

Participatory Impacts Assessment of Drought Reserve Areas in Guji and Borana Zones, Oromia Region



Report prepared for Save the Children USA

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Executive Summary

This report investigates the impacts of drought reserve areas supported by Save the Children USA in Guji and Borana Zones of Oromia Regional State. The report is based on participatory impact assessment exercise conducted over the period of 12-25 February 2010. It is organized into V main sections. Section I introduces the objectives of the assignment, major questions raised and methods employed in addressing them. The Section opens up by revisiting the ecological foundation of drought reserves in the variable environment where pastoralists practice extended livestock production, and winds up with presentation of limitations to the exercise and forwards suggestion for bridging the lacuna created by the limitations.

Section II is about detailed case studies on history, status, management details and benefits generated from 12 purposively selected drought reserves. It presents a descriptive account of each site, mainly on the basis of interview and observation data. Section III briefly presents views of government partners on drought reserves. In Section IV, a summary of key findings is presented while Section V provides recommendations on way forward with drought reserves and rangeland development in southern Oromia. The recommendation comprises synthesis of the assessment for policy direction and site-specific suggestions to address problems affecting individual reserve site.

The enclosures are found in different statuses and present diverse pictures: some are intact and fully functional, serving the community as fallback reserve during times of critical pasture shortage as was planned; some dysfunctional and management disrupted due to inter-ethnic conflicts and displacement; while others have digressed from the original objectives due to introduction of hay sale.

Regarding impacts, there is a consensus among the informants concerning the role of drought reserves in protecting the pastoralist asset. If well managed and integrated with customary land use, drought reserves could be remarkable range management tool as they are based on indigenous ecological knowledge in availing fodder for critical times and integrating aspects of environmental conservation, resource use and pest control. Therefore, support to careful promotion of drought reserves must be accompanied by simultaneous support to revitalization of pastoralist land use systems through, among others, systematization and patterning of pastoralist villages in the manner that allows perennial pasture and ensures smooth inter-seasonal transition.

Acronyms

CAPs: Community action plans

CFW: Cash for work

CPRs: Common property resources

DA: Development assistant

DAP: Development activities program

DF : Development facilitator

EAs : Extension agents

ELMT: Enhanced livelihoods in Mendera triangle

ELSE: Enhanced livelihoods in southern Ethiopia

EtCO: Ethiopia country office (Save the Children)

FDRE: Federal Democratic Republic of Ethiopia

FFW : Food for work

FSTF: Food security task force

Ha: hectare

IDPs: Internally displaced people

NRM: Natural resource management

PA: Peasant/pastoral association

PaDO: Pastoral development office

PAP: Pastoralist areas pilot

PIA : participatory impact assessment

PLI: Pastoralist livelihood initiative

PSNP: Productive safety net program

SC : Save the Children

TFG: Tropical forest group

TOR: Terms of reference

I. Introduction

1.1 Ecological foundations of pasture reserves in pastoral production

Reserving pasture for posterity has always been an essential element of range management that pastoralists practice to forestall or minimize the inherent risks involved in pastoral production in the arid lands (see Coppock, 1994; Oba, 1998). Within that environmental context, rainfall variability plays an important role in imposing resource mosaics over different landscape units, which are, however, functionally interconnected in supporting pastoral production across seasons (Tache, 2008). The resource pattern makes it a necessity for pastoralists to devise mobility as a key method that enables them access the patchy resources, sometimes involving long distance trekking. It follows then that those physically weaker and more susceptible herd classes (such as immature calves, milk cows and selected breeding bulls) require fodder in the vicinity of their homesteads.

Communal pasture reserves, locally known as *kaloo* among the Oromo-speaking populations in southern Oromia and northern Kenya, provide a means for meeting the special need (Tache, 2000). Here, drought reserves have been widely practiced among Borana and Guji Oromo communities long before the advent of externally funded pastoral development projects and extension work, although the details may vary from one locality to the other, depending on settlement patterns, variations in relative degree of aridity and territorial organization.

When opened up, the reserved pasture is either grazed openly by the target herd classes or cut and carried for homestead feeding or both. Whichever method may be applied, the key point is that site closing and opening at appropriate times, management and utilization are all effected by the societal institutions for collective purpose, on the basis of customary rules governing key natural resources within the CPR arrangements.

The homestead pasture obviously reduces drought mortality and enhances survival of those more drought vulnerable herd classes. It protects the nucleus herd, implying contribution to natural herd growth and household milk production.

1.2 Background to SC's intervention with drought reserves

SC's intervention with drought reserves in southern Oromia was made in the context of changing scenarios where recurrent droughts, demographic pressure and increased sedentarization have threatened (and continue threatening) sustainable pastoral livelihoods. The introduction was necessitated by a compelling need to respond to environmental changes that have resulted in critical pasture scarcity, particularly in drought years.¹ The most pressing question was how best could the communities' livelihood be ensured in the context of global climate change without losing the customary resource tenure and without upsetting the social fabric?

The objective of the drought- survival- focused enclosures was to ensure survival of the nucleus herd in the epoch of crisis when the customary pastoral production and land use systems are trending towards general decline.² The rationale further considered how capacity to respond to emergency could be built locally, as a possible substitute for or a supplement to the expensive but lesser quality hay that had been transported from the central highland for emergency feeding in the lowlands. For example, SC/US spent about 3 million Birr to feed around 8000 head of cattle in southern Oromia during the 2008 severe drought.³

A paradigm shift occurred in SC's pastoral development approach in general and drought mitigation in particular, in the post-DAP period. A comprehensive drought mitigation strategy was designed during PLI I intervention whose best practices were scaled up by ELSE. The comprehensive strategy included a number of inter-related elements: livelihood protection, livelihood improvement, commercial destocking, emergency destocking, income improvement and drought preparedness, and drought reserves were recognized as integral parts of this comprehensive drought mitigation strategy.

Accordingly, to date, the intervention has supported establishment or improvement of 22 drought reserves in Liban (now split into Lian and Goro Dola districts) of Guji Zone, covering estimated land area of 8, 122.5 hectares to serve 6,360 beneficiary household heads; the corresponding figure for the number of supported enclosures being 10 in Arero District of Borana Zone (Appendix 4).

¹ Interview with Doyo Hargessa, Did Boru and Tewodros Jima, February 14, 2010, Nagelle Borana.

² Ibid

³ Ibid

1. 3 The participatory impact assessment (PIA)

The PIA on drought reserves was conducted in Borana and Guji Zones of Oromia State over the period of 12-25 February 2010 (inclusive of all travels). The central objective of the mission is to undertake PIA of enclosures and assess their values as a range management tool (see Consultancy TOR i.e. Appendix V). Its specific objectives are to evaluate the natural, social, financial, and human capitals developed and supported as a result of the intervention. The following key questions were considered to meet the above objectives:

- a. What were the original community livelihood expectations and have they been met or not? What indicators best answer these questions and could be usefully tracked in future?
- b. What remaining community expectations could be realized and how in order that the enclosures reduce levels of vulnerability without cutting across local people's preferred systems and livelihood aspirations?
- c. How can the Livelihood Unit better support sustainable dry land development in the short, medium and long-terms in particular through taking interventions to scale, documentation and supporting policy process?

1. 4 Methods

To address the above-outlined and other related questions, both secondary and primary sources of information were used in producing this report. The secondary sources include field reports and other informative documents. However, the report is essentially based on primary data collected through a combination of methods, including field observation, site-specific discussions with the community representatives, interviews with government partners and SO staff members; as well as focus group discussions with a women group.

The interviews considered specificities of each enclosure site and pastoral resource management and drought survival in general as per the methodology stipulated in the TOR. The assessment team, consisting of the consultant and senior management and frontline staff members of Liban Sub Office, also participated in an 'enclosure day' event in Kobadi PA which was organized with the aim of demonstrating results achieved from the Qarre Gutu drought reserve to the public. Focus group discussion with the women group in Kobadi has been video taped. In conducting the assessment, the consultant was accompanied by the senior management staffs, NRM Officers and EAs in both Zones. The PIA covered 12 purposively selected sample enclosures, 6 per

Zone, with district distribution of 2, 4 and 6 in Gorodola, Liban and Arero districts respectively.⁴

1.5 Limitations

The centrality and sensitivity of the topic at hand and task's participatory nature naturally require more comprehensive and in-depth investigation. Particularly, a thorough look into issues of relations over resource, access and equity would have been made to triangulate views of those community members who did not participate in various discussions. This in turn would require employment of informal data collection techniques and ample time to further dig into less visible social impacts of the intervention. However, time limited the depth of the investigation as we wished to although the team succeeded in obtaining sufficient information through the formal techniques. Also, due to program overlap, the team could not attend community discussions regarding the sale of Dheebisa reserved pasture.

One of the worth assessing dimensions of the impacts of drought reserves was the post-enclosure land cover change, using ecological parameters such as biomass, species frequency, species richness, species evenness, etc. The ecological techniques could have supplemented the data obtained through bare observation and interviews, being crucial particularly in exploring the role of community enclosures in managing environmental 'degradation', communities' rangeland reclamation plans and the 'degradation' debate in general. Such is an important lacuna that needs bridging in the future.

