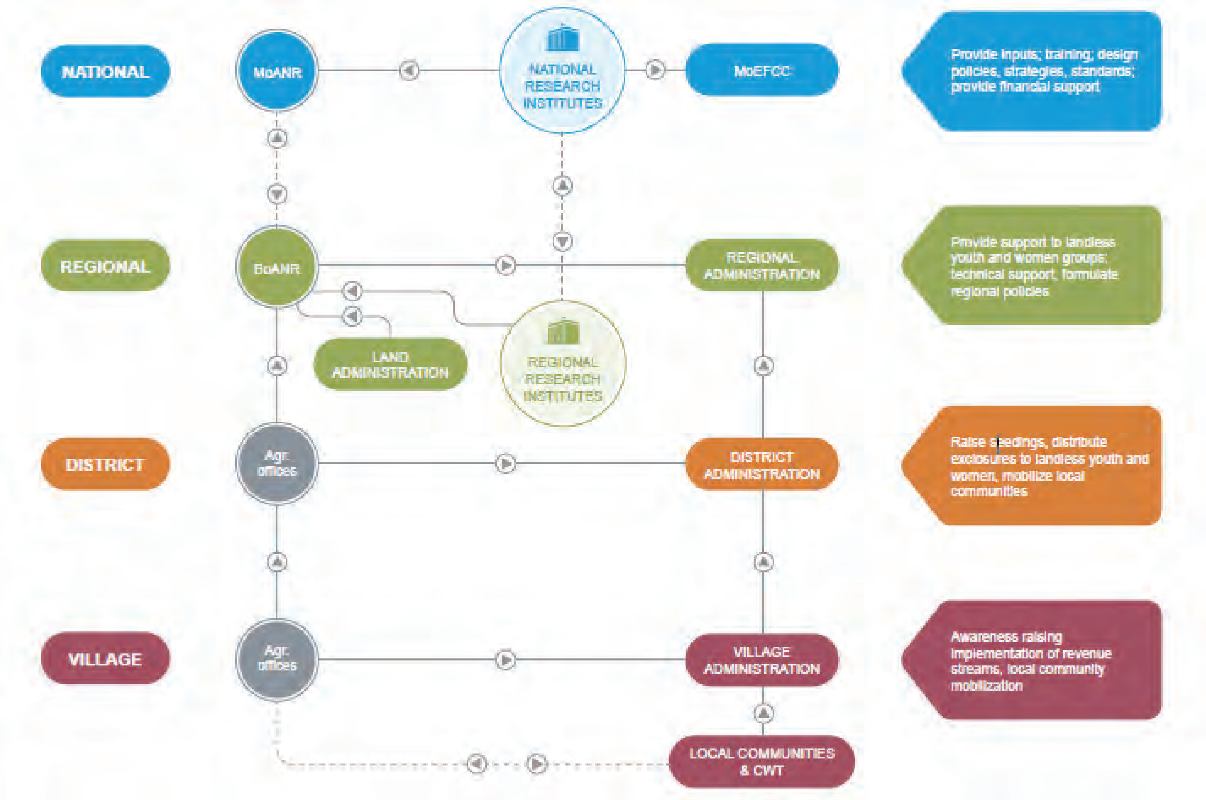


Figure 3: Illustration of the interactions among the different stakeholders in exclosure management (Mekuria et al. 2020).

Note: MoANR - Ministry of Agriculture and Natural Resources; CWT - Community Watershed Team; BoANR – Bureau of Agriculture and Natural Resources; MoEFCC - Ministry of Environment, Forest and Climate Change; Agr. - Agriculture and natural resources. (source: Mekuria et al. 2020).

Table 5: Analysis, identification and prioritization of key stakeholders in exclosure management*

Stakeholder	Expertise		Willingness to engage	Value		Rank	Score
	Contribution	Legitimacy		Influence	Necessity of involvement		
MoALR and MoEFCC	3**	3	3	3	3	1st	15
Regional bureaus	3**	3	3	3	3	1st	15
Regional research systems	3***	3	3	3	3	1st	15
District agricultural offices	2	3	3	3	3	1st	14
District administrative bodies	1	3	3	3	3	2nd	13
Local communities	1	3	3	3	3	2nd	13
International research institutes (e.g., IWMI)	3	2	3	2	3	2nd	13
Universities	3	2	3	2	3	2nd	13
National research systems	3	3	2	2	2	3rd	12
NGOs	2	2	3	2	3	3rd	12
Private sector	1	1	2	1	2	4th	7

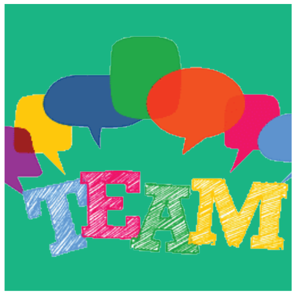
Source: (Mekuria et al. 2020).

Notes:

* Values for scores are given as: expertise = contribution + legitimacy (L/M/H; L=1, M=2, H=3); willingness to engage (L/M/H or 1/2/3); and value = influence + neces sity of involvement (L/M/H or 1/2/3);

** Technical knowledge of natural resources management is of high value.

*** Knowledge of research on land resources management is of high value.



Group exercise or discussion two:

Assumption: The management of exclosures require the participation of diverse stakeholders operating from national to village levels.

Task: Illustrate possible interactions among stakeholders & conduct preliminary analysis on identification and prioritization of key stakeholders.

Type: Group discussion

Materials: Flip chart, markers, etc.