

Draft Scaling Strategy:

Grazing Exclosure for Watershed Management and Livelihoods in Amhara National Regional State of Ethiopia

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Multi-stakeholder watershed management workshop in Bahir Dar



Restored grazing exclosure (foreground) and degraded open grazing area (background), South Achefer

Executive summary

This document provides a draft strategy for the regional up-scaling of grazing enclosure in the highlands of Amhara National Regional State of Ethiopia, proposed by International Livestock Research Institute researchers in partnership with the Community Based Integrated Natural Resource Management Project, implemented by Amhara Bureau of Agriculture.

The document was prepared in response to the synthesis and consensus achieved during a multi-stakeholder watershed management workshop was held in Bahir Dar, Amhara, Ethiopia in November 2017. The complementary and robust selection of stakeholder groups provided for challenging and thought-provoking discussions on the successes in watershed management, the challenges that remain, and what improvements can be made to the approach. Strong emphasis was placed on deliberation of the future of grazing enclosure in the region.

In this draft version, the document outlines a general strategy for the regional up-scaling of grazing enclosure in Amhara, the groups of stakeholders likely to be key players in up-scaling, and an initial proposal for general roles and responsibilities according to the possible relative advantages of various institutions and stakeholder groups. The document specifically does not include complete details for how to accomplish the strategy, which requires further discussion, clarification, and preparation of a forthcoming manual once consensus agreement is reached among stakeholders.

Accordingly, the following priority actions were determined as important elements of any strategy for the regional up-scaling of grazing enclosure in Amhara: creating greater environmental awareness; improving access to alternative technologies; improving community access to finance and markets; enhancing the effectiveness of community institutions that oversee communal lands; more systematic monitoring and evaluation; and regional policy formulation with regard to grazing lands and their management.

Abbreviations

ANRS	Amhara National Regional State
ARARI	Amhara Regional Agricultural Research Institute
BDU	Bahir Dar University
BoA	Bureau of Agriculture
CBINReMP	Community-Based Integrated Natural Resource Management Project
GiZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Corporation for International Cooperation)
ILRI	International Livestock Research Institute

1. Background information

This document was prepared in response to the synthesis and consensus achieved during a multi-stakeholder watershed management workshop held in Bahir Dar, Amhara, Ethiopia in November 2017. The primary purpose of the workshop was to form an 'agro-regional'-level community of practice (CoP) for the promotion and advancement of watershed management in Amhara. The workshop prioritized interaction and exchange of knowledge and experience among farmers (including watershed leaders and Orthodox priests), and with governmental and non-governmental experts from several institutions active in the region (Table 1).

Table 1. CoP workshop participants and stakeholder groups.

Participant name	Institution	Position
Ato Tesfahun Mengiste	BoA	Deputy Bureau Head
Ato Alemnew Alegn	ORDA	NRM Directorate
Dr. Ayalew Wondie	BDU	Senior Lecturer
Dr. Zewdu Wuletaw	GIZ-SLM	Range Land Manager
Dr. Elias Zerfu	ILRI	Consultant
Dr. Jason Sircely	ILRI	Ecosystem Ecologist
Dr. Abebe Metku	BoA/CBINReMP	IGA expert
Dr. Aden Aw Hassan	ICARDA	Economist
Getachew Engdayehu	BoA	NR Directorate
Woreta Asres	ORDA	CBINREMP focal person
Beryihun Tessema	National Biogas	CBINREMP focal person
Tinsae Ayalew	Biodiversity Center	Botanist
Markos Wondie	BoA/CBINReMP	Project Coordinator
Tamene Temesgen	ILRI	Research Associate
Workneh Andarge	BoA/CBINReMP	Forestry/Agroforestry Expert
Mengist Minale	BoA/CBINReMP	M & E Officer
Arega Alemu	BoA /SLMP	Watershed Expert
Fetene Mekonen	Department of Agriculture	Focal person
Tazeb Bayih	Department of Agriculture	Focal person
Matebie Estezia	Office of Agriculture	NRM process owner
Amare Minayehu	Office of Agriculture	Office Head
Aweke Eskezia	Tech Voc & Ent	Expert
Bayih Sinshaw	Office of Agriculture	NRM Expert
Kassa Gerem	Office of Agriculture	Focal Person
Yeshambel Walle	Office of Agriculture	NRM Coordinator
Nuru Welelaw	TVET	NRM Expert
Bete Mengist	Office of Agriculture	NRM Development Agent
Berhanu Molla	Office of Agriculture	NRM Expert
Wollelaw Addis	Office of Agriculture	NRM Expert
Mastewal Melkamu	Office of Agriculture	Focal Person
Nigatu Shibabaw	Office of Agriculture	NR Coordinator