The next section will present detailed assessment of the 12 sample drought reserves that were visited during the fieldwork.

⁴ All the enclosures supported by SC in Guji Zone were located in PAs that were administratively under Liban District before recent formation of Gorodola as a separate district.

II. Case studies

2. 1 Kurkurru (Goofambo PA)



Part of the site was severely degraded and exposed to gully erosion



2.1.1 History and physical description

This drought reserve, located at Kurkurru section of Goofa Ambo PA in the new Goro Dola District of Guji Zone, was established 4 years ago at what had been an open grazing area adjacent to the Nagelle Borana-Addis Ababa main road. It covers 400 hectares of the Kurkurru Hill⁵ and associated plains that have good potential with varieties of grasses, shrubs and lowland tree species. Before enclosing Kurkurru⁶, the community did not have any enclosed drought reserve and used to practice semi-mobile life style: rain fed agriculture practiced at the sedentary village bases while herds moved towards Gannale River basin in the east and the Liban plains occasionally. The agro-pastoralist PA community comprises multiple clans of Arsi, Gurra and small sections of Guji and Marrehan. The eastern section of the area was severely degraded (in terms of above ground pasture availability) and affected by gully erosion.

The idea to set aside communal drought reserve came about from SC's DAP, which the community initially resisted for fear of losing the land to private interests once fenced. As a result, it took 2 years before the community was persuaded and site fencing implemented through FFW and hand tools provision from SC. Now the effective size of the reserve has been reduced subsequent to recent taking up of the northern part of the enclosure by a Chinese road construction company. Company's field camp and a site for production of earth material required for upgrading the Nagelle Borana-Addis Ababa main road are located in the community reserve area. The Company has agreed to recompense the community with 117, 000 Birr, payable over three years, although implementation of the agreement is yet to take effect.

⁵ The Hill is also culturally important as the yaa'a (mobile power centre) of Borana performs a ritual upon Gada institution's ritual migration to Liban region

⁶ Benefits generated from the Kurkurru reserve have prompted the community to establish an additional 3ha enclosure at Goyyale part of the PA.

2.1.2 Management and utilization

The enclosure supports 1086 household heads. It is run by a 24-person group of elders⁷ (22 men and 2 women) but routine management responsibilities rest with three guards⁸ who undertake site patrolling with an assistance of members of three nearby villages. The guards receive 100 Birr monthly payment (per person) as an incentive for the service rendered to the community. Sources of their meager salary include income generated from hay sale upon harvest (see next), in which case annual salary is paid in one installment; from the 300 Birr collected as a fine from illicit resource users;⁹ or members' voluntary contribution.

2.1.3 Hay Sale and investment of proceeds

The site is closed around the onset of rainy seasons and opened in dry season at a public meeting organized by the PA. Before opening up the reserve, members register the amount of the lush grass intended to buy but, as a rule, one household head is entitled to 1 ha plot to cut and carry hay from, upon paying 300 Birr to the PA.¹⁰ The payer is issued with headed receipt from the District Revenue Office, signed by the DA assigned to the PA. The DA hands the money over to a cashier who is assigned by the PA. Informants pointed out that hay has been harvested and sold 3 times since the enclosure was introduced and the money invested in development of social infrastructure. So far, emphasis has been given to construction of new public schools or upgrading of existing schools. Reportedly, the hay proceed has fully financed construction of 4 and 2 additional classrooms at Burra and Goyyale primary schools, respectively while construction of Eenso Primary School (1-4 grades) was entirely implemented with community's free labor contribution and the hay money.

It was learnt that those PA members who are too poor to pay for the hay were excluded from the direct benefits. They depend on benevolent gifts from kinsmen or friends who have the capacity to pay for hay.

⁷ By rule, the PA Chairperson and the man in charge of Administration of Security are automatic members of the Enclosure Committee.

⁸ These are Mohamed Badda (age 65, from Ri'ata), Hassan Bariso (45, from Kurkurru) and Gannale Daraso (40, from Kurkurru).

⁹ The fines are paid to the PA.

¹⁰ Hay is also saleable to residents of neighbouring PAs for same amount of fee as the members.

2.2 Dheebisa (Nura Humba PA)



2.2.1 History

The Dheebisa community enclosure in Nura Humba PA (about 600 ha) was also reserved 4 years ago through the same process as Kurkurru. The area, largely inhabited by the Guji Oromo, used to be a degraded open grazing area, effectively taken over by no-fodder-value vegetation type, locally known as *buliyyee* or *hadaaddoo*.

The community was divided over the proposal to enclose the site. Some members were pro adoption of the idea while others openly objected it. The reasons for resistance are multiple but chief among them were: 1) concerns about possible blockage of access routes to watering points and open grazing areas, 2) fear of ownership loss amidst the common practice where community grazing lands are being allocated for private investors for mechanized farming. As a result, the first 3 years passed without the enclosure bearing any tangible results. An additional indicator of fierce resistance was the fact that fire was set ablaze the reserved site by unidentified individuals, the trace of which is still vivid.

However, the residents gradually accepted the innovation through persuasive engagements, FFW and provision of hand tools, and also seeing the experience of Wato Burer PA (not visited during the field mission). Currently, the site represents an excellent pasture condition with attractive lush grass, clearly demonstrating existence of rich seed bank and rehabilitative potential of the rangeland. The Current harvest is the first of its kind in 4 years time. This good vegetation change in terms of tremendous biomass increase has contributed to the community's attitudinal change about the reserves.

Elder Banata Jilo, 84 and Chair of the resource management elders, gave us historical time line in progressive pasture scarcity:

Pasture was abundant during Haileselassie's time; Dergue encouraged resettlement and crop cultivation that introduced rangeland shrinkage; land is full nowadays due to extensive farming, population increase and settlements. This means that there is no sufficient rangeland for us to practice mobile pastoralism to the scale we used to.

He argued that the golden past would not come back again and thus, in the present scenario, enclosures were rationale responses to rangeland shrinkage and crucial for drought survival. Regarding the prospects of mobile pastoral land use, he saw not only the urgency for reinstating it but also practical difficulty involved in realizing the reinstatement.

As a way forward with enclosure, the informants envisioned more reserves, both in size and number, at least 7 big reserves in the PA, i.e 1 community reserve per PA *qaxana*. Regarding post-SC sustainability, informants' views varied. For some, the enclosures would cease to exist immediately after disengagement while others saw continuity, given the imminent benefits that the community expects from the hay sale.

2.2.2 Management and benefits

The enclosure is managed by a group of 2 women and 15 men, including the PA Chairman and the PA Manager, with daily management responsibility entrusted to 5 enclosure guards. The 'what' and 'how' of the incentives for the guards were still pending decision at the upcoming PA meeting. With regard to concrete economic impacts, it was too early as no harvest had been collected before. However, informants anticipated more income for the PA from the hay sale¹¹, better feed availability for drought

¹¹ Informants stated that the idea to sell hay was attributable to the news that people in Wato Burer had made 'huge' amount of money from the sale of communal hay

survival and improved per capita animal products in dry seasons, and replacement of the hay transported from the highlands and distributed to the pastoralist households as emergency intervention. February 17 was the date set for commencing the sale. However, due to tight schedule the assessment team was unable to observe the event but the following questions would have been legitimate to ponder in this regard:

- Who is entitled to buy what amount of hay?
- Are there any mechanisms devised to accommodate resource poor families in the hay business?
- Who will collect the fee and where will it go? How is payment acknowledged? If receipt is issued to payers, what type of receipt is used and whose responsibility is it to issue it?

2.3 Haya Anani (Qoratti PA)



2.3.1 History and description

This drought reserve is situated at a place called Haya Anani in Qoratti PA, to the south east of Nagelle Borana town of Liban District. The PA is inhabited by the Borana Oromo pastoralists. The phrase Haya Anani literally means milk mineral, so named because per capita milk output used to considerably improve instantly when milk cows licked the mineral soil and fed on the good quality surrounding pasture in post-fire seasons. This previously lush pasture site is 'degraded' as it stands today (see below), but has a rich potential in terms of abundance and quality of pasture according to our informants. Qoratti, like the neighboring Hadheessa PA, represents relatively better parts of the rangeland in the District today where herders from other places (including crop dependent suburban communalities) often move their stocks in wet seasons.

The history of the Haya Anani enclosure goes back to the year 2007 when fencing started subsequent to a series of community discussions around SC's proposal to make fenced drought reserve. The community discussion

revolved mainly around indigenous range management methods (seasonal pastures, mobility, controlled fire, etc). Assessments were also made around effectiveness of different strategies in the present day context. Shared understanding was reached that pastoral production system and sustainable land use had been transformed from transient seasonal risks to deepened viability challenges. It was further underlined that vulnerability to drought-induced asset loss and resultant food insecurity had progressively increased like the drought frequency itself, both at household and pastoral systems level.

Final decision to enclose the site was made by an assembly of community representatives drawn from 11 PAs. According to the informants, Haya Anani was selected as a demonstration site for both ecological reasons pointed out earlier and for another practical reason. The later refers to its central location which renders inter-PA management easy for members of the enclosure management group from Simminto and other parts of Qoratti PA. The site covers about 900 hectares which was fenced by the community with SC's support with provision of hand tools and refreshments.

