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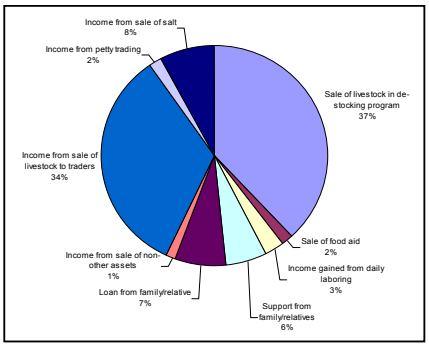

Impact Assessments of Livelihoods-based Drought Interventions in Moyale and Dire Woredas, Ethiopia

A Pastoralist Livelihoods Initiative report produced by the Feinstein International Center in partnership with:

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Impact assessment in Moyale woreda

The Save the Children US commercial off-take relief intervention in Moyale, southern Ethiopia was jointly informed by two main documents. First, the guidelines by Aklilu, Y., Admassu, B., Abebe, D. and Catley, A. (2006), *Guidelines for Livelihoods-based Livestock Relief in Pastoralist Areas*, USAID Ethiopia/Feinstein International Center, Tufts University, offered the PLI program technical guidance on a range of livestock-related drought responses. Second, a drought assessment carried out in December 2005 by Save the Children US confirmed a substantial increase in the numbers of livestock being presented in markets in the drought-affected area, and a subsequent collapse in livestock prices. Building the response was a joint initiative involving various actors, including: the MoARD Department of Fisheries and Livestock Marketing and in particular, the Department Head Ato Belachew Hurissa Dadi who convened a number of meetings with livestock traders; two livestock exporters - Ato Shiferi Assefa and Dr. Taferra Hailu who traveled to the drought-affected area and purchased livestock; and PLI partners in the Commercial De-stocking Working Group, which included representatives from DoFLM, CARE, IRC, Tufts University, Save the Children US and ACDI/VOCA. The patient work of the Working Group resulted in the release of USAID funds to livestock traders as credit. The documentation of the commercial off-take relief intervention was greatly assisted by Andy Catley from Tufts who trained Save the Children US staff in participatory impact assessment. In addition Save the Children US are grateful to Dr. Dawit Abebe, also from Tufts, for the support and guidance he provided to the assessment team which included Abebech Belayneh and Tsehay Abera, together with the following District Development Assistants who participated in data collection: Melaku Berhanu, Galgalo Begejo, Diba Sora, Nuredin Musa and Mulugeta Wakuma.

Impact assessment in Dire woreda

This assessment was conducted in three pastoral associations of Dire wereda, Borana zone. Reta Hailu, Livelihoods Officer of CARE Borana, played a crucial role in the field work. As participatory impact assessment is a relatively new methodology and has rarely been used to assess the impact of emergency interventions, the assessment required the input of various people. Thus, the CARE team would like to express our heartfelt gratitude to Dr. Andy Catley and Dr. Dawit Abebe of the Feinstein International Center, Tufts University for their immense technical support, for training on participatory impact assessment techniques, assisting with planning the assessment and for editing our case study in this report. The team also expresses its appreciation to Dr. Cary Farley, Dr. Abay Bekele, Dr. Afurica Juvenal and Elias Abdosh of CARE International in Ethiopia for their contributions and inputs in enriching the report. We would also like to thank Aden Tekle and Belachew Deneke of CARE Borana for their enormous input. Finally, we would like to express our gratitude to pastoral communities of the assessment area, without their support and dedication this assessment would not have materialized.

Contents

SUMMARY

The Pastoralist Livelihoods Initiative (PLI) is a two-year program funded by USAID Ethiopia which combines field level implementation and learning in pastoral areas, with the development of national guidelines for livelihoods-based livestock relief interventions with the Ministry of Agriculture and Rural Development. From late 2005 into 2006 a severe drought affected some pastoral areas of southern Ethiopia, and PLI government and NGO partners intervened with various types of livestock-related assistance. With the intention of informing policy dialogue and contributing to the national guidelines, impact assessments were then conducted in two woredas. The impact assessments combined descriptions of project activities (sometimes called 'process monitoring') with the systematic use of participatory methods to capture local perceptions of benefits.

The first case study in this report presents the impact assessment of a 'commercial de-stocking' intervention in Moyale woreda led by the Department of Fisheries and Livestock Marketing, and Save the Children US. It involved linking two private livestock traders with pastoralists and facilitating the off-take of cattle. As the intervention progressed, the two traders were provided with loans from Save the Children US of US$ 25,000 each. The intervention led to the estimated purchase of 20,000 cattle valued at US$ 1.01 million. On average, de-stocked households received US$186 from the sale of cattle in the program, and approximately 5,405 households were involved. In terms of aid investment, the approximate benefit cost ratio was 41:1 for the intervention. During the drought, income from de-stocking accounted for 54.2% of household income (n=114 households), and this income was used to buy food, care for livestock, meet various domestic expenses, support relatives, and either pay off debts or added to savings. In terms of supporting local markets and services, 79% of the income derived from de-stocking was used to buy local commodities or services. Expenditure on livestock care amounted to 36.5% of the local expenditure, and included the private trucking of livestock to better grazing areas. The buoyant export trade in live cattle and chilled meat was considered to be an important driver of the commercial de-stocking, demonstrating a positive linkage between livestock and meat exports, and pastoral vulnerability during drought.

The second case study describes the livestock interventions of the PLI/ENABLE consortium in Dire woreda. These interventions were: the purchase of livestock followed by local slaughter and distribution of dried meat; livestock feed supplementation; and livestock vaccinations and treatments. Income derived from de-stocking accounted for 37.8% of household income during the drought (n=61 households), and averaged US$23 per de-stocked household; 1121 households sold animals during the program. During the drought, the main household expenditure was the purchase of food (44.5%). Expenditure on local commodities and services amounted to 88.4% of total expenditure; 24.7% of expenditure related to livestock care. Despite an initial reluctance to eat dried meat produced from thin animals for cultural reasons, 1301 households received packs of dried meat averaging 2.16kg in weight. This was considered to be a useful nutritional supplement during the drought, particularly in view of the high protein content of dried meat (around 55.4g/100g edible portion).

Both case studies showed that even when implemented in the later stages of a drought, livestock interventions can meet important livelihoods objectives. The cash derived from de-stocking assisted people to meet their immediate food needs and purchase health care. This cash also enabled people to protect their key assets – their livestock – by buying fodder, transporting animals to better grazing areas, buying veterinary care, and buying water. This protection of assets also relates to a third livelihoods objective viz. the rapid rebuilding of assets and post-drought recovery.

The policy implications of the impact assessments were summarized into five main groups: the need to view drought as a normal and often predictable event; the importance of pre-existing services and markets during livelihoods-based programming; the opportunities for better linkages between pastoralists and livestock traders, particularly in relation to export markets; the need for stronger veterinary services to support livestock trade; and the need for donors and NGOs to review decision-making, procurement and other procedures and thereby better enable more rapid and innovative livelihoods-based programming in pastoral areas.

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Introduction: Livelihoods-based relief interventions in pastoralist areas of Ethiopia

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INTRODUCTION

It is widely recognized that recurrent drought is a key factor affecting the vulnerability of pastoralists in Ethiopia. While opinions vary on the severity and frequency of drought during the last ten years or so, few would argue that drought continues to cause excessive loss of pastoral livestock, causes severe hardship to pastoralists and leads to repeated bouts of humanitarian assistance. Aid assistance during drought was first delivered to pastoral areas of Ethiopia in the early 1970s and since then, the dominant response has been food aid. To some extent, this response may have resulted in reduced human mortality and the gradual disappearance of famine. Infant mortality rates of 615/1000, as reported among Issa pastoralists in 1974 (Seaman et al, 1978), seem like a thing of the past. But while aid may have helped to keep pastoralists alive, they remain highly vulnerable.

More than 20 years ago an analysis of the humanitarian response to the 1984 to 1985 famine in Darfur, Sudan showed how most people affected by famine survived not because of aid, but due to their own resourcefulness and 'survival skills' (de Waal, 1989). Although food aid may have played a role in reducing impoverishment, it was suggested that other relief interventions would have been more effective for preventing destitution. Recognizing the importance of livestock to both farmers and pastoralists, it was proposed that the early buying up of animals and the use of 'fodder aid' rather than food aid would have helped people better protect their main resources and way of life. Around the same time, drought-related purchase of livestock and distribution of dried meat was used in pastoral areas of Mali (Oxby, 1989) and during the last 15 years, the concept of de-stocking has often been suggested an appropriate drought response in pastoral areas (e.g. Toulmin, 1995). Specific experiences of de-stocking are available from areas such as northern Kenya (Morton and Barton, 2002, Aklilu and Wekessa, 2002).

De-stocking and other types of livestock-related drought assistance fit well with the concept of saving lives *and livelihoods*. When viewed from a livelihoods perspective, de-stocking is a way to exchange some animals for cash, thereby giving pastoralists the cash they need to buy food,

maintain a core herd and access the services they want (rather than the services aid agencies provide). This herd maintenance might involve purchase of fodder or veterinary care, thereby supporting local markets and service providers.

THE PASTORALIST LIVELIHOODS INITIATIVE

The PLI program is a two-year initiative with an overall goal to *"mitigate the impact of drought and other shocks by sustainably improving preparedness, livelihoods and incomes of pastoralists"* in Ethiopia (Anon, 2005). The program started in October 2005 and an underlying strategy was improved resilience to shocks such as drought through stronger livestock marketing systems in pastoralist areas. It was implemented by four consortia of non-governmental organizations (NGOs) working with regional governments and federal government departments. The PLI program was atypical for at least two reasons. First, the program objectives include the development of national best-practice guidelines and policy for livestock relief interventions in pastoralist areas. This process was based on the creation of a national Livestock Policy Forum by the Ministry of Agriculture and Rural Development (MoARD), facilitated by the Feinstein International Center (Tufts University) and including scope for impact assessment of PLI interventions. Second, PLI encouraged innovation by allowing implementing agencies to identify new types of response and re-allocate up to 10% of their total budgets without prior permission from USAID.

Although livestock marketing initiatives in pastoral areas have a long and somewhat disappointing history, various international trends indicated that a renewed investment in livestock marketing by programs such as PLI was appropriate. For example, Ethiopia had made substantial progress towards the national eradication of rinderpest, a disease which effectively prevents a country engaging in a formalized livestock export trade according to international standards. Also, greater private sector involvement in livestock exports included the appearance of private export abattoirs and the export of chilled meat. Partly responding to an increasing demand for chilled meat in the Gulf States and Egypt, private companies were seeking to meet export quotas which in turn, meant purchasing livestock from pastoral areas (Aklilu, 2006). A complementary strategy of PLI was to support to privatized primary-level veterinary services in pastoral areas. Here the thinking was that improved animal health provides direct benefits to pastoral households through improved milk supply and other benefits, while also reducing livestock mortality and increasing the number of animals available for sale.