Assefa Shibabaw	Office of Agriculture	Focal person
Addisu Melak	Office of Agriculture	Focal person
Fetene Amogne	Office of Agriculture	NRM Development Agent
Birhanu Fentahun	Office of Agriculture	Deputy Office Head
Getnet Gashaw	Office of Agriculture	NRM process owner
Mulugeta Derseh	Office of Agriculture	Focal person
Sofian Mohamed	Office of Agriculture	Focal person
Selenat Fentie	Office of Agriculture	NRM process owner
Yeketie Alemayehu	Office of Agriculture	NRM Development Agent
Yalemwork Simachew	Office of Agriculture	NRM Development Agent
Mesele Yihunie	Farmer	Watershed committee leader
Degu Jemberie	Farmer	Watershed committee leader
Tegabu Walle	Farmer	Watershed committee leader
K/Zelalem Dires	Farmer	Watershed committee leader
Aytenew Gebay	Farmer	Watershed committee leader
Ayale Aschalegne	Farmer	Watershed committee leader
Atalay Fentie	Farmer	Watershed committee leader
K/Getenet Yimer	Farmer	Watershed committee leader
Korbo Kebede	Farmer	Watershed committee leader
Taye Berhe	Farmer	Watershed committee leader
Bekalu Mihret	Farmer	Watershed committee leader
Molla Alemu	Farmer	Watershed committee leader
Addisu Mengiste	Farmer	Watershed committee leader
Birhan Gizat	Farmer	Watershed committee leader

While the focus of the workshop was on watershed management more generally, there was a consistent emphasis on one technique central to the watershed management approach in the region: the closing of communal grazing lands to create grazing exclosures for cut-and-carry fodder production.

This CoP workshop built from and expanded upon adaptive action research being conducted in six woredas of the Awi and West Gojjam Zones of Amhara by ILRI researchers in collaboration with CBINReMP. This research primarily focuses on development and testing of approaches for improving the productivity of grazing exclosures, and is being conducted in 28 communally managed exclosures created for watershed management, with a total beneficiary population of 4000 farmers involved in using and managing the exclosures where the research is conducted. The farmers invited to the CoP workshop were among those involved in this collaborative research.

Those readers wishing to access the complete, session-by-session observations and annotations made during the workshop may consult the report completed to summarize the findings of the workshop (Andarge and Minale 2017).

2. Constraints to the success of grazing enclosure as a component of watershed management in Amhara

A significant outcome of the CoP workshop was identification of the primary constraints most strongly affecting the success of enclosure as a component of watershed management. In fact, most of these constraints also apply to watershed management more generally in Amhara, given the overwhelming importance of livestock in the region as a source and support for livelihoods and the high livestock density in the region.

The huge demand for animal-based power for transport and especially traction for plowing fields underscores the importance of draught animals, mostly oxen, in maintaining crop production and food security. Given the currently limited alternatives to animal traction for plowing, especially on steep slopes, this situation is unlikely to change rapidly. Finding feed solutions to support draught power and crop production, and to support greater milk production for consumption and for sale, are therefore central elements of any strategy to up-scale grazing enclosures in the region.

