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PLI Policy Project

Review of Pastoral Rangeland Enclosures in Ethiopia

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Disclaimer

The findings and recommendations of this review do not necessarily reflect the views of USAID.

Contents

ABBREVIATIONS

CDF	Community Development Fund
CFW	Cash-for-work
CPMC	Community Project Management Committee
DRR	Disaster Risk Reduction
EPRDF	Ethiopian Peoples' Revolutionary Democratic Front
FFW	Food-for-work
INRM	Indigenous Natural Resources Management
IRC	International Rescue Committee
JIRDU	Jijiga Rangelands Development Unit
MC	Mercy Corps
MERET	Managing Environmental Resources to Enable Transitions to More Sustainable Livelihoods
MOARD	Ministry of Agriculture and Rural Development
NGO	Non-governmental organisation
NRM	Natural Resources Management
PILLAR	Preparedness Improves Livelihoods and Resilience
PLI	Pastoralist Livelihoods Initiative
PNRM	Participatory Natural Resources Management
PSNP	Productive Safety Net Programme
RAIN	Revitalizing Agricultural Incomes and New Markets
SMART	Specific, Measurable, Achievable, Realistic, Time-bound
SC UK	Save the Children UK
SC US	Save the Children US
SoRPARI	Somali Regional Pastoral and Agro Pastoral Institute
SORDU	Southern Rangelands Development Unit
UNHCR	United Nations High Commissioner for Refugees
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

Access to productive rangeland has long been a critical issue affecting pastoralists in Ethiopia. In November 2011, the Feinstein International Center at Tufts University facilitated a review of a specific set of changes to rangeland management in Ethiopia, being the establishment of rangeland enclosures. This work was conducted under the Pastoralist Livelihoods Initiative (PLI) in Ethiopia, funded by USAID and involving a consortium of non governmental organizations (NGOs) known as the PLI 2 consortium, working with government and other partners. The review considered the development of rangeland enclosures in Ethiopia and examined how different actors perceive the likely impact of enclosures on pastoralist livelihoods. Central to the review was the need to understand impact by pastoralist wealth group. The review process involved a literature review, field assessments in Borana and Somali pastoralist areas to understand current perceptions of the benefits of enclosures, particularly for poorer pastoralists, and finally, local stakeholder review workshops.

The review found that:

- In Borana the number and size of range enclosures has steadily increased since the 1990s, often supported by NGOs with the objectives of rehabilitating degraded or bush-invaded rangeland, and providing a pasture reserve for animals during extended dry season or drought periods. Customary institutions still play a role in determining the size and location of communal grazing enclosures, but the relevance of this type of enclosure has to be viewed in the context of rapid growth of private and cooperative enclosures.

- In Somali areas the situation varies by location. In Harshin, Kebribaya and Jijiga, much of the land has already been privatised and enclosed, while in parts of Shinille zone, there are still large areas of open common grazing land. The NGO focus has been more on supporting fodder production in relatively small enclosed areas as a source of income for poorer farming/ pastoralist households. Customary institutions now seem to have little control over rangeland management generally.

Although the PLI consortium support to enclosures falls under a strategic objective of improving the lives and livelihoods of pastoralists, the causal pathway for reaching this objective through enclosures is unclear. In Borana, measurement of the potential impact of enclosures has focussed on estimating the number of livestock grazing the area for a specific number of weeks or months during the drought in 2010/11. The thinking was that these animals would otherwise have died and that therefore the livestock assets of pastoralists have been protected. However, there has been no analysis by wealth group i.e. whose livestock benefitted? The review found that poorer pastoralists did send livestock to enclosures during the drought, but that under the most common management structures - which allow equal access for all - relatively better-off households benefit relatively more since they have more livestock to take advantage of the improved/ enclosed grazing. The potential benefits to poor households, and women need to be monitored and measured far more systematically. PLI 2 rangeland interventions in Somali region are in the early stages.

Moving forwards to possible refinements to PLI approaches and programming:

- Where poor households own land, they can rent pasture or produce fodder as a source of income.

- However, in the context of livestock commercialization and population growth, a gradual transfer of livestock assets from poorer to wealthier pastoralist households (the 'Moving up or

Moving out' scenario) indicates that enclosures will not enable poorer households to rebuild their herds to a viable level or prevent them from exiting pastoralism. In general, access to and management of enclosures will tend to be controlled by wealthier actors, engaged in commercial production.

- Other interventions that are more directly targeted to poor households, to enable them to return to pastoralism or to adapt to an agro-pastoralist or other alternative livelihood, will probably have a greater impact on livelihoods relative to enclosures.

Current PLI support to enclosures is benefitting some areas of land, and some people, at the expense of others. The potential impact of the continuing expansion of enclosures on the fragmentation of the rangelands, the restriction of mobility and the optimal management of variable, patchy water and vegetation resources needs to be thoroughly assessed. Advocacy work is also needed to support pastoralists' rights to and tenure of communal rangelands. The participatory approaches to natural resource management have potential to be expanded to address some of these issues.

1. INTRODUCTION

1.1 Background

The *Pastoralist Livelihoods Initiative (PLI) Policy* project is a USAID-funded project in Ethiopia which provides technical and policy support to non-governmental organizations and government partners. The project is implemented by the Feinstein International Center at Tufts University, and includes support to a consortium of NGOs – the PLI2 consortium - in impact assessment of livelihoods interventions or other learning processes that can inform policy dialogue at federal and regional levels. The PLI NGOs have been intervening in natural resources in pastoralist areas for a number of years. Activities have included area enclosures for control of invasive species and range rehabilitation, fodder production, water source rehabilitation and water pumps, strengthening of customary institutions, use of controlled fire, development of participatory rangeland management guidelines and community-based disaster-risk-reduction. Some of these interventions were started in earlier phases of PLI. In mid-2011, the consortium requested Tufts to conduct a review of the PLI 2 natural resources management (NRM) interventions; it was agreed to focus on area enclosures, being of common interest to the consortium NGOs and pertinent to current debates on land fragmentation in pastoralist areas.

1.2 Purpose of the review

The review aimed to provide a common platform for PLI 2 partners to review experiences with rangeland enclosures in Ethiopia, including "indigenous" enclosures developed by communities, individuals and groups independently of government or NGO projects, and enclosures supported by aid programmes. The review was to examine how different actors perceive the likely impact of enclosures on livelihoods and to move towards a common framework (causal pathway) for understanding the impact of different types of enclosure on pastoral vulnerability. Inherent in the approach was the intent to understand impact by pastoralist wealth group. In part, the need for a differentiated analysis by wealth was influenced by the basic principles of participatory inquiry from the 1980s, in which the aim was to capture the specific views and ideas of the poorest people within communities.[1] Similarly, research on poverty in pastoralist areas emphasizes the need to identify richer and poorer groups rather than view pastoral areas or communities as universally poor. [2] The idea to jointly develop the framework for measuring the impact of enclosures also arose from the limited impact assessments conducted so far and therefore, the difficulty of defining "effectiveness" or other possible measures of impact. With these issues in mind, four key questions were developed:

1. What is the history of rangeland enclosure in different areas, and what are the different ways in which aid assisted and non-aid assisted enclosures have developed?

2. What are the trends in enclosure development in different areas, including the trends in land areas assigned to enclosures, the drivers of enclosure development, local conflicts linked to land access, and the management and control of enclosures?

3. Why do different actors – from private individuals to NGOs - support enclosures and how do they perceive the potential benefits? To what extent does thinking on benefits relate specifically to poorer pastoralists?

[1] For example, see Chambers, R. (1983).*Rural Development: Putting the Last First*. Longman Scientific and Technical, New York. Various later guidelines and manuals for participatory inquiry emphasize the need for wealth ranking or similar methods, leading to comparison of local priorities, ideas etc. by wealth group.

[2] Little, P, D., McPeak, J., Barrett, C.B. and Kristjanson, P. (2008). Challenging Orthodoxies: Understanding poverty in pastoral area of East Africa. Development and Change 39(4), 587-611.

4. Based on responses to questions 1-3, what are the implications for NGO NRM strategies in terms of having a greater and measurable impact on poorer households?

1.3 Review methodology

The review process acknowledged that PLI 2 NGO staff have considerable knowledge on rangeland enclosure and related issues, as do various researchers and government staff in Ethiopia. In addition, for some areas there is already a substantial literature on rangeland and related issues. Therefore, it was decided to focus the review process on three area-level review workshops in Borana, Afar and Somali regions, to draw on the knowledge of selected key informants and resource people. Each workshop took two days and was designed and facilitated by Tufts to answer the four key review questions above. The workshops were not intended to ensure representation by all stakeholders with an interest in enclosures but aimed to use selected local professional and community experts, including selected PLI 2 staff. Preparatory interviews and collation of data was done before the workshop i.e.

- Collation of data from interviews in Borana by Dawit Abebe[3], focusing on perceptions of poor herders to enclosures and access issues (Annex 1),
- Interviews by Gezu Bekele[4] in Afar and Somali, focusing on similar subject matter (Annex 2). Following the field visit, it was agreed to drop Afar from the review, since the PLI consortium is not involved in area enclosure in Afar.

Tufts staff also reviewed the literature on the history of the enclosure of pastoral land in Ethiopia, and used this to triangulate information arising in the workshops. PLI NGOs provided summaries of their NRM activities to Tufts before the workshops and gave a brief presentation at the workshops. The workshops were facilitated by Dr. Solomon Desta, an independent expert with considerable experience on NRM in the rangelands, particularly in Borana. There were 24 participants in Yabello and 21 participants in Jijiga; workshop participants are listed in Annex 4.

This report incorporates the outputs of the two review workshops, documentation provided by the PLI 2 NGOs, and relevant literature.

[3] Dr. Dawit Abebe is a Senior Researcher with the Feinstein International Center, Tufts University, in Addis Ababa.

[4] Dr. Gezu Bekele is an independent consultant, who previously worked with the Feinstein International Center, Tufts University, in Addis Ababa.

2. ENCLOSURES IN BORANA PASTORALIST AREAS

2.1 Types of enclosures in Borana

In order to review the possible impacts of rangeland enclosures in Borana supported by NGOs, it is useful to recognize that different types of enclosures already existed before NGO activities, with various forms of local management, control and access.

Seera Yabbii

Borana pastoralists' traditional enclosures were called *seera yabbii* (literally 'protected grazing for calves'). They were relatively small, around 10 hectares or less, and had a very specific purpose - to conserve pasture or put aside a section of the rangeland for milking cows, calves and sick animals during the dry season/ times of drought. The size varied depending on the anticipated rainy season, the number of young or sick calves anticipated in the coming year for a given *olla*[5] and the local forage conditions. For example, if drought was expected, the *seera yabbii* would be bigger, if good rain was expected, the *seera yabbii* would be smaller. *Seera yabbii* were established on relatively productive land and were not fenced.[6] They have mostly been replaced through the introduction of *kallos*, which are larger, fenced enclosures and which have different functions.

Semi-private/ communal enclosures (*kallos*)

These are referred to as semi-private/ communal kallos since although they are organised on the basis of a community or group of communities, they are fenced, either physically (using thorn bush) or socially (through by-law or community agreement), and therefore they exclude some people from what was previously open rangeland. There are different types of semi-private/ communal kallos; their uses, establishment and management vary, and for the purpose of the review, can be categorized as follows:

- Community-initiated
- NGO-initiated or facilitated
- Government-initiated/ facilitated.

Community-initiated kallos are owned and managed by groups of *ollas* (villages), but the decision to enclose, the enclosure location and size and the use of the enclosure is traditionally decided by the *rheera* council.[7] The *rheera* is the third highest Borana decision making structure[8] related to a geographic area, and represents a cluster of *ollas*. The *rheera* council is the decision making body for NRM and is followed by the *olla* leader and elders at the village level. When these *kallos* were first introduced, their purpose was similar to the *Seera Yabbii*. Now they are mostly fenced and are used to feed different types and ages of cattle (not just calves), including for commercial purposes.

Since the number and size of *ollas* are expanding, one large *olla* may now have its own *kallo*, or a cluster of *ollas* or a *rheera* with a large pastoral population may decide to establish several *kallos*. Once agreed, all the *olla* residents in the *rheera* help to establish the *kallos*. Where there are several enclosures in a *rheera*, the day to day decisions about use and access are made at the *olla* level. Non-resident users of the *kallo* are not part of the decision making process but under the traditional Borana water and pasture management system pastoralists from other areas are allowed to use the

[5] Village – the smallest social and territorial unit in Borana.

[6] Coppock, L. (1994). *The Borana Plateau of Southern Ethiopia: Synthesis of pastoral research development and change, 1980-91.* ILCA System Study 5, Addis Ababa.

[7] There are indications that this is changing and that there are now *olla* based kallos i.e. that not all are necessarily agreed at the *rheera* level. Further discussion would be needed with *rheera* leaders to confirm this.

[8] The highest is *Maada*, followed by *Aarda.*

kallos by agreement of the host communities. Community-initiated *kallos* are relatively smaller than NGO- or government-facilitated *kallos* but are increasing both in number and size.

NGO-facilitated kallos have mostly been established on degraded land, with various aims including clearing bush and rehabilitating severely degraded land, providing reserve pasture for core herds during dry seasons and drought, and providing a short-term source of income for communities through paying cash or food-for-work for bush clearing and fencing activities[9]. Different NGOs use different establishment and management modalities, described further below.
Government-initiated kallos have been largely linked to the Productive Safety Net Programme, with similar aims to NGO-facilitated kallos viz. clearing and rehabilitating unproductive rangeland and providing cash or food-for-work as a short-term food security measure. As discussed below, there are plans to scale these up and establish much larger *kallos* across the Borana rangelands.

Private enclosures (*Dhunffaa*)
Under traditional law, it is not allowed to fence open rangeland in Borana and there are only a few large-scale private enclosures, mainly around Yabello town and the Web well in Arero woreda. These are for commercial livestock fattening/ marketing enterprises. However, it is allowed both traditionally - as long as the applicant goes through the elder system and secures elders' approval - or by the local authority, in particular the *kebele*[10] office, to fence land for farming. The practice has grown whereby individuals fence a large area, purportedly for crop cultivation, but then plant crops on a small part of the land and keep the rest as pasture for rent or for hay production and sale. This type of enclosure is expanding all over the Borana lowland. Most of these 'farmlands' are located in the flat valley bottoms, taking the most productive and fertile land from the common range.

