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Reviving a Traditional Pasture Management System in Fentale, East Central Ethiopia

SHIMELIS BEYENE AND DAFU GUDINA

Abstract

In this paper, we describe the process of establishing dry season grass reserves, traditionally known as kalo, among Kereyu and Ittu pastoralists of Fentale in the Awash Valley of eastern central Ethiopia. The data were primarily collected using qualitative research methods such as key informant interviews, group discussions, field observations, and records of community meetings and non-governmental organization (NGO) project reports. In the last decade and a half, several attempts were made by NGOs and local governments to encourage pastoralists to revive their traditional practices of setting aside grass reserves for seasonal grazing, but only a few such private enclosures were established. Even these private enclosures remained sources of conflict among community members until the severe drought of 2002. In response to events associated with the drought, community leaders, with the support of government and NGOs, mobilized local communities to establish both private and communal grass reserves for dry season grazing. The unusually good rains in the summer of 2003 resulted in high pasture production in the reserves that had not been observed for several previous decades. Stimulated by this positive event, communities attempted to expand this community-based pasture management system with varying degrees of success. While this initiative indicated that degraded rangelands can recover with appropriate management practices, and that increased rangeland productivity can significantly improve the livelihood of pastoralists, setting up appropriate institutional mechanisms for the sustainable management of pasture remains a challenge.

Introduction

The Kereyu are among several traditional pastoralist groups living in the Upper Awash Valley within the Great Rift Valley in Ethiopia (Figure 1). Almost all of the Kereyu, who are primarily cattle herders, live within Fentale Woreda (equivalent to a district), which is administered under the East Shoa Zone of the Oromia Regional State. The Kereyu are believed to be early inhabitants of the area (Wilding 1985). The other traditional people in the area, the Ittu, are more recent immigrants from West Harerge, a region approximately 70 km to the east of the Fentale Woreda. They migrated to Fentale within the last 40 or 50 years as a result of drought, conflict with the

Issa Somali peoples, and desire for less populated land (Gebre 2001a). Although both belong to the same language group—the Oromo—some aspects of their cultures differ; the Ittu practice agro-pastoralism and are almost exclusively Muslim while the Kereyu are primarily herders who mostly practice their indigenous religion. However, this distinction has faded in recent years as the Kereyu have been rapidly converting to Islam and have become increasingly involved in farming (Gillingham 2001), the latter due to a decline in pastoral livelihoods (Abdulahi 1998). In this paper, our discussion will primarily focus on the Kereyu.

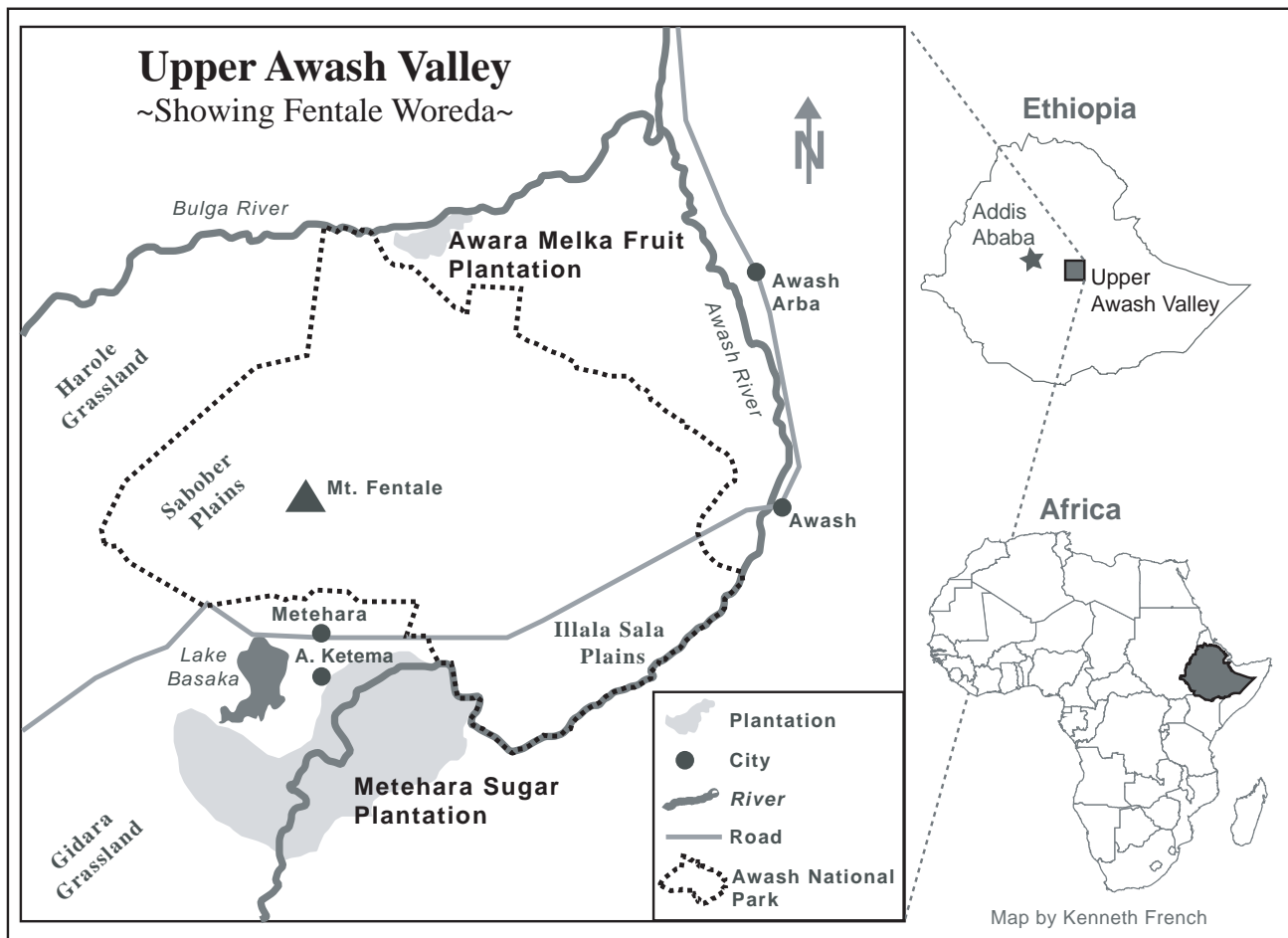


Figure 1. The study area showing Awash National Park, commercial farms, Mt. Fentale and the parts of the community kalos of Harole and Fentale (Courtesy of CARE).