LIVELIHOODS-BASED DROUGHT INTERVENTIONS AND ASSESSING IMPACT

Almost as soon as the PLI program started in late 2005, it was evident that a major drought was evolving in parts of southern Ethiopia. Although not designed as a humanitarian program, PLI partners working in drought-affected areas began to design and implement relief interventions. Drawing heavily on experiences from northern Kenya during the drought there in 1999 to 2001, best-practice guidelines were prepared to assist PLI agencies to design livelihoods-based livestock interventions (Aklilu et al, 2006). It was also recognized that contrary to the Kenya experience, it might be possible to test alternative interventions such as "commercial de-stocking", based on linking private livestock traders to drought-affected pastoral communities. It was further recognized that systematic and prompt impact assessment of these interventions could contribute to the development of the best-practice guidelines by the National Livestock Policy Forum.

This report describes the livestock-related interventions of PLI in Moyale and Dire woredas in southern Ethiopia during the drought. Agencies funded directly by PLI, viz. Save the Children US and CARE, worked closely with government partners such as the Department of Fisheries and Livestock Marketing and the Oromia Pastoral Commission. The veterinary interventions of CARE were made possible by the provision of veterinary medicines and vaccines by the Food and Agriculture Organization to the Oromia regional government. Therefore, the interventions covered in the report should be viewed as a joint effort, involving different partners according to the intervention in question. The report also provides information on the impact of the interventions, as derived from participatory impact assessment (PIA), and seeks to relate livelihoods impact to the timing of the interventions. The report does not aim to cover all PLI livestock interventions during the drought, as at the time of writing, additional impact assessments and reviews were in progress or were being planned by the various working groups of the policy forum. The PIA methodology was based on the use of standardized participatory methods and where feasible, the repetition of these methods with representative household samples. This methodology had been used previously in pastoral areas of Ethiopia to assess USAID-funded projects (Admassu et al., 2005; Abebe, 2005), and PLI partners and USAID monitoring and evaluation staff were trained in PIA between February and May 2006.

Case study 1: Livelihoods impact of a commercial de-stocking relief intervention in Moyale Woreda, Oromia Region

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INTRODUCTION

De-stocking programs involve the intentional removal of animals from pastoralist communities in times of drought and other calamities, before animals die and become worthless. Ideally, these interventions provide a fair price to pastoralists/agro-pastoralists for their livestock, based on the animal's gender and age. De-stocking has been tested in pastoralist areas of Kenya (Aklilu and Wekessa, 2002) and has become an accepted use of the Government of Kenya's drought contingency fund. However, until recently the approach has not been widely used in Ethiopia.

During the recent drought in parts of southern Ethiopia, the PLI program was an opportunity to test livelihoods-based relief interventions in pastoralist areas. Therefore within PLI, the Department of Fisheries and Livestock Marketing (DoFLM) and Save the Children US supported a commercial de-stocking intervention in which private livestock traders were introduced to pastoralist communities with livestock to sell. Although traders initially used their own cash to purchase animals, as the intervention progressed they also received loans from Save the Children US. This intervention was based on the principles of drought cycle management and livelihoods approaches. In theory, the sale of livestock is intended to provide much-needed cash to people during drought, thereby enabling them to buy the food and services they need while also supporting local markets. When drought ends, cash can also be used to assist with rebuilding herds. This paper describes the commercial de-stocking intervention and the results of a participatory impact assessment (PIA) with pastoralists in Moyale woreda, Oromia Region. The objectives of the PIA were as follows:

- To assess the impact of commercial de-stocking as an emergency response on the livelihood of pastoralists.

- To assess the impact of the emergency de-stocking intervention on children.

- To identify the strengths and weakness of the de-stocking intervention, and how this can be improved in the future.

THE COMMERCIAL DE-STOCKING INTERVENTION

Preparing for commercial de-stocking at the proposal stage

The Save the Children US proposal for PLI acknowledged the possibility of drought during the two-year program and included an emergency de-stocking fund for use in the alarm and emergency phases of the drought cycle. The proposal budgeted $25,000 to the emergency de-stocking fund, but emphasized that the fund would be boosted through the diversion of development funds in the event of a drought during the life of the project. In addition to the emergency de-stocking, the Save the Children US PLI proposal also stated that *'…during an alert phase, the consortium will work with other PLI partners to encourage the off-take of surplus males and non-productive females in target areas, without resorting to the de-stocking fund. Efforts will rather be made to bring together livestock keepers, herder marketing groups/cooperatives and private traders in primary markets to increase off-take at reasonable prices.'*

Linking traders to communities

Save the Children US field staff reported the onset of drought in October 2005 and in mid-December 2005 their Addis-based food security staff undertook drought assessments in Liben and Afder zones in the Somali Region. These assessments concluded that Moyale District was in the alert phase of the drought cycle and without rain or appropriate intervention, could move to the alarm phase within the following four to six weeks. Pastoralists were employing drought coping strategies including movement of livestock to Hudet and Filtu where slightly better *deyr* rains and pasture were recorded.

In addition a number of recommendations were made in the assessment report, including:

> *SAVE FSU call an early meeting with relevant PLI partners to explore and agree options for increasing off-take in particular from kebeles along the Dawa River in eastern Moyale District. It is strongly recommended that SAVE take the opportunity afforded by the recently funded PLI to focus its interventions in the drought affected zone to protect pastoral livelihoods and assets (e.g. de-stocking – using generous quantities of cash and grain; feeding of nucleus breeding herds; and eventual restocking) which will have the single biggest impact in the long-term on the lives of children. In*

addition, SAVE should ensure that preparations are being made by the DPPA and other related government agencies to make food-aid available to vulnerable communities, including children, as required.

As a result of the drought assessment Save the Children US joined a series of meeting organized by the MoARD's Department of Fisheries and Livestock Marketing (DoFLM) and encouraged the formation of multi-agency 'De-stocking Working Group'. At the request of the DoFLM, Save the Children US agreed to support an awareness-raising meeting for livestock traders involved in the supply to livestock to both local and export markets, and to attract as many traders as possible. A series of radio and television announcements were used to invite people to the meeting on the 17th of January, 2006. The cost to Save the Children US was Eth birr 10,000 (US$ 1150).

Convened by the DoFLM, the meeting was attended by more than 40 livestock traders and abattoir owners as well as government officials and NGO representatives working on livestock related issues. The primary purpose of the meeting was to raise awareness among livestock traders and abattoir owners of the need for increased off-take from the southern rangelands. The meeting was largely successful and a number of traders expressed an interest in traveling to the drought-affected areas to explore the possibility of purchasing drought-affected livestock.

Two subsequent meetings were held by the DoFLM to organize familiarization visits to drought-affected areas, in which 21 livestock traders traveled to Afder and Liben Zones of Somali Regional State in the first two weeks of February 2006. Save the Children US covered the hire cost of four vehicles for a week (cost Eth birr 20,000, US$ 2300). However, although 21 traders visited five drought-affected districts, only two traders felt that a link with local traders and concentrations of pastoralists would be worthwhile.

The two traders expressed a particular interest in Moyale's two districts (Oromiya and Somali) and based on this interest, Save the Children US field staff in Moyale linked them to communities and the purchase of livestock was initiated. Some of the key features of the purchasing at community level are summarized in Box 2.1.

Between 5th to 25th February 2006 the traders purchased 6,292 male cattle (many of them very emaciated) which were either transported directly to holding grounds (in Nazareth, Awash and Metehara) or held in the Moyale area where they were provided with fodder until they were healthy enough to travel. The traders received no financial support from Save the Children US for the purchase of these livestock.

Box 2.1 Some key features of the commercial de-stocking initiative in Moyale woreda

Initial discussions
Save the Children US first introduced the traders to the woreda officials and then community meetings were held in areas where livestock were concentrated viz. Afdher and Liben Zones (Somali Region) and Borena Zone (Oromiya Region). The meetings were attended by local government staff, Save the Children US staff, traders and pastoralists, and provisional arrangements made for the establishment of 'commercial de-stocking markets.' Subsequent meetings were held between these same parties in Moyale area when the two traders expressed serious interest in the purchase of cattle. Save the Children US staff provided vehicles for traders and officials to travel to areas of livestock concentrations.

Selection of de-stocking sites
As a result of the meetings with the two traders outlined above, further meetings were held with pastoralists in convenient roadside locations. The traders felt that they would be able to buy all the stock they wanted near the road, and they were also aware that the interior roads were poor and transporters would charge higher rentals, which they wanted to avoid. The exact locations for the de-stocking markets were negotiated between the traders and pastoralists.

Selection of livestock species to be de-stocked
Bearing in mind that cattle are particularly susceptible to drought and would suffer highest mortality, Save the Children US suggested to the traders that cattle should be purchased. The purchase of cattle was also thought to be a more rapid approach for stabilizing livestock prices generally, and it was known that Ethiopia was encouraging the export of cattle to Egypt and this was meat prices. Although pastoralists were initially skeptical about the traders, soon after the purchasing actually started they saw that the traders would buy thin cattle for high prices, and they realized that they could sell cattle and use the money to feed goats and sheep.

Purchasing arrangements
Groups of pastoralists nominated a person to represent them in the de-stocking markets. This was a common practice already used in the area because many pastoralists were not confident to negotiate with traders and were unsure of reasonable prices. The traders also liked this system as they could negotiate the purchase of large numbers of animals through few people.

Sale price of cattle
Prices were determined by negotiation between traders and pastoralists. The de-stocking markets were not normal 'open markets' with lots of traders, but more closed with few traders - hence normal market values did not apply. In some cases prices were lower than in 'normal markets' and in others considerably higher. The trend towards higher prices was influenced by the export of cattle to Egypt.

Loans for traders for de-stocking

At the same time that Save the Children US was working with the DoFLM to organize visits by traders to drought-affected areas, PLI partners established a Commercial De-stocking Working Group. The working group, which included representatives from DoFLM, ACDI/VOCA, CARE, IRC, Tufts University and Save the Children met on 26th January and February 3rd 2006. As a result of these meetings Tufts staff prepared and circulated *Draft Modalities of the Provision of Short-Term Loans to Livestock Traders* which included an application form, covering letter and legal agreement with obligations of both the lender and borrower clearly outlined. It was proposed that PLI partners avail a total of US$ 2 million (or 7% of the total PLI budget) for this operation. This proposal was

endorsed by the USAID Contracts Officer in Ethiopia in a communication to PLI partners on 14th February, 2006.

Following the USAID endorsement of the loan scheme, Save the Children US informed the two traders who had already purchased more than 6,000 cattle (see section 2.2) that they were eligible for loans. Each trader received an interest free loan of US$ 25,000 on 28th February 2006. The agreement stated that based on their performance the two traders would be eligible for a second tranche of US$ 25,000 each. However, the onset of rain resulted in this offer being withdrawn as livestock prices started to recover. The two loans were repaid on 1st August and 9th October 2006.