Cooperative enclosures (*Weldaa*)
Cooperative ranches were first established in the 1980s by SORDU (Southern Rangelands Development Unit), notably the Sarite-Orbati Cooperative ranch, which is not functioning currently[11], and the Dubluq-Higo cooperative ranch which is ongoing. The main purpose of the ranches is to generate income for the cooperative members by providing access to grazing for livestock traders. The Dubluq-Higo ranch is located 12-15 km from Dubluk livestock market which makes it easily accessible to traders. There are reportedly five big ranches (two of which are cooperative ranches) in the Borana rangelands currently, occupying around 33,000 hectares. Only members and those that pay a fee are allowed to use the grazing in the ranches. Before, these were open areas including important grazing and watering resources for the Borana pastoral system.[12]

More recently, government has been promoting cooperative-owned and managed enclosures, linked to safety net programmes. For example, in Dire and Miyo, safety net programmes were used to clear bush and rehabilitate land, which was then handed over to individual cooperatives. There are also cases of areas cleared through NGO cash-for-work (CFW) programmes subsequently being handed over by local government to cooperatives.[13] The main purpose of these cooperative *kallos* is to generate income for the members through the production and sale of hay, or livestock fattening. A recent study reports 250 hectares being allocated to the Oda Roba Pastoral Union in Moyale, and an application by the Utuba Gumi Livestock Marketing Share Company in Yabello to enclose 1,000

[9] Note that under PLI 2, agencies do not pay CFW or FFW for enclosure-related activities.
[10] The *kebele* is the smallest governmental administrative unit in Ethiopia, and is based on a geographic area.
[11] One study reports that the ranch is now community managed and used as a fodder reserve during the dry season.
[12] Flintan, F. (2011). *Broken Lands: Broken Lives? Causes, processes and impacts of land fragmentation in the rangelands of Ethiopia, Kenya and Uganda,* REGLAP (Regional Learning and Advocacy Program), Nairobi, June 2011.
[13] Case story from an unpublished assessment of an Oxfam America supported CFW programme in Borana.

hectares. The same study reports that many of the cooperatives, associations and union members involved are not pastoralists, but people with business interests in towns.[14]

2.2 History and trends in natural resources and development of enclosures in Borana

Timeline and mapping exercises by workshop participants highlight the history of the development of different types of enclosures in Borana and illustrate some of the trends behind their emergence and expansion. The timeline is shown in Table 1. The periods in the timeline correspond with the Gada calendar, which relates to the leadership of the highest traditional governing body of the Borana, the *Gumi Gaayo,* which changes every 8 years.

To help visualise the changes in land use and the emergence of the different types of enclosures described in the timeline, the workshop participants developed maps of the rangelands for the 1950s, 1980s and 2010, shown in Figure 1.

Table 1: Timeline of key events related to the development of enclosures in Borana

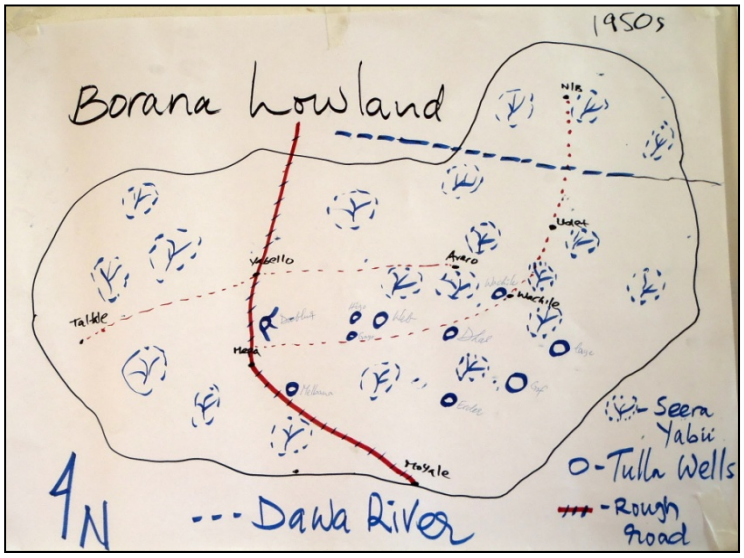
Period	Key Events
1937 – 1945 Aga Adi	• Drought, famine and conflict • Livestock disease (*baga).*
1945 – 1953 Guyo Boru	• Severe drought • ***Traditional enclosures - Seera Yabbii - are used to protect specific stock***, mainly calves. They are on good pasture land, close to homesteads and are not physically enclosed • Only traditional wells are used, there are no big ponds.
1953 – 1961 Mada Gelma	• No drought during this time and there are rainy years • There is peace.
1961-1969 Jaldesa Liben	• Conflict between Somali (Guji) and Borana pastoralists; some communities are displaced • Good grass available • Rinderpest, *sombeek (Contagious Bovine Pleuro Pneumonia).*
1969-1977 Goba Bule	• Drought - beginning of NGO relief food aid • In 1974 Haile Selassie's government is overthrown by the *Derg* • Excavation of big ponds starts • Construction of the tarmac road improves market access and crop cultivation by pastoralists starts • The first restocking and large livestock programmes start • ***First fenced kallos are approved by the Gumi Gayo*** in parts of the Gonde/Guji area, based on the experience of the Guji. Jirmo Dida establishes the first *kallo* in Dida Hara at his *olla* • Formation of *kebeles* and settlements begins.
1977-1985 Jilo Aga	• Severe drought • 1976-8 Ethio-Somalia war; conflict between Borana and Somali • Expansion of *kebeles* and settlement programmes under the *Derg* • *Derg* government bans prescribed fire in forest areas • Increase in wildlife hunting • SORDU starts • ***Kebele-based 'communal enclosures' expand***, replacing *seera yabbii.*
1985-1993 Bora Guyo	• Drought, conflict and disease – both human and livestock • Fall of the *Derg* regime in 1991; Ethiopian People's Revolutionary Democratic Front (EPRDF) transitional government takes power • ***NGOs start to support establishment of fenced kallos in the rangeland, usually***

[14] Yacob Aklilu and Catley, A. (2010). *Mind the Gap: Commercialization, livelihoods and wealth disparity in pastoralist areas of Ethiopia*. Feinstein International Center, Tufts University, Addis Ababa.

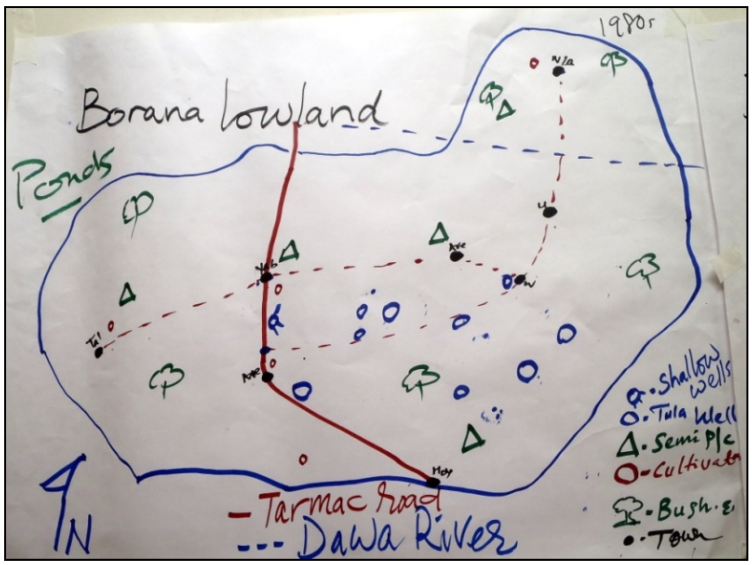
	through FFW and on a kebele basis • Customary institutions weaken as *kebele* leaders gain authority.
1993 – 2001 Boru Meda	• Partial drought; there is major Borana-Somali conflict over land • Massive deforestation due to fire • Expansion of crop land and increasing numbers of big ponds • Increasing bush encroachment; NGO CFW/ FFW programmes are used as an incentive for communities to clear land • Government starts including traditional leaders and there are strong links between government and traditional leadership.
2001-2009 Liben Jeldesa	• Drought; start of feed purchasing for livestock as a drought response. This increases the market value of grazing land • Elections cause almost one-quarter of Borana rangeland to pass from Oromia to Somali region; land is lost to the Guji clan. The shrinkage of Borana rangelands and loss of pasture and water resources leads to conflict in the regional border areas • ***Huge expansion in the number of privately and semi-privately owned, fenced kallos***, as well as cooperative and government kallos.
2009 – 2011 Guyo Goba (3rd year)	• Severe drought and conflict • Continuing expansion of crop land • Increasing feed purchasing, increasing the value of enclosed land • Inappropriate settlements are dismantled; government land use plans define settlement and grazing areas (community *kallos* and open common grazing lands) • ***Dismantling of some private enclosures.***

As described in the timeline above, the maps in Figure 1 below show only traditional wells and *seera yabbii* in the 1950s. By the 1980s, with the improvement of the road, the introduction of ponds, boreholes and shallow wells and government settlement programmes, more people have begun to farm. Crop land is encroaching into traditional grazing areas and *seera yabbii* have been replaced by semi-private/ communal fenced *kallos*. Bush encroachment is becoming a problem. By 2010, crop cultivation has hugely expanded along the road and by the Dawa river. Private enclosures and large-scale cooperative enclosures have emerged alongside the continuing expansion of semi-private/ communal enclosures facilitated by NGOs and government. Demarcation of the border between Somali and Oromia region has put some important traditional Borana rangelands, including important pasture and water resources, in Somali region.

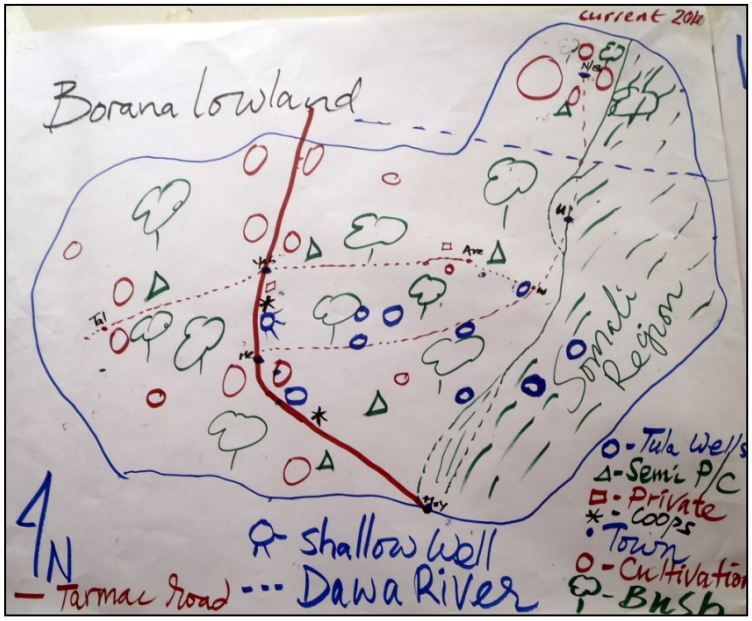
Figure 1: Representations of Borana rangelands, 1950s, 1980s and 2010.



1950s: *Seera Yabbii* and traditional wells (*tulla*). The main road from Moyale was rough.



1980s – Along with the construction of big ponds and shallow wells came the expansion of fenced, semi-private/ communal enclosures. Crop cultivation was expanding, especially alongside the new tarmac road and bush encroachment began to affect pasturelands. Small towns emerged along the Yabello-Moyale road.



2010 – The map shows around one quarter of the rangeland demarcated as Somali region. More rangeland has also been lost to expanded crop farming, especially along the road and also by the river. Enclosures owned privately, semi-privately and by cooperatives are now a feature. Bush encroachment has increased dramatically. The number of small towns has increased.

2.3 Driving factors for the emergence and expansion of different types of enclosures

Based on the timeline and maps, the workshop participants identified some of the main drivers for the emergence and expansion of the different types of enclosures (Table 2).

Fenced *communal kallos* at the community level began to increase in order to secure feed for certain categories of animals during times of drought, in the face of increasing scarcity and competition for good quality, accessible grazing land. As livestock trade increased in the area, the opportunities to earn income from producing hay or grass on the enclosures expanded, and cooperative and private enclosures emerged.

Table 2: Types of rangeland enclosure in Borana, 2011

Type of enclosure	Drivers of enclosure process
Seera Yabbii	• Part of the traditional herd and rangeland management system to enhance calves growth and protect milking cows and sick animals; relatively good pasture land was enclosed • Unlike the other forms of enclosure, these have tended to disappear, as larger *kallos* emerged.
Communal fenced kallo (community, NGOs & government)	• Drought and related feed shortage, pushing people to protect pasture for certain categories of livestock • Population growth (human and livestock) and increased competition for accessible land • Increasing awareness of enclosures (following Guji experience) • Expansion of crop land, encroaching into former grazing areas and increasing competition for pasture • Bush encroachment and weakening of customary institutions for NRM, leading to introduction of bush clearance and rangeland rehabilitation programmes supported by NGOs and government; relatively poor land is enclosed.
Private kallo	***For grazing:*** • Individual profit and political power • Farm land expansion • Commercialisation of livestock production and associated business opportunities from enclosing accessible land ***For crop production:*** • Promoted by government policy • Diversification as a drought response • Destitution and drop out of pastoralism – livelihoods diversification
Cooperative kallo (includes cooperatives and informal groups)	• External promoters (government, NGOs) • Economic incentives, profit-making • Transfer of land to private ownership

One of the drivers for the introduction of *NGO-facilitated enclosure*s in the mid to late 1980s was ecological i.e. to clear bush-infested areas and fence them to allow the pasture to regenerate (nowadays, there is a greater focus on adding value to the land through reseeding, soil and water conservation and tree planting). In the 1980s, enclosures were also used as a short-term drought-response mechanism for targeted households to receive CFW/FFW for the bush clearing work. Most recently, enclosures are considered part of disaster-risk-reduction (DRR) programming, the theory being that they protect livestock assets, and therefore livelihoods, from the impact of drought.