Besides its potential drought survival impact, this particular reserve was intended for reinstating controlled fire as an indigenous rangeland management tool. As a result, site fencing was followed by burning, which reportedly, led to abundant post-fire pasture sprout during the long rainy season of the year 2009.

2.3.2 Management and Utilization

The enclosure is run by 17-member grazing management elders, locally known as *jaarrolee dheedaa*, comprising 12 men and 5 women of various age groups.¹² The only Gada councilor (*hayyuu*) in the area is a member of the elders' group elected for his role as a guardian of the customary laws of resource tenure and collective management. Informants underline that the reserve belongs to the community as a customary enclosure; the validity of the claim is evident from the inclusive and participatory process that the decision to reserve the area passed through. Also, decision to open the pasture reserve is shared among the PA residents and those who come there in search of seasonal pasture.

The rules governing the enclosures were the customary resource law of the Borana Oromo where breach of the law (illicit grazing or cutting, breaking

¹² A peculiar point here is that the enclosure management elders were deliberately elected outside the PA leadership. The latter were given backstopping role in case of disputes over resource use.

of the fence, etc) involves fines, ranging from 1 to 3 head of cattle, specified as follows:

- Intentional illicit grazing or cutting involves a fine of 1 cattle unless forgiven upon regrets and apologies by the culprit
- Deliberate denial of the criminal acts committed, intimidation of the members of the enclosure management elders or the community at large, or defying authority of the customary institutions in relation to their acts, involves 2 head of cattle
- Members of the elders will pay a fine of 3 head of cattle if involved in similar activities

According to our informants, the first post-enclosure product was harvested during the 2008 drought and utilized equitably; the claim was confirmed by communities in other places (e.g. the Simminto community at Dambala Raba). Date was set through consensus for opening of the reserve and allocation of the amount of the hay per household. The latter was decided generally according to applicant's herd size and severity of their livestock condition. As a general rule also, the hay was meant primarily for emergency purpose, targeting the most drought-affected animals. Accordingly, residents from far-flung PAs used pack animals or hired a lorry to transport their shares of hay (e.g. Malkaa Gubaa). Seven men were elected to implement equitable hay distribution over 3 weeks' harvesting period and each received a 2 Birr contribution from respective hay recipient household as a recompense for the full-time service to the community. The amount was decided by the public.

2.3.3 Initial expectations and success

Land rehabilitation, restoration of fire technique, control of external animal parasites and reduced drought mortality were the major expectations that the community had when the land was enclosed first. As to whether these expectations have been met or not, community representatives at Haya Anani evaluated the success as significant in terms of biomass increase of the post-fire grass generation and enormous livestock survival during the 2008 drought. In terms of control of animal ecto-parasites, they pointed out that the area was now free from infestation due to the fire. However, they see every impact as partial since the whole thing has been disrupted due to conflicts and displacement in 2009. Even after repatriation of the IDPs amidst precarious security situation, the whole community attention was geared towards security guarding. Consequently, the site is currently 'degraded' and fences are broken. Community's efforts to rehabilitate the site have been severely undermined by the challenges of long dry season.

2.4 Dambala Raba (Simminto PA)



2.4.1 History and management

This is a purely community enclosure fenced and managed by the communities in the Oda Yabbi and Waarsalle divisions of Simminto PA, Liban District. Routine management responsibility is entrusted to the heads of surrounding village. There had not been any fenced drought reserve in the area before early 2009 when the present site (estimated 600 ha) was reserved through the same extension process as other sites. However, adoption of the extension idea did not take longer here unlike in other sites. Site selection considered less concentration of villages there, herders' knowledge of good grass cover in the past and thus high likelihood of fast land rehabilitation. As discernible from the pictures, the enclosure is found in an excellent physical condition. Community members cut and piled the

hay up for later use in a relatively water proof fashion but the pace of heap making has been slower than expected as the long dry season progressed.

The community appropriately plans, in the context of uncertainties, to keep this first harvest until the onset of long rains expected in mid March. With regard to property right to the resource, an elder during our interviews summarized the community's position as under:

We have cows of our own to milk, and houses of our own to live in. However, everything else in the domain of the rangeland is held in common. The fact that we have good pasture reserve now does not imply our exclusive right to this resource. It is the property of the society. We were severely hit by drought two years ago [2008]. That time, our fellow pastoralists in Qoratti had a better reserve and all of us received our share from the reserve and benefited. The message must be clear: our customary law does not allow exclusive right to key pastoral resources, thus denying people access right is just unacceptable. Therefore, although we have not yet decided how we are going to utilize the reserve, our compatriots elsewhere will obviously receive their own share.¹³

Although utilization of the reserve has not begun at large scale, nearby villagers already enjoy the product to a certain extent, by feeding sick animals and young calves at home. Cases were also reported whereby households from the neighboring Burra Dhera and Dhaka Qalla PAs requested and received hay for similar purpose. Informant Iyya Guyyo reported that he fed his bull with broken leg on the good quality hay which could have died from starvation. The bull recuperated and was later sold for 2500 Birr. Huqa Duba had a lactating cow that had emaciated to the brink of death. Having been fed on the reserved hay, both the cow and her calf survived; the cow is pregnant and in good condition at the moment.

These cases are apparently localized and scattered. However, their message is important in terms of asset protection and potential for improved household income.

¹³ Elder Gurracha Duba speaking at a community interview, February 16, 2010.

2.5 Qarre Gutu (Kobadi PA)



2.5.1 History

While the process of origin of Qarre Gutu community reserve is similar with most enclosures in other sites, this particular reserve represents a unique success story in terms of land rehabilitation and resultant hay harvest. The site covers 200 hectares of land located in the northeastern edge of Nagelle Borana town. Qarree Gutu, which too is an important ritual site for the Borana Gadaa institution like Kurkurru, was degraded and literally reduced to an unproductive sand stone site.

2.5.2 Present status

For someone who had prior knowledge about the status of the area before, it was hardly believable that the huge heaps of hay on the field were actually harvested from that particular place. The three big heaps visited during the fieldwork represent what had been collected from 15% of the reserved land area (30ha). They are the community's saving balance from what had been distributed to the 300 member households and what had been shared with the neighboring communities in Bururi and Mi'essa PAs.

The hay was used entirely for domestic purpose, with no evidence of plan or intension to sell it.

2.5.3 The 'enclosure day'

The Kobadi community organized a public event on February 17, 2010 with the objective to demonstrating to the public the results achieved from the reserve. Invitees included representatives of the neighboring PAs, Deputy Administrator of Liban District, Head of District PaDO, NGO staff members and prominent figures. The demonstrated results included fattened bulls, hay stack, fresh and sour milk with which participants were served. During the occasion, representative of the host community underlined the practicality of restoring productivity of degraded environments. "If we can successfully rehabilitate our barren land in the sub-urban area, what about our range areas located far away from urban influences?" he challenged the participants.

2.5.4 The community's efforts and challenges encountered

The community conducts diverse reserve management activities such as fencing, bush clearing, tree planting and terrace work, to curb soil erosion through checked surface run off. As regard to the challenges, the community identified the following problems:

- i. Lack of storage facility: There is no warehouse or proper covering of the hay. As a result, the hay has been exposed to occasional decomposition in rainy season or fast drying up in dry season.
- ii. Laborious and manual hay harvesting technique
- iii. Sub-urban location and susceptibility to illicit harvesting
- iv. Poor fencing
- v. Termite infestation

2.5.5 Benefits and impacts: Consideration of gender aspect of drought reserves

We organized a separate discussion session with a group of 19 women to explore, in some depth, the benefits generated from the reserve. The participants stated that their benefits had gone beyond drought survival. For those families owning milk stocks, milk was available for domestic consumption. Some stated further that they had earned income through milk marketing in the otherwise unlikely period of long dry season. They also mentioned availability of butter for cosmetic use. Milk-generated

income has reportedly enabled them not to entirely depend on pockets of their husbands to meet every petty demand of the family. Gourds full milk displayed during the public event were cited as living evidence for the concrete nutritional change in addition to the minimized labor burden on women in tedious search of fodder during long dry season and drought years.

Another important cited impact is freedom from fear. Women's minds have been freed from the usual panic about losing the calves borne during the short rainy season (September-October) which is regularly followed by stressful long dry season that could easily expose them to more stress and death. Besides the suckling calves, the families have now been able to feed farm oxen, milk cows and donkeys three times a day: morning, afternoon (after watering) and in the evening.

Still another dimension of the impact of community reserves is the freedom from uncovering their huts by removing the grass thatch to feed their animals around the onset of rainy season when feed scarcity reaches climax. Doing so used to expose the family to rain and put women in conflict with the rest of the households. A woman whose hut leaks is usually seen as untidy and thus stigmatized.