The limited awareness of farmers to the environmental ramifications of heavy, uncontrolled grazing and the importance of natural resource conservation was noted as a significant barrier to the effective implementation of watershed management, including grazing enclosure, at scale in Amhara. Although other factors may be at play as well, there was a general agreement that inadequate environmental awareness contributes to the widespread reluctance of farmers to keep animals in-house, especially large herd owners, and to make collective investments of labor and materials to improve the sustainability of agricultural landscapes in Amhara. Furthermore, insufficient integration and communication among stakeholder groups ranging from farmers to experts was noted as a significant reason underlying poor environmental awareness.

What is less clear are the approaches that may lead to more rapid and widespread expansion of environmental awareness, and the stakeholder groups best-placed to lead the drive. Here the role of CoPs is key, with membership of CoPs an essential aspect. Since networks of farmers created through family and religious connections are often the most effective conduits for information on innovative ideas and management practices in agriculture, it is proposed that CoPs ensure that membership and activities such as exchange visits should link with larger social networks. The role of the Ethiopian Orthodox priesthood in encouraging long-term thinking in the interest of the entire population, the dominance of Orthodox Christianity in Amhara, and the willingness of most farmers to take the views and concerns of religious leaders seriously each point to the potential gains to be made through better integration of stakeholder groups, with the Orthodox Church as a significant stakeholder group.

Another related challenge to the success of grazing enclosure and watershed management is the frequently poor sense of community ownership over enclosures. A sense of ownership cannot be created

directly, but may improve with progress on related constraints. Unclear land tenure, especially in communal lands, likely restricts the sense that individuals stand to benefit from their effective management. As a result, the boundaries of communal lands are often not clear. Another symptom of a lack of 'buy-in' is the sometimes insufficient acceptance and enforcement of community by-laws, especially on the part of farmers living close to exclosures, who sometimes resist establishment of new exclosures.

Research and further exploration of improved or new varieties of grasses and other fodders and productive animal breeds is proceeding, but access to these resources and knowledge on their management remains inadequate. The wide variety of known varieties and breeds that may be well-suited to the various agro-ecologies of Amhara presents a significant challenge to their effective targeting. In addition to on-station research, greater investment in systematic research and in monitoring and evaluation of exclosure implementation will make a large contribution to effective targeting. Most information currently available is short-term or focuses on only a few approaches to exclosure creation and management, making these data inadequate for robust recommendations. One of the most glaring gaps are the limited (almost non-existent) linkages between institutional arrangements for managing exclosures and their implications for the technical approaches implemented on the ground. Providing a variety of technical options for exclosure management that vary in their suitability to particular institutional arrangements is a promising means of linking investments (labor, materials) in exclosures with the eventual private returns to those communal investments.

Finally, there was a belief that watershed management, grazing exclosures perhaps most particularly, suffers from inadequate attention to the long-term sustainability of these approaches in the region. It is well documented as well as intuitive that farmers are more committed to exclosure management when the returns to exclosure are greater and accrue more rapidly. Since some exclosures provide limited benefits to livelihoods, especially in unproductive sites, the improved productivity of these areas has the potential to create 'win-win' solutions: environmental rehabilitation to provide public goods such as water flows and quality and control of erosion, alongside tangibly greater long-term benefits from exclosures for individuals involved in their management. Exclosures that do not provide net livelihood benefits are ultimately unlikely to be sustainable from a livelihoods perspective. Avenues for improving the ability of farmers to benefit from exclosure are furthermore constrained by limited access to financial services and markets, which reduce profit margins and hinder investment.

3. Responses and possible roles of stakeholders in the up-scaling of grazing exclosure in Amhara

Several action items were identified during the CoP workshop that are likely to be essential ingredients of a regional scaling strategy. Starting from these required actions, an initial assignment of responsibilities and roles of various stakeholders is provided for critique and refinement. The roles of stakeholders listed here indicates only an initial accounting of institutions that may (or may not) be appropriate to fulfill the roles described effectively, according to the different potential advantages of various institutions and stakeholder groups in scaling of grazing exclosure. Not all relevant stakeholder groups are noted in this document, and those stakeholders who attended the CoP workshop are emphasized as their interest in up-scaling exclosure has already been indicated. It is hoped that as this document and its descendants are circulated, additional stakeholders will sign on to the effort.