Government-facilitated enclosures have appeared over the past decade driven by a purposeful scaling-up by government of what they perceive as the NGO 'best practice' of reclaiming bush-encroached land and securing it as a dry season pasture reserve. Part of the thinking behind the scaling-up is that the region should be able to manage risk in pastoral areas by creating large-scale feed reserves, rather than relying on imported grass from highland areas.

The government is also promoting *cooperative enclosures* for commercial purposes. These have grown in number and size as they have been heavily promoted through the Cooperative Promotion Offices, which offer them land to start up commercial enterprises such as hay production, renting of grazing to livestock traders or livestock raising or fattening for the market. In many cases, the identity of the cooperative members is not clear and therefore, it is difficult to determine who is benefiting. During the review it was reported that many of them lack transparency in their leadership and decision-making, members don't know where the money goes and there is often little investment in the *kallos* despite the stream of income generated.

It is also worth noting the establishment of enclosures by private groups supported both by government and NGOs (through savings and credit associations). While these tend to operate on a small scale, there are now hundreds of them in Borana, usually involved in raising animals for the market and/or producing grass or hay for sale.[15]

The development of *private enclosures* is linked to the expansion of crop land, the commercialisation of livestock production and a weakening in the power of the customary institutions. As it became possible to fence land in specific areas for farming, some individuals saw an economic opportunity in enclosing a large area, cultivating a part of it and leaving the rest as pasture. These 'two section' *kallos* allow the owners to graze livestock for fattening and/or rent the pasture to others. A few individuals began to appropriate larger areas and the Borana customary institutions were not able to prevent them (one such individual was a former customary leader, the Abba Gada). Some of these individuals have 'moved up' within pastoralist society over the past decade, establishing large herds of cattle for trading.[16] Informants reported that these people tend to be close to government systems and structures and use their relationship with powerful individuals in government first to appropriate land and then to protect them from the consequences. In one case described by elders, a powerful individual established a large private enclosure without permission. Reportedly, the surrounding communities asked the government many times over a 10 year period for the enclosure to be dismantled, but each time the individual was able to negotiate with government to keep the land. As one elder said, "*the problem is that this person has one foot in the customary system and one foot in the government system*".

Private hay production and cut-and-carry along crop land boundaries (Dawit Abebe)

[15] Aklilu, Y. and Catley, A. (2010). Ibid.

[16] Catley, A. and Iyasou, A. (2010). *Moving Up or Moving Out? A rapid livelihoods and conflict analysis in Mieso-Mulu Woreda, Shinile Zone, Somali Region, Ethiopia*. Feinstein International Center, Tufts University, Addis Ababa.

As well as individuals "grabbing" land for private enclosures, there are recent cases where land has been given by government to private investors to establish enclosures specifically for commercial livestock trading enterprises.[17]

In 2010, the Oromia regional government agreed with the Borana customary institutions, including the current Abba Gada that private *kallos* should be dismantled and some of the larger ones have recently been dismantled by government. For example a large *kallo* put up by a wealthy herder in Alona was dismantled following pressure from local government officials and elders. Some communities have also reportedly gone ahead and dismantled private enclosures themselves, with or without the agreement of the individuals concerned, and converted them into community-managed *kallos*.[18] However, the *kallo* owned by the former Abba Gada is still operational. Although some private *kallos* have been dismantled, a greater number still exist and new ones are still being created; in particular, the 'two-section' *kallos* for crop as well as pasture production are increasing in number and size. In some cases the crop section of the *kallo* is very small and nominal while the pasture section is huge.

As implied above, the significant expansion of crop production over the past few decades underlies the growth and expansion of fenced enclosures. Crop production in enclosed farms was initially started by pastoralists to provide an additional or alternative source of income during times of recurrent drought, feed shortage and decreasing livestock productivity. Destitute pastoralists started small-scale cultivation but this was followed by commercial cultivators, encouraged by supportive government policy and heavy promotion of agriculture by the Ministry of Agriculture and Rural Development (MOARD). While poor pastoralists engage in opportunistic farming as a coping mechanism, the wealthy, who have large herds and/or additional income sources in urban and peri-urban areas, can afford to take more risks. Note that farming is relatively risky in most pastoral areas of Ethiopia, because of high rainfall variability and relatively marginal soils, among other factors.

Another underlying trend seen from the maps is the increase in bush encroachment. One of the drivers for this was the ban in the 1970s on the use of fire as a rangeland management tool.[19] As traditional management tools (such as fire) became unavailable and agriculture was promoted, access to extensive common rangelands became more restricted and it became more difficult for customary institutions to mobilise communities to manage bush. The CFW/ FFW provided by NGOs may also have reduced the incentive for communities to tackle bush encroachment themselves. As a response to bush encroachment, NGOs and government have used bush clearance and enclosure programmes both as a tool to benefit poorer community members through CFW/ FFW (in safety net programmes) and also to reclaim encroached pasture land.

The literature supports much of the workshop participants' analysis of drivers outlined above. Most recently, for example, Bokutache Dida[20] highlights the triggers for the development of enclosures in the Borana rangelands as: expansion of crop production as people diversify into farming; the increase in livestock trade (encouraging people to enclose land for the production of hay and/or renting of grazing to herders and traders); and the expansion of NGO-supported community enclosures as drought reserves. The Tufts assessment in Borana for this review (Annex 1) also supports the perceptions of the workshop participants, identifying the key drivers as:

[17] Dawit Abebe and Jeldesa Doyo (2011). *'Kello' (Enclosure) - Part 1: Historical Development, Access and User Right*s. Feinstein International Center, Tufts University, Addis Ababa. Presentation for PLI Policy Project NRM Review Workshop, Yabello, October 2011.

[18] Information from Save the Children US.

[19] The 'ban' was based on a policy introduced by the *Derg* government to protect forest land, and some experts believe that this policy was misinterpreted to include a ban on prescribed fire in the rangelands.

[20] Bokutache Dida (2010). *Range Enclosures in southern Oromia, Ethiopia: an innovative response or erosion in common property resource tenure?* FAC Research Update 004, Future Agricultures, November 2010.

- Human population increase and increased competition for land/ resources;
- Change in land use and land cover both through bush encroachment and increasing crop cultivation;
- Growth in individualism and an interest in economic gain;
- Increasing poverty meaning that those with few livestock needed to find alternative sources of income, such as selling hay;
- The weakening of traditional natural resource management institutions, allowing traditional range management 'rules' to be bent by powerful, rich people.[21]

A recent literature review is available covering the trends, drivers and impacts of land fragmentation, including enclosures, in Borana, Afar and Somali pastoralist rangelands.[22] Although the trends and drivers of enclosures development are relatively clear, it is less clear who is benefitting from the changes and what the livelihoods impact is on the majority of pastoralists. This is discussed further, below.

2.4 PLI NGO approaches to enclosures in Borana

CARE Ethiopia

CARE Ethiopia NRM interventions in Borana started with bush thinning programmes around 15 years ago. In those days, all woody species (including species with forage value) in project sites were cleared using CFW/ FFW and the area was then left unfenced, without any community management system in place. As a result, many areas became re-invaded. Learning the lessons from this, CARE now follows a 'bush management' approach - selective bush clearing followed by establishing community-based systems for maintaining the rehabilitated pasture and avoiding bush re-encroachment. CARE partners with government and traditional stakeholders, using the traditional *rheera* governing body as the entry point. The basic approach is:

- Identify degraded area at *rheera* level, for bush management and enclosure establishment,
- Provide tools and technical support for selective bush clearing and prescribed burning,
- Fence the enclosure,
- Provide a community development fund (CDF) to be used for development activities prioritised by the community.

The size of the enclosure depends on the available land, the community's interest and the CARE project budget. CFW/ FFW are no longer used for bush clearance and the incentive is the CDF, with the amount of the fund linked to the size of the area cleared (up to a maximum of ETB 30,000). Use of the fund is determined by the community through a problem identification and prioritisation process and may or may not be linked to enclosure management, maintenance or improvement.

The aim of the CARE-facilitated enclosures is to build resilience to drought, through protecting selected types of livestock. Although no evaluations or impact assessments have been done, CARE reports that since 2008, 1,325 hectares of communal *kallos* have been rehabilitated/ expanded in Borana, benefitting over 24,000 households and over 69,000 livestock. The CARE target group is 'the community' and there has not been any analysis of the benefits of enclosures by wealth group.

[21] Dawit Abebe and Jeldesa Doyo (2011). Ibid.
[22] Flintan, F. (2011). Ibid.

SC US

SC US is rolling out a Participatory Natural Resources Management approach (PNRM) which aims to strengthen the indigenous pastoral rangeland and natural resources management system. The approach follows a number of well-defined steps including resource use mapping with communities, activity planning and implementation and development of a participatory monitoring and evaluation framework. The process involves the Abba Deheeda, Abba Herega, women and other elders from *rheeras* and *maadas* as well as *kebele* leaders and government line departments. The idea is that the customary institutions lead the process while the involvement and acceptance of government supports and strengthens their decision-making power. Specific to enclosures, key steps include:

- Define and demarcate wet and dry season grazing areas,
- Identify the location for the enclosure,
- Promote *kebele*/ *rheera* level enclosures by dismantling private enclosures,
- Provide technical and material support to communities to clear the site and improve rangeland productivity through use of prescribed fire, soil conservation, tree planting etc.
- Determine site protection measures and access and user rights,
- Establish legally-binding rangeland management agreements.

The framework for PNRM is included in Annex 3 and more information on PNRM can be found in the PNRM guidelines published by SC US in 2010.[23] SC US reports that the enclosure 'interventions' are multi-purpose, aimed at rehabilitating rangeland, strengthening customary institutions, protecting livestock assets during drought and increasing milk production. So far, over 1,000 hectares have been enclosed as new drought reserves and over 7,000 hectares of existing enclosures have been improved. There is no data related to the livelihoods impact of the enclosures but a recent (draft) internal review made available to the reviewers reports that over 63,000 head of livestock were supported in the community kallos during the 2011 drought, benefitting around 10,000 households.[24] PLI 2 staff verbally reported that people who would otherwise have gone onto PSNP direct support did not need to, because they had been able to protect their livestock assets. As in the case of CARE, the target group for SC US's enclosures work is 'the community'. There is no specific, explicit targeting of poorer households and no analysis of the benefits by wealth group.

PSNP-facilitated communal enclosures, Borana

[23] Flintan, Fiona and Cullis, Adrian (compilers)(2010). *Introductory Guidelines to Participatory Rangeland Management in Pastoral Areas*. Save the Children US, Addis Ababa.

[24] Internal draft SC US report 'Result Assessment on Key drought reserves, traditional water point rehabilitation and role of CI implemented by SC USA under USAID Funded PLI II Programme in Oromia regional state of Guji zone Liben and Gorodola Districts in Ethiopia, September 2011.

2.5 Government approaches and plans for enclosures

Government bush clearing interventions initially focussed in areas that were completely invaded and no longer useable (for example Madecho *madda*). The areas were cleared using CFW programmes but were not fenced and over time they became re-invaded. Following the NGOs' "best practice", government began to enclose areas following clearance.[25] Similar to the NGOs, enclosures have primarily been viewed by government as part of a rangeland improvement intervention rather than as a livelihoods intervention, with less attention given to determining access and user rights to the enclosed land, or to understanding who, specifically, is benefitting, or what are the implications for others' access to what was formerly open (albeit degraded) rangeland.

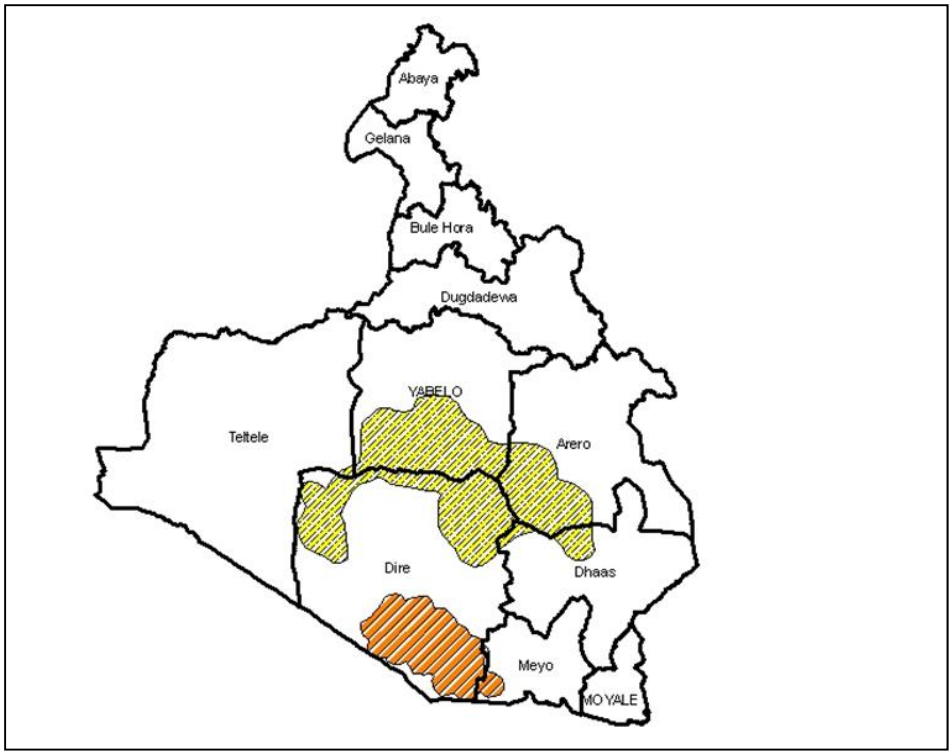


Figure 2: Borana administrative map and water network implementation area, showing proposed pilot locations

Under the Borana zone Integrated Rangeland Development Programme[26] the government plans a large-scale rangeland improvement programme directly related to the development of a 2,000 km water pipeline network from Magado (almost completed) to Dilo and Gelchet (completed up to Yabello). Figure 2 shows the map presented by the zonal representative at the NRM workshop in Yabello, indicating the pilot rangeland intervention areas (coloured) in Gelchet, Magado and Dilo.

Once the pipeline is in place, then pasture development interventions will follow, beginning in the pilot intervention areas. Areas relatively close to settlements will be demarcated as '*kallos'*, cleared of bush (through PSNP) and then enclosed to protect them from livestock. Other areas will be cleared and demarcated as 'open rangeland' – these areas will not be physically fenced but will be guarded to prevent animals entering until the land has recovered. Within the 'open' rangeland, the theory is that different areas will be demarcated for grazers or browsers, depending on land suitability, as identified in the land use plan. Settlements will be consolidated in defined locations organised around water resources, and will be kept out of areas demarcated as 'grazing reserves'.