Because the Kereyu are circumscribed in a relatively small area (Fentale Woreda covers about 150,000 ha), surrounded by different pastoral and agro-pastoral groups, and their interaction with these groups is primarily hostile, livestock grazing is tightly regulated in all seasons. As a result, the Kereyu have complex seasonal grazing systems (Edjeta 2001) in comparison to their pastoralist neighbors, such as the Afar, for example (Assegid 2001). Before the 1960s, the Kereyu utilized the whole area within Fentale and a small portion of the neighboring woreda, Boset. During this period, the Kereyu used three major traditional grazing zones:

the primarily open grassland plain (**ona ganna**) for the wet season, the riverine and adjacent wooded savanna vegetation (**ona birra**) for the early dry season, and the thorn bush between the two zones (**ona bona**) for the late dry season (Edjeta 2001). Even within these major ecological zones, different villages may be required to travel to different parts of a specific zone for livestock grazing during the appropriate season. Livestock movement between these grazing zones is regulated through traditional rules and regulations, as well as varied and complicated rituals and ceremonies (Beyene 2006; Edjeta 2001).

Since the 1960s, the creation of protected areas and the establishment and expansion of large-scale commercial farms throughout the Awash Valley, especially along the flood plains of perennial rivers, has led to reduced access to traditional grazing lands, watering points and ceremonial sites (Abdulahi 1998; Edjeta 2001). Abdulahi (1998) estimated that these development schemes have expropriated more than 55 percent of traditionally accessed Kereyu land. The new development schemes not only denied the Kereyu access to dry season grazing areas, they have also blocked the seasonal livestock movement routes and almost all of their watering points along the Awash River. Primarily as a result of lost access to the critical dry season grazing areas, the pastoralists have become increasingly vulnerable to extended dry seasons and drought (Abdulahi 1998). Furthermore, floodplains removed from pastoralists throughout the Awash Valley are potentially up to ten times more productive than most of the rangeland left to the pastoralists (Lane 1993). These land-use changes—the establishment of protected areas and commercial farms—have had particularly negative effects on the Kereyu (Gebre 2001b), who were already confined to a relatively small area. Moreover, in the last few decades, the human population in the area has increased, due to both internal demographic growth and immigration (Gillingham 2001).

Over the last few decades, then, this increase in human and livestock populations within an ever-shrinking rangeland has forced pastoral communities to use whatever grazing land is accessible to them with little regard to seasonal rotation or the need to set aside grass reserves for critical dry periods. The wet season grazing areas, which have not been claimed by the various development schemes, are now used year-round by pastoralists. The combined effects of all of these factors have led to diminished seasonal mobility of livestock, year-round use of seasonal grazing areas, and increasing deterioration of the rangeland. In fact, many of the wet season grazing areas, which are now being used continuously throughout the year, have reverted to bare ground, or have been overgrown with bushes or grass species unpalatable to bovine (Abule et al. 2007a). As a result, average livestock holdings per household have declined among the Kereyu, and

all pastoralists in the area have become increasingly vulnerable to food insecurity—especially during extended dry seasons and drought years (Abdulahi 1998). During 2002, one of the most severe droughts in the last few decades occurred and some pastoralists in Fentale lost more than 40 percent of their livestock (Piguet and Hadgu 2002). Even the most drought-resistant camels succumbed to this drought in some areas. During the height of the drought, non-governmental organizations and the local and regional governments of Oromia collaborated to provide an innovative emergency intervention—the provision of emergency fodder for livestock.

The sudden drop in livestock mortality at the height of the drought due to this fodder provision led to increased discussion on the idea of putting aside grass reserves, locally known as **kalo**, among communities and non-governmental organizations in the area. In this paper, we describe the impact of this kalo initiative on the environment and the people, as well as the challenges faced by committees in sustaining the kalo initiative.

Theoretical Framework

Ever since Hardin articulated the famous phrase “tragedy of the commons” (Hardin 1968), studies have clarified the distinction between common-pool resources and the property regimes and conditions under which these resources can be managed on a sustainable basis (Bromley 1992; Ostrom 1990). The kalo initiatives in Fentale meet these conditions to varying degree thus highlighting challenges that the initiatives face in the long-term.

Research Methodology

Because the first and second authors served as Project Coordinator and Conservation Officer respectively, for CARE’s “Awash Conservation and Development Project,” we had regular contact with the communities involved in the kalo initiative. Most of the data for this analysis was extracted from information collected for the project’s monitoring and evaluation purposes and from the project implementation reports. The primary vehicles for data collection were monthly community meetings (from October 2002 to the end of 2005), various

Participatory Rural Appraisal techniques, and site visits that were carried out by the project staff, including the authors.

At the monthly meetings, members of Village Development Committee from all 18 kebeles in Fentale discussed issues related to selecting and setting aside areas for dry season grazing and later on management, such as paroling and excluding trespassing livestock from the kalos. Progress and challenges in the implementation of the community plans were discussed. Support from the government and non-governmental organizations were also requested during these meetings. Minutes from these monthly meetings provided an overview of the process of the kalo initiative.