Create greater awareness

Improve community awareness of the importance of restoration especially in the long term and under climate change.

- Organize exchange visits for farmers. Lead: Regional/Local NGOs (Direct support: Amhara BoA)
- Create or maintain Farmer Research Groups (FRGs). Lead: Regional/Local NGOs (Direct support: Amhara BoA)
- Support model farmers to demonstrate alternative or new practices. Lead: Amhara BoA (Direct support: ILRI)
- Religious liaison especially with the Ethiopian Orthodox Church (EOC). Lead: Amhara BoA (Direct support: ILRI)
- Build or maintain Communities of Practice (CoPs) to integrate knowledge and build relationships among stakeholder groups. Lead: ILRI (Direct support: Amhara BoA, GiZ)

Improve access to alternative technologies

There remains a somewhat limited selection of technologies generally available in the region, including propagation materials and productive animal breeds well-suited to the agroecologies in the region. Priority areas noted for greater effort include:

- Improved access to productive grass and fodder varieties, animal breeds, and the other inputs these feeds and animals require. Lead: Amhara BoA (Direct support: ILRI, ARARI, GiZ)
- Improved knowledge on the management of improved grasses, fodders, and animals, including propagation and breeding techniques. Lead: Amhara BoA, Regional/Local NGOs (Direct support: ILRI, ARARI, GiZ)
- Improved knowledge on institutional and technical aspects of rotational grazing management in current open grazing areas, to reduce the need for exclosure. Lead: ILRI (Direct support: Amhara BoA, ARARI, GiZ)

Improve community access to finance and markets

There was a clearly stated need to improve access to micro-finance through Village Savings and Loan Groups (VSLGs) and other financial mechanisms, including micro-finance arrangements designed specifically to stimulate environmental restoration. Lead: Regional/Local NGOs, private sector (Direct support: Amhara BoA, GiZ)

The generally limited ability of most small farmers to market their products points to the importance of improving market access for inputs and outputs, especially access to urban milk markets. Lead: Regional/Local NGOs, private sector (Direct support: Amhara BoA, GiZ)

Enhance effectiveness of community institutions

Improve the sense of community ownership over communal grasslands and stimulate community-driven restoration. Several actions have been proposed to improve the effectiveness of local resource management:

- Registering communal lands. Lead: Amhara LUAB (Direct support: Amhara BoA)
- Demarcating communal exclosures and other grazing areas. Lead: Amhara LUAB, kebele and watershed committees (Direct support: Amhara BoA)
- Facilitating adjustment or modification of community by-laws to better fit local circumstances. Lead: Amhara BoA, kebele and watershed committees (Direct support: ILRI)

Monitor and evaluate

Use simple, cost-effective monitoring to track and evaluate what has succeeded to determine what approaches to exclosure have succeeded, the reasons for their success, and to identify communities and community leaders well-placed to contribute to scaling through demonstrations, experience sharing, and communities of practice. Lead: Amhara BoA (Direct support: ILRI, GiZ)

Inform regional policies

Creation of a regional 'pasture management policy' or 'pasture land policy' would provide a variety of benefits, including a framework guiding prioritization of exclosure locations according to environmental restoration goals (for example, increasing hillside vegetation cover vs. protecting wetland or riparian areas), specification of the size and approach to exclosure establishment, and promotion of the positive long-term livelihood impacts of exclosure restoration. The success of these policies may improve if the policies (or separate, complementary policies) also provide a system for better regulated grazing management in open grazing areas, which may reduce the need for exclosure. Lead: Amhara NRS government (Direct support: Amhara BoA, ILRI, GiZ)

Literature cited

Andarge, Workneh and Mengist Minale. 2017. Agro-regional Learning Exchange Workshop Report on Watershed and Grazing Exclosure Management Frameworks. International Livestock Research Institute (ILRI) and Community Based Integrated Natural Resource Management Project (CBINReMP). November 25–26, 2017, Bahir Dar, Amhara NRS, Ethiopia.