[25] In the absence of documented evidence from evaluations or impact assessments of the NGO projects, it is not clear how "best practice" was identified.

[26] Presented at the NRM Review workshop in Yabello by the Zonal Pastoralist Development Department.

The government representative emphasised that this system is at the pilot stage and that progress and impact would be carefully monitored before scaling up. During the review, doubts were expressed that the water pipeline, which is at the heart of the programme, will be completed as planned. Nevertheless, the participants raised a number of concerns, including:

- The planned physical land use demarcations don't take account of the social aspects of the traditional pastoralist rangeland management system, whereby pasture and water resources are shared with pastoralists from other areas, including across borders, based on rainfall and pasture conditions in one area or another.
- Pastoralists currently manage mixed herds of grazers and browsers and it is not clear how the demarcation of specific areas for grazers and browsers might affect herd management.[27]
- Also it is unclear how land/ species demarcation might affect pastoralists' mobility in response to variable rainfall and vegetation cover. For example, will they be able to move cattle to areas demarcated for browsers or move herds to better pastures outside enclosures, as necessary?
- Pastoralist elders pointed out that successful pasture and water management depends on a system-wide perspective based on clear ownership of the resources. While ownership of traditional ponds and wells is clear, who will own the resources in the new enclosures?
- Similarly, the institutional structure and role of customary institutions is unclear. Pastoralist elders asked, '*What are the new enclosures called? We have a name for traditional kallos, we have a name for community kallos, but what will we call these? Knowing what they are called is the starting point for us to be able to understand how best to manage them*'.

Past experience of technically-driven development programmes in pastoralist areas suggests that unless they are based on a thorough understanding of the socio-economic-ecological-institutional aspects of the pastoralist system as a whole, they tend to be unsustainable. For example, the construction of big ponds through the 70s and 80s was hailed as the answer to water shortage in the rangelands, but are no longer functional and their construction in wet season grazing areas created problems that are still not resolved.[28] It is not clear to what extent the government's plans are based on a system-wide analysis of the potential impact of enclosures on land and water access and use and how that might affect the wider pastoral ecosystem and economy.

Finally, the participants agreed that a wider set of discussions needs to be held in Borana before government goes ahead with implementation of the pilot. These should include elders, community members, technical experts and government experts together, to facilitate sharing of knowledge, experience and available evidence of the impact of similar rangeland development programmes implemented elsewhere and to examine the social, economic and ecological implications of the plan.

2.6 Perceived benefits and risks of enclosures in Borana

The number of enclosures in Borana is increasing and the area of land available for communal grazing is reducing. Whereas in the past, animals were able to graze all day, now pastoralists say, *"We have been migrating the whole day, avoiding crops here and kallos there".29*

The benefits and risks of the different types of enclosures in Borana identified by the workshop participants are summarised in Table 3. The main benefits perceived are that enclosures allow the land to recover and, when used as a pasture reserve, they protect livestock during drought. However, the risk is that they represent a shift from a communal natural resources management

[27] The zonal representative explained that herds will not need to be split, just that management of the enclosure/ rangeland will depend on whether it is most suitable for grazers (more thinning) or browsers (less thinning).
[28] Comment from Oxfam GB participant at the Yabello NRM Review workshop.
[29] Borana elder at Yabello workshop.

system to a system which benefits some areas of land at the expense of others, and some people at the expense of others.

Table 3: Perceptions of benefits and risks of rangeland enclosures in Borana

Enclosure	Benefits	Risks
Traditional (*seera yabbii*)	• Feed available for specific livestock during drought; sustained milk production • Reduced livestock mortality during drought • Land given time to rest, and build up soil seed bank	None, because they were relatively small
Communal *kallos* (community, NGO, government)	• As for *seera yabbii* and also: • Short-term income from CFW/FFW • Benefits from community development funds, provided as an incentive for bush clearance	None so far, but there may be risks if they continue to expand in number and size and if they become permanent enclosures (rather than as a temporary response to drought)
Cooperative/ group	• Income from rent of pasture and/or sale of hay • Improved quantity/quality of grass • Number of livestock that survive in the enclosure during drought time	• Lack of transparency in management and how income is used/ invested • May encourage people to change to individual-based NRM system • Rangeland may gradually be occupied by different owners and land and other resources for common use may shrink • Only members and those who can pay will be able to access rangeland and the poor will be marginalised
Private	• Income/ profit for private individuals	• Only few individuals benefit • Land and other resources for common use may shrink
Government (proposed in Borana land use plan)[1]	• Drought reserve • Improved fodder production • Income/ profit from commercial enterprises	• Ownership is unclear e.g. kebele or cooperative-owned? Lack of community ownership • Traditional system of NRM weakened further • Enclosures may be given to investors or cooperatives in future • Further shrinkage of land for common grazing • Constraints on mobility and associated risk of conflict e.g. with Kenyan pastoralists crossing border • Technical intervention, difficult to manage at community level and high running costs

[1]The group at the workshop, especially pastoralist elders, were reluctant to comment on the government plans since they were not aware of them before and didn't have enough information.

Many of the risks relate to how the enclosures are managed and controlled and by whom, including the role of customary NRM institutions. The fears expressed in relation to current plans for rangeland development in Borana are about the implications of a massive scaling up in the number and size of enclosures, and how that might affect mobility, access to common grazing and traditional, reciprocal rangeland resource sharing arrangements.

Like the workshop results, the Tufts field research in Borana found that community perceptions of the benefits of *kallos* mainly relate to the ecological benefits such as reduced grazing pressure and maintenance of the seed bank, and the economic benefits such as improved pasture availability for calves, milking animals and sick animals during extended dry periods.[30]

How the perceived benefits and risks of enclosures specifically relate to poorer pastoralists is discussed in section 5 below.

[30] Dawit Abebe and Jeldesa Doyo (2011). *'Kello' (Enclosure) - Part 2: Impact on Pastoral Socio-Ecological System*. Feinstein International Center, Tufts University, Addis Ababa. Presentation for PLI Policy Project NRM Review Workshop, Yabello, October 2011.

3. ENCLOSURES IN SOMALI PASTORALIST AREAS

3.1 Description of types of enclosures in different parts of the region

In Somali region, land is owned by sub clans, and whether someone can claim land or not depends on the decision of the sub-clan. Although anyone from the sub-clan has a right to claim land, the clan can re-allocate the land to other clan members if they so decide. Broadly, there are four types of '*seero*'[31] (enclosure) in the Somali regional state: private; government; communal and/or NGO-supported (in some areas); and cooperative. The Tufts field work for this review identified two types of private enclosures – "*sera*" within an existing farm, and "*beer*" outside the farm.[32] The development and prevalence of these different types varies across the region, as described below.

Shinille

Most of the area is pastoralist, and the territory of the Issa clan. The Issa strongly believe that all resources in Issa areas are communal and it is relatively more difficult to establish private enclosures in Issa areas than in other areas. In one example from Afdem, a private individual enclosed an area of communal land to grow sorghum. The surrounding communities waited until the sorghum had grown well and then released their livestock onto the land to graze and destroy the crop. When the 'owner' came to protect his farm, the community beat him, saying "*No-one allowed you to start a private farm here*". He took his case to the elders for their decision and was promptly arrested.

Despite this type of experience, there have been examples of private enclosures happening in Issa areas. This is raising questions around the strength and role of the customary institutions in NRM. A recent study suggested that the trend in land enclosure reflects a weakening of pastoral institutions' ability to negotiate with agro-pastoralists and government actors.[33] Although in 2008/9, the regional government limited the size of private enclosures, the social barriers to establishing them are not as strong as before. Elders at the NRM workshop suggested that because of drought and land degradation, people have come under pressure to find an alternative livelihood and enclose land as a way of securing an income.

Harshin

Most of the rangeland in Harshin is already permanently divided and enclosed by individuals. One study in 2009 estimated that 80% of pasture lands in Harshin are enclosed.[34] In most of the woreda, rangeland was divided without consensus in a spontaneous grabbing of land. In some cases this was to reserve dry season grazing for an individual's own livestock, and in others, to earn an income by selling pasture/ hay to others. Oxfam GB worked with two communities in Harshin which had seen that land division elsewhere had led to some people obtaining huge areas of land and others none or little. In response to what they saw as an unstoppable trend[35], the respective customary institutions decided to initiate private enclosure of land, but to control the process and share land equitably. Elders from the community said, "*We couldn't stop it (enclosures) - it was happening and we realised that we would soon have no land so we decided to enclose the land ourselves*." In these communities, the customary institutions were drawn into land distribution for private use, which is extremely uncommon in a pastoral system. The Harshin elders explained that they no longer have

[31] 'Seero' means 'grass' in Somali. Some also say the name comes from 'zero' or 0 to show a closed area.

[32] Gezu Bekele (2011). *Assessment of pastoralists' views on enclosures in Shinille and Dollo*. Presentation for PLI Policy Project NRM Review Workshop, Jijiga, November 2011.

[33] Andy Catley and Alula Iyasou (2010). Ibid.

[34] Talasan Consultancy PLI (TCC), The impact of enclosures on access to rangelands: Findings of a cross-border (Somaliland and Somali Region) study commissioned by Oxfam GB, April 5, 2009.

[35] A 1998 study by Sugule and Walker (cited below) reports that, "In the Harshen (*sic*) area, for example, there is a clan agreement that there should be no more enclosures because the negative effects of many enclosures has become apparent". That this didn't happen supports the elders' view that the trend was 'unstoppable' in the Harshin area.

the power to prevent land privatisation and that nowadays their role in land use decision-making and natural resources management is limited to managing access disputes between neighbouring enclosures. An elder explained the management and control of the different types of enclosures in Harshin:

- *Private enclosures* are mainly reserve areas for individual's own livestock; they are managed by private individuals and there is no specific law governing them (e.g. size, location),
- *Government enclosures* are usually on degraded land, identified by government, which they then ask the community to enclose. They recruit and pay people to work on the area,
- *Cooperative enclosures* are managed by cooperative committees, according to bylaws developed by the members. NGOs have been supporting cooperatives by facilitating development of their bylaws etc. (for example, Oxfam is supporting them in Harshin),
- *Area or seasonal enclosures* are common rangelands which are put aside for later use by the community. These are based on traditional areas, known by the name of the sub-clan, which were not physically enclosed. Apparently, many of these enclosures are being replaced by private, cooperative or government enclosures.

Although enclosures are now regarded as a permanent feature, elders from Harshin explained:
"*Whatever the type of enclosure, mobility is important for pastoralists and the enclosures don't work when livestock comes from other areas. In our area, others are allowed to use any of the enclosures during drought time, though some of the cooperatives may tell pastoralists from elsewhere that they need to pay; most though allow access because of fear of conflict, and also to help them, especially when there is serious drought.*"

Degehabur

According to elders, private enclosures emerged in Degehabur over the last 15 years. The enclosures were started by people who had minimum herds of cattle, camels and shoats and needed to find other sources of livelihood, so they enclosed land near towns and riverine areas, and started farming. Some earn income by renting the pasture, for example, to shoat or camel traders from the livestock market in Degehabur who need to hold animals for a few days. Also in Degehabur, there are communally owned lands, divided between clans and sub-clans (Rheer Gedi, Rheer Gizman etc). Within the agreed, demarcated territory of a sub-clan, individual sub-clan members can enclose land. There are also cooperative enclosures in Degehabur, mainly in riverine areas or farms. They are bigger than private enclosures and can include members from different sub-clans.

Aware

Like Afdem in Shinille zone, Aware is a more 'pure pastoral' area - land enclosure so far is minimal and evident only in relatively small areas. According to elders, most of the community are not interested in having enclosures. However, community leaders have started to orient people about enclosures since there are areas of open rangeland that they don't want people to enclose and there are also areas where people have claimed inheritance rights and then enclosed land. According to the elders, the main problem is with people who enclose areas and then don't allow others to graze there. They said that awareness needs to be created so that these areas are returned to communal grazing areas and to improve the areas so that they are more productive and produce more grass. One of the Aware elders said, "*I have seen in some areas that people have enclosed land, and when others come to graze there conflict arises – we don't want that in our area*."

Dollo

Tufts research for this review found that in the Dollo area, almost all private enclosures (*sheromo*) are established within the farmland and along the Dawa and Genale rivers.[36]

[36] Gezu Bekele (2011). Ibid.

3.2 History and trends in natural resources and development of enclosures in Somali region

Timeline and mapping exercises with the workshop participants explored the history and development of different types of enclosures in parts of Somali region and highlighted trends in NRM and the expansion of enclosures. The timeline in Table 4 below includes information from the workshop as well as from the pre-workshop field research conducted in Somali region.

Table 4: Timeline of key events related to the development of enclosures in Somali region

Period	Key events
1950 - 1955	• In Harshin, lack of water for cattle led to a big increase in the construction of birkads; in some areas this led to conflict among clans.
1962	• The establishment of large private farms and the first private enclosures in the region as land is divided between different clans (Abdulahi Farah, Ugas Mohamud, Sultan Gallool Elmi) in a government-led attempt to resolve inter-clan conflict.
1974 - 1977	Ethio-Somali war; outflow of Ethiopian Somalis to Somalia; start of the *Derg* regime; • *Dabadheer drought* – a long lasting, unforgettable drought • **Cooperative enclosures** started in the 'Haud' area[37], based on clan ownership • **Government enclosures** were started by the *Derg*; these were mainly grazing reserves for commercial producers (involved in fattening or feed production) • Resettlement policies were introduced for people affected by the drought • Kebeles were formed and as kebele leaders became more powerful, traditional leaders were weakened • Large-scale rangeland development projects started (JIRDU), with the construction of big ponds and birkads.
1983*	• Critical drought led to massive livestock mortality; **Private enclosures were initiated by wealthier households** who split their family to allow them to feed milking animals (*irman*) at the main settlement (Shinille).
1984-1988*	• Herds recovered and seasonal movement was reinitiated; the majority of the private enclosures were abandoned (Shinille).
1988-1991	Somali civil war. Refugees and returnees returned from Somalia and claimed land for farming; • Massive deforestation as refugees tried to make a living from selling firewood • Development of birkads and ponds as well as shallow wells.
1991	EPRDF government and regionalisation policy. Influx of people due to political support in Ethiopia for settlement and the allocation of farmland to returnees; • Non-Ethiopian Somalis also came to try to claim land • Somali communities started to farm and become agro-pastoralists, mainly producing feed for their livestock • NGO interventions on NRM started, along with awareness creation about degradation; **enclosures were started as a means of rehabilitating rangeland** • Huge camps were established for the refugees by NGOs and UNHCR; this was accompanied by massive deforestation as people sought an income from sale of firewood and charcoal making • In Dollo, **returnees enclosed dry season grazing lands** around Dawa and Genale rivers for crop farming or production of pasture/ fodder; host communities responded by enclosing more rangelands around the rivers.*
1995	• Establishment of cooperative societies and **start of cooperative enclosures** • Lands were enclosed for charcoal production.
1998*	• Record high rains • Some pastoralists planted their previous enclosures to take advantage of crop production (Shinille).