2.6 Sibü Jilo Hama (Mugayo PA)



2.6.1 History and rationale for the enclosure

Mugayo is a multi-clan PA inhabited by Guji and Borana Oromo clans as well as some Somali clans of Marrehan and Degodia backgrounds. The enclosure at Sibü Jilo Hama (about 1000 ha) was fenced with similar objective, just one year ago. Fencing was implemented entirely with community labor and tools while SC's support was purely the extension idea. Residents further explain the rationale for accepting the idea as follows:

The proposal to enclose a drought reserve was convincing to us as livestock mortality keeps increasing with each drought episode. There was also literal lack of safe zone to move our herds to in order to buffer drought impacts. Also, we have lived to see grass distributed to pastoralists during emergencies, like relief food. We then said to ourselves that we should reserve our own grass to tackle drought impacts. This site is endowed with incense-producing trees called *dakkara*. As we enclose the land for pasture,

we also conserve these important trees to create an alternative source of future income for ourselves.¹⁴

With regard to harvest, the first post-fencing yield is in the process of making but regeneration is slow due to sandy, rocky and hilly nature of the site. Therefore, it was quite early to probe into pasture utilization during the fieldwork.

2.6.2 Multi-clans and participation

Although the multi-clan composition would have offered an excellent scenario for probing into the matters of access and equity across clan or ethnic divides, the age of the enclosure has limited our investigation only to issues of participation in site selection and fencing. In this regard, it was learnt that all the clans (living around the site at the time of fencing) participated in fencing. As to the future utilization, informants stated that the pastoralists' values of resource sharing would be upheld when the yield was ready. Regarding clan composition of the management group (10 men and 5 women), the greatest majority come from the Guji Oromo due to mere demographic reason while Marrehan is represented as the only non-Guji present in the area during the site fencing. The community envisions purely domestic use of the hay when the reserve is opened up for the public, but the opening time will depend on livestock and rainfall conditions in the following rainy season.

Whereas the above 6 drought reserves were sampled from the Guji Zone, the following 6 other case studies are based on drought reserve samples taken from Arero District in Borana Zone.

¹⁴ Interview with Gimbe Nenqo, Kottola Cirri and Sulxan Xache, February 17, 2010, Mugayo.

2.7 Irressa Tibba (Wacille PA)



2.7.1 History and rationale for site selection

The Irressa Tibba community enclosure is located nearby Wacille traditional wells in Waille PA, Arero District. The total enclosed area is estimated at 80ha, 50% of which was fenced through CFW under the government's Productive Safety Net Program (PSNP), 5 years ago. SC's PAP took over from the PSNP and doubled the size of the reserved site. Fencing of the additional 40ha too was implemented through similar approach.

The community added land rehabilitation aspect to the original objective of the enclosure with particular aim of restoring the best grass varieties (locally known as *ilmogor*, *hiddo*, *matguddessa* and *halchiso*). In relation to drought survival, site selection also considered proximity to perennial wells in order to contribute to a smooth transition of the emaciated animals to safe season, by reducing physical stress aggravated by long distance mobility.

2.7.2 Status, problems and impacts

Informants argue that the reserve has partially met its objective in terms of land rehabilitation although natural regeneration of key grass species took 2 solid years. From the point of view of hay production, however, it was not that successful due to:

- a) Discontinuous engagement by SC
- b) Conflict with Garre and subsequent displacement

Poor site management is evident from the broken fences and the weakness is inherent in the system that has been put in place in addition to the external factors outlined above. Contrary to pastoralists' resource management tradition, responsibility to oversee the community enclosure was entrusted to one person, instead of a group of elders.

Half of the 300 Birr fines collected from the illegal resource users was meant for the guard's salary while the other half was earmarked for the upkeep of the reserve itself. Community's plan of reinforcing the fence, enclosing additional site for more accommodation and bush thinning was hampered by occasional security alert (such as animal theft by the rivalry group) and stressful dry season.

2.7.3 Relationship between fenced reserves and mobile land use

A probing question was forwarded to the informants to gauge how they perceive expansion of fenced drought reserves in the rangeland, and the relationship between the fenced reserves and customary pastoral land use. Their responses are summarized as under:

Enclosures are useful for life saving. Their particular value lays in practical learning i.e. demonstrating possibility of restoring endangered grass varieties and improving land cover at apparently degraded sites. Although the enclosure areas are small when compared with the wider range land, they are still important for the cut and carry hay. Wacille was famous for both abundance and quality of pasture. As pastoralists, our drought reserving method was inherent in our customary land use system: systematic grazing according to seasonal patterns, supported by small-scale calf reserves. It is regrettable that frequent drought has degraded our rangeland and reduced its productivity, disenfranchising our land use system.¹⁵

¹⁵ Interview with community representatives, February 19, 2010, Wacille,

As was clearly pointed out, pastoralists always had a seasonal grazing system in Wacille. Informants stated that restoration of seasonal grazing pattern would have been easy for them but the ambitious territorial expansion by Somali Region and resultant insecurity would make it practically challenging.

2. 8 Bule Harsogido (Hallona PA)



2.8.1 History and current status

This is a purely community calf reserve (area \geq 200ha) which was enclosed in 1994 in accordance with Borana Oromo pastoralists' reserve-making tradition. It belongs to a group of 5 neighboring pastoralist villages of Dabbaso Jatani, Kottola Sokka, Dalacha Dabbasa, Liban Lammitta and Kunno Godana. The community expanded the size of the reserved area 4 years ago, with the objective to accommodating more young calves. SC through the PSNP supported the community effort in 2009 with hand tools¹⁶ and a monthly 15 kg wheat ration distributed per person working on fencing or clearing bush from within the reserved area.

¹⁶ The hand tools were handed over to the PA FSTF

2.8.2 Management and access

Enclosure management is a responsibility of the community as a whole while elders coordinate routine activities to ensure that all the user villages equally participate in the fence reinforcement task and use the product equitably. It was witnessed during the field work that the fresh fence reinforcement was conducted by all the user villages.

The reserve is opened in short dry season (July-August) and closed around onset of rainy seasons while both opening and closing are decided through consensus, having effectively assessed and confirmed grazing inadequacy for young calves in the open fields. The reserve is strictly for field grazing or home feeding of calves younger than 2 years. The community rule also forbids grass cutting for thatching purposes.

Although the reserve currently belongs to the 5 villages mentioned earlier, property right to the enclosure and the rules governing its use are the customary ones, whereby fellow pastoralists who might migrate to the place under drought influence or those choosing to settle at the vicinity will negotiate their inherent access right. Informants indicate as an example that pastoralists who migrated from Kenyan in 2009 had been enjoying equal use right until they went back few months ago. However, those who had mismanaged their own reserves would lose their entitlements.

An intentional breach of the customary rule governing the resource use and management entails fines amounting to 300 Birr (now raised to 500 Birr) although the latter are rarely collected as offenders are often pardoned upon public apology. If collected, however, the money is used either for an upkeep of the enclosure or for covering periodical contributions expected of the constituent villagers by the PA or the District.

2. 9 Kukkuba Sala (Hallona PA)



2.9.1 History and property right

Like the Bule Harsogido enclosure, the Kukkuba Sala enclosure is controlled by a group of 5 neighboring villages, consisting of villages of Guyo Halake, Waqo Elema, Arero Wario, Sonkolo Bilala and Bidu Godana. The reserved land is ≥ 100 hectare of land. It is 18 years old, its history of origin being very similar to the adjacent Bule Harsogido enclosure. But one case study is outstanding in indicating social equity.

2.9.2 Farmland within the grazing reserve: special social consideration

A 60 years old poor man named Sarbayye is a widower, raising 5 children single handedly. He is blind too. In 1995 most of the community members in the area moved to Arero Mountain to conduct ritual hair shaving ceremony that is conducted every 8 years. Upon returning to their base,

they discovered a farm land within the calf reserve cultivated by Sarbaye's family. The community condemned the act as farming intervened with the reserve. The old man confessed his family's wrongdoings and apologized to the public. He explained the transgression as purely compelled by sheer survival need and requested the public to allow the family to use the island for crop cultivation. He was allowed to keep the plot (observed by the assessment team) on condition that the family would not expand the plot size and that the post-harvest pasture and the crop residues were open for communal use. The family agreed with the terms and is still keeping the plot in the middle of the drought reserve.

This piece demonstrates that the communal objectives are often given due primacy but special needs of individuals are also considered and accommodated in pursuit of the common good.

2. 10 Qawa land reclamation enclosure (Qawa PA)



2.10.1 History and current status

Qawa was administratively under Weeb PA before becoming a PA itself recently. Informants state that, 3 decades ago, the place was uniquely rich with perennial pasture due to its far-flung location from permanent water sources. As a result, access to the abundant grass was limited to wet seasons. However, subsequent construction of big ponds and water cisterns gradually attracted permanent settlements and the ensuing continuous grazing led to the current land 'degradation'.

Site fencing started (between September and October 2009) in anticipation of the short rains, the pressing objective being land rehabilitation. However, the expected short rains failed and people migrated to Arero Mountain as a consequence of which fencing was interrupted and regeneration failed. Site fencing did not resume in the post-migration period as the population was engaged in construction of connecting road in other site.

2. 11 Weeb land reclamation enclosure (Weeb PA)



2.11.1 History, physical description and status

This enclosure is bisected by the Weeb-Dubuluq vehicle road. Site fencing started with the southern section and was implemented by the Food Security Office of the Arero District PaDo through PSNP (FFW). SC came in later on with bush clearing activity from within the enclosed area.