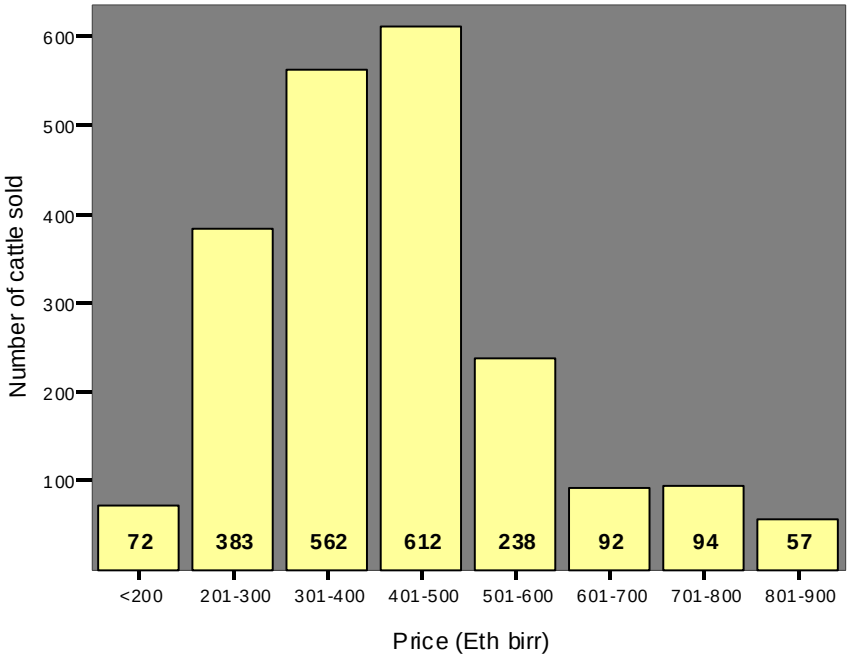
In addition to providing loans to traders, the Commercial De-stocking Working Group was also considering transport support for traders. However, based on the off-take of livestock by the two traders around Moyale, Save the Children US was able to lobby successfully within the PLI Commercial De-stocking Working Group and restrict support to loans to those traders with proven capacity to purchase and transport livestock to holding grounds.

Number of cattle purchased

In terms of the number of animals purchased, the results of the de-stocking activities were encouraging. In addition to the 6,292 cattle purchased by the two traders, it became evident that these traders had influenced other commercial livestock traders to buy animals. The result was an additional 3,778 male cattle purchased from the Moyale area, bringing the total cattle purchases during February and March 2006 to 10,915. It is important to note that Save the Children US did not physically monitor all sales and when interviewing traders in September 2006 it became evident that the traders had previously under-stated their purchases for taxation reasons. At this point in time, the traders were adamant that at least 20,000 cattle had been purchased.

Working with staff of the Oromiya Pastoral Development Commission an initial sample of 2,110 sales in February 2006 revealed a total purchase price of Eth birr 924,154; the average purchase price was Eth birr 438/head and on average, 3.7 cattle were sold per household. Using the average purchase price and assuming that 20,000 cattle were purchased, the total value of cattle de-stocked was approximately Eth birr 8.76 million or US$ 1.01 million. Based on these figures, around 5405 household benefited from the intervention.

Figure 2.1 Commercial de-stocking cattle price range in Moyale woreda, February 2006 (n=2110 cattle purchased)



ASSESSMENT METHODOLOGY

The PIA methodology combined participatory methods with conventional sampling methods and statistical analysis. Results from participatory methods were cross-checked against project process monitoring data. The assessment was carried out in seven kebeles (Peasant Associations) where commercial de-stocking had been carried out. A list of 570 households who have sold (de-stocked) their animals during the emergency was obtained from the Moyale Woreda Pastoral Development Office. From each kebele, 20% of de-stocked households were randomly selected, giving a total sample size of 114 households.

Table 2.1 Sampled households for the assessment of commercial de-stocking in Moyale woreda

Kebele (Peasant Association)	Total number of households involved in de-stocking	Sample size (number of households)
Malab	83	17
Tilo Medo	36	7
Tuqa	88	18
Argen	11	2
Medo	48	10
Goofaa	67	13
Dembi	237	47
Total	570	114

The participatory methods used in the assessment are summarized in Table 2.2. The proportional piling and matrix scoring methods were standardized and repeated with all 114 informants. Semi-structured interviews were used with each of these methods, providing flexibility to cross-check and probe responses, and clarify information as necessary. Data from proportional piling and matrix scoring was summarized using Statistical Packages for Social Science (SPSS Version 12.0) software. Results were compared with project process monitoring data, particularly data on the number and value of livestock sold per household.

Table 2.2 Participatory methods used in the assessment of commercial de-stocking in Moyale woreda

Method	Use	Sample size
Time-line	To determine the times when the intervention started and ceased.	Seven groups of informants (1 group per kebele; 10-15 people per group)
Proportional piling	To determine relative proportions of different sources of income and expenditure	114 households
Pair-wise comparison	To identify community-defined impact indicators for matrix scoring of different interventions	Seven groups of informants (1 group per kebele; 10-15 people per group)
Matrix scoring	To compare different food and non-food relief interventions using community-defined impact indicators	114 households
Semi-structured interviews	Used with all other methods to cross-check information and clarify responses	114 households
SWOT analysis	To determine perceived strengths and weaknesses of the de-stocking intervention	Three groups (community, Save the Children US, Moyale woreda Pastoral Development Office)

RESULTS

Timing of the intervention

The time-line results from the seven kebeles were compiled and are presented in Figure 2.2 overleaf.

Figure 2.2 Time-line of key events during the 2005 to 2006 drought, Moyale woreda

	Month/season	Events
	Gaana[*] 2005	▪ Late and insufficient long rain ▪ The rain supposed to start in *Gurandhala* but came late in *Bitotessa* for short period. ▪ Pasture didn't grow well
	Hagya[*] 2005	▪ Late and insufficient rain which started raining in *Chika* instead of *Hagaya* or *Bira.*
	Sadassa 2005 (November)	▪ Livestock started to die. It started with calf deaths and then latter adult cattle, sheep and even donkeys died.
	Abrassa 2005 (December)	▪ Dams completely dried and no water sources available for livestock and human being ▪ Different livestock diseases occurred such as *Awarssa*, *Luxxa* and *Sombessa.*
	Amaji 2006 (January)	▪ Food shortage occurred and people started starving ▪ Food aid started by government and GAYO (a local NGO) ▪ Migration to town and different areas started ▪ Large number of cattle died ▪ Abdhuba Abakude, a pastoralist from Tuqa Kebele, killed himself because he lost all his cattle
Support to de-stocking started	*Gurandhala* 2006 (February)	▪ De-stocking started by traders supported by Save the Children US ▪ Pastoralists transported some of their remaining animals to other places (Yabello, Fincha, Surupa, Arero, Didera and Liben –Dawa River). ▪ Food aid and water tankering from government started ▪ Water tankering and provision of water containers and water purification medicines provided by Red Cross. ▪ Livestock feed supplement started by CARE and GAYO ▪ Road construction under safety net program started as a source of cash for the community
Support to de-stocking ended	*Bitotessa* 2006 (March)	▪ De-stocking stopped ▪ Started raining ▪ Water tankering stopped ▪ Pasture started coming up but not in all places yet
	Chamssa 2006 (April)	▪ Livestock are in better condition ▪ Migrated livestock started to return

[*] *Ganna* is the long rainy season (*Gurandhala* –February; *Bitotessa*-March and *Chaamsa* – April)
[*] *Hagya* is short rainy season (*Hagaya* – August; *Bira* – September and *Chika* – October)

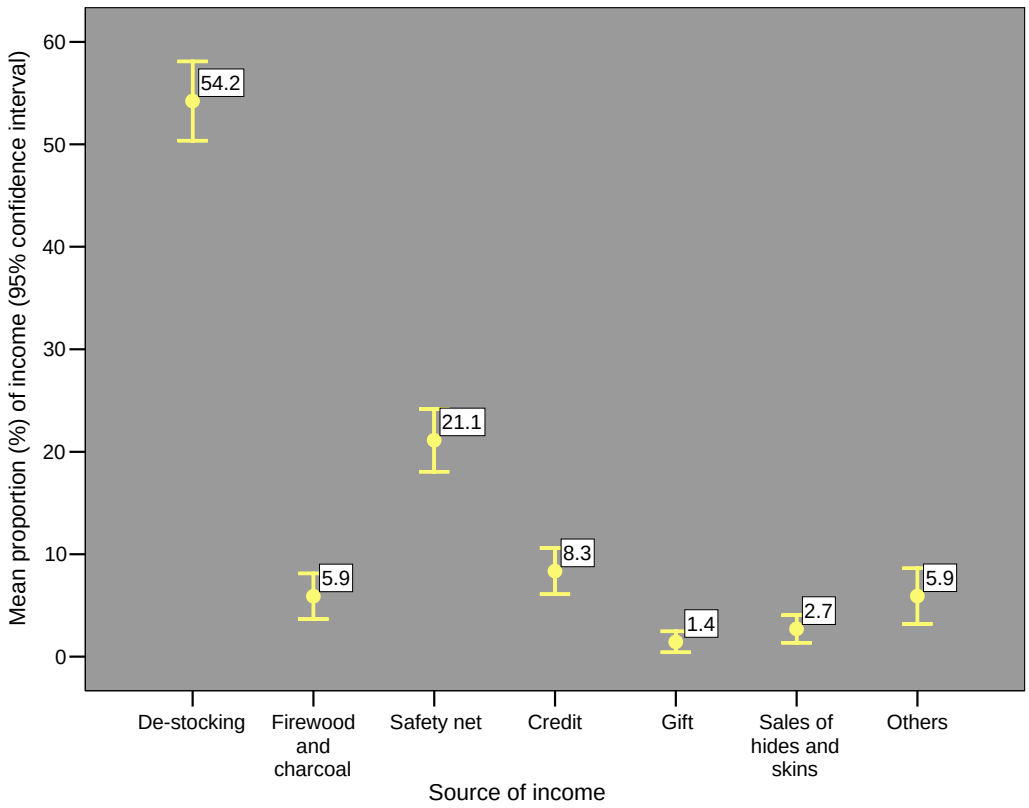
Impact of de-stocking on livelihoods: income and expenditure during the drought

Sources of income

The relative proportions of different sources of income are shown in Figure 2.3. On average, 54% of household income was derived from the sale of animals during the drought and this source of income was significantly higher than any other source (at the 95% confidence level). In absolute terms, this amounted to approximately Eth birr 1618 (US$ 184) per household, and therefore represented a substantial injection of cash.