[37] The Haud is a historically important grazing area for Somali pastoralists, stretching from Jijiga along the Somali border up to Gashamo and beyond.

2000 - 2009	• Increasing settlement, linked to access to water points and other basic services such as health and education • **Increase in number of privately owned enclosures**, linked to government development interventions; usually on areas of reclaimed land • Increasing drought; Herds were depleted and the majority again stopped seasonal movement; Rangeland enclosure practice was reinitiated (Shinille)* • Drought-destitute pastoralists became dependant on income from firewood/charcoal marketing; Others responded by enclosing more rangelands mostly close to settlement areas, to protect browse (Shinille)* • **The practice of private enclosure expanded** as crop farming expanded (Dollo)* • A number of **communal enclosures** were established away from the rivers with support of SC US (Dollo)*.
2010	• Emergence of MERET project and safety net 'donor-led' enclosures, which are mobilising people to establish **area enclosures on a communal basis** • SoRPARI/government develops plan for a 10,000 ha area enclosure across 6 districts in the region; the aim is mainly rangeland rehabilitation, including in the Haud area.

Note: Information marked with * is from Gezu Bekele's (2011) field work in Shinille and Dollo for this review; all other information is from the Jijiga NRM review workshop.

Maps were developed for the 1950s, 1980s and 2010 to visualise the changes in land use and the emergence of the different types of enclosures in Somali pastoralist areas (Figure 3)..

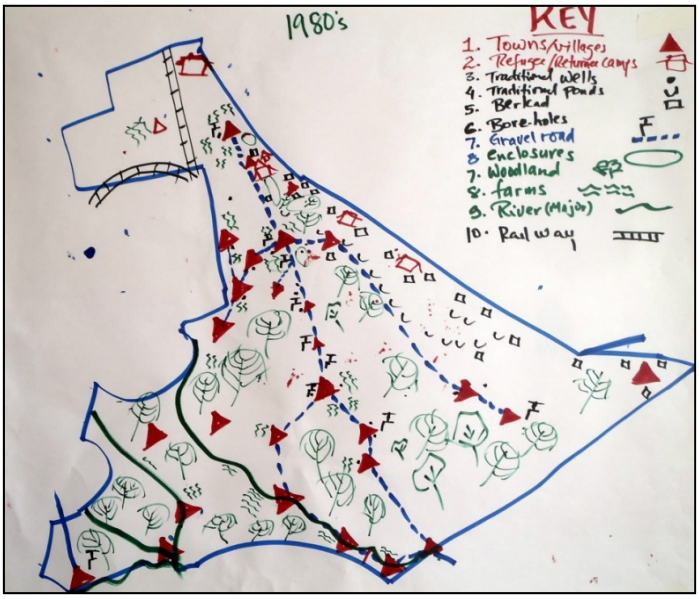
In the 1950s, there was no 'Somali region'. Livelihoods depended on livestock and there was enough pasture, with clearly defined dry and wet season grazing areas. Rangeland vegetation included wood, grass, and shrubs. There were only limited areas of regular crop cultivation and shifting cultivation around Denan, Kalafo and Jijiga, which depended on the rain and rivers. At that time there were only traditional water points e.g. Waldal, Weldel, Shilabo, Doboweyn, Korohaye, etc. All had names and all served both livestock and humans. These wells are still functional today and according to elders are especially useful for watering camels. There were also natural ponds which held water for 3-4 months, for example in Aware and Dunot, in the Haud area. At that time there was only one birkad in Harshin, with others concentrated on the Somaliland side of the border. There were no enclosures and when there was rain shortage, people had space to move elsewhere with their livestock to find other sources of pasture and water.

By the 1980s, there was more urbanisation, along with the improvements in roads and infrastructure. Birkads increased in number in the Haud in response to the need for water and lack of other water sources (government boreholes were not deep enough to provide adequate water). These were all owned by individuals at the household level. The number of boreholes had also increased, for example in Shalabo, through Degehabur, Jijiga and to Moyale. The establishment of the refugee camps near Kebribaya and Hartisheik and increasing urbanisation put pressure on the surrounding vegetation cover and forests. Areas under crop cultivation were also increasing, including permanent farms around Jijiga and in riverine areas in the region. Government was also enclosing large areas for state farms in riverine areas in south Gode, west Gode and Errer.

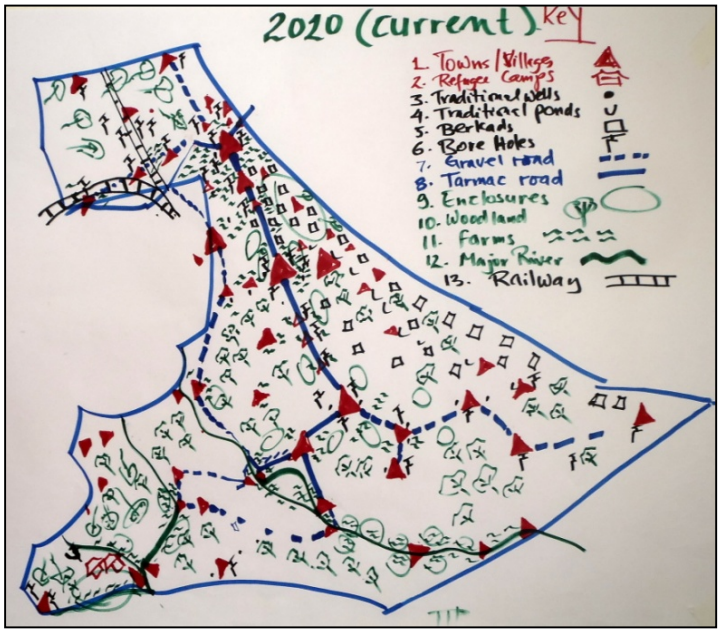
The 2010 map shows a striking increase in the number of water sources across the region, both boreholes and private birkads. There has also been a dramatic increase in urbanisation as people spontaneously settled along roadsides and took advantage of government investment in basic services such as health centres and schools. People are less mobile than before and big herds are sent further afield while people stay closer to settlements. Massive deforestation and increased land degradation can be seen around the camps in Dollo Ado and Kebribaya. More people have started seasonal farming and there is also an increase in riverine farming. With the expansion in farming, have come more enclosures, especially in Harshin, Jijiga and Degehabur. Tarmac roads have expanded and vegetation cover has shrunk.

Figure 3: Representations of Somali rangelands, 1950s, 1980s and 2010.

1950s – Few permanent farms; mainly traditional wells and natural ponds, only one birkad in Harshin; no enclosures, high livestock mobility between wet and dry season grazing.



1980s – Improvements in infrastructure brought new towns and villages; birkads and boreholes increased; refugee camps put pressure on surrounding resources; large areas enclosed for state farms (Gode)



2010 – Dramatic increase in number and size of settlements in the region; increasing boreholes and individual birkads; more land enclosed for farming and shrinking rangeland vegetation cover.

The history and main trends illustrated by the maps are also reflected in the literature. Sugule and Walker (1998) describe how the practice of individuals fencing former communal grazing land emerged in Aware in the 1980s, and link this to increasing pressure on grazing land due to uncontrolled growth of water points and settlements. [38] Some enclosures were established to conserve fodder for own livestock, while others were for crop cultivation as people (including refugees and returnees) tried to supplement their livelihoods. Gomes (2006) also describes a process whereby the proliferation of "berkado" in the Haud area in the 1990s led to increasing settlement and the rise of crop cultivation to supplement pastoralism, which in turn resulted in land privatisation and the spread of rangeland enclosures in the Haud.[39]

The trends in livestock population and the number of people staying in and 'dropping out' of pastoralism were also discussed by participants at the review workshop. Some participants suggested that the livestock population was relatively small in the 1950s and that both the human and livestock populations have increased. As one pastoralist elder said, '*I have four boys and each of them has the same size of herd that I used to have*'. This is supported by Sugule and Walker (1998), who suggested that the number of family herding units has increased related to the increase in water sources, which allows larger populations to be supported[40]. Others at the workshop said that many people who used to have large herds now don't have any livestock. There is still a lack of accurate data on these issues.

All workshop participants agreed that the herds are less mobile than before. They also agreed that many people have lost their herds through drought and have dropped out of mobile pastoralism and settled in towns, where they have access to food aid as well as the chance of finding alternative sources of livelihood.

3.3 Driving factors for the emergence of different types of enclosures in Somali region

Based on the timeline and maps, the workshop participants identified some of the main drivers for the emergence and expansion of the different types of enclosures (Table 5).

Table 5: Types of rangeland enclosures in Somali Region, 2011

Type of enclosure	Drivers of enclosure process
Community (community, NGOs and government-facilitated)	• Not discussed since they are not common in Harshin, Degehabur or Kebribaya where participants were from.
Private	• To secure dry season reserve for livestock in times of increasing scarcity of natural resources • To diversify income and take advantage of increasing commercialisation; for some the driver is poverty, for others income and profit. • Increasing livelihoods diversification into farming, firewood collection and charcoal production.
Cooperative	• Recurrent drought leading to enclosure of large areas as reserve pasture for dry seasons and drought • Government policy (e.g. Shinille and Dollo Ado): promotion of commercial enterprises, supported by the Agriculture and Livestock

[38] Sugule, J. and Walker, R (1998), Changing Pastoralism in the Ethiopian Somali National Regional State (Region 5), University of Pennsylvania – African Studies Center, UNDP-EUE, Addis Ababa, May 1999.

[39] Gomes, N. (2006). *Access to water, pastoral resource management and pastoralists' livelihoods: Lessons learned from water development in selected areas of Eastern Africa (Kenya, Ethiopia, Somalia)*. LSP Working Paper 26, Food and Agriculture Organisation of the United Nations, Rome.

[40] Sugule, J. and Walker, R (1998). Ibid.

	Bureau; viewed as employment opportunity for members and others hired by the coop.
Government	• Land given to private investors for commercial livestock or farming enterprises • Conflict resolution – land divided between clans • Research – land enclosed for research and demonstration • Drought reserve (huge areas planned to be enclosed, though not fenced).

The literature on enclosures in Somali region cites the expansion of permanent settlements around rangeland water and pasture resources, commercialisation, inter and intra-clan competition and a weakening of customary institutions among the key drivers of the increase in private enclosures. Weak government institutions and a lack of clear, enforceable laws to support pastoral land tenure and rangeland management have also enabled individuals to claim communal rangeland as private enclosures.[41]

SC US identified two of the main challenges facing their PNRM programme as the absence of a strong pastoral land use policy and lack of recognition of INRM rules and regulations by statutory law – traditional rules are strong at the grass roots level but often not recognised at district level or above. A survey by Kenee (no date) identified various drivers for the expansion of private enclosures in Harshin, Kebribaya and Mieso woredas in Somali region. These included the increasing market value of enclosure over time (as feed shortage encouraged people to sell grass from enclosed land), the need to conserve pasture as a dry season feed reserve, as well as the diversity of decision-making rules and institutions and requirements necessary to secure rights to enclose land, leading to unstable property rights[42]. Kenee also highlighted the variation across the region in the benefits and underlying incentives for private enclosures.

3.4 PLI approaches to NRM/ enclosures in Somali region

The PLI agencies' work on enclosures in Somali region is more limited and on a smaller scale than in Borana. Rangeland rehabilitation has mainly been done by SC UK under previous projects. Under PLI 2 so far, the focus has been more on promoting fodder production by individuals and groups as an income generating activity. Much of the work is planned or just beginning to be implemented.

IRC

IRC works in Aware, Degehabur and Kebribaya *woredas*, focussing on small-scale fodder production, construction of nurseries and rangeland management training. At the moment they have three 2-hectare fodder production units which are managed by cooperatives formed by the agency. The aim is to introduce improved forage species (lablab, elephant grass), to build up the soil seed bank and to demonstrate improved methods of fodder production, as well as to produce fodder for the members' livestock. The results have been mixed so far since the units are rainfall dependent, and IRC is now looking at developing permanent water sources at the sites.

Mercy Corps

Mercy Corps plan to establish community enclosures in 10 kebeles in Mieso-Mulu woreda. The enclosures will be managed by specifically formed Community Project Management Committees (CPMC), linked to *kebele* and District Development Committees and the CPMC will receive a community development fund to support future NRM activities. The site selection, size and purpose

[41] Talasan Consultancy PLI (TCC)(2009). T*he impact of enclosures on access to rangelands: Findings of a cross-border (Somaliland and Somali Region) study commissioned by Oxfam GB.* Oxfam GB.

[42] Kenee, F.B. (PhD) (no date), Incentives and outcomes of rangeland enclosures: A comparative institutional analysis among three (agro-) pastoral districts in eastern Ethiopia.

of the enclosures will be determined by the respective committees, but criteria includes: the enclosure is not in a border area (between clans e.g. Hawiya and Issa); the land is degraded and needs rehabilitation; the enclosure should serve all community members; benefits should be shared equitably, through by-laws developed by the CPMCs.

SC US

Under PLI 1, enclosures were started in the Dollo area linked to the PSNP programme but according to staff these were not particularly successful due to rain failure and lack of involvement of customary institutions.[43] SC US has also supported fodder production in enclosures alongside the rivers (e.g. in Gode, Dollo Ado and Dollo Bay).