As the picture above depicts, the enclosure is located nearly in Weeb town, along the dusty watering route, like the Irreessa Tibba enclosure in Waille. Although the objective of the enclosure was to rehabilitate the land (short-term objective) and then hay collection (long-term object), its inappropriate location easily defeats the desired objectives. The improper location will likely make management more complicated due to town influence even if pasture regeneration succeeds.

Having realized the demerits with this site, the PA's alternative plan is to encourage one big community enclosure in good potential areas of all the 13 constituent divisions, to make investment of human labor more meaningful and enhance contribution of reserves to drought survival. According to the new plan, enclosure-focused development activities (such as bush clearing) would be focused on the new sites. The new plan seems feasible and in line with customary resource management; SC should adjust its site-specific NRM plans to the new community plan.

2. 12 Kaffara (Kaffara PA)



The assessment team visited the enclosure site at Kaffara but constrained by time shortage to conduct systematic interview with the community on the details of the site. However, the team could learn that the enclosure was purely a community reserve and run according to the customary resource management systems.

III. Views of the Government partners on drought reserves

We interviewed Liban District Pastoral Development Office, Arero District Administration and Arero District PaDO, to assess their views on the drought reserve activities being implemented by SC along with the role of community reserves in drought survival in general. Mr Gosaye Alemu, Head of Liban District PaDO, commends SC's work on drought reserves as a significant complement to the customary community enclosures. He assesses the reserves as beneficial to the communities in terms of restoring rangeland productivity, reducing drought mortality and

contributing to improved household income, by citing the Kobadi experience as exemplary (see section 2.5 above).

He recommends that SC should support micro irrigation schemes in the river basins for production of food crops and irrigated pasture, referring to the irrigated drought reserve being piloted by the organization along the bank of Dawa River in Malka Guba PA. He sees river basin initiative as a sound strategy to addressing pastoral development needs in general and food insecurity and feed scarcity in particular. In concurrence with several community informants, Mr Gosaye suggests that the reserved hay must be kept for real critical times, in preparation for unpredictable drought episode.

The Administrator of Arero District, Mr Dida Halake, and The representative of the District PaDO, Mr Waqshum, recognize the role of drought reserves in drought mitigation, particularly at the level of small scale territorial units. They recommend, however, that one must move forward proactively towards reinstatement of seasonal grazing system for more impacts. Moreover, SC's extension work on NRM should focus on restoration of the most desired seasonal grazing pattern by supporting community forums for dialogue and action plans.

IV: Summary of key findings

4.1 On appropriateness of communal drought reserves

Are the communal reserves appropriate as an approach to mitigating drought impacts? The interview data confirm that the original objective of drought reserves was appropriate as it envisaged minimization of households'/community's herd loss due to starvation-induced livestock mortality – particularly of milk cows, breed stock and infant class, which are all crucial for milk production and herd growth - through improved management of locally available resource. Appropriateness of community drought reserves may also be considered from the context of realities with pastoral production systems today. The idea to support community enclosures came about in the present context when the pastoralist land use and livelihoods have been subjected to systemic breakdown due to multidimensional pressures on the rangeland and management institutions. The pressures are of both natural and anthropogenic characters, ranging from global climate change to territorial loss due to conflicts. Although physical fencing of communal grazing lands implies weakening of the past community rules when the word of mouth sufficed to hold, curving of

drought reserves out of communal grazing for the communal purpose was necessary and timely as the enclosure, if managed well, would contribute to drought preparedness and minimizes drought impacts with local resource (replacing costly purchase and transportation of hay from the highlands during emergencies).

Significance of enclosures runs beyond direct economic reasons of asset protection. They also have contributed to positive attitudinal change of self-reliance and resilience by the pastoralists. While the extension message to make critical grazing reserves was appropriate in the face of heightened drought challenges and corresponding dire need for minimizing them, SC initially used incentives in supporting drought reserves.

4.2 Are the communal reserves useful range management tool?

Beyond the obvious economic significance, the role of community enclosures in environmental management, rangeland rehabilitation and biodiversity conservation is immense.¹⁷ As was stated by the community representatives at Dambala Raba and Qarre Gutu enclosures in Simminto and Kabadi PAs respectively, soil erosion has been significantly reduced due to the concrete change in land cover. The rich grass stand grown at seemingly barren and useless sites demonstrate that the communal pasturelands are not entirely degraded in terms of in-ground seed bank and can easily reseed the surface and boost land cover with good management practice.

According to a TFG report, the enclosures sequester, on average, 3.86 tons of carbon per ha (TFG, 2010).

4.3 On impacts of the drought reserves

Drought reserve's impacts vary across sites, depending on effective management and regeneration status. Some impacts are directly observable from the livestock conditions and availability of hay heaps at homesteads. The PIA was conducted during the period of the year when onset of the long rainy season (*ganna*) was only one month away under normal circumstance. The period is often characterized by severe pasture scarcity where milk stocks emaciate and dry up to the extent of failing to feed young calves, let alone to provide milk to human consumption. During the field mission, however, livestock species of all the food animals were found in an excellent physical condition. The better livestock performance at the regional scale in general is attributable to good rains received during the last short rainy season of *hagayya* although in some places one cannot

¹⁷ In Mugayo, kodus, wart hogs and leopards have been observed in the enclosed site

deny the role of drought reserves in adding value. Although lush grasses were not available in both Zones as such, *finna* - an indigenous ecological concept referring to a situation where the herds are in good condition despite feed scarcity - was abundant as informants repeatedly mentioned in both Zones.

With regard to improved livelihood capital assets, the enclosures have certainly played remarkable role. The evident improvement in natural capital in terms of conversion of the seemingly desolate land into productive plots yielding stacks of hay, have immensely contributed to massive drought survival (e.g. Kobadi, Haya Anani and Goofa Ambo PAs). The link between improved natural capital and human capital is clear: good quality pasture contributes to livestock health and healthy livestock means better productivity and better price that creates better capacity for the households to purchase more food. The good quality products in turn contribute to human health. Similarly, the initiative has apparently made contribution for pastoralists' attitudinal change as the aspiration to replace transportation of the emergency hay from the highland with the locally available resource suggests. In terms of social capital, management of drought reserves and resource utilization were largely built on the customary rules governing NRM in most places. Also, the ethos of resource sharing and mutual concern were intact in these places despite tendencies of deviation elsewhere. Regular meetings organized to reflect on management of the reserves, additional bylaws developed when necessary, and CAPs formulated, all contribute to promotion of community skills in NRM and drought mitigation.

In terms of financial capital, too, concrete impacts have been reported at household level, as was reported by communities in Goofa Ambo and Kobadi PAs. For example, the year 2008 witnessed heavy livestock death toll due to severe drought that hit the area. However, residents of the two PAs reported less herd loss due to the impacts of the drought reserves. Similar impact was also reported in Qoratti. Hussein Kote sites a concrete indicator of the impacts of the drought on his family. He reports that he collected 7 donkey cart hay as a result of which farm oxen, milk cows and calves survived the severe drought unlike in the neighboring PAs. We visited a heap of hay at his homestead during the field mission (see section 2.1) for which he was offered 3000 Birr, which he rejected due to uncertainty with the next rains. Maho Adam Mane purchased 2 oxen with the money earned from sale of the hay.

4.4 Constraints and emerging issues of concern

4.4.1 Competing development approach: The SO management staff members complained that some NGOs operating in the area had been advancing incentives, mainly FFW and CFW. The approach certainly competes with and weakens participatory development approach that aims to promote community empowerment by working with them, not working for them. In the presence of competing development approaches, effectiveness of empowerment-oriented efforts face obvious practical challenges. The issue needs coordination particularly by the Zonal and District PaDOs on harmonization of development approach and extension messages conveyed by development actors. On the part of the NGOs too, they need coordinate among themselves. A possible means is perhaps an establishment of NGO forums at zonal or district levels.

4.4.2 Lack of clear guidelines: Concern was also raised on lack of clear guidelines on enclosures development in the Borana-Guji lowlands. It is not clear when and where to reserve pasture; steps to be followed in preparation; what type of vegetations to cut and what to spare in bush thinning and fencing; what techniques should be used in bush thinning, etc. In the absence of standards set to manage reservation making, actors tend to engage in haphazard range enclosing. A major concern here is lack/loss of accountability to the community and a looming danger that could encourage spontaneous enclosures by free riders.

4.4.3 Frequent conflicts and droughts: Conflicts and droughts obviously interfere with pastoralist development in general and drought reserves initiatives in particular as the case of Haya Anani demonstrates. Among other things, drought imposes premature opening of the reserves and diverts attention away from proper upkeep of the reserves while conflicts cause displacement and abandonment of the reserves.

4.4.4 Expansion of mechanized farming: In the Liban District of Guji Zone, mechanized farming is expanding at an alarming rate, threatening to take over the entire Liban Plain. This silent but hot land business is turning the cultural groves of Liban into exclusive farm lands allocated for town residents and their capital sources from the upcountry, under the guise of private investments. The practice fails short of pastoralists' right to their land as recognized by the Constitution of the FDRE. It is also fuelling up conflicts between the 'investors' and the community. The rapid boom of tractors population over the last one year gives Liban an appearance of a high potential crop land in the highland. It is worrisome that the District is being given an image of a model crop-producing land in the Zone. The expansion of mechanized farms in the rangeland is detrimental to the pastoralists as it dispossesses them of their land rights in general; promotes private land holding and undermines drought reserve initiatives in particular.