A Participatory Rural Appraisal exercise was conducted from November to December 2003 in 14 representative villages to assess the impacts and challenges of the kalo initiatives. About 20 percent of households were sampled in each village. During this Participatory Rural Appraisal exercise, key informants and household interviews and focus group discussions (women, young and elders) were conducted by teams of project and government staff. The household interview took about 40 minutes to an hour but durations of group discussions were more variable usually taking more than an hour and occasionally going over two hours. These discussions attempted to provide perspectives of three distinct groups of the community—elders, young men and women. All the three types of assessments—household interview, focus-group and key informant interview—were conducted in each of selected village. Questionnaires for the household interviews were designed to provide information on: 1) where respondents had taken their livestock for grazing at different seasons in the last 10 years; 2) distances traveled to and from grazing and watering points; 3) changes, if any, in the conditions of pasture in the last 10 years; 4) location of respondents' villages in relation to community kalos and whether they had to relocate for the kalo season; and 5) what the benefits and costs of the kalo initiatives may have been. The household interviews and the group discussions also focused on management-related issues such as monitoring/guarding, the role of traditional, especially gada, leaders as well as

the Village Development Committees and conflicts within the local communities and with other ethnic groups. Because the interviewers used both open-ended and semi-structured questionnaires, the issues raised were varied and complex. We only highlight some of the community views in this article. Because most of the data for this article were derived from data prepared for project reports and the reports themselves, they are primarily qualitative.

The Study Area

Fentale Woreda includes diverse topographical features ranging in altitude from 2007 m above sea level at the tip of Mount Fentale to below 1000 m above sea level (Figure 1) in the eastern part of the plains (Jacobs and Schloeder 1993). Located within the East African Rift system, extensive geological activity produces diverse terrain, several hot springs, and Lake Basaka covering more than 35 km² (Jacobs and Schloeder 1993). The only major river, the Awash River, passes through Kereyu country while the Bulga River forms the northern boundary of their territory and is contentiously shared with other ethnic groups—the agropastoral Argoba and the pastoral Afar. Before the development of ponds and boreholes by government and non-governmental organizations, these two rivers provided the only source of livestock water during the dry season for the Kereyu. The high concentration of fluoride in Lake Basaka makes the water unfit for livestock.

The area is characterized by hot and semiarid climate. Annual rainfall averages about 500 mm (Figure 2) with great variability year to year (Abdulahi 1998). The main rainy season occurs between June and September, and the minor rainy season occurs between February and May. The Kereyu often assess the productivity of the rainy season by the condition of their livestock at the end of the main rainy season—which is also a good indicator of their ability to withstand the impending dry season.

Owing to varied topographical and hydrological features, the Fentale Woreda exhibits a complex variety of habitat types (Jacobs and Schloeder 1993), generally riverine forest, wooded savanna thorn bush, and grassland. The riverine forest along the bank of the Awash River is dominated by big trees such as fig

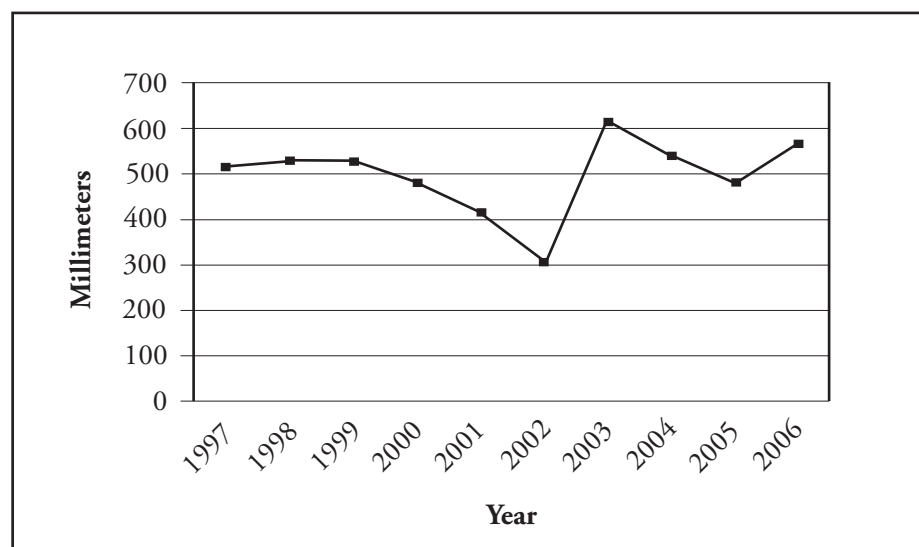


Figure 2. Annual rainfall from 1997 to 2006 (data from Metahara Sugar Estate Research Station).

(*Ficus sycamores*) and several acacia species common along the floodplain. The undergrowth, pods and leaves of these trees provide critical livestock food sources during periods of drought (Abdulahi 1998). Most of this riverine forest now lies within the commercial farms and the park. The small segments of the forest that are still accessible to pastoralists are increasingly being cleared for small-scale irrigated cultivation.

The woodland savanna, dominated by multiple acacia species and other hardwood trees, stretches along the floodplain where the Awash River traverses more level areas and along the course of seasonal streams that get waterlogged during some rainy seasons. Most of the vegetation zone associated with the floodplain has been converted into large sugarcane plantations and small irrigated farms (Beyene 2006). The thorn bush vegetation characterized by many acacia species (*A. senegal*, *A. mellifera*) and other thorny bushes is dominant on well drained, rolling areas with shallow soils. *A. nubica* is the dominant bush species in the more flat, overgrazed areas, especially around permanent and semi-permanent villages. In the last few decades, the thorn bush vegetations have been expanding into the grassland (Abule et al. 2007b).