SC UK

Under PLI 2, SC UK also plans to start fodder production in Haliso, Gerbachile and Ardo in areas where there is a permanent water source. The aim is to target vulnerable pastoralists who will grow fodder as an income generating activity, linked to SC UK's existing milk marketing groups. In the past, SC UK has supported private fodder production in riverine areas and fodder production as a source of supplementary feeding to protect breeding bulls given to targeted households.

Under its PILLAR and RAIN programmes, SC UK has established a number of community enclosures in Shinille and Dambel woredas, designed to rehabilitate degraded land and provide a source of pasture for the dry season. The enclosures are generally near settlements and are intended to be used as a reserve for lactating animals, calves and sick animals. Anyone in the community who has livestock should be able to benefit. The enclosures are relatively small (around 10 hectares) and are rehabilitated using a combination of fenced enclosure, soil and water conservation measures and tree planting.[44] The soil and water conservation activities are done through CFW. Enclosure Management Committees, selected by the community, are established to manage the activities and develop by-laws on future management and use of the enclosures, including benefit sharing mechanisms. The committees include traditional leaders and work together with the local *kebele*/ Administration to decide where to put the enclosure, how to manage it, protect it etc.

SC UK cash-for-work in enclosure site, Shinille[45]

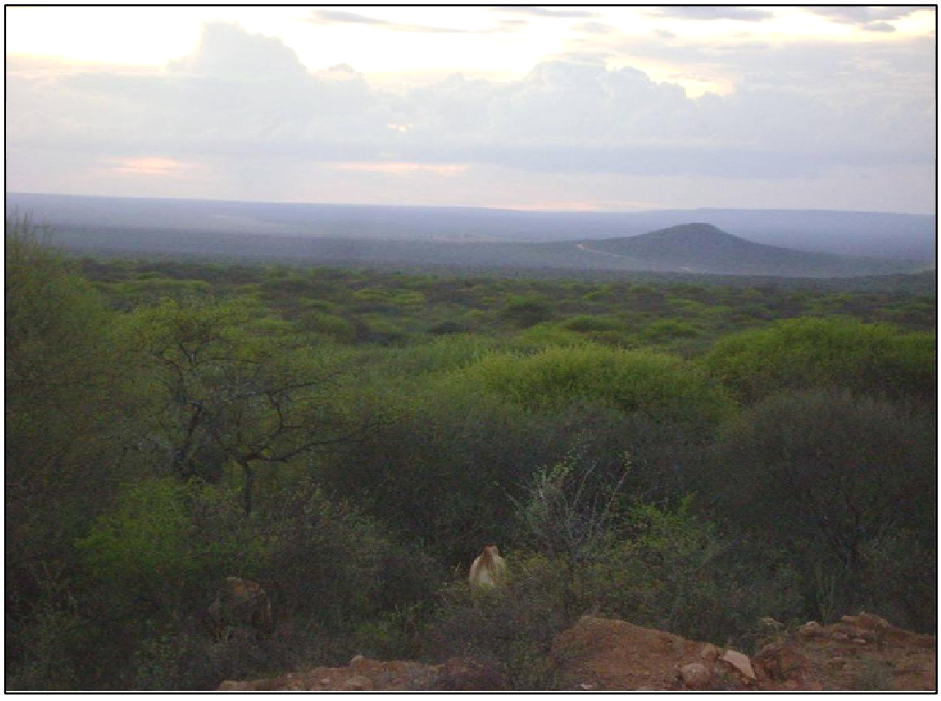
[43] According to staff, part of the reason for the failure was that customary institutions in Somali region do not have as strong a role in natural resources management as they still do in Borana.

[44] Save the Children UK (2011): Preparedness improves livelihoods and resilience (PILLAR PLUS): Rangeland rehabilitation and sustainable NRM established drought reserve area in Shinille and Dambel woredas.

[45] Save the Children UK PILLAR PLUS internal report, Rangeland rehabilitation & sustainable NRM, Established communal drought reserve area in Shinille and Dambel woredas, 30 April, 2011.

3.5 Government approaches and plans, presented by SoRPARI

At the Jijiga workshop, a representative from SoRPARI presented an overview of the rangeland resources base in the region, current uses of rangeland, the state of rangeland degradation and the history of development interventions in the rangelands. The presentation emphasised the importance of understanding indigenous rangeland management mechanisms, including mobility, herd diversity, knowledge of the ecosystem, methods for fodder and grazing resources assessment and species utilisation. He also highlighted the government's proposed rangeland development plans for the region, which incorporate controlled grazing, integrated watershed management including soil and water conservation measures, and an NRM-based conflict management approach. One of the key mechanisms being proposed is rangeland improvement through area enclosures for a variety of purposes including: drought reserves; bush control and rangeland rehabilitation; intensive fodder production; and strengthening land use management, incorporating the knowledge and influence of customary institutions. The enclosures would be managed by committees including customary leaders and local government, and would be fenced (physically and/or socially) and guarded. SoRPARI has also submitted a proposal for the enclosure of 1,000 hectares of degraded rangeland in five woredas for research and development purposes.[46]



Rangeland resources in Somali region (Mohamed Abdalle)

3.6 Perceived benefits and risks of enclosures

The Jijiga workshop participants' perceptions of the benefits and risks of different types of enclosures in Somali region are shown in Table 6.

[46] SoRPARI Range and Forestry Biophysical Business Process, Project Proposal on Establishment of area enclosures to rehabilitate and improve degraded rangelands at Arara, Gashamo, Adadle, Wardher and Kebridahar Woredas of Somali Regional State for R&D, January 2011.

Table 6: Perceptions of benefits and risks of different types of enclosures in Somali region

Enclosure	Benefits	Risks
Private	• Better land management • Reduced soil erosion (trees can't be cut down) • Land given time to rest, and pasture can recover • Introduction of quality forage seeds – good for grazers and browsers • People can settle and have better access to basic services.	• Cause of conflict between clans which used to access communal grazing • Can't accommodate a large number of livestock • Only benefits the individual owner (no sharing) • Limits access roads, footpaths for humans and livestock.
Cooperative	• Similar benefits to private enclosures, for the coop members • Management of coop enclosures can be supported by people and communities coming together • Cooperative enclosures less likely (than private enclosures) to cause conflict – can ensure cooperation between communities, especially where land is scarce.	• Not accessible by non-members and only cooperative members can benefit • Potential cause of conflict where former common pasture is enclosed • Limit access for humans and livestock • Not big enough to accommodate large number of livestock • Undermines pastoralist range management traditions, especially mobility.
Government enclosures	• Similar to benefits from private and cooperative enclosures, but it is not clear who will manage and benefit from these.	• Limit mobility over large areas - may cause conflict where others' access to former common grazing is restricted • Reduce the area of remaining, productive, common land; if enclosures are big, land outside them comes under increasing grazing pressure.

Elders made a clear distinction between areas where much of the land has already been privatised and enclosed, and areas where the main land use is still open grazing, used by mobile pastoralists. In the former, for example in Harshin and Kebribaya, the perception is that land enclosure and division is irreversible. In these areas, elders felt that continuing individual privatisation of land is not sustainable (since there is not enough land for everyone) and communal enclosures are no longer feasible: "*Land is scarce, there are no access roads for livestock or people between the enclosures - 'fences are being attached to fences' - and this is creating conflicts between neighbours*."

In the latter, for example along the roadsides north of Degehabur, enclosures are beginning to encroach into areas of common rangeland and again elders highlighted the risk of conflict with traditional users of the range.

The risk of conflict was also emphasized in the field research for the review in Shinille and Dollo, which found that communities find enclosures difficult to protect since they contradict traditional resource-sharing practices, and fear that if enclosures continue to expand into traditional, accessible common grazing areas, there is a serious risk of conflict, especially in a drought situation.[47]

[47] Gezu Bekele (2011). Ibid.

4. IMPACT OF ENCLOSURES ON POORER PASTORALISTS

4.1 Local perceptions from the review process in Borana and Somali

The field work in Borana and Somali for the NRM review specifically looked at the perceptions of pastoralist communities, including poorer households, on the impact of enclosures. The research in Borana found that:

- The poor have limited access to private kallos and can only access cooperative kallos if they can afford to pay;[48]
- Poor pastoralists, with livestock, can access community *kallos*. However, wealthier pastoralists benefit more because they have more animals that can use the *kallo*;
- Where households don't have any cattle or calves, then they may benefit from CFW used in clearing or fencing the *kallo*, but not from use of the *kallo*.

The research in Shinille and Dollo Ado/ Dollo Bay found that:

- In Shinille, poor households with few livestock depend on grazing around homesteads; privatization of accessible, productive land is pushing poorer livestock owners to further, less productive grazing;
- Poor households without land or livestock are increasing the pressure on former common grazing lands since they are dependent on selling firewood for income;
- In Dollo, some poor households (including those involved in cooperatives/ groups) with enclosures around the river are earning income from the sale of pasture/ crop leaf to others;
- As in Borana, poor households can benefit from community enclosures, but the better off benefit more since they have more animals.

Table 7 below describes the workshop participants' perceptions of who is benefitting from the different types of enclosures in each area, and the implications for poorer pastoralists. The findings generally support the research above. Although there is variation both between Borana and Somali region and within different parts of Somali region, generally wealthier pastoralist households benefit more than poorer households, whatever the type of enclosure, because they have more livestock.

It should be noted that wealthier herders or commercial livestock owners reap a double 'extra' benefit from enclosures through dual grazing: once from grazing their relatively large herds inside the enclosure, and again by grazing their relatively large herds for free on common grazing land outside the enclosure. In both cases, they gain additional benefits but do not necessarily incur any additional costs e.g. for fencing, guarding (the 'cost of exclusion'), for rehabilitation of the common rangeland that they have used and so on. This was touched on by Kenee (no date).[49]

A 1988 paper on enclosures in Somalia was prescient in highlighting some of the issues raised in the NRM review workshops, suggesting that the privatisation of common pasture should be seen in the light of a move from purely subsistence production towards a market orientation.[50] The paper suggested that while some people benefit, the main costs are borne by the pastoralists who are excluded from enclosures. It went on to say that enclosures were contributing to a 'crystallisation' of wealth stratification in pastoralist society through the allocation of permanent access to vital resources for some, and the permanent exclusion of others.[51] Flintan (2011) provides an extensive

[48] Either through buying the hay or paying for grazing inside the Kallo (e.g. 2 Birr / head of cattle, and 1 Birr per shoats).

[49] FB Kenee (PhD) (no date), Incentives and outcomes of rangeland enclosures: A comparative institutional analysis among three (agro-) pastoral districts in eastern Ethiopia.

[50] Graham, O. (1988). *Enclosure of the East African Rangelands: Recent trends and their impact*. ODI Pastoral Development Network, Paper 25a, March 1988.

[51] Ibid.

Table 7: Overview of perceived benefits of enclosures by wealth group

Enclosure	Who benefits?	Implications for poorer pastoralists
Traditional drought reserve (*seera yabbii*, Borana)	All members of a cluster of *ollas*; Anyone with livestock was allowed to use the enclosure. If they had no animals, they could participate in the clearing or fencing of the reserve and benefit later when they had built up a herd again.	Households with few or no livestock could benefit so long as they were a member of the 'cluster' and helped to prepare the reserve area.
Communal kallos (community, NGO, or government-facilitated)	All community members with livestock can benefit according to the agreed benefit-sharing system. The common systems are: 1. Everyone has an equal right to contribute all the calves they have, with no limit on number. 2. Everyone contributes an equal number of animals (e.g. 5) irrespective of their livestock holding, and including all categories of cattle. 3. Everyone has an equal right to graze agreed categories of cattle, with no limit on the number. **In addition, for kallos facilitated through CFW/ FFW** • Poor households (HH) on the CFW/ FFW programme • Wealthy HH, through grazing on improved rangeland after clearance.	• Where CFW/ FFW is used, poor households with or without livestock get a short-term benefit • Where there is no CFW/ FFW, only households with livestock benefit. Under the most common management systems (1 and 3), those with more livestock benefit more • Where the kallo is far from homesteads, poor households may not be able to afford to send livestock there (Gezu Bekele).
Cooperative/ group	• Cooperative members and leaders • Other individuals who can afford to pay the access fees • In a drought, outsiders might be allowed to graze livestock for free.	• Depends on whether poor households, women, are specifically included in the membership of the cooperative/ group.
Private	• Mainly wealthy households who have the resources needed to enclose and fence land • Some poor households who lack access to pasture, water and livestock and enclose land to earn an income • Only men have the right to enclose land.	• Poor households with few livestock may not be able to afford to pay for grazing, and access to common grazing is reduced • Poor households with land can benefit from producing fodder for sale or renting land for grazing.
Government	• Enclosures for commercial livestock or farming enterprises - usually men and usually wealthy investors benefit • Enclosures allocated to different clans (Somali) - all clan members benefit e.g. where land was previously inaccessible due to conflict • Enclosures used or planned as large-scale drought reserves – all have equal access.	• Less common grazing land is available to poorer households with few livestock • Households with more livestock benefit more • Households with no livestock don't benefit.

overview of land fragmentation in pastoral areas, including Borana and Somali rangelands. She suggests that '*In the drive to protect remaining resources, the enclosure of land (in particular dry season grazing areas) is rapidly growing, which further places restrictions on those requiring access to communal areas."* She goes on to suggest that this is leading to rangeland degradation and a decline in animal productivity, making the vast majority of people who still rely on livestock production in the rangelands more vulnerable than in the past.[52]

However, in Somali region in particular, poor households have been able to enclose land for farming or other income generating activities such as fodder production, or sale of pasture, for example in Harshin, Mieso and Kebribaya. In Harshin too, although only touched on during the workshops, poor households gain from producing and selling charcoal on enclosed land.

4.2 NGOs' perceptions of enclosures

The PLI 2 NGOs have generally supported the trend towards enclosure of rangeland:

- As a strategy for bush clearance and rangeland rehabilitation (CARE, SC US, mainly in Borana),
- As a DRR strategy where enclosures are established as a drought reserve for targeted communities (SC US, mainly in Borana),
- As a means of improving the productivity of rangeland through soil and water conservation measures, tree planting, introduction of improved fodder (CARE, SC US, SC UK),
- On a relatively smaller scale, as private fodder production units, to provide an alternative source of income for targeted households (SC US, IRC, mainly in Somali region).