The second most import source of income during the drought was labor (safety net), which on average, made up around 21% of total household income and was significantly higher than all other sources of income apart from de-stocking (at the 95% confidence level).

Figure 2.3 Mean proportion (%) of household income by income-source during the drought (n=114 households)

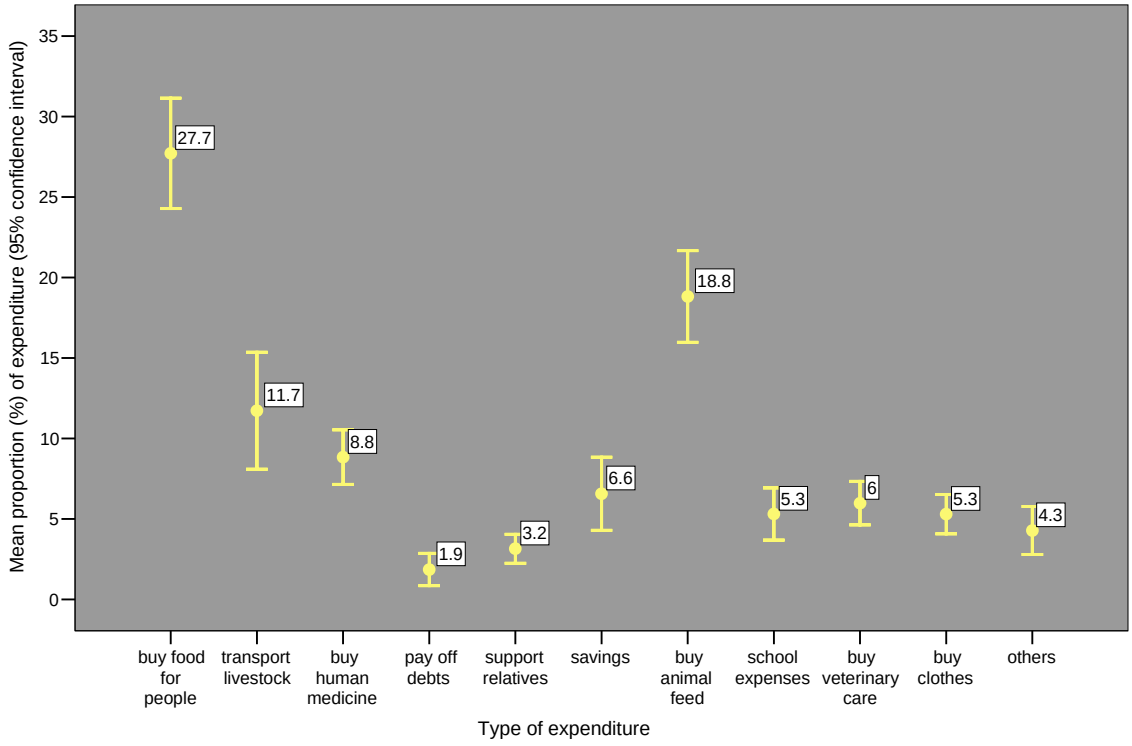


Uses of income derived from de-stocking

Household use of income derived from de-stocking is summarized in Figure 2.4 and 11 main types of expenditure were identified. Although the purchase of food for people accounted for the highest single proportion of expenditure (28%), pastoralists also invested heavily in safeguarding their remaining livestock. Expenditure on livestock accounted for 37% of the cash derived from de-stocking, comprising feed for animals (19%), trucking animals to other grazing areas (12%) and veterinary care (6%).

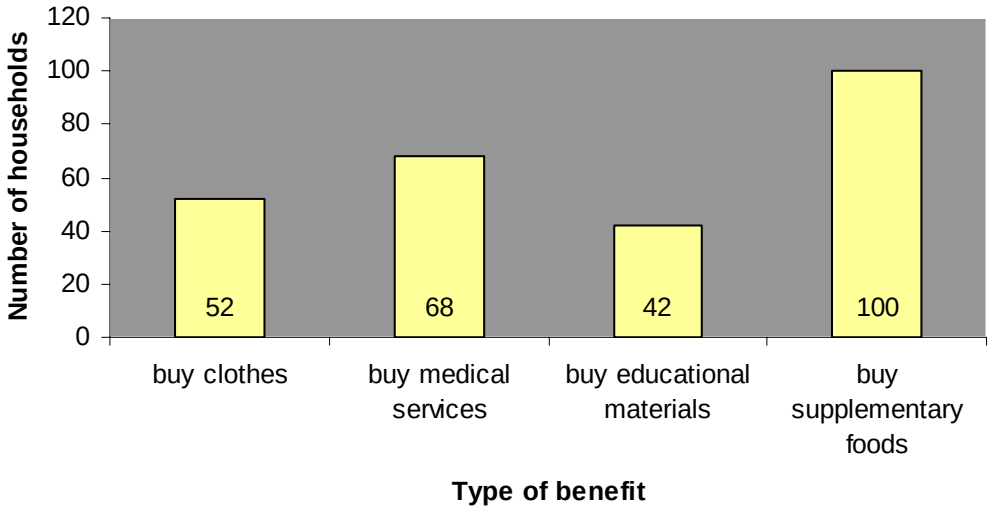
Livelihoods-based interventions such as de-stocking are partly justified on the basis of supporting local markets and economies. With this in mind, 79% of cash derived from de-stocking was used for local purchase of commodities of services, being purchase of food for people (28%), purchase of feed for animals (19%), trucking fees (12%), human medicines (9%), veterinary care (6%) and purchase of clothes (5%). In addition, people were able to use some of the cash from de-stocking to pay school fees, pay off debts, support to relatives and for saving.

Figure 2.4 Proportional (%) use of income derived from commercial de-stocking (n=114 households)



Regarding the perceived benefits of de-stocking on children within de-stocked households, interviews conducted as part of the proportional piling method revealed specific uses of income related to children. These uses are presented as number of respondents citing a particular use and the results are shown graphically in Figure 2.5.

Figure 2.5 Use of income derived from de-stocking: benefits for children (n=114 households)



Community perceptions of different drought-related interventions

A comparison of different relief interventions is shown in Figure 2.6. The indicators reflected both short-term and longer-term needs, such as *"Saves human lives"* and *"Helps fast recovery and rebuilding herd"* respectively. Looking at some of the indicators in turn, the indicator *"Helps to cope with the effect of the drought"* reflects the value of an intervention for supporting a household's capacity to cope with the shocks and stresses caused by the drought. De-stocking was considered to be the most useful intervention (mean score 9.1), with a significantly higher score (95% confidence limit) that any other intervention. In follow-up interviews after scoring this indicator, all informants confirmed that they were able to buy their own food with the money obtained from de-stocking, instead of waiting for food aid as they used to do during the drought in previous years. They also described the advantage of de-stocking over food aid, explaining that money from de-stocking could be used to buy other things such as medicines, clothes and so on (and as confirmed in Figure 2.4).

Figure 2.6 Community perceptions of interventions during and after the drought

Indicators	Mean scores (95% CI) for interventions							
	De-stocking	Veterinary support	Animal feed	Food aid	Water supply	Labor (Safety net)	Credit	Others
"Helps us to cope with the effect of drought"	9.1 (8.5, 9.7)	3.5 (3.2, 3.9)	5.7 (5.1, 6.2)	6.9 (6.5, 7.4)	3.0 (2.4, 3.6)	0.8 (0.5, 1.1)	0.5 (0.2, 0.8)	0.4 (0.2, 0.7)
"Helps fast recovery and rebuilding herd"	11.1 (10.5,11.7)	4.4 (3.9, 4.9)	5.7 (5.0, 6.3)	4.9 (4.4, 5.6)	1.9 (1.5, 2.4)	0.9 (0.5, 1.4)	0.6 (0.1, 1.1)	0.4 (0.1, 0.7)
"Helps the livestock to survive"	10.3 (9.5, 11.2)	4.9 (4.4, 5.4)	8.9 (8.1, 9.7)	2.3 (1.8, 2.8)	2.8 (2.2, 3.5)	0.2 (0.1, 0.4)	0.3 (0.1, 0.6)	0.2 (0.0, 0.4)
"Saves human life better"	9.8 (8.9, 10.6)	2.4 (1.9, 2.8)	3.7 (3.1, 4.3)	8.8 (8.1, 9.6)	3.6 (2.9, 4.3)	0.9 (0.5, 1.3)	0.5 (0.2, 0.9)	0.3 (0.1, 0.5)
"Benefits the poor most"	7.6 (6.7, 8.6)	1.9 (1.6, 2.3)	3.2 (2.5, 3.8)	11.0 (10.1,11.9)	3.7 (2.8, 4.3)	1.6 (0.9, 2.2)	0.7 (0.3, 1.1)	0.5 (0.1, 0.8)
"Socially and culturally accepted"	11.5 (10.6,12.4)	5.1 (4.7, 5.6)	5.8 (5.1, 6.4)	3.4 (2.8, 3.9)	2.6 (2.1, 3.2)	0.9 (0.5, 1.4)	0.3 (0.1, 0.5)	0.3 (0.1, 0.5)
"Timely and available"	8.4 (7.8, 9.0)	3.3 (2.9, 3.7)	4.3 (3.9, 4.6)	8.5 (7.9, 9.1)	3.5 (2.8, 4.1)	1.2 (0.7, 1.7)	0.5 (0.2, 0.8)	0.3 (0.1, 0.5)
Overall preference	10.6 (9.9, 11.2)	4.2 (3.8, 4.6)	6.2 (5.5, 6.9)	4.7 (4.1, 5.2)	2.6 (2.1, 3.2)	1.0 (0.5, 1.5)	0.4 (0.1, 0.6)	0.3 (0.1, 0.6)

n= 114 households; results derived from matrix scoring of each indicator using 30 stones; mean scores (95% CI) are shown in each cell. The black dots represent the stones used during the matrix scoring. The animal feed and water tankering interventions were implemented by CARE under the PLI/ENABLE program. Veterinary support was a joint effort led by LVIA under the Save the Children US PLI consortium, and using veterinary medicine and vaccines provided to LVIA by FAO through the Oromia Pastoral Development Commission.

Galma Diida, an elder from Dembi Kebele, used a proverb to emphasize how de-stocking had helped them to cope with the effect of the drought saying "*Okkon waan gadi itti dhiyaatu fuudha*" - it means 'to collect the nearest fruit from a tree's branches'. He explained saying that by selling some of the livestock he was able to save the rest by buying feed and transporting others to grazing areas , and also he was able to buy food for the family. Another beneficiary, Dedecha Sarite Ketelo, also from Dembi Kebele, said that he sold six cattle and besides buying food for the family he was able to save his remaining 24 cattle by buying feed supplement for them. Food aid was perceived as the second most important intervention for helping people to cope with effects of drought (mean score 6.9).