Finally, grassland, where the dominant vegetation is grass covering more than 50 percent of the ground cover (Jacobs and Schloeder 1993), is the dominant vegetation type in the area and is scattered throughout the plain and on flanks of Mount Fentale. However, in recent years a significant area of this grassland has been converted into thorn bush (Abule et al. 2007a).

Traditional Institutions and Resource Management

Detailed ethnographic study on the nature of traditional institutions among the Kereyu has yet to be conducted. Searching the Human Relations Area Files and other databases, and consulting scholars who have done research on Kereyu, revealed no such study. Most studies of traditional Kereyu and Ittu institutions are short-term ones, ranging from a few weeks to a few months and are based primarily on various forms of interviews. Thus, we provide here a preliminary description of traditional institutions based upon our experiences working with the Kereyu for nearly a decade and also based upon the published accounts of two masters' theses: Abdulahi (1998) and Edjeta (2001). Edjeta's account depicts an ideal model that was practiced before the

land-use changes had occurred. Many traditional institutions that deal with pasture management have steadily declined in their effectiveness over the last few decades due to loss of almost all of the dry season grazing areas and a significant portion of the wet season grazing areas.

The Kereyu are organized around a patrilineal kinship system, with clans and sub-clans, down to the level of extended family. Two clans, **Dullaha** and **Baso**, are divided into sub-clans, and each sub-clan can be broken down into sub-sub clans. Each level of this structure is administered through a council of elders headed by a **damina** ('clan leader'), who is charged with a variety of responsibilities, from handling domestic issues of abusing husbands, to supervision of herd and pasture management practices, to conflict resolution at different levels. Elder councils at each level of the clan structure oversee the performance of the damina, forming a system of checks and balances (Edjeta 2001). However, the Kereyu, as in other traditional Oromo groups, also have a unique institution called the **gada**, an age-set system that cross-cuts kinship organization. There are five generations of age-sets (**tuutaa**), each taking leadership roles in political and ritual responsibilities on rotational basis for a period of eight years. The generation who takes on leadership roles also lives in a special village, called **gabala**, during their eight year tenure. Gabalas are located in a specific site for each tuutaa and are reestablished every 40 years. During each tuutaa's tenure, including during transfer of power, there are important ceremonies where almost all of the Kereyu community participate. These ceremonies are held in special sacred sites and serve as venues whereby norms are established or reinforced; they also deal with ceremonies for health and fertility of people, livestock, and rangeland (Edjeta 2001). We saw that almost all men and their livestock are expected to attend these ceremonies (see also Edjeta 2001). Because most of these ceremonies are held at particular seasons and places, and people and livestock are expected to be there, movement of livestock between different grazing zones are coordinated through these rituals.

The rituals exactly take place after pasture and water depletes from the *ona ganna*, and movement to another source becomes mandatory. Arriving at the Awash River bank, as indicated above, a series of ritual would be carried out throughout the *Birra* season. These rituals would keep stock in the *ona birra* so that pasture in the other two ecological zones would not be overgrazed. Upon return to the *ona bona* and *ona ganna*, other rituals would be performed. Moreover, we have also seen that many of the ritual places bear the same name as the watering points which exactly indicate the close interrelations between the ritual performances and pastoral movement.... On each ritual, the basic contents of the songs are prayers for peaceful performance of the pastoral movement (Edjeta 2001:28, emphasis in original).

It is fair to assume that these seasonal ceremonies that required movement of livestock from one zone to the other had facilitated the optimal use of the rangeland. Elders often recall lush grasses in most areas that are now either bare or covered with bushes.

Within the above broader framework, Edjeta (2001) identifies a two-level system of grazing management. The first one is based on **ganda**, a territorial herding group roughly equivalent to a village¹. The head of the village, the **abba ganda**, along with other elders, makes decisions on the time of movement, the area of grazing, the composition of livestock, and the allocation of communal labor for the village (Edjeta 2001). Through efficient traditional communication systems, almost all adult men have knowledge of the status and distribution of resources at a particular point in time, which then informs decisions on livestock movement patterns (Abdulahi 1998). The second level of grazing management involves the division between the two major clans, namely the Dullacha and the Baso. Consequently, Fentale is divided into two major grazing areas termed as Ona Dullacha (the grazing area of Dullacha) and Ona Baso (the grazing area of Baso) each with the three ecological zones of its own. However, these grazing areas do not signify territorially based ownership rights of the respective clans but only a regulatory mechanism on how to use pasture

resources optimally and avoid possible conflict over these resources (Edgeta 2001). In theory, any Kereyu can use areas of either clan as long as the appropriate grazing practices are followed. Here again, the abba gandas, who are responsible for the management of group herding, are expected to regulate livestock movements and comply with traditional practices (Abdulahi 1998; Edjeta 2001). Violators would be fined according to the severity and context of the offence based upon the decision of the damina and/or council of elders. The charges range from minor penalties, such as a small payment for *chat* (stimulant plant leaves often chewed by elders), to slaughtering of livestock. It is interesting to note that, according to Abdulahi (1998), the most common sanctions are those related to violating rules of water and range utilization.

Abdulahi (1998) identifies a third level of grazing management that involves border areas between the Kereyu and other pastoral groups, such as the Afar. Livestock grazing in these 'tension zones' (Beyene n.d.) is a precarious exercise and is pursued only as a last resort when the pasture is depleted elsewhere, which usually happens during extended dry seasons.

Uses and management of resources at the borders of other tribes are secured by armed young members, locally known as '*salfa*' who have the responsibility of patrolling these resources by leaving early in the morning and by creating a peaceful atmosphere for the herders who come to the area for grazing during the day time (Abdulahi 1998:100, emphasis in original).

Actually, there is no peaceful atmosphere during livestock grazing in these boundary areas. Life is always fraught with tension not only for individuals herding in these areas and the *salfa* themselves, but also for their families back in the villages whose livestock and sons are in these dangerous areas. In fact, the paramilitary *salfa* create a buffer zone to prevent other pastoral groups from coming close to these areas until the herd is out of the tension zone. Grazing in these areas often creates conflicts that can lead to violence and raiding of livestock. Often, however, once the area is first claimed by

one group, the second group avoids the area until it has been vacated (Gudina 2002). We also witnessed that when an extended dry season turns into a full-blown drought, livestock movement becomes erratic, and herding groups (even households) split and disperse in different directions—usually far out of the Fentale area.

The above illustration of traditional resource management systems, which have sustained the pastoral way of life of the Kereyu for generations, are not as functional today. There are still gada ceremonies that mobilize people and livestock, but after the ceremonies are over, we have noted that enforcement of livestock movement in any specific direction is almost nonexistent. The pattern of movement between pasture areas is regulated mostly by the decline of grass quality and availability when an area is grazed for an extended period of time. It is also clear that the spatial distribution of members of the two major clans, Dullaha and Baso, is still distinct, almost as it was originally when the Kereyu had control over all of Fentale, but most of the early and late dry seasons grazing areas are lost to other land uses that forces year-round use of some areas. The impact of this dispossession is so profound that the Kereyu now describe the area they use in different terms:

The only grazing zone that remains is the *ona ganna*. This zone began to serve two purposes at the same time: as *bakka teessuma* (dwelling place) and *bakka dheedaa* (grazing place). Change in the terminology itself indicates change in the performance of the pastoral way of life. The former three pairs of terminologies, *ona ganna*, *ona birraa* and *ona bona*, combines territorial (*ona*) and temporal (the three seasons, *ganna*, *birra* and *bona*) terms, which connotes from the Kereyu point of view, extensive and rich territory with culturally ritualized movement. In the latter terms, *bakka* indicates a 'small' and 'diminished space'. And *teessumma* implies limited movement and implicit connotation of sedentarization (Edjeta 2001:45, emphasis in original).

In fact, before 2003, the practice of setting aside areas as communal grass reserves had been abandoned although people seasonally move their cattle between areas. As stated earlier, risky areas

such as those grasslands within the park and in between boundaries of different ethnic groups have become the *de facto* dry season grazing areas since they have relatively better pasture due to infrequent use (Beyene n.d.).

The 2002 Drought

During the summer of 2001, the amount and duration of rainfall was far less than normal (Figure 2). The rain—normally expected to fall until the end of September—stopped in early September 2001. From the Kereyu's perspective, 2001 was a drought year, since at the end of September livestock were not in good shape to withstand the impending dry season. The rain normally expected during February and March of 2002 did not materialize. Furthermore, the main rain season during the summer of 2002 was delayed, leading to the longest dry season in nearly 30 years. According to community elders, the 2002 drought was the second worst long-term drought they encountered during their lifetime. Such a severe drought happened 30 years ago and was remembered as a single event when two rain seasons were missed, locally referred to as **fulasa** – a condition where two or more events (in this case, three dry seasons) are connected, breaking their natural barriers (rainy seasons). In Fentale, cattle had started to die by May 2002; by June, even drought-resistant camels had started to die in some areas. Although the actual livestock mortality was difficult to discern, Piguet and Hadgu (2002) estimated that in Fentale Woreda some households had lost more than 45 percent of their livestock (primarily cattle) by early July.

The provision of emergency fodder at this period reduced the mortality rate of livestock. Several households interviewed stated that once their cattle started feeding on the emergency hay, mortality stopped almost immediately. The shock from the magnitude of the drought and the impact of the emergency fodder on livestock mortality stirred a serious discussion among community elders and non-governmental organization staff about setting aside grass reserves. As one elder put it:

[d]ry fodder that we do not value enough to 'harvest' came to us from elsewhere and saved our cattle. Without cattle we will not survive as a

community. If we had taken appropriate care of what God has given us, we would have been the giver, not the receiver.

For several years CARE and a local non-governmental organization named Gudina Tumsa Foundation have been encouraging small scale grass 'private' enclosures around homesteads as both a rehabilitation effort of degraded areas and saving hay for sick animals and milking cows during the dry season. In 1999, several community members, including elders, opposed the idea of individually enclosing plots for private use. Elders stated that "if everybody enclosed these areas, our cattle would not have enough area to roam." In fact, trespassing and breaking the fences of the enclosures was so frequent, and led to so many major conflicts, that individuals have had to cultivate around these enclosures to minimize trespassing. It is generally expected that individuals will not trespass privately cultivated fields. Although private kalos remain controversial and did not gain wide acceptance before the drought, those that were established in 2003 demonstrated that even apparently degraded areas can be rehabilitated to provide good fodder if properly managed (see below for detail).

Institutional Set Up

At the same time these discussions were going on, CARE was attempting to organize an institutional framework for its community development and natural resource management interventions. After extensive dialogue with communities, local government departments and other non-governmental organizations working in the area, various level committees were organized. Within Fentale Woreda, two tiers of committee were organized; one at the woreda level, and one committee for each of the 18 separate village-level kebeles (equivalent to a sub-district). Each village level committee has five members (four men and a woman), four of them elected by the community. The head of the committee is the chairperson of the kebele council, the smallest government unit. Because Kereyu traditional institutions were considered weak, this hybrid structure was envisioned to be more sustainable and more conducive for eliciting government support when needed. Some of the responsibilities of kebele committees include:

encouraging communities to set aside grass reserves and develop bylaws regarding its use in collaboration with neighboring kebeles; mobilizing village members for guarding kalos on a rotational basis; resolving conflicts among village members regarding kalo utilization; verifying the appropriateness and providing legal support for individuals planning to establish 'private' enclosures amid the communal land; and participating and facilitating community participation in other development activities. The formation of kebele-level committees took several months to finalize and several monthly meetings by the general assembly to develop and finalize the terms of reference for the committees.

The general assembly finally established the nine-member woreda-level committee and its mandate. The woreda-level committee is headed by the chairperson of the woreda council and oversees the establishment and utilization of communal kalos; settles disputes within and between kebeles; facilitates sharing of experiences among kebeles; and coordinates development activities within the woreda. Although the general framework of these institutions remains, stable membership has been fluid within many of the kebele—as well as woreda—level committees, especially true for committee members representing government institutions where turnover is frequent. Through a series of general assembly meetings, several kebele-level committees agreed to set aside large areas as kalo, although not all were successful in implementing them.

Two types of grass reserves are referred to as kalo in Fentale: private and community kalos. The first, private kalo, represents grass reserved in small, fenced areas owned by individual households or a group of households. These kalos are usually found near homesteads, and their primary purpose is to reserve grass for calves, dairy cows and weak animals not be able to travel far during the dry season. There is no 'private' land where people can set kalo, but the communal land becomes a private kalo once someone fences an area, often with the permission of the kebele committees. Only plots of lands with potential for irrigation farming (close to Awash river) and near towns are privately assigned. The only limitation is that the private kalo should not be on any of, or close

to, the livestock routes and communal kalo areas.

Grass from private kalos and the community kalos can also be used for thatched roofs. Non-governmental organizations encourage the use of private kalos for introducing hay-making to pastoralists as a means to prevent degradation or to rehabilitate degraded areas, at least as demonstration sites. Utilization of grass in these private kalos primarily involves cutting and carrying. Still, despite non-governmental organization efforts, only 33 private kalos were recorded by CARE staff in September 2003. The total area covered by these private kalos was about 95 ha., with the size of each individual kalo ranging from 0.5 to 10 ha (PIR 2003). CARE project staff encouraged and closely followed and provided items such as sickles for these households.

We observed that, encouraged by the results of the 2003 effort, the number of households increased and the acreage each household fenced as private kalo expanded totaling more than 249² ha by the end of 2004 rainy season. This kind of grass reserve is probably similar in terms of scale and purpose to kalos used within the Borena area (Homann and Rischkowsky 2008). Grass within these private kalos belongs to its owner, and his permission is necessary if others wish to use it. Livestock trespassing during the 'no grazing' season leads to conflicts, sometimes violent. But once the grass is cut or the owner starts to graze his cattle in the kalo, kinsmen and friends may be allowed to bring milking cows to the private kalo under the discretion of the owners. Similarly women may collect thatch grass from the private kalo if permitted by the owner.

In contrast to private kalos, the second type of kalo, a community kalo³, covers large areas of hundreds or thousands of hectares. Taking into account the seven kebeles within which this initiatives were successful in 2003, the community kalos were estimated to cover a total area of between 10,000 and 15,000 ha out of an estimated of 24,000⁴ ha within these kebeles that could potentially be put into community kalos. In principle, any Kereyu has a right to utilize community kalos at an agreed upon time period. Unlike the private kalos, fencing is not feasible here. Two extensive areas—the entire area around the western and southern parts of Mount Fentale (Figure 1) and its surroundings, and an extensive grassland

area (Harole)—were set aside as community kalos, through extensive discussions at the general assembly—monthly meetings where members representing all kebeles were present—during the main rainy season, July to September 2003. The purpose of these community kalos was to increase productivity and improve the availability of grass for the dry season. Community kalos, or public grass reserves, are established when people close to the proposed area pull out their livestock. The establishment of public kalo⁵ means that community members that have already settled in these areas need to evacuate for the duration of the rainy season. While most community members evacuated voluntarily, four households were evacuated by force that required the involvement of the woreda police. This set the stage about the seriousness of the initiative. More than half of the pastoralists of Fentale used one of these areas for at least a few weeks in a given year. Once the ban is lifted, anybody can get access to the grass reserves for whatever livestock they may have.

Traditionally, once the kalos were declared, people respected the rules, and trespassing would be rare and could easily be managed by the traditional institutions, such as the damina, who is the local clan leader involved in dispute resolution and natural resource management. In the current public kalo system, however, management of kalos requires the assignment of monitoring guards, elected from communities of both clans, at key posts on a rotational basis. Guarding the kalos remained the primary activity of participating communities throughout the rainy season. Although the actual monitoring was conducted by village-level committees, the higher district or woreda-level committee oversaw the process. In fact, it was the woreda committee—backed by the power of the local government/police—that effected the necessary sanctions (or threat of sanction) on potential violators based on the reports from the monitors at the early stage of the initiative. The presence of kalo guards prevented violations and minimized the need for sanction⁶. With the exception of eviction from the kalos during the first onset of kalo initiative (where one person was put into prison), no really serious sanction were made by the government although there were discussions/threats about sanction during the monthly meetings at the

beginning of the rainy season. The Kereyu do not like to sleep in a closed house let alone prison, which was the ultimate deterrent for potential violators.

This coordinated effort was facilitated by the monthly meetings of the district committee. This initiative was community-based in a sense as pastoralists used their traditional knowledge and conflict management and negotiation skills. But it was also in many ways different from what would have been the case several decades ago. For example, major parts of the community kalos are on what would have been the wet season grazing areas before the 1960s, but their purpose now is to reserve grass for the dry season. Current community settlements are still broadly similar to the Dullacha-Baso settlement patterns, but many households also bring their livestock (sometimes in large herds) to the kalos from distant villages attracted by quality of the pasture. Almost all mobile herds of Fentale converge on these kalos, which would not have been the case before land alienation.

The unusually good rains in the summer of 2003 (Figure 2) brought unexpectedly high grass growth within the kalos. The vigorous growth of grass in these areas (see Figure 3) surprised all participants, including communities, non-governmental organizations and government staff. This condition brought so much excitement that project staff videotaped kalo sites while interviewing Kereyu pastoralists and showed it to Afar pastoralists as a demonstration of the significance of the kalo. The success of the kalo initiative during 2003 was appreciated by communities throughout the woreda and beyond. In fact, its impact on community attitudes was apparent in various respects. Participatory Rural Appraisal assessment of community perspectives, after the opening of community kalos, revealed several significant changes related to resource use conflicts and resource production as described below.

Community Views on the Kalo Initiative

The following account came primarily from the group focus discussions that included elders, women and youth groups, our personal observations, and project reports. We try to provide a balanced account of these views by providing the positive impact as



Figure 3. Improved pasture in one of the kalos (Photo by Dafa Gudina).

well as the challenges faced by the community as they try to reestablish community-based pasture management system.

Reduced conflict: During the dry season, when grass is scarce, Kereyu travel to far distances in search of pasture that bring them in close proximity to, and conflict with, other pastoralists such as the Afar and the Argoba. During the entire 2003/4 dry season, there was no reported incidence with the Afar, although conflict resolution interventions were going on during this period. As one elder put it, “[w]e did not need to venture to faraway places, where our sons and cattle would be in danger.” It was clear from the group focus discussion both elders and young men reflect the impact of kalo on reducing conflict⁷.

Increased milk production: Larger numbers of dairy cows in production and calves were retained in villages because of the availability of grass; each cow also produced more milk, increasing milk availability, especially to children, during the early dry season when the incidence of malaria was high. Traditionally, taking plenty of milk is believed to help with quick recovery from malaria. For example, one household that established private kalo was able to keep seven dairy cows throughout the dry season following the 2003 rains. Community members consistently claimed improvement in milk production associated with the kalo initiatives.

Reduced encroachment into the park: Encroachment into the park significantly dropped during the months of early dry season. However, this did not mean that kalos totally eliminated livestock grazing within the park at this period. For example, during one of the woreda-level monthly meetings (in which community members, government and park officials and non-governmental organization staff participated) in November 2003, park officials raised the issue that grazing in the park still continues. Elders responded to this issue by claiming that because there has been enough grass for many of the villages, they do not need to go into the park. They only have to be willing to drive their cattle to the kalo areas. Park officials acknowledged, in the same meeting, the reduction in livestock grazing during the period in question.

Burden on women is reduced: Some women stated that they had to travel up to six hours or more to fetch thatching grass for walls and roofs since the availability of proper grass, even in years of good rain, was limited. Kereyu houses are constructed solely by women. Grass from the nearest possible distance from the village center is customarily exploited first, and the distance one travels in search of grass increases over the year, beginning in early September, thus reducing time for other tasks and social commitments. Access to grass in gorges and on steep hillsides—not



Figure 4. The condition of pasture on the Alaka plain near the kalo in Figure 3 (Photo by Dr. Abule Ebro).

possible to graze—is dangerous for women carrying loads of grass. The availability of thatching grass in the kalos not only reduces the distance women need to travel and the amount of time spent collecting grass, but its availability in open and accessible fields has made the utilization of pack animals possible. In the last few years, the Kereyu themselves talk about the improvement of huts near private or communal kalos due to the improvement in thatch grass.

Range rehabilitation: Protecting grasses in early growth from cattle trampling has enhanced the rejuvenation of a variety of palatable plants and has reduced the percentage of bare ground (Abule et al. 2007a; Gebru 2004) (see Figures 3 and 4 for comparison)⁸. These conditions contributed to quick rehabilitation of the rangeland, eventually resulting in abundance of pasture in kalos and its availability for a longer period of time than was previously possible.

Challenges of the Kalo Initiative

Despite the related community optimism, this kalo initiative is not without its challenges. First, in some areas villages could not cooperate in setting up kalos, or there were repeated violations, such that the kalos ultimately had to be abandoned. For example, communities in Fentale woreda share grazing areas with communities from another woreda, so the latter continue to bring their livestock to areas that the former communities were planning to set

aside as kalos. The encroaching communities did not have representatives at the monthly meetings that led to the establishment of kalos and belong not only to another woreda, but a different zonal administration. Because of these complicated issues, the third community kalo was abandoned at an early stage.

Even in those areas where the initiative was successful in setting up the community kalos, communities complain that some powerful individuals violated the agreement, undermining community trust in the system as a whole. For example, the chairperson of one of the kebeles (government institution) near one community kalo disregarded committee decisions by encouraging his kinsmen to graze their livestock towards the end of the ‘no grazing’ period before it was allowed for the rest of the community.

From the PRA exercise, it was clear that communities had high expectations from the district-level committees for all kinds of coordinating issues—especially the application of sanctions against violators. The involvement of traditional leaders was limited in the kalo initiatives and some of the committee members, who also have government positions⁹, consistently undermined the authority of the traditional leaders.

Generally, the traditional institutions that are relevant for natural resource management still remain poorly understood in Fentale. All these weaknesses

in the management of the kalo initiatives frustrate many community members, which undermines its future sustainability.

Conclusion

It is instructive to view this kalo initiative in light of eight design principles formulated by Ostrom (1990). First by linking locally elected committees with government structure, this arrangement met Ostrom's design principles numbers seven and eight—nested enterprises, and governmental recognition of minimal rights to organize—which made it easier for communities to request government support when necessary. This arrangement appeared to work well at the early stages of the initiative during the setting up of kalos. But as time goes on, the woreda level committee, whose meetings were facilitated by CARE's financial support, became increasingly weak, even before the project was phased out. Some of the community complaints during the PRA exercise reflected their frustration with this decline, especially of the woreda administration. However, the kalo practice still continues, which may indicate some subtle institutional arrangements that might have developed but which have not been explicitly recognized in this study. It took several monthly meetings and numerous local level negotiations (facilitated by CARE, GTF and government staff) to set aside areas that community considered appropriate for communal kalos. Due to the intimate knowledge of the local area—every village, plain hills, dry streams, valleys, big trees, any natural or human-made marks on the landscape were known to members of the community—defining the boundaries of kalos is relatively straight forward, once members reach agreement on setting aside a particular area. Therefore, boundaries of the community kalos were clearly defined in line with design principle one—clearly defined resource use rights and boundaries (Ostrom 1990). The issue of who has use rights in these kalos was clearly understood by community members. Once the kalos are open for grazing any Kereyu or Ittu has access rights. Interethnic relations automatically exclude any possibility of grazing by Afar or Argoba in these kalos without violent conflict. We suspect that the original effort to establish communal kalos in several

areas might have the implicit intention to distribute grazing pressure as much as possible. Normally, people will stick to their habitual grazing areas at different seasons. But the good pasture in the communal kalos attracted herders from all over Fentale. Although some complain about this grazing pattern, no mechanism was in place to exclude herders based on village or clan membership, which may potentially undermine the sustainability of the initiative.

Regarding Ostrom's principle number six (low cost and easily accessible conflict resolution mechanisms), traditionally the Kereyu have low cost conflict resolution mechanisms for all of issues from household to clan level conflicts. Elders and clan leaders are responsible for conflict resolution whatever the case may be, including homicide. Individual's abilities to resolve conflicts bring high social prestige and their decisions are respected. These individuals are highly sought after when a conflict becomes difficult to resolve. Many conflicts that arose during the establishment of private kalos were resolved by communities themselves. Normally, elders in the villages, often kin to opponents, come together and deliberate on the issue. Their decision is usually final. However, it was clear that the communal kalos, at least initially, needed the support of the woreda government, suggesting that community alone might not have been successful. Heavy reliance on government support would undermine the long-term sustainability of the initiatives, but the fact that the practice of communal kalos still continues suggests that some effective community-based mechanisms are already in place.

The extensive negotiations among community members regarding the importance of establishing communal kalo—and also convincing those who have to move out of the assigned area for the 'no-grazing' period—necessitated community wide participation on decision making, thus meeting design principle three—collective-choice arrangements with participatory decision-making (Ostrom 1990). These same negotiation forums facilitated the establishment of regular monitoring mechanism by assigning people that monitored kalos on rotational basis in line with design principle four—effective monitoring (Ostrom 1990).

The major challenges with respect institutional arrangements at this stage of the kalo initiative are related to Ostrom's principles two (congruence between benefits and costs appropriate to local conditions) and five (graduated sanctions for violators). Generally the village level committees conducted both the monitoring activities and the sanctions. We have very limited data on how sanctions were effected since the monitors usually asked people who brought their livestock close to the kalos to leave immediately and people complied. The government participated at the very early stage enforcing eviction of involuntary households from the kalos during the rainy season. But, from the PRA information it was clear that a few influential individuals started grazing before the kalo season was over. It is interesting to note that these influential individuals also have government positions that enabled them to circumvent sanction above the community level, which might undermine the system in the long-term. Furthermore, communities' inability to apply sanctions uniformly might have led to incongruent cost-benefit balance as some community members indicated in the PRA exercise. The unsatisfactory conditions to meet design principles two and five can potentially lead to breakdown of the kalo initiative. But detailed study is required to see if additional factors might also be involved and whether even those principles that appear to be met early on remain uncompromised.

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Notes

- ¹ Traditional villages are loosely based on clan, although multi-clan villages are increasingly becoming common—especially close to towns and commercial farms where non-pastoral livelihoods are pursued.
- ² In the last few years, rumors about expansion of the commercial farms and the fact that the government is constructing extensive irrigation tunnel system across several kebeles have led to land speculations—resulting in expansion of private kalos as an insurance to land claims.
- ³ Before the 1960s, such large scale reserved areas would have been referred to as ona, not kalo. However, the custom of creating reserves went out of use over 20 years or more. When it was revived during the initiative discussed here, the management arrangements were different since areas that would have been used during the rainy season in the 1960s are now set aside for dry season grazing. Pastoralists and others, such as government officials and project staff, call these current reserves kalos.
- ⁴ These estimates, based on diving distances across several kebeles, are likely to underestimate the actual areas.
- ⁵ Community kalos were established by the decision of the village-level committees through discussions at the monthly meetings, which by now had met nine times. The woreda level committee and woreda administration oversaw the process closely, especially during the first few months. CARE provided financial support to facilitate the monthly meetings.
- ⁶ Most of the complaints about violations during the PRA interviews refer to members of the gada officials that were 'in power' during the kalo season, where there was no clear-cut action to take against them. More research is needed how this issue is handled since the practice of communal kalo still continues.
- ⁷ In more recent years (2007/8), the lush grass in Harole community kalo might have increased the interest of Argoba (an agro-pastoral group northwest of Bulga River) in these pastures leading to increased conflict with the Kereyu, based on our discussions with locals. The Bulga River is the boundary between the two ethnic groups.
- ⁸ Several bags of grass seeds, weighing more than 150 kg, were collected by individual community members for use on private enclosures in degraded areas.

⁹ Many of the government officials, even those who are Kereyu or Ittu themselves, have some level of education,

and their attitude towards traditional leaders may not be similar to a common pastoralist.

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