The ecological objectives of NGOs' work on enclosures are relatively clear (e.g. to rehabilitate bush infested/ degraded rangeland), although more research is needed into the potential longer term and system-wide ecological impact of enhancing recovery in one place while causing degradation and overgrazing in areas outside the enclosures. On the face of it, it seems only positive to clear infested areas of bush and rehabilitate degraded rangeland. However, again, closer, more systematic monitoring is needed to understand whether there are unexpected negative ecological impacts. For example, one study found that protection from disturbance may promote bush encroachment within enclosed areas.[53]

The longer term social impact of enclosures also needs to be thought through. For example, an SC UK case study of a community managed rangeland in Jijiga *woreda* reports that the revitalisation of land through enclosure has contributed "*to at least a 30% reduction in migration of the community in search of pasture*" and that based on their positive experience, the community is now "*identifying and enclosing another new area for expansion. They have long plan to promote and totally reduce the seasonal movements in search of pasture.*"[54] This is not necessarily a problem, so long as reduced mobility/ increased settlement is one of the explicit, intended aims of the organisation's intervention (Note, however, that the area was reported as being only around 11 hectares).

So far, it is not clear whether the communal drought reserves facilitated by the NGOs will be 'reopened' for communal use or whether they are to stay as permanent enclosures, for the exclusive use of specific communities or user groups. In cases where decisions about location, access and benefit-sharing mechanisms have been fully agreed with the different user groups, including host communities and incomers, it will be harder for powerful people to 'break the rules' and exclude other users, and there may be less risk of conflict between host users and users migrating into the

[52] Flintan, F. (2011). Ibid.

[53] Ayana Agassa (2007) quoted in Flintan, F. (2011), ibid.

[54] Revitalising Rangelands: Beletka Kebele Community Managed Rangeland, internal document. Save the Children UK.

community. Management mechanisms need to specifically incorporate representation of the interests of women and poor pastoralist households, to make sure that they benefit from grazing enclosures. The PNRM approach being piloted by SC US has potential to enable this to happen.

The specific poverty-reduction or livelihoods objectives of the enclosures are not well-defined. Under PLI 2, the rangeland rehabilitation/ enclosure work falls under the strategic objective of strengthening the lives and livelihoods of pastoralists and ex-pastoralists. However, the causal framework for achieving this through the enclosures work is not clear: the target group for the enclosures interventions is not identified beyond 'the community' and it is not clear what the specific livelihoods impact is intended to be. The limited available results from Borana, from case studies (CARE) and a draft review document (Save US), include:

- *Hay fed over 2,500 cattle for 1 month during drought* (Save US),
- *Hay was harvested and distributed at household level benefitting 12,990 animals* (Save US),
- *Pasture production increased from 1 ton to 4.5 tons* (Save US),
- *333 tons of hay was harvested, benefitting 2,775 animals for 30 days* (Save US),
- *2000 cattle were fed for 3 months* (CARE),
- *400 sq km (sic) rehabilitated rangeland being used by 500 HH* (Save UK PILLAR PLUS project).

Elders in Borana emphasised that many people benefited from the SC US kallos during the 2011 drought. However, although apparently thousands of livestock were grazed on the CARE and SC US enclosures, it is not clear whose livestock these were and therefore, who specifically benefitted. As explained above, under the most common management system used (see Table 5), those with more livestock will benefit relatively more from the pasture in the enclosure than poorer households with fewer livestock. Those with no livestock will not benefit. In Borana, although wealth definitions vary, poor pastoralist households generally own less than 5 heads of cattle.[55]

More work is needed to understand who benefits, whether the benefits are sustained and whether there are unintended negative socio-ecological impacts.

In Somali region, there was also very limited data on the intended livelihoods benefit of the NRM work, and for whom. NGO staff agreed that there is a need to re-consider their NRM strategies in the light of the potential livelihoods benefits to their target group. They suggested that agencies need to:

- Assess whether enclosures are needed by the poor[56]. If so, what is the anticipated livelihoods benefit?
- Consult with customary institutions and government agencies re. how to ensure that poor pastoralist households benefit, related with indigenous knowledge,
- Ensure the participation of all stakeholders (pastoralists, NGOs, government, experts) and consider all the emerging ideas,
- Consider the pros and cons of enclosures when doing awareness-raising and training; develop contextual by-laws for stakeholder management responsibilities and how to share the benefits.

The need to clarify causal pathways for NRM activities and to define the anticipated impact (along with meaningful indicators) on livelihoods, specifically the livelihoods of poorer pastoralist and agro-pastoralist households, was also highlighted in an earlier review for PLI 2. [57]

[55] Dawit Abebe and Jeldesa Doyo (2011). Ibid.

[56] The participants identified poor households as those who are still in the pastoralist 'system' i.e. not drop outs, and that they should be further categorised by wealth for example based on number and species of livestock owned.

[57] Catley, A. and Napier, A. (2010). *Rapid Review of the cash-for-work and natural resource management components of the RAIN project.* PLI Policy Project, Feinstein International Center, Tufts University, Addis Ababa.

5. WAYS FORWARD FOR STRATEGIES ON NRM/ ENCLOSURES

5.1 Recommendations from the Borana workshop

Given the scale of government plans for expanding enclosures in Borana, there is an urgent need to establish a forum whereby communities, particularly elders and customary institutions can be made fully aware of the plans, actively comment on them, discuss the implications and share their concerns, and identify how their NRM knowledge and experience will be incorporated in the management of the enclosures. SC US offered to help facilitate such a forum.

In addition, PLI 2 NGOs need to:

1) **Clarify the livelihoods-related objectives of the enclosures/ NRM activity:**
   - Who is the target group within the broad definition of 'community'? This should be defined by gender and wealth status.
   - What are the expected livelihood benefits for the target group(s), over what time-frame?
   - What enclosure/NRM management mechanisms need to be put in place to secure the expected benefits for the target group?
   - Put in place SMART livelihoods-specific indicators for the impact on the target group within a specified timeframe.

2) **Agree the most appropriate modality for facilitating enclosures**. For example, some programmes (PSNP) use FFW/ CFW for bush clearing activities, others do not (PLI 2); some agencies provide incentives (CARE's CDF), others do not (SC US under the PNRM approach).

3) **Adopt a PNRM approach** that prioritises and strengthens the participation of communities and the role of customary institutions in NRM planning and decision-making.

4) **Advocate for/ facilitate a detailed socio-ecological assessment** that provides clear evidence of the trends and implications of changes in NRM and rangelands land use in Borana, including the implications of the increasing number and size of enclosures.

5) **Facilitate forums for government-pastoralists-pastoralists' representative bodies[58] to discuss government plans for development of the Borana rangelands**, including the implications for access to and the productivity and sustainability of the rangelands as well as the implications for NRM management. Pastoralist elders recommended:
   - Raise and discuss the issues at the General Assembly of Borana, the Gumi Gayo, which will take place next year (2012).
   - Management of new government enclosures should be done through indigenous systems/ customary institutions (for example, Abba Herega and Abba Deheeda).
   - Development of any new enclosures should be based on strong community participation and agreement, and equitable benefits-sharing mechanisms. Management systems, including those based on traditional structures, need to be transparent and accountable to communities.

[58] Participants suggested the Oromia Pastoralist Association and the Pastoralist Forum Ethiopia

5.2 Recommendations from the Somali workshop

Government, NGOs and elders at the Jijiga workshop had different perspectives on whether and how enclosures should continue to be promoted and facilitated by government and NGOs in the region. Their perspectives are compared below.

Elders' recommendations:

1) **In areas where there are still relatively few enclosures** and pastoralists depend on mobility:
   - No new enclosures in areas of common grazing land except in degraded areas.
   - In degraded areas, enclose and rehabilitate land in consultation with government and the respective communities, for use as a drought reserve.

2) **In areas where there are already many enclosures**, or where new enclosures are agreed:
   - Prevent new private enclosures and promote cooperative enclosures; Cooperative enclosures reduce the risk of conflict and increase the chance of reaching agreement over access; Cooperative enclosures have the potential to benefit more people, including poor households, women, landless and other groups who are not able to access private enclosures.

3) **Overcome some of the recognised management problems of cooperatives**:
   - Strengthen the role of customary institutions in natural resources management.
   - Ensure that cooperative enclosures are initiated by the community (not government or NGOs) and are managed jointly with government/ others implementing rangeland development interventions in the area.
   - Ensure that cooperative membership is not restricted to those who already have land/ enclosures and that there is clear agreement between the community and cooperative members regarding entitlements to access and use the enclosure.
   - Limit the role of government and NGOs to the provision of technical support for establishing the enclosure (not CFW or FFW) and legal support, for example in assisting to manage or resolve conflict. Their involvement should be at the request of the community.
   - Land use planning processes and decision making bodies for enclosures or other NRM interventions should incorporate indigenous knowledge through the participation of customary leaders.

Government recommendations:

Government representatives recommended **promoting communal enclosures**, specifically for use as drought reserves. They should be established and managed so that:

- They do not restrict mobility, which is important for sustainable rangeland NRM.
- They enhance rangeland productivity.
- They ensure more equitable benefits by being managed to provide a source of wood that can be sold by poorer households for fuel wood or construction.
- They ensure ownership of rangeland NRM by the majority of users.

NGO recommendations:

PLI agencies also recommended **promoting communal enclosures** in specific areas as a dry season or drought reserve and for specific categories of livestock e.g. similar to the elders' recommendation 1) above. They proposed similar conditions to government:

- The enclosures should not restrict mobility – this should not happen so long as the location and size of planned enclosures is agreed with the representation of all of the existing user groups, for example through a PNRM process.
- There should be equal access and they should not marginalise some groups, or benefit some at the expense of others.

- The process should ensure sustainability through the full participation of all stakeholders (including community, government, facilitating agency).

Although both the NGOs and government seemed to suggest enclosures for the purpose of a dry season reserve, there were major differences regarding the scale of enclosures being recommended. While NGOs suggested enclosures on a similar scale to traditional drought reserves (on a community/ kebele basis), government suggested that drought reserves should be created 'on vast communal land', broadly based on current dry and wet season grazing patterns. These would not be fenced but would be under the control and protection of government.

5.3 Conclusions

Private and semi-private enclosures are expanding in both Borana and Somali pastoralist/ agro-pastoralist areas. The main benefits are captured by those people with relatively more livestock, and the benefits for poorer pastoralists seem to be limited. Enclosures represent the fragmentation of the rangelands. On the one hand, wealthier individuals and households drive the process by enclosing land for commercial livestock production. In contrast, poorer pastoralist/ ex-pastoralist households seek to diversify their livelihoods through enclosing land for farming, fodder production or other income generating activities. Others enclose land to protect it from the increasing numbers of households who don't own land or livestock and depend on charcoal production, sale of firewood or other 'destructive' uses of natural rangeland resources.

In Borana, the enclosure of communal rangelands for private and select group use for commercial purposes, is '*changing the pastoral way of life and production system'*.[59] In Somali region, in some areas where most of the land is already privatised, some poor households who managed to enclose farmland are benefitting from farming, fodder production or renting pasture. For others, with no land and few livestock, it is becoming more and more difficult to graze open, free rangelands.

Communal enclosures promoted by NGOs and government are an increasingly popular strategy for regenerating rangeland, as well as creating pasture reserves to protect animals during extended dry periods or drought. So long as they have been established by consensus of the community, are accessible to all traditional users, are limited in time and space (i.e. not permanent) and are managed with the involvement of customary institutions, they may be a valuable tool for rangeland management and disaster risk reduction. However, again, those with more livestock tend to benefit relatively more. There is a need to re-think whether wealthier households (or private investors, commercial enterprises or cooperatives) could be made to bear more of the costs of exclusion (e.g. fencing, guarding) or the costs of rehabilitation of the enclosed land, that they will benefit from later, rather than being subsidised by NGOs or government.

For those still in pastoralism, community enclosures need to have by-laws and mechanisms that ensure that households with few livestock can access and benefit from them, and that the rights of all traditional user groups (including those not resident in the area) are respected. The potential benefits to poor households, and women need to be monitored and measured far more systematically. Advocacy work is also needed to support the further integration of pastoral traditional NRM mechanisms with formal laws (community land titling, co-management arrangements?[60]) that recognise pastoralists' rights to and tenure of communal rangelands. The PNRM approach has potential to be expanded to address these issues.

[59] Yacob Aklilu and Andy Catley (2010). Ibid.
[60] Talasan Consultancy PLI (TCC)(2009). Ibid.

In the face of settlement policies and land use plans that promote rangeland development through enclosures, increasing commercialisation and the 'moving up and moving out' scenario will mean that enclosures are likely to continue to benefit the relatively better off - those that are 'moving up' and engaging in commercial livestock production. For those who are 'moving out', enclosures that protect a few livestock for a limited time during a drought period may be enough to save their livestock in the short-term, but will not be enough to enable them to rebuild their herds to a level that allows them to re-engage in full-time pastoralism.

For poor households, we need to ask whether there are other NRM or non-NRM intervention options that may be better targeted to those with limited/ no land or livestock than rangeland rehabilitation and enclosure. Accepting that there will be settlement, urbanisation and movement out of the pastoralist livelihood system, and focussing more on how to support poor households to transition into other livelihoods in urban and peri-urban areas or in the new 'settlements', may be more helpful. To put this in perspective, a recent Tufts study suggested that the number of wealthy pastoral households is increasing by around 2.5% (in line with average population growth) while poor households are increasing at a rate of 4.1%.[61]

The support being provided by PLI agencies, Oxfam GB and others to poor households (with land) to engage in fodder production as an income generating activity is one example. Supporting appropriate education in pastoralist areas is an example for the longer-term, that has the potential to provide many more households with skills and options to find a way to 'move out and up' rather than 'move out and down'.

The issues are complex. NGOs and government should ensure thorough, extensive consultation with elders and communities about the pros and cons of enclosures. Unless organised on a 'pastoralist system-wide' basis, promotion of enclosures of any kind will contribute to rangeland fragmentation, encourage settlement and are unlikely to ensure the long-term benefit for the system as a whole. One of the recommendations of the Tufts researcher in Borana was that there needs to be a systematic assessment of the socio-ecological impact of rangeland development trends, including the increasing number and size of enclosures, and the implications for the rangelands as a whole. The 'Moving Up or Moving Out?" study also suggested that rationalising land and water resources in the pastoral areas of Ethiopia should start with a system-wide inventory of natural resources with analysis and quantification of trends in vegetation and livestock herds, including measurement of bush and weed encroachment over time. This information could then be fed into an economic analysis of pastoralism and economic comparison of land use options.[62]

Land privatization, division and enclosure is increasing across the pastoralist areas of Ethiopia. PLI 2 NGOs and others working on rangeland NRM issues need to be completely clear why they are supporting enclosures and what the longer term implications of this support might be.