4.4.5 'Paid' enclosure guards: As some case materials have documented, drought reserves are routinely managed by 'salaried' enclosure guards. This is an emerging and worrying pasture management method in southern Oromia. No matter how less expanded the practice might be, the very idea of shifting pasture management responsibility from the community based approach to individual persons is erroneous and potentially risky. With an exclusive management responsibility, there is an embeddedness of or temptation for exclusive decision-making, just to less emphasize the possible danger of guards' involvement in un intended practices in the present context of hay sale. Lessons may also be borrowed from the change that occurred in the forest management approach in Ethiopia decades ago, where management responsibility was shifted from the community to the State. The latter introduced forest management by salaried armed guards. The shift caused loss of ownership right by the community and, coupled with the new method's ineffectiveness in forest patrolling, *de facto* open access situation was created, leading to deforestation and environmental degradation (see Tache and Irwin, 2003).

4.5 Possible indicators of change to track the impacts of drought reserves

Apart from vegetation dynamics as bio-physical change in the reserved areas, other indicators of change are measurably only indirectly. However, the following impact indicators may be tracked as a contribution by the reserves although it is difficult to entirely attribute the changes to the reserves:

- **Feed availability** from the enclosures, whether as a grass stand on the fields or as a hay heap at homestead, during the peak of dry season
- **Physical conditions of the enclosed sites** with primary objective of rangeland rehabilitation. Monitoring could consider sites' natural regeneration statuses and corresponding change in the above ground dry/wet matter and biomass.
- **Grazers' conditions**, particularly that of lactating cows, farm oxen and immature calves around the onset of the rainy seasons. This period is usually stressful when severe pasture scarcity often exposes animals to serious weight loss and emaciation. If the herds are found in better conditions during these periods, one could

probe into possible contribution by the drought reserves besides other factors that might have played into the situation

- **Milk outputs** from the grazers during extended dry seasons
- Physical condition of **children and the aged** in dry season, etc

V: Recommendations for way forward with drought reserves and rangeland management

5.1 Recommendations

5.1.1 General recommendations

- Given the inherent uncertainties in the arid environments and the current global climate change that can likely worsen the uncertainty further, drought preparedness is the matter of absolute necessity in the lowlands. Communal drought reserves would offer a significant contribution in this regard if organized and managed well. Therefore, the communal drought reserves require strengthening with more rigorous extension work that facilitates community consensus in order to limit utilization of the reserved pasture to real critical times only.
- It is necessary to support communal drought reserves as a way and means of reducing drought mortality through rescued lives of the most drought vulnerable herd classes which are, at the same time, crucial for natural herd growth and household milk production. However, such an intervention becomes complete and impacts more significant if the bigger pastoralist range management and land use issues are addressed at larger scale. In the present epoch of multi-directional resource 'degradation' at scale, too much emphasis on the enclosures might divert development attention and efforts from enhancement of bigger pastoral livelihoods through revitalized land use systems to localized and small-scale matters. SC (and all development actors for that matter) should see enclosures only as a subset of pastoralist range management systems. Pastoral land use and range management incorporate issues of tenure, relation and negotiations, mobility, strategies corresponding with seasonal resource patterns, etc. Fenced drought reserves can complement revitalized pastoral systems but cannot justifiably replace them.

- Development support that aims to enhance sustainable pastoral production must accord particular attention to the large-scale resource 'degradation', which is a priority problem to the pastoralists of the area today (Tache, 2009). SC should thus support community aspiration to revitalize an integrated land use system (seasonal resources and drought reserves) and implementation of decisions made by the leaders of customary institutions (Appendix 3).
- While community enclosures were originally meant for reducing drought impacts on households/communities by availing pasture reserves during difficult times, current sale of hay in some places demonstrates a tendency to deviate from the originally intended organizational objectives. Over and above confusing resource tenure arrangements and collective management responsibility, the practice could cause or aggravate *de facto* resource privatization in the CPR rangeland. Therefore, the deviation must be rectified and communal enclosures brought back to their original purpose through continuous engagements with the communities and government line departments before commercialization of the key natural capital replicates in more pastoralist areas and the negative innovation takes root.
- The environmental management and rangeland rehabilitation objective makes it essential to rotate location of the reserved sites from time to time. Keeping pasture reserves at a constant space would aggravate grazing pressure on the surrounding open areas, implying soil erosion and loss of in-ground seed bank in the long run.
- In **replicating** good practices of the drought reserves in other places through initiatives of new community enclosures or supporting those already existing, SC should make project objective abundantly clear to the community (and other stakeholders) from the outset and make continuous follow up to ensure that the enclosures contribute to strengthening of CPR tenure, institutional empowerment and equity. However, it is vital to be cautious in supporting spatial replication of drought reserves in order not to contribute to rangeland fragmentation and break up of landscape connectivity. The objective of drought reserves and domestic feeding of animals must be seen only as supplementary to extended and mobility-based land use. Pasture scarcity, rangeland shrinkage and population pressure are all factual elements that are currently affecting sustainable pastoral land use. However, they can't and should not be used as an excuse for shying away from delving into the challenging but necessary task of revitalizing seasonal grazing and mobile land use.

- With regard to **scaling up** of the drought reserves, the seemingly barren areas must be put to rest so as to restore their usefulness in supporting livestock production. If such an intention and practice spatially expands with the immediate primary objective of land reclamation, it can be a good step towards addressing macro-scale environmental 'degradation' (in terms of above ground biomass), severe pasture scarcity and decline in rangeland productivity, thereby creating capacity to minimizing 'degradation'-induced vulnerability to herd loss and resultant household food insecurity. Enhanced productivity of degraded environments would recompense the opportunity cost of the apparent temporary access 'loss' that happens when land is fenced aside. Rangeland reclamation through rehabilitation of degraded areas must go hand in hand with revitalization of the open seasonal grazing system as was mentioned earlier. Such an integrated and scaled up range management could contribute to sustainable pastoral livelihoods and suggest a trajectory option in rangeland development in southern Oromia.
- Active participation of women in all aspects of drought reserves (decision to enclose or open the reserve, fencing, bush clearing, terrace making, hay cutting and collection, stacking, monitoring, benefit sharing, etc) as was demonstrated by the Qarre Gutu community enclosure in Kobadi PA, suggests higher likelihood of sustainability of the reserves and implies social equity. In supporting drought reserves, particular attention should be given to women groups in order to reduce extra burden on them, particularly during emergencies, and to augment their income through improved capacity to survive droughts.
- Management of rangeland resource is such a delicate matter that requires multi-dimensional considerations, including relations, cultural issues, ecological characteristics, tenure arrangements and equity among others. In the socio-environmental context of southern Oromia where key pastoral resources are in the domain of common property where the customary law is the ultimate owner of the land and use right granted upon proper observation of the rules, innovations such as the sale of communal hay might carry potential danger when related to the bigger resource tenure issue. Hence, a key lesson here is that development actors must be ultra cautious with program interventions that centre on key natural resources such as pasture.
- SC should support pastoral development in the arid lands of southern Oromia by supporting implementation of pastoralists' rangeland development vision and aspirations as clearly stated in the directives issued and an appeal made by leaders of multiple customary institutions

in such a way that development partners stand by them in implementing the community level policy decision (Appendix 3).

5.1.2 Site-specific recommendations

Site	Observed red flag issues	Recommendation
Qarre Gutu	<ul style="list-style-type: none"> Proximity to town and susceptibility to illicit use; very poor fencing Exposure of hay heap to sun and rain Tedious & ineffective hay harvesting technique 	<ul style="list-style-type: none"> Support with dialogue with the town & sub-urban <i>kebeles</i> Support with improved hay storage is crucial. Options include water proof canvas to cover the hay or building an iron-roof warehouse Assess more efficient hay harvesting techniques
Haya Anani	<ul style="list-style-type: none"> Dismantled due to ethnic conflict & subsequent population displacement Controlled fire practice discontinued Poor fencing 	<ul style="list-style-type: none"> Rehabilitate the reserve and the IDPs Resume controlled fire in the post-rehabilitation stage Reinforce the fence
Dambala Raba Qawa	<ul style="list-style-type: none"> Hay exposure to rain, sun and termites after harvest Incomplete fencing 	<ul style="list-style-type: none"> Support with improved hay storage techniques More extension work to mobilize the population to complete fencing
Kurkurru	<ul style="list-style-type: none"> Hay commercialization & exclusion of the poor households from benefit sharing Encroachment by a road construction company 	<ul style="list-style-type: none"> Bring the reserve back to its original objective Follow up realization of the promised compensation
Dheebisa Bule Harsogido	<ul style="list-style-type: none"> Hay commercialization 	<ul style="list-style-type: none"> As above (Kurkurru) Vigilance to ensure that resource use and management continue being in line with customary resource tenure and use
Kukkuba Sala Kaffara Weeb	<ul style="list-style-type: none"> Inappropriate location 	<ul style="list-style-type: none"> As above Support community plan to enclose drought reserves in more appropriate places.