The indicator *"Helps fast recovery and herd rebuilding"* reflected the value of an intervention for assisting post-drought recovery, particularly in terms of rebuilding herds. Again, de-stocking was scored significantly higher than any other intervention (mean score 11.1) and informants explained this score by describing the uses of cash derived from de-stocking. Almost all informants mentioned that they were able to use some of the money from de-stocking to buy animal feed and veterinary medicines, thereby protecting their remaining livestock. Some informants also said that they saved some money from de-stocking and used it to restock (often by purchase of goats) after the drought. Feed supplementation (mean score 5.7) and veterinary support (mean score 4.4) were also important. Some food aid was fed to livestock and this practice explains the scores allocated to food aid for this indicator (mean score 4.9).

The indicator *"Helps livestock to survive"* reflects the value of an intervention in terms of saving livestock, and therefore, partly overlaps with the previous indicator**.** De-stocking (mean score 10.3) and feed supplements (mean score 8.9) were considered to be the most useful interventions and again, income from de-stocking was mentioned as a means to buy veterinary care (mean score 4.9). They noted that unlike the past drought it was possible to save most animals that otherwise would have died through de-stocking and feed supplement interventions.

The overall preference indicator was used to measure informant's overall preference for the different relief interventions during the drought. The four most-preferred interventions were de-stocking (mean score 10.6), feed supplementation (mean score 6.2), food aid (mean score 4.7) and veterinary care (mean score 4.2). Informants recognized the value of de-stocking as a means to both save their remaining livestock and contribute to herd rebuilding.

Strengths and weaknesses of the de-stocking intervention

One of the objectives of the impact assessment was to draw lessons learned and identify issues for improvement of similar intervention in the future. The results of a SWOT analysis are summarized in Table 2.3.

Table 2.3 Summarized findings of the SWOT analysis of commercial de-stocking

Strengths ▪ The first time for SC US to attempt de-stocking during drought ▪ Good working relations with government – the DoFLM of the MoARD ▪ Support provided to DoFLM for meetings, familiarization visits and for connecting traders to pastoralists interested in selling their livestock ▪ Good working relations with two traders ▪ Support provided to traders to link them to pastoralists seeking to sell their drought-affected livestock ▪ The first loans to livestock traders for off-take livestock in times of drought ▪ Purchase of weak and emaciated animals that otherwise would have died ▪ Community sensitization for de-stocking ▪ Buyers have come relatively close to the villages in most cases	**Weaknesses** ▪ Relatively low response of traders to marketing opportunities following exposure visits – only two traders responded, but many traders lacked financial capacity to take risks ▪ Lack of support from roadside customs officials and traffic police resulting in multiple taxes en route to the holding grounds ▪ Inadequate recording and monitoring of de-stocked households
Opportunities ▪ Presence of several local livestock traders buying cattle during drought ▪ High preference to livestock emergency response interventions than food aid ▪ High willingness of the community to participate in livestock emergency response interventions ▪ More commitment from regional government to provide land for holding grounds to support emergency de-stocking	**Threats** ▪ Poor status of roads in Moyale Somali Region which mitigates against commercial markets and easy access of transporters ▪ Insufficient capacity of traders to get involved in this activity ▪ Violations by roadside customs officials

DISCUSSION

To our knowledge, this case study describes the first attempt at commercial de-stocking to be conducted as an emergency response in pastoralist areas of Ethiopia. The intervention was not pre-planned in detail and Save the Children US staff and partners such as the DoFLM had to quickly respond to conditions on the ground and design the intervention intuitively as it progressed. This somewhat ad hoc but expert-driven approach reflects the realities of designing and implementing innovative approaches in emergency situations, particularly when there is only a short window of opportunity for intervention. In the case of commercial de-stocking, it is generally assumed that commercial off-take will only occur while animals are in reasonable body condition or at least capable of recovering condition following feeding in holding grounds. At some point, animals will become too thin and weak for transport, leading to emergency slaughter and meat distribution as the next option (for example, see the PLI/ENABLE case study in this report).

Methodological issues

In terms of rigorous and systematic assessment of the commercial de-stocking, there were two main constraints faced by the impact assessment team. First, during the purchase of cattle only the names of contact pastoralists were recorded, meaning that not all households selling cattle were known at the time of the sale. Therefore, the assessment team had to trace back the households linked to each contact pastoralist in order to determine possible impact at the household level. This was a time-consuming and difficult process, which would have been unnecessary if all households selling cattle had been recorded at the time of sale. Second, the use of private traders in the intervention raised questions about how to monitor all purchases when for taxation reasons, traders might prefer not to reveal the exact number of animals purchased. In the assessment we used known records of sales as the minimum number of cattle sold, and trader's own estimates as the maximum number of cattle sold.

In addition to these limitations, all impact assessment and research involves bias. Conventional research usually overcomes bias through procedures such as the use of controls and representative sampling techniques. In the case of de-stocking, control groups might have comprised communities with similar ethnicity and livelihoods to the de-stocked communities, who also experienced drought but who were not de-stocked. However, we decided not to use control groups because of possible community-level concerns that they'd been excluded from the de-stocking (thereby increasing the risk of exaggerated responses) and due to various logistical and time constraints. The PIA methodology addressed validity issues in two main ways. First, participatory methods such as

proportional piling and matrix scoring require informants to compare different items or interventions. Although such comparison does not completely solve the problem of bias, it is a more valid approach than asking direct questions about the intervention in question, as commonly used in questionnaire surveys. Second, results from participatory methods were triangulated with project process monitoring data on the numbers of cattle sold and the value of these cattle. This enables the plausibility of community informant perceptions to be assessed.

The livelihoods impact of de-stocking

Despite the involvement of only two traders in the de-stocking, and the rapid design and implementation of the work, dramatic results were produced. Not only did de-stocking provide over 50% of household income during the drought (Figure 2.3), this income was used in very rational ways and for meeting both immediate household needs and protection of assets (Figure 2.4) – expenditure on livestock accounted for 37% of income derived from de-stocking. The trucking of some remaining cattle to grazing areas is a novel approach to protect assets and was organized in the absence of advice or support from government or aid agencies. This is a good illustration of people using their resources wisely when resources are available. Up to 79% of cash derived from de-stocking was used to buy local commodities or services, indicating the livelihoods benefits in term of supporting local markets and services required for post-drought recovery.

When comparing livestock-based inputs, food aid and safety nets (Figure 2.6), food aid was the third most-preferred option and was a particularly important type of support for poorer households. Although the safety net was not perceived as a useful approach during the drought, it did account for 21% of household income (Figure 2.3). These findings indicate a need for better integration of non-food and food-based responses, and also, suggest a need for analysis of the right balance of non-food and food inputs by wealth group. Although the impact assessment did not aim to disaggregate impact by wealth, it is possible that the commercial de-stocking piloted by Save the Children US was more useful to households with more cattle, and less useful to poorer households with fewer cattle or whose cattle had already died. It follows that the timing of commercial de-stocking might be particularly important for poorer households, with very early intervention most likely to remove animals from poorer households before significant mortality occurs. These theories need to be explored by both further discussion with communities, and future implementation and assessment of commercial de-stocking.

The use of some income to buy livestock feed and veterinary drugs (Figure 2.4) shows support to local markets and services, but also indicates that free provision of livestock feed and veterinary care

by NGOs or government may not be needed if an adequate de-stocking response can be organized. In the event of such a response, pastoralists should be able to purchase these inputs as required from the private sector.

Requirements for scaling-up commercial de-stocking

Where there are still no roads

The pilot commercial de-stocking described in this chapter provides useful indicators for the wider application and institutionalization of the approach in Ethiopia. Perhaps the first point of note is that although the pilot aimed to cover five woredas and traders were exposed to these woredas (section 2.2), traders opted to focus on only two woredas. One of the main reasons for this restricted coverage was the appalling condition of roads in the area, and therefore the desire to limit activities to the vicinity of the main asphalt road to reduce transaction costs. The two traders almost established a site in Hargelle (this third woreda agreed to provide them with a holding ground) but then they pulled out because of the cost of transport which in turn, was determined by the condition of the roads. This is yet another example of how chronically weak roads and infrastructure in pastoralist areas hinders opportunity and in the case of commercial de-stocking, will most likely limit the approach to relatively accessible communities. If stronger livestock marketing systems are to evolve in these areas, the need for better roads is self-evident.

Rapid provision of loans to traders

The provision of loans to traders during the intervention was in response to requests from traders, and probably bridged a short-term gap in capital flow during the drought. Clearly, the purchase of animals by traders to the value of around $1.1 million vastly exceeded the $50,000 provided in loans. Given the current loan arrangements offered by government and private banks in Ethiopia, particularly for loans related to livestock activities, there is a need to design and institutionalize 'fast-track' loans schemes to support large-scale de-stocking during the early stages of drought. Although loans might also be offered by NGOs, this is not a long-term solution and many NGOs are constrained by their own financial management systems in terms of loan schemes for private individuals or groups. While private banks might also be an option, these are profit-orientated actors and will only provide loans if the profit which is derived from interest repayments outweighs the risks. A third arrangement might use a central relief fund within a coordinating agency such as UN-OCHA to provide quick loans to traders, with loan applications being screened by a technical group of governmental and non-governmental agencies. A central contingency fund could provide

funds to other livelihoods-based support such as feed supplementation and veterinary care. A further opportunity may be the use of 'drought insurance schemes'.

Continuing awareness among livestock traders

Although 21 livestock traders visited drought-affected areas and up to US$ 2 million was made available in the PLI budget, only two traders intervened during the drought. In general, there is still a communication gap between traders and pastoralists and therefore a need for ongoing awareness-raising involving individual traders and the various livestock marketing associations in Ethiopia. The DoFLM has an important role to play in convening events in which representatives from pastoralist communities and traders can discuss marketing opportunities.

Holding grounds for livestock

During drought livestock in pastoralist areas become thin and in some cases, unfit for transport. Traders require holding facilities for these animals, either in pastoralist areas (for animal too weak to travel) or in or around abattoirs. At present, limited holding grounds are a constraint, and both traders and government need to allocate holding areas prior to the onset of drought and agree modalities for using and maintaining these facilities.

Taxation and movement of livestock during drought

The transport of purchased livestock away from drought-affected areas to holding grounds was hindered by frequent customs and taxation points along the route. Options for temporary suspension of these payments should be considered during droughts periods.