[61] Yacob Aklilu and Catley, A. (2010). Ibid.
[62] Catley, A. and Iyasou, A. (2010). Ibid.

ANNEX 1 – PRESENTATION ON ENCLOSURES IN BORANA RANGELANDS

PLI Policy Project

'Kello' (Enclosure) - Part 1: Historical Development, Access and User Right

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Historical Perspective of *Kello*

- Traditionally non-fenced but through common understanding and agreement protected grazing land for calves and sick animals round encampment exists
- It started to take its current shape (fenced enclosure) during *Geda* Goba Bulle (1968-1976)
- Fenced enclosure first introduced by Jirmo Dida (Borena Pastoralist)
  - ✓ From Guji Pastoralists' who practices *Kallo* along before
  - ✓ First introduced in Did-Hara, and expanded to other areas
  - ✓ Approved by Geda Council on Gumi-Gayo with intention of making pasture available to calves during dry season with out constraining communal grazing lands.

Type, management, access and user right of *Kello*

1. Semi-private / communal owned
   - ✓ At Olla level
   - ✓ Very few in the past but currently each Olla has got one *Kello*
   - ✓ Established through participation of all Olla members
   - ✓ With equal access and user right regardless of the number of animals Olla members have,

Type, management…Cont.

1. Semi-communal …Cont
   - ✓ Recently, support from NGOs (e.g. CARE, SC-US, SOS-Sahel …..) through NRM management initiative in return for cash capital intended for other community development work
   - ✓ Management and access decision is based on traditional system, however, enforcing rules and regulations on trespassers is getting difficult;
     - ➢ Use of government officials / system as a protection
     - ➢ Trespassers are usually rich and powerful individuals

Type, management…Cont.

2. Fully privately owned
   - ➢ Very few (2-3 in number in Web and Yabello area) of this exists and recent development
   - ➢ Exclusively managed and used by the owner.

Type, management, …Cont.

3. Co-operative *Kallo*
   - ✓ Established by poor people
   - ✓ Membership doesn't necessarily limited to Olla members, it can involve people from more than two Ollas.
   - ✓ Land demarcated by government
   - ✓ With initiative to control bush encroachment and at the same time to support the poorest of the poor with in the community (e.g. PSNP initiatives).

Type, management, …Cont.

4. Private pasture growth long crop land:

- Fenced crop land and hay production along the crop field
- Cut and carry,
- Hay storage for private use



Driving factors

- ✓ Population growth and increased livestock population compared to land available
- ✓ Increasingly changing land use/cover change
  - ➢ Increased bush encroachment problem
  - ➢ Increased land use for crop cultivation
    - Lack of pasture availability and competition over land access
- ✓ Increased individualistic sense of land ownership driven by increased livestock commercialization
- ✓ Increased level of poverty
- ✓ Bush clearing/thinning approaches
- ✓ Weakening of traditional institution natural resource management system
  - ➢ Power full people in the *geda* system
  - ➢ Rich people with strong influence on both *geda* and Government institutions

General community perception of benefits of *Kallo*

- Enhances Ecological Resilience
  - ✓ Limits grazing pressure which is one of the triggering factors for grazing land to shift to other state (s).
  - ✓ Helps to maintain the seed bank of palatable and useful grass species.
- Economic Benefits
  - ✓ Improves pasture availability for calves and sick animals
  - ✓ Supported milking and other weak mature cattle during extended dry period

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Poor pastoralists perceived benefits from Kallo

- Who are / is the poor?
- Classification of wealth category slightly varies from place to place, but
  - ➢ Cattle ownership
  - ➢ Less than 5 heads of cattle per household

Poor pastoralists perceived benefits from Kallo

- Private and Co-operative *Kallos:*
  - ✓ Poor pastoralists have no access to both private and co-operative *Kallos*.
  - ✓ Private *Kallo* exclusively owned by an individual, and thus access to the poor is limited
  - ✓ Access to co-operative *Kallo* involves payment either through
    - ➢ Buying the hay
    - ➢ Paying for grazing inside the Kallo (e.g. 2 Birr / head of cattle, and 1 Birr per shoats)
    - ➢ Those who can't afford paying can't access the pasture in the Kallo in either of the approaches.

Benefits to poor Pastoralists

- Communal *Kallo:*
  - ✓ Poor pastoralists have equal access, however, rich pastoralists benefits more because of the difference in the number of animals that can use the *Kallo*.
  - ✓ In most cases the benefit is only from the cash for work program – bush clearing and fencing of the *Kallo* and no benefit from using the Kallo in case where the member of the Olla doesn't have any cattle or calf.
    - ✓ Poor pastoralists own 0-5 cattle and probably some shoats

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Community perception of challenges

- ✓ Increasing conflict:
  - ➢ Trespassing *Kallo* management and access rules and regulation is increasingly a problem often causing a conflict
  - ➢ Rich people are often the trespassers.
- ✓ Increased grazing pressure and overgrazing on communal lands
  - ➢ Reduced access to communal grazing lands
  - ➢ While enhancing recovery in one place it causes degradation in others – areas outside enclosures are heavily overgrazed

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Community perception of challenges

- ✓ Increased migration outside traditional wet and dry season grazing areas particularly during the drought period.

"Most of our grazing land is taken by bush and *Kallos*, and we don't have a place to take our livestock for grazing"

(Herders from Miyo and Dillo in Did Hara-Allona, April 2011)

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The way forward

- Clarify the objective of *Kello* interventions
  - NRM (Ecological focused)?
  - Livelihood improvement (Economic)?
    - Whose livelihood should be improved?
  - Systematic impact assessment on socio-ecological system
- The number and size of Kellos increasing
  - Initial objective changing
  - Ownership and access changing?
  - Where is the whole system heading to?
    - Ranching?
    - What is the implication to access and utilization of spatially distributed patchy resources?

ANNEX 2 – PRESENTATION ON ENCLOSURES IN PARTS OF SOMALI REGION

PLI Policy Project

Assessment of pastoralists' views on enclosures in Shinille and Dollo

For NRM Review Workshop, November, 2011, Jijiga

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Purpose and methodology

Purpose

- To identify trends in enclosure development and document the views of pastoralists, esp. poorer pastoralists, on access and benefits of enclosures facilitated by NGOs

Methodology

- 3 enclosures selected: Dhagajabis (Shinille); Boryale (Dollo Ado); Goal (Dollo Bay); all are 'community enclosures' used at least once
- Dhagajabis & Boryale – FGDs (all wealth groups)
- Goal - individual interviews (poorest) & FGD (kebele leaders)

Types of Enclosure

Shinille

- 2 types of enclosures:
  - communal
  - private (within the farm – *sera* and outside the farm – *beer*)

Dollo area

- Almost all private enclosures (*sheromo*) are established within the farmland and along the Dawa and Genale rivers

Timeline – Rangeland enclosure practice in Shinille

Time	Event/Outcome
1983	• Critical drought led-to massive livestock mortality • Herds depleted - even relatively better-off unable to feed the whole family • Many drought destitute pastoralists stopped seasonal movement while better-off split their family • Private enclosures initiated mainly by those who split their family to allow them to feed milking animals (*Irman*) kept at the main settlement
1984 - 1988	• Herds recovered and seasonal movement reinitiated • Majority of the private enclosures were abandoned
1998	• Record high rains • Some pastoralists planted their previous enclosures to take advantage of crop production
2000 - 2009	• Drought frequency increased • Herds were depleted and majority again stopped seasonal movement • Rangeland enclosure practice was reinitiated • Drought-destitute pastoralists became dependant on income from firewood/charcoal marketing • Others responded by enclosing more rangelands mostly close to settlement areas - to protect acacia trees and feed pods to goats
2010	• SC-UK facilitated communal enclosure at Jeldeysa, half day trek from main settlement • Rains performed well
2011	• SC-UK facilitated new enclosure close to settlement • Rains failed and the jeldeysa enclosure was grazed in March 2011 for one week

Timeline - Rangeland enclosure practice in Dollo area

Time	Outcome
Early 1990s	• Civil war erupted in Somalia • Returnees, clan members that left for Somalia during Ethio-Somalia war in 1977, invaded most potential dry season grazing lands around Dawa and Genale rivers for crop farming, sale of pasture/ maize leaf • The host community responded by enclosing more rangelands around the rivers, initially to protect dry season grazing land • Some people began to fence rangelands away from rivers, to safeguard the browse against returnees who earned income from sale of firewood
2000s	• Drought frequency increased • Irrigated and flood recession-based crop farming expanded around the Dawa and Genale Rivers with the support of NGOs and local government • The practice of private enclosure expanded as crop farming expanded
2009	• A number of communal enclosures were established away from the rivers with support of SC US - FFW, including the Boryale enclosure (Dollo Ado)
2010	• Rains failed
2011	• Goal communal enclosure (Dollo Bay) established with support of SC US - FFW

Perceived access, benefits - Dhagahjabis

- Jeldeysa enclosure – hillside, 6 hours walk on livestock trekking route from main settlement
- Location meant livestock had to camp to graze the enclosure (*bulcho* or *hollo-hidh*)
- Most poorer HH couldn't afford extra labour and food needed to camp
- Herds camped at the enclosure in March 2011 for one week – better off with larger herds benefitted more

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Perceived access, benefits - Boryale

- ~ 4 ha, close to trekking route to Mandera market & main settlement
- Established via FFW, contracted to labourers from Suftu station
- Used by Boryale & Suftu communities for 2 months in 2010 dry season to protect kids/lambs
- Poorer HH also contributed livestock (lambs/ kids)
- Location means difficult to protect and some community members want to remove fence; guard claiming ownership.

Perceived access, benefits - Goal

- ~ 6 ha donated by kebele chair
- Grazed for 2 weeks in April 2011
- 13/15 respondents (poor) contributed livestock

Perceptions of benefits from private enclosures, Dollo Bay (n=15)

HH with enclosures (n=8)

Benefits
- Income from pasture (5)
- Pasture for own livestock (5)
- Protect from outsiders during drought (2)

Concerns
- None (5)
- Poor no access to farm (1)
- Poor restricted access to rangeland for livestock (1)
- Poor forced far for firewood (1)

HH without enclosures (n=7)

Benefits
- Access to pasture from neighbours' enclosure (3)

Concerns
- Poor no access to farm (3)
- Poor restricted access to rangeland for livestock (3)
- Poor forced far for firewood (1)

Preference for private vs. communal enclosure (n=15)

With enclosure (n=8)
- 6 prefer private
- 1 prefer communal
- 1 against any

Without enclosure (n=7)
- 0 prefer private
- 3 prefer communal
- 4 against any

Conclusions – private enclosures

Shinille
- Wealthier privatizing accessible, productive land, pushing poorer to further, less productive grazing
- Poorest now more dependent on selling firewood
- Those with few livestock depend on grazing around homesteads – access reduced by private enclosures

Dollo
- Land around river already privatized
- Some poor HH with enclosures earning income from sale of pasture/ crop leaf to others; average HH enclosure is 0.25 ha (poor) and 4.5 ha (better-off); income can be 500 ETB for dry season and 3000 ETB during drought

Conclusions – communal enclosures

- Enclosure can protect part of rangeland and categories of livestock, at expense of others
- Generally better off benefit more since have more animals
- Enclosures contradict traditional resource-sharing practices, are difficult to protect
- If continue to expand, there is a risk of conflict between communities (esp. during drought) if enclose traditional, accessible grazing areas

Recommendations

- Discourage private & NGO-facilitated communal enclosures around settlements & in wet season grazing areas
- Target poorest HH with income generating activities (which would enable them to buy fodder, access enclosures)

ANNEX 3 - SAVE THE CHILDREN USA FRAMEWORK FOR PNRM

ANNEX 4 – LIST OF PARTICIPANTS AT NRM REVIEW WORKSHOPS

NRM review workshop participants - Yabello

Name	Organisation
Doyo Dulacha	Pastoralist elder
Ilmole Dabessa	Pastoralist elder
Sara Malise	Pastoralist elder
Tunale Doyo	Pastoralist elder
Atlaw Belayneh	Zonal Pastoralist Development Department
Samuel Tuffa	Yabello PDARC
Nizam Husen	Yabello PDARC
Zariya Mamo	Land use and Environmental Protection office
Huka Garse	SOS Sahel
Wondimu Mengiste	UCT/linkaging
Hussen Miyo	SC US
Gelma Duba	SC US
Theodros Jima	SC US
Jerry Farrell	SC US
Axel Weiser	SC US
Tesfaye Abebe	CARE
Amanuel Kassie	CARE
Halake Dida	CARE
Aliyu Mustefa	CARE
Charles Hopkins	CARE
Trousseau	CARE
Dr. Solomon Desta	Consultant MARIL
Dr. Dawit Abebe	Tufts University, FIC, Addis
Alison Napier	Tufts University, FIC, Addis

NRM Review workshop participants - Jijiga

Name	Organisation
Asael Galol	Pastoralist elder, Aware
Mahamed Sheikal	Pastoralist elder, Degehabur
Osman Ali Aden	Pastoralist elder, Harshin
Budul Ahmed	Pastoralist elder, Kebribaya
Terefe Abebe	Pastoralist elder, Harshin
Mohamed Abdalle	SoRPARI
Mohammed Sherif	SoRPARI
Yassin Ibrahim Yoni	LCRDB
Abdirizak Abdulahi	LCRDB
Abdifatah Guddi	Water Bureau
Muse Abdi	Pastoralist Commission
Abay Bekele	OXFAM GB
Million Ali	OXFAM GB
Berhanu Eshete	Mercy Corps
Guled Ismael	SC UK
Ahmed Ibrahim	IRC
Aden Mohamed	IRC
Jerry Farrell	SC US
Dr. Solomon Desta	Consultant MARIL
Bashir Abdullahi	Tufts University, FIC, Addis
Alison Napier	Tufts University, FIC, Addis