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VI. Appendices

Appendix 1: List of participants in group discussions and interviews in Guji and Borana Zones

No	Name	Sex	Age	Organization
1	Huseno Boru	M	41	Goofa Amboo PA
2	Hassan Bariso	M	45	"
3	Qasim Addow	M	71	"
4	Isaq Aliyyi	M	48	"
5	Tayib Liban	M	59	"
6	Nura Bariso	M	48	"
7	Adan Hussein	M	42	SC, Extension Agent
8	Husen Kote	M	46	"
9	Yusuf Kote	M	56	"
10	Mahmud Isaq	M	30	"
11	Tahir Kote	M	40	"
12	Doyo Hargessa	M		SC, Liban Sub Office Manager
13	Dida Boru	M		SC, Liban Sub Office Program Coordinator
14	Tewodros Jima	M		SC, Liban Sub Office NRM Officer
15	Gosaye Alemu	M		Liban District PaDO, Office Head
16	Manata Jilo	M	84	Nura Humba PA
17	Sirba Lillo	M	75	"
18	Matu Bullalla	M	45	"
19	Jaggo Xele'o	M	40	"
20	Halchu Waldenna	M	25	"
21	Dhekkama Birbirs	M	24	"
22	Dambob	M	22	"
23	Musxafa Cirri	M	21	"
24	Qasim Hammessa	M	20	"
25	Nure Sirba	M	25	"

26	Huqa Iyya	M	64	Qoratti PA
27	Kote Cacicha	M	54	"
28	Cuqulisa Dida	F	43	"
29	Kontoma Dida	M	53	"
30	Jarsa Konsole	M	44	"
31	Roba Dhera	M	38	"
32	Liban Jilo	M	53	"
33	Saqo Kulule	M	53	"
34	Liban Badhasan	M	24	"
35	Qumbi Saqo	M	22	"
36	Guyo Godana	M	45	"
37	Gurracha Duba	M	68	Simminto PA
38	Liban Dabbaso	M	22	Oromia Pastoral Areas TVET College, Yaballo
39	Waqo Bonaya	M	28	Simminto PA
40	Bonaya Iyya	M	52	"
41	Dima Duba	M	66	"
42	Huqa Duba	M	67	"
43	Doyo Huqa	M	35	"
44	Wario Liban	M	73	"
45	Huqa Nura	M	30	"
46	Iyya Guyyo	M	44	"
47	Tadhicha Nura	M	46	"
48	Dabbaso Galgalo	M	71	"
49	Diqa Liban	M	45	"
50	Dida Duba	M	56	"
51	Bukke Duba	M	63	"
52	Kadija Udukko	F	56	Kobadi PA
53	Amina Isaq	F	29	"
54	Zeinabu Abdo	F	36	"
55	Faxuma Abdi	F	37	"
56	Hale Kuliso	F	40	"
57	Radiya Hussein	F	42	"
58	Shukria Abdo	F	25	Bururi PA
59	Battula Mohamed	F	39	Kobadi PA
60	Salia Haro	F	40	"
61	Shaggaro Hassan	F	31	"
62	Faxuma Mohamed	F	28	Bururi PA
63	Halima Ararsa	F	38	Kobadi PA
64	Abdia Xahir	F	22	"
65	Zeinaba Sheikh Hassan	F	30	"
66	Asha Galchu	F	30	"

67	Asha Hussein	F	38	"
68	Dunio Hussein	F	20	"
69	Zeinaba Mamo	F	28	"
70	Leila Issa	F	40	"
71	Gimbe Nengo	M	58	Mugayo PA
72	Kottola Cirri	M	45	"
73	Sulxan Xache	M	34	"
74	Gossaye Alemu	M		Head, Liban District PaDO
75	Jarso Wacille	M	61	Wacille PA
76	Giri Jilo	M	60	"
77	Sora Waqo	M	52	"
78	Jilo Shanu	M	38	"
79	Galgalo Dhaddacha	M	48	"
80	Hassan Molu	M	60	"
81	Sora Boru	M	60	"
82	Biliso Sora	M	72	"
83	Jarso Morowa	M	71	"
84	Qalla Guyo	M	38	"
85	Dabbaso Jatani	M	75	Hallona PA
86	Haro Dabbaso	M	24	"
87	Wario Boru	M	30	"
88	Bule Waqo	M	25	"
89	Sora Duba	M	40	"
90	Ture Jarso	M	15	"
91	Bakkayye Duba	M	55	"
92	Diqqa Garbole	M	23	"
93	Wakkala Dabbaso	M		"
94	Adi Liban	M	55	"
95	Adi Gollo	F	35	"
96	Halake Doyyo	M	55	"
97	Dhiba Hashanu	M	20	"
98	Gurra Guyyo	M	40	"
99	Guyyo Halake	M	85	"
100	Sora Waqo	M	20	"
101	Halake Bukune	M	80	Qawa PA
102	Garbole Godana	M	75	"
103	Haphicha Huqa	M	60	"
104	Galma Bukke	M	48	"
105	Bukke Liban	F	52	"
106	Kana Jaro	M	26	"
107	Roba Korophu	M	24	"
108	Qucuca Halake	M	20	"

109	Mallicha Korophu	M	20	"
110	Qabballe Kandha	F	60	"
111	Guyyo Dida	M	49	Weeb
112	Garo Gufu	M	52	"

Appendix 2: Fieldwork itinerary

Date	Activity
12-02-2010	Trip from Addis Ababa to Hawassa; overnight in Hawassa
13-02-2010	Trip from Hawassa to Nagelle Borana; acquisition of various secondary data documents
14-02-2010	Meeting with Doyo Hargessa (Liban Sub Office Manager), Did Boru (Liban Program Coordinator) and Tewodros Jima (Liban NRM Officer) for field work planning; interview with them on the history of intervention with enclosures, achievements, challenges and lessons learnt.
15-02-2010	Visit to Liban District Administration and District PaDO, Enclosure site visit and community discussion at Goofa Ambo & Nura Umba
16-02-2010	Site visit and community discussion at Qorati & Siminto PAs
17-02-2010	Site visit and community discussion at Kobadi and Mugayo PAs; debriefing Liban SO
18-02-2010	Gap filling visit to Kobadi; organizing notes
19-02-2010	Trip to Arero; site visit and community discussions Irresa Tibba enclosure in Wacille PA
20-02-2010	Meeting with Arero District Administration and District PaDO; site visit and community discussions at Bule Harasogido and Kukkuba Sala in Hallona PA ¹⁸
21-02-2010	Site visit and community discussion at Qawa PA; enclosure visit in Kaffa PA
22-02-2010	Report compiling, interviewing SC Arero Manager, discussion with Gadaa leaders
23-02-2010	Debriefing the Arero Site; overnight in Yaballo
24-02-2010	Meeting with Borana Zone PaDO
25-02-2010	Trip to and arrival in Addis Ababa
26-02-2010	Reporting to EtCO

¹⁸ Enclosure sites are two in number in the Hallona PA

Appendix 3: Decisions and Directives issued by the leaders of Borana Oromo regarding severe pasture scarcity and subsequent community action plans

.....In the present era when climate change has become global agenda, when the world economy suffers recession, it is imperative that pastoralists mull ways and means of ensuring their survival in the face of these global challenges. One main strategy towards reduced impacts of climate change and global economic crisis is to strengthen or revitalize pastoral land use system.

Having thoroughly explored the causes of appalling pasture scarcity throughout the Borana rangeland with the meeting participants drawn from different grazing zones in nearly all districts, government partners and NGOs, having discussed both short-term and long-term livelihood implications of resource degradation at the meeting held in Yaballo over the period of 5-7 December, 2009, we the Gadaa leaders, the laduu and gadaa councilors undersigned make the following decisions and issue directives with the objective to tackling the worrying pasture scarcity:

On Private enclosures

In our culture, rangeland is the property of the community as a whole and our customary law does not recognize and allow making and holding of private pasture reserves in any forms. However, the communities in different districts have repeatedly complained about *de facto* private enclosures that are spontaneously flourishing on our common property resource areas. The control of the best grazing lands by self-interested individuals has resulted not only in degradation of the non-enclosed communal areas but also has caused internal conflicts at different times in different places. Having consulted with community representatives from different districts in our Zone, government line departments and NGOs involved in pastoral development, we hereby issue our directives that as of today December 7, 2009, there will be no private enclosures recognized in any part of our rangeland. Only the calf reserves enclosed for the purpose of supporting the more drought vulnerable herd classes (such as calves and weak cows), through public consensus, for communal utilization by *ardaa* and *reera*, are recognized by our customary law. Community leaders, district and PA leadership in different places where the problem exist are expected to implement the opening up of all the privately controlled enclosures for equitable public access in the manner that ensures peace and security of all concerned.