Case study 2: Impact assessment of the PLI/ENABLE emergency livestock interventions in Dire Woreda, Borana Zone

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INTRODUCTION

In response to the failure of the 2005 *hagaya* rains in Borana zone of the Oromia National Regional State, CARE Ethiopia worked with various partners to design and implement emergency livestock interventions in drought-affected areas. This work was part of the USAID-funded PLI/ENABLE program coordinated by CARE Ethiopia and evolved from rapid assessments conducted by CARE and the first Borana Drought Emergency Response Coordination meeting, held in early January 2006 at zonal level. This meeting led to the PLI/ENABLE 'Borana Drought Emergency Response Plan'. The plan included three types of emergency livestock interventions viz. livestock feed supplementation, de-stocking followed by slaughter and distribution of dried meat, and livestock treatment and vaccination.

Although livestock treatment and vaccination has been a common emergency response to drought in Ethiopia, de-stocking and feed supplementation are relatively new approaches in Borana areas. In addition, the PLI program included the development of national best-practice guidelines for livestock relief interventions in pastoral areas of Ethiopia and therefore, information was needed to inform the content of these guidelines. With these issues in mind, a participatory impact assessment of the PLI/ENABLE livestock drought interventions was planned with the following objectives:

- To assess the impact of the emergency response of the PLI/ENABLE program on the livelihoods of communities based on community-defined indicators
- To assess if and how cash transferred during the de-stocking intervention helped people to cope with the drought
- To assess if and how the interventions helped people to maintain or rebuild assets
- To identify possible ways for improving the livestock interventions in future

This section describes the different livestock interventions and the results of the participatory impact assessment. The section also presents community suggestions for improving the interventions, and discusses how CARE might intervene more effectively and rapidly in the future.

THE LIVESTOCK INTERVENTIONS

De-stocking and dried meat distribution

The purpose of the de-stocking program was to promote off-take of animals that would otherwise die due to drought, and to provide protein-rich food to drought-affected people. Purchased animals were slaughtered and the meat was dried and distributed. After dialogue with the communities de-stocking centers were established at Goray, Dillo, Megado and Arbale kebeles around permanent water wells. The work began in March 2006 but the supply of livestock decreased after the onset of the *furmata* rains in mid-April.

Table 3.1 Number of animals slaughtered in Dire woreda and recipients of dried meat

Indicators	Kebele				
	Megado	Arbale	Dillo	Goray	Total
Purchase and slaughter of livestock:					
Cattle	93	34	30	7	164
Sheep and goats	86	194	965	932	2177
Camel	9	3	8	5	25
Number of households selling livestock	107	95	463	456	1121
Preparation and distribution of dried meat:					
Amount of dried meat prepared (kg)	675	671	737	732	2814
Number of households receiving dried meat	450	447	395	410	1301

A total of 2411 animals of different species were slaughtered in the four centers and a total of 2814kg of dried meat was packed and distributed (Table 3.1) along with supplementary food. The weight of each pack of dried meat varied from 0.5 to t 0.75 kg and on average, each household received 2.16kg of dried meat.

Table 3.1 shows that more sheep and goats were purchased relative to cattle, and camels. The number of livestock slaughtered in Dillo and Goray centers was much higher comparing with the other centers. This may have been due to the remoteness of these areas and their limited access to normal livestock markets.

A fixed value was set for each species of livestock – cattle Eth birr 300, camels Eth birr 600, and sheep and goats 75 Eth birr. Purchasing was organized through the Dillo Kayo Multi-Purpose Cooperative with a minimum profit margin of 10 Eth birr for cattle, 20 Eth birr for camels and 5 Eth

birr for shoats. Therefore, pastoralists received Eth birr 290, Eth birr 580 and Eth birr 70 for cattle, camels, and sheep and goats respectively. In addition to receiving a small profit from the purchase of livestock, the cooperative received the hides and skins from the slaughtered animals. In total, 1121 households sold livestock for de-stocking and these households received a total of Eth. birr 227,475. Therefore, the average income per household from livestock sales was Eth birr 203 (US$ 23).

Emergency livestock feed intervention

The emergency assessment conducted by CARE in December 2005 identified diminishing rangeland feed availability around permanent water points and therefore, increasing distance between grazing areas and watering points. The frequency of watering livestock had decreased from once per day to once every five days, depending on the level of water shortage. This situation contributed to loss of livestock condition, low productivity, and death of animals.

Based on the assessment, PLI/ENABLE planned to feed animals of reproductive importance such as lactating or pregnant cows, and calves. The idea was to establish central feeding stations near to permanent watering points in five drought-affected kebeles. This proposal was approved and 20,000 bales of grass hay and teff straw (in equal amounts), each weighing 12 to 18kg were procured to feed 4000 livestock for one month at 3kg per head per day.

In order to implement the feed intervention with the participation of the community, various community dialogues and discussions were held and a community-based emergency response committee was established in each kebele. The committees together with their respective communities identified 800 cattle from each kebele for feeding (a total of 4000 cattle) in the feeding centers; two to four centers near to water sources were identified in each kebele. The agreement to supply hay and straw from Debre Zeit and Sululta areas (around 40 km east and northeast of Addis Ababa respectively) were made at the time with contractors. The supply of bales and number of supplemented animals is shown in Table 3.2.

Table 3.2 Emergency livestock feed supplied in four woredas

Woreda	Number of bales			Number of supplemented animals
	Grass	Straw	Total	
Dire*	3603	4202	7805	3509
Moyale	2960	4052	7012	4940
Miyo	347	1910	2257	1887
Teltele	1052	0	1052	717
Total	7962	10164	18126	10763

* This woreda was later subject to a participatory impact assessment – see section 3.

Animal health interventions

The emergency animal health intervention started in late March and ended in April 2006, and was undertaken in Miyo, Dire and Teltele districts. The intervention was a collaborative effort, with PLI/ENABLE supporting the operational costs and providing technical coordination, and FAO supplying vaccines and drugs through OPaDC/SORDU. Vaccination and treatment figures are provided in Table 3.3. Vaccinations included CBPP, pasteurellosis, blackleg and anthrax.

Table 3.3 Livestock vaccinations and treatments in three woredas

Woreda	Type of intervention and number (proportion) of livestock				Number of households benefiting
	Vaccinated	Sprayed	De-wormed	Treated for infectious diseases	
Teltele	78900 (33.3%)	180912 (76.3%)	53391 (22.5%)	49903 (21.0%)	3497
Miyo	76465 (na)	42721 (na)	19259 (na)	2108 (na)	5396
Dire*	74085 (10.3%)	134303 (18.6%)	21181 (2.9%)	10790 (1.5%)	5558
Total	229450	357936	93831	62801	14451

Proportional coverage figures based a livestock population in Teltele of 237,025 and in Dire of 720,191; woreda livestock population figures were not available (na) for Miyo.
* This woreda was later subject to a participatory impact assessment – see section 3.

ASSESSMENT METHODOLOGY

The CARE assessment team selected Dire woreda for the assessment because three types of emergency intervention had been implemented in the woreda viz. emergency de-stocking, animal health care, and animal feed supplementation. Three out of four kebeles in Dire woreda were sampled viz. Dillo, Megado and Arbale. The fourth kebele in the woreda, Goray, was not assessed due to insecurity.

Three samples of informants were used depending on the specific topic to be discussed. Sample type and size are shown in Table 3.4. Five different participatory methods were used viz. mapping, timelines, proportional piling, pair-wise comparisons, and focus group discussions. The focus groups involved elders, youths, kebele leaders and cooperative members.

The distribution of the household income and expenditure data (n=61 households) was tested for Normal distribution by using the P-P plot function in SPSS software (version 13). The data was judged to be normally distributed and therefore handled as parametric data. Data from pair-wise comparisons and proportional piling was summarized using non-parametric statistical tests, again in SPSS software.

Table 3.4 Summary of the assessment methodology in Dire woreda

Method	Use	Sample size
Time-line	To determine the times when the intervention started and ceased .	Three groups of informants (1 group per kebele)
Proportional piling	To determine relative proportions of different sources of income and expenditure	61 randomly sampled households - 25 households in Dillo; 21households in Megado; 15 households in Arbale
	To determine use of different types of livestock feed	9 focus groups
	To determine changing livestock disease patterns	6 focus groups
	Nutritional information related to dry meat distribution	4 groups of women
	To compare different emergency interventions	9 focus groups
Pair-wise comparison	To compare different type of animal feed/methods used during the drought	9 focus groups
	To compare different emergency-related interventions	9 focus groups
	Nutritional information related to dry meat distribution	4 groups of women
Focus group discussions	General discussions on the impact of different interventions, plus weaknesses and opportunities for improvement, timeliness of the different interventions etc.	9 focus groups

RESULTS

Onset of the drought in relation to PLI/ENABLE interventions

During discussions with communities, people recited important historical events that occurred during the recent drought period. They mentioned many key events such as the time of cessation of rainfall, drying of grazing land and water points, migration, and the start of emergency response activities. These events are summarized in Figure 3.1.

Figure 3.1 Time-line of drought-related events in Dire woreda, 2005-2006

Dillo kebele

March 2005	• Cessation of *ganna* rain
May 2005	• Government Food Aid Distribution Started
June 2005	• Pastureland started to dry; livestock became emaciated towards the end of the month
July 2005	• Livestock started to die
August 2005	• Huge livestock deaths started
September 2005	• No *hagaya* rains. Conflict erupted between Borana and Gabra
November 2005 to January 2006	• Livestock deaths and migration continued
February 2006	• Provision of water and CSB started
March 2006	• Livestock feed intervention and de-stocking started
April 2006	• Rain started; emergency livestock vaccination and treatment started; conflict between Borana and Gabra intensified; return of community members from migration
May 2006	• Dry meat distribution started
June 2006	• Cessation of rain

Arbale kebele

March 2005	• Cessation of *ganna* rain
April 2005	• Some rain in the middle of the month, but low coverage and intensity
May 2005	• Rain ended
June 2005	• Pastureland started to dry; livestock became emaciated towards the end of the month
July 2005	• Scarcity of water and pasture
August 2005	• Huge livestock deaths started
September 2005	• Very poor *hagaya* rains; livestock become emaciated and migration starts.
November 2005	• Livestock deaths start and water points dried up
January 2006	• Severe death of livestock; start of government food aid; dialogue with CARE starts at the end of the month
February 2006	• Provision of water and CSB started
March 2006	• Livestock feed intervention and de-stocking and slaughter started
April 2006	• Rain started; emergency livestock vaccination and treatment started; de-stocking centers closed
May 2006	• Dry meat distribution
June 2006	• Cessation of rain

Megado kebele

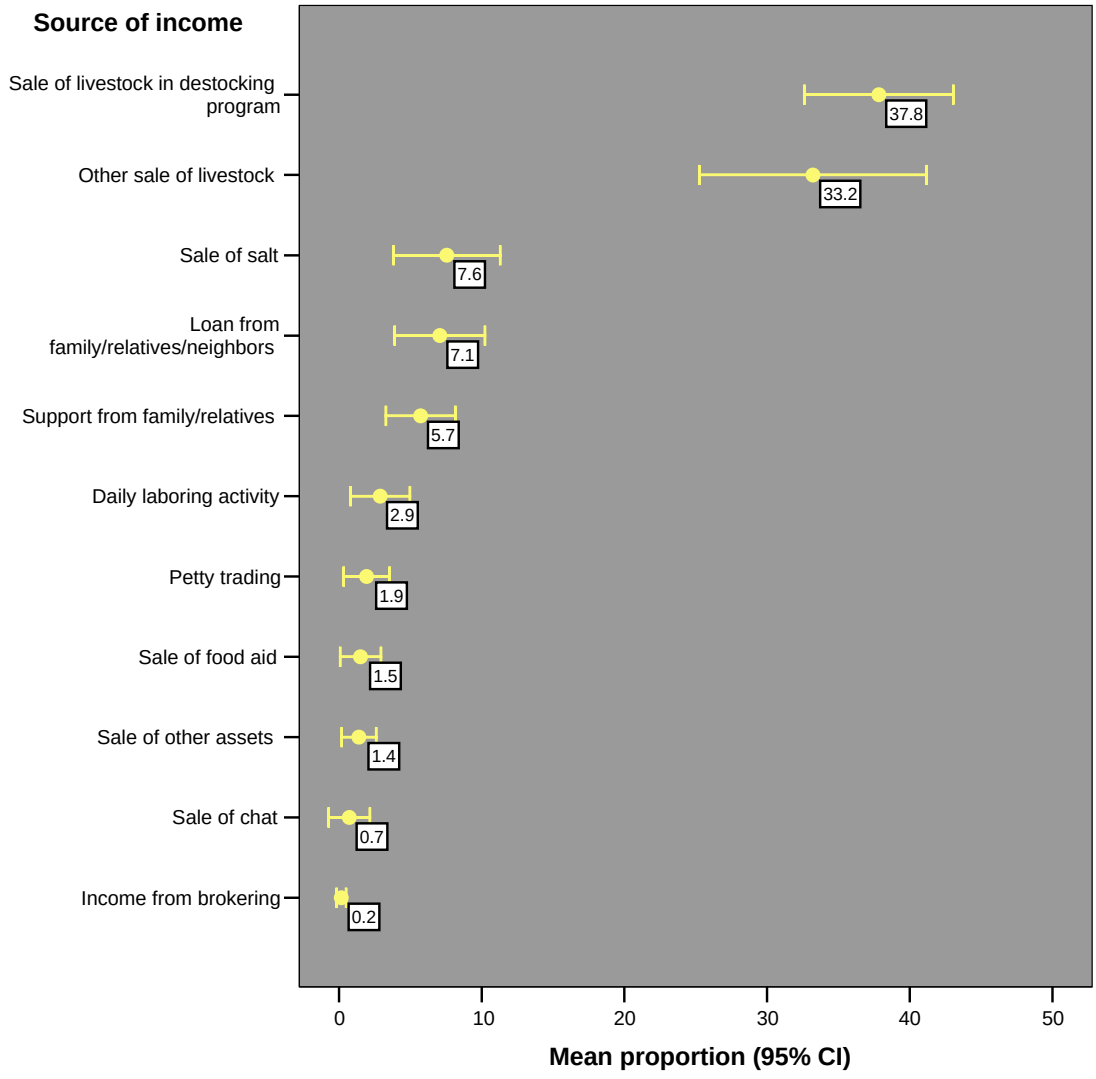
April 2005	• Cessation of *ganna* rain
May 2005	• Grazing areas become dry
June 2005	• Livestock became emaciated and migration starts
July 2005	• Scarcity of water and pasture
August 2005	• Huge livestock deaths started
September 2005	• *Hagaya* rains fail; livestock become emaciated and migration starts.
November 2005	• Livestock deaths start
January 2006	• Huge death of livestock; start of government food aid
February 2006	• Provision of water and CSB started
March 2006	• Distribution of CSB; livestock feed supplementation and de-stocking for slaughter begins; start of *furmatta* rain.
April 2006	• *Ganna* rain started
May 2006	• Dry meat distribution; cessation of rain at the end of the month

De-stocking and dried meat distribution

Impact in terms of household income and expenditure

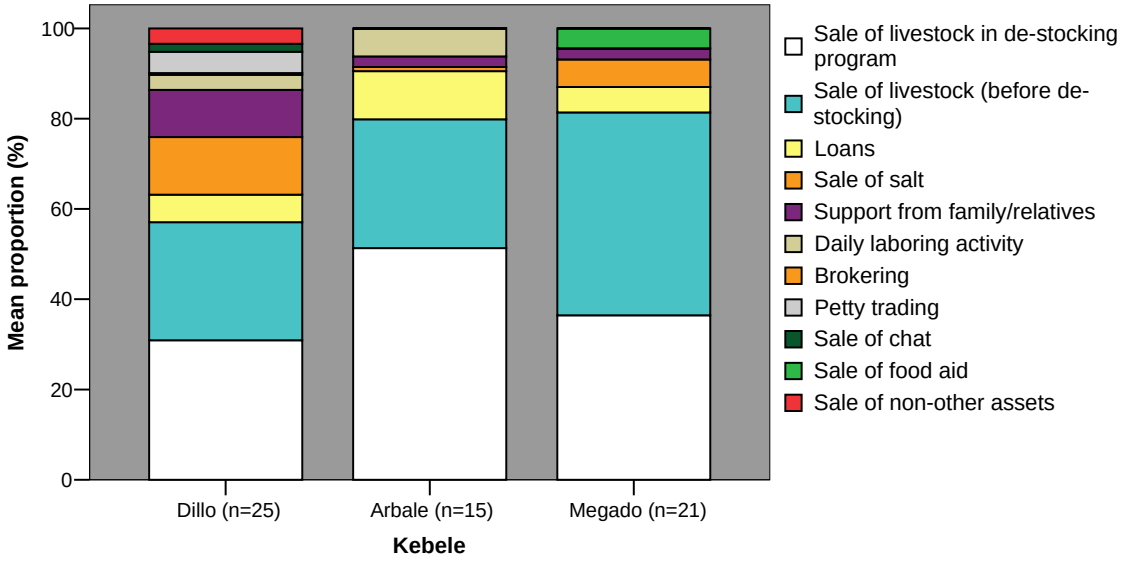
Informants identified eleven sources of income during the drought, with livestock sales accounting for 71% of income (Figure 3.2). Prior to de-stocking and during the early stages of the drought, people sold livestock through normal marketing channels (33.2% of income), whereas sales under the de-stocking which occurred later in drought accounted for 37.8% of income. Both these types of livestock sales provided significantly more income than any other income source.

Figure 3.2 Sources of household income during the drought in Dire woreda (n=61 households)



Sources of income by kebele are shown in Figure 3.3. Megado was nearer to Mega town and this explains the relatively higher income from livestock sales in this kebele.

Figure 3.3 Sources of household income in drought-affected areas by kebele in Dire woreda



An overview of household expenditure during the drought is presented in Figure 3.4 and shows that food purchases accounted for 44.5% of expenditure. People also invested in livestock, with expenditure on veterinary medicines (17.8%), purchase of goats (4.3%), purchase of water for livestock (1.8%) and payment to shepherds (0.8%); these expenses accounted for 24.7% of total expenditure.

Discussions with informants indicated that they appreciated the creation of livestock markets through the de-stocking initiative. Whereas previously they'd been forced to sell drought-affected livestock at a very low price (as low as Eth birr 2 for shoats and Eth birr 12 for cattle), the de-stocking program offered a far higher price (Eth birr 70 for shoats and Eth birr 290 for cattle). The program enabled them to get medical services, repay loans, and purchase commodities like tea and sugar. The participants also emphasized that the program helped in improving and maintaining their social roles, as it enabled them to help poor relatives and to make dowry payments. Some people were also able to construct houses and pay school fees.

Figure 3.4 Types of household expenditure during the drought in Dire woreda (n=61 households)

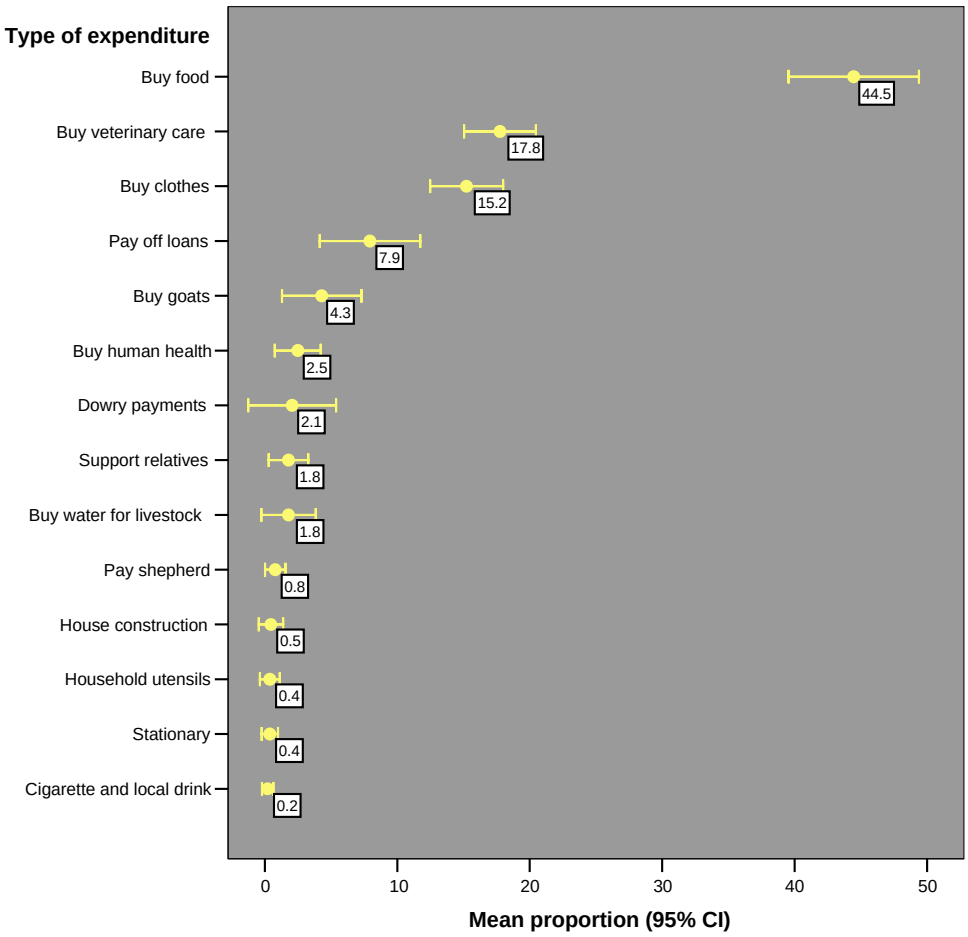
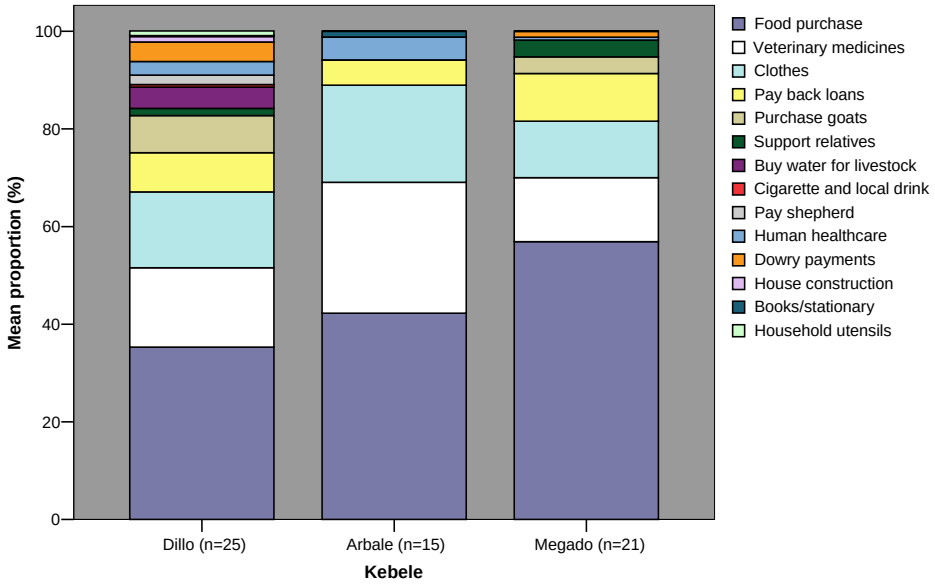


Figure 3.5 Types of expenditure during the drought by kebele in Dire woreda



My wife was very sick and in order to get medical service, I had to sell my cattle. But the only and nearest market place was Dubluk, about 100km away and almost impossible to reach with my cattle on time. While I was hopeless and in a desperate situation, I heard that CARE is buying emaciated livestock. Then, I sold my cattle to CARE and took my wife to Mega town for treatment and she is healthy now. Unless there is CARE in our area to purchase my cattle at that time, my wife would have been died and my entire family would be distracted.

Konchora Jarso, resident of Arbale PA

I had a cow that was very weak to return to the home from the dry grazing area. The fate of that cow was to be eaten by wild animals. When I heard that CARE is purchasing animals, I and other three friends of mine put the cow on a stretcher and brought it to the de-stocking center in which I sold it to CARE. I bought food and cloth from the money I got from the program. A number of livestock were left in the field dead and I consider CARE as my savior.

Waqo Duba, resident of Megado PA

When I looked back at the time of drought, it is just like a drama to me since I did not expect that I reach this day alive. During the drought that occurred eight years ago, I lost all my livestock. But now, I sold five very weak cattle to CARE and had it not been for CARE, I would have lost all my livestock. I owe much to CARE and had it been possible, I would have given my child to CARE. Since I do not have the power to repay my debt, let God pay to CARE for what it has done to destitute people.

Dabassa Wario, resident of Megado PA

In terms of re-building assets, some people had purchased goats using money acquired through the sale of emaciated cattle or camels.

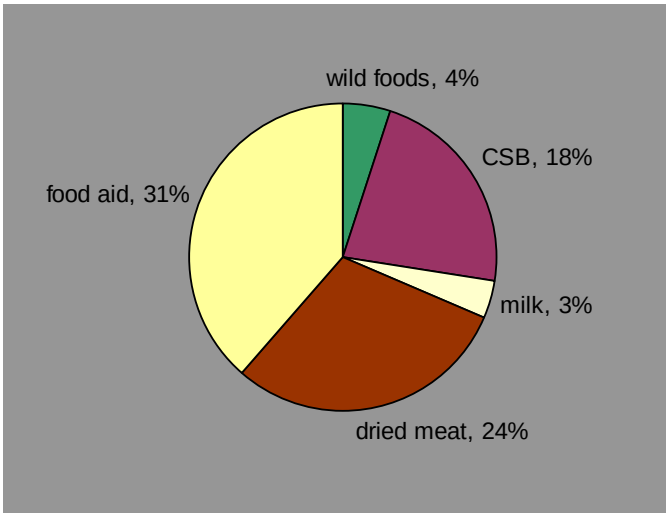
In addition to creating livestock markets in remote, drought-affected kebeles for emaciated livestock and transferring cash to pastoralists (Figures 3.4 and 3.5), the de-stocking provided temporary employment for 205 people (78 women and 127 men). These people were employed to slaughter livestock, prepare the meat, and as guards. Informants also recognized that the program had provided the hides and skins from slaughtered animals to the local cooperative.

In Dilo and Arbale kebeles there was a serious shortage of stores for food aid. However, after the completion of the de-stocking intervention, the dry meat processing houses became stores for food aid.

Impact of dried meat as a source of food

The impact of dried meat as a proportion of food consumed during the drought is shown in Figure 3.6. During drought assessments before the design of the de-stocking program, it was noted that Borana communities avoided the consumption of meat from emaciated animals for cultural reasons. Despite these initial concerns, the dried meat accounted for 24% of household food consumption. Informants mentioned that the dried meat helped them to cope with the drought and it was a very important food for children, elders and pregnant women because of its high nutritive value. Contrary to previous perceptions, informants also mentioned the nice taste of dried meat compared with their usual meal of maize, particularly when the meat was prepared with salt and green pepper. One elder noted that, *"CARE distributed the dried meat to only the poorest. After seeing the dried meat, the rich were begging the beneficiaries and then, according to the Borana culture, we shared the meat to non-beneficiaries".*

Figure 3.6 Foods consumed during the drought in Dire woreda



Results derived from proportional piling with 4 groups of women

Looking in more detail at foods consumed in the different kebeles:

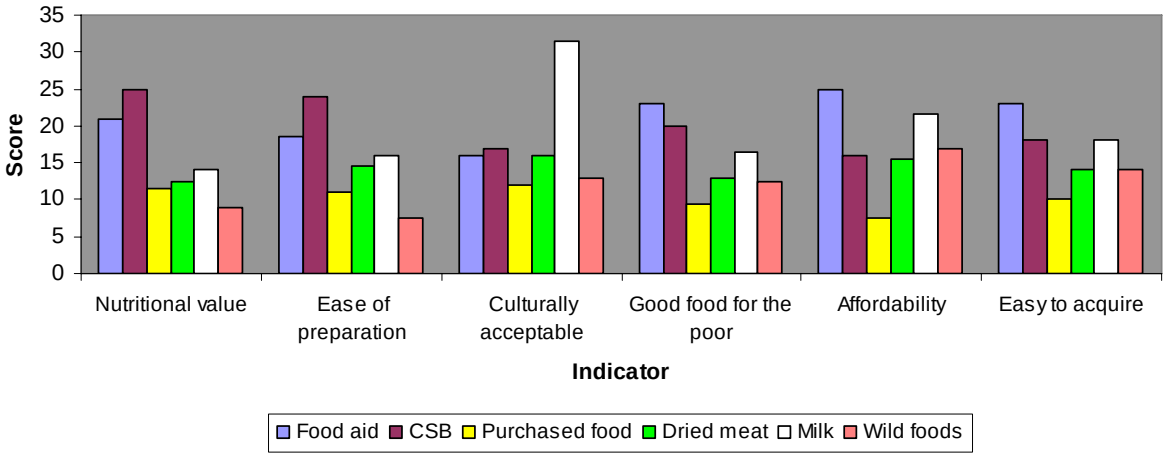
- The women in Dillo identified five sources of food viz. food aid, purchased food, meat from de-stocking, CSB and milk. This was the only group to use milk during the drought and the women scored it higher than any other type of food due to factors such as its nutritional value and cultural acceptance.

- The women in Arbale also identified five sources of food but compared with the Dillo group, used wild foods not milk. These women preferred CSB because it was easy to prepare and nutritious. Food aid and purchased foods were also valued because they were 'good for the poor' and easy to acquire.

- Women in Megado PA identified four sources of food during the drought period viz. food aid, purchased food, meat from de-stocking and CSB. These women preferred food aid because it was 'good for the poor' and easy to acquire. Dried meat and CSB were also valued.

The characteristics of different food consumed during the drought are shown in Figure 3.7.

Figure 3.7 Characteristics of different foods consumed during the drought in Dire woreda



Results derived from proportional piling with 4 groups of women. Not all groups scored all types of food.

Community suggestions for improving the de-stocking intervention

Informants noted the following weaknesses and made suggestions for future improvements to the slaughter de-stocking program:

- The payment for daily laborers, especially for guards was low, as they worked 24 hours a day.

- The price for emaciated and non-emaciated animals was the same. In future this has to be rationalized, and the price for cattle and camel has to be raised in order to enable the beneficiaries to rebuild their assets through the purchase of goats.

- By the time the de-stocking started there had already been huge livestock mortality due to the drought. In future, the timeliness of the response has to be considered.

- There was only one de-stocking center in each PA. Some clusters were located 30km from the de-stocking center, meaning that it was very difficult for weak animals to reach the center.

- CARE has to encourage a permanent livestock market place in the area and during drought, should assist livestock traders to purchase animals before they become too emaciated (commercial de-stocking).

- Meat should not be stored overnight without being processed, because flies will spoil the meat; rapid smoking of the meat is also recommended.

- Many people resented the bad smell from the de-stocking center - the sanitation has to be improved in the future.

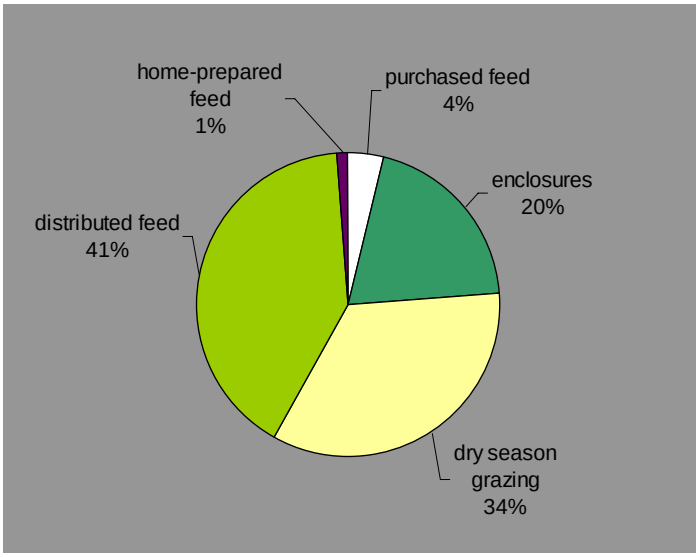
- The dry meat distribution targeted the poorest households. In the future, meat has to