On emergence of spontaneous settlements at community grazing reserve sites

Appropriate land use is pivotal for sustainable pastoral production. Our land use strategies entail designation of the portion of the rangeland for communal grazing; following seasonal rhythms in using seasonally variable resources, including distinction between wet season and dry season grazing areas. Effectiveness of resource use strategies largely depend on systematic patterning of pastoralist villages. However, it is trendy today that some individuals or group of herders have been involving in activities that severely impede the land use system by, among others, establishing their villages on the communal pastures reserved for communal use. To tackle this problem we hereby decide that:

A). All villages found at the community reserve sites must leave the sites; relocate their villages and align them with those located at the right sites earmarked for village establishment. Non compliant will be moved through legal coercion and, at the same time, face the 5 head cattle fine as per the previous decisions made by General Assembly of Gumii Gaayoo. If the culprits still continue with disobedience, they must be brought to the Gadaa center for further action.

B) Community in different grazing zones have to convene and explore the extent of pasture scarcity problem in their respective zones and delineate buffer communal pasture reserves between different territorial units (ardaa, reera and madda) with the objective to enhancing livelihoods through improved range conditions and thus reduced drought mortality. To this end, those who have broken the wet season and dry season grazing pattern by leaving one of those bases must restore the system by maintaining their seasonal village sites.

On expansion of crop cultivation in the rangeland

Expansion of crop farming in the rangeland is prohibited by our law. Nether does government pastoral land use policy encourage it. We thus pass directives that prohibit expansion of crop cultivation in our rangeland. To this effect, in the *dheeda* where microclimatic condition may allow small scale opportunistic crop cultivation, farming sites must be distinguished from grazing sites and those who wish to engage in crop cultivation must do so in places designated for this purpose. In allocating farmlands where applicable, the customary and statutory structures must make sure that multiple and oversized farm plots are reduced to appropriate number and size. Farm sites emerged at water points (ponds) and wells and ritual grounds must be dismantled unconditionally and immediately in all corners of our rangeland.

We appeal to community members and customary institutional leaders, government institutions, NGOs operating in our areas, to take initiative towards implementation of these directives. All concerned are hereby requested to render due support to persons and institutions making efforts to translate the directives into practice.

Appendix 4: Information on drought reserves supported by SC/US in southern Oromia

A: Liban

S/N	Madda	Cluster/Arda	Size (in hectares)	Estimated beneficiary HHs	Remark
1	Boba	Halale	600	193	Liben
2	Siminto	Oda Yabi	550	213	Liben
3	Siminto	Dima kite	580	228	Liben
4	Bura Dhera	Rakatu	250	198	Liben
5	Dhakaqalla	Dhakaqalla	310	250	Liben
6	Alge	Adadi bokkola	126	89	Liben

7	Alge	Chamurji	118	96	Liben
8	Alge	Soyye	136	100	Liben
9	Alge	Shane	100	25	Liben
10	Bokkola	Biye Dimtu	178.5	184	Goro Dolla
11	Nurahumba	Madhera	80	72	As above
12	Nura Humba	Dhebissa	350	164	As above
13	Nurahumba	Qaqali	94	56	As above
14	Dillaelsa	Gobisso	200	152	As above
	Gofiyambo	Kurkuru	450	200	As above
16	Qorati	Haya Anani(fire site)	900	3000	Liben
17	Koba Adi	Qare Gutu	200	110	As above
18	Bulbul	Mendaro	900	260	As above
19	Mugayo	Sibu Jilo Ama	1000	250	As above
20	Miessa	Miessa	700	350	As above
21	Lagagula	Lagaula	200	110	As above
22	Hadhessa	Haya Hamaressa	100	60	As above
	Total		8122.5	6360	

Source: Liban Sub Office

B: Arero

s/n	District	Madda	Reera	Established	Estimated coverage in Ha	Beneficiaries	Facilitated by	Management system		
								V.good	strong	weak
1	Arero	Alona	Alona	2009	200 ha		SCF		✓	
2	Arero	“	Kukubasala	2009	150 ha		SC SCF F		✓	
3	Arero	Fuldowa	Mudhidunun	2009	200ha		SCF		✓	
4	Arero	“	Afura	2009	75ha		SCF		✓	
5	Arero	H/Dimtu		2009	50ha		SCF		✓	
6	Arero	Web	Ela	2009	100 ha		SCF		✓	
7	Arero	Kakalo	Ela	2009	100ha		SCF		✓	
8	Arero	Kawa	Kawa	2009	50		SCF		✓	
9	Arero	Wachile	Ela	2009	80ha see note		SCF		✓	
10	Arero	Wachile	Takabulti	2009	200ha		SCF		✓	

Source: Arero Site Office

Appendix 5:

TOR FOR PARTICIPATORY IMPACT ASSESSMENT OF DROUGHT RESERVE AREAS IN GUJJI and BORANA ZONES, OROMIA REGION

1. Background

Save the Children USA's (SC/US) Livelihood Unit (LU) has been implementing pastoral development and emergency programs in Oromia and Somali Regions since the mid 1990s. Currently through projects such as the Enhanced Livelihood in Southern Ethiopia (ELSE), the Productive Safety Net Program – Pastoral Areas Pilot (PSNP-PAP), Pastoral Improved Livelihoods and Resilience (PILLAR) and Somali Pastoral Livelihood Initiative (SPL I) the Livelihoods Unit supports pastoral development interventions under three pillars – livestock, natural resource management and people and institutions. The approach is based on work led by IIED which includes a regional pastoral training initiative. Under the NRM Pillar SC/US undertake a range of natural resource management activities under a participative drylands management approach which is centered on strengthening indigenous dryland management skills and institutions with a viewing to capturing and incorporating tried and tested systems and to support the necessary adaptation processes to cope with global climate change.

One intervention – enclosing dryland grazing areas (at times more than 200 hectare) has been used to support rangeland regeneration and to provide essential dry/ drought grazing reserves for lactating and weak animals – in parenthesis SC/US is particular keen to promote the feeding of lactating livestock near the homestead as a way of ensuring children have increased access to milk and are therefore less likely to become malnourished. In addition, efforts have been made to support customary managers to establish income generating activities including honey, firewood and charcoal, the latter from 'invasive' species.

Despite the apparently good work that has been done on enclosure to-date there has been no systematic review of the lessons learned and therefore the Livelihoods Unit is unable to contribute to discussions regarding current best practice. The Livelihoods Unit seeks to address this issue by contracting an internationally recognized rangeland management scientist to undertake a participatory impact assessment of enclosures to assess the potential and constraints.

2. Objectives

The central aim of the Consultancy is to undertake participatory impact assessment of enclosures and assess their value as a rangeland management tool. The specific objective is to evaluate the natural, social, financial and human capitals developed and supported as a result of the intervention.

Scope of the work

The participatory impact assessment of enclosed areas in Gujji and Borana Zones will be visited and assessed and if time permits enclosures in Moyale and Hargelle. The assessment will specifically focus on:

- Financial capital - changes in milk availability, the safeguarding of livestock and changes in household income from the enclosures
- Natural capital – changes in biomass production and rangeland degradation
- Human capital – changes in community level dryland management knowledge and skills
- Social capital – changes in community relations, strengthening of community level institutions and ways of working
- Policies and processes – ways in which Livelihoods Unit staff have sought to engage in policy processes and inform policy outcomes

Based on the assessment, the Consultant will offer recommendations regarding ways forward at the field, program and policy levels.

Additional key questions

- What were the original community livelihood expectations and have they been met or not – what indicators best answer these questions and could be usefully tracked in future
- What remaining community expectations could be realized and how in order that the enclosures reduce levels of vulnerability without cutting across local people’s preferred systems and livelihood aspirations
- How can the Livelihoods Unit better support sustainable dryland development in the short, medium and longer-terms in particular through taking interventions to scale, documentation and supporting policy processes

3. Methodology

The methodology involves secondary information review and primary data gathering. The secondary information includes reviewing of proceedings, reports and any document on drought reserve areas. The primary data collection will involve PRA-type techniques including focus group discussions with customary institutions and other interest groups.

3.1. Secondary information review

All available secondary information from literature, reports and proceedings will be reviewed, analyzed and summarized and finally incorporated into the report.

3.2. Primary data gathering

A. Key informant interviews

This involves interviewing of project staff, community leaders, womens groups, local government etc

B. Focus group discussions

Focus Group Discussions will be conducted in selected project intervention areas in at least two districts. The Consultant will explore the history, progress, challenges, benefits and costs and sustainability of enclosures.

C. Direct field observation of enclosures

The Consultant will visit selected enclosures to carry out a detailed assessment of their status, management and potential.

4. Timeframe

The Consultant position will be deployed as soon as possible for a period of 25 days. The 25 days will include all activities including preparation, travel, field visits, meetings, debriefing and reporting. The Consultancy will submit the final report not less than 15 working days after leaving Ethiopia.

Table 1: Core Activities

ACTIVITY	No of days required
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1. Preparation and travel	5
2. Field work	15
3. Return travel and reporting	5
Total number of days	25

4.2 Cost estimate

To be submitted by interested Consultants

5. Expected output

The Consultant will debrief with the Livelihoods Unit in Addis and no later than 15 days after leaving Ethiopia submit a first draft report. Following the return of aggregated comments the Consultant will have 5 days to deliver the final report in both hard (x5 bound copies) and soft copies (2 CDs).

6. Reporting Responsibility

The Consultant will work closely with the Natural Resource Management Advisor/ELSE Manager and relevant sub Office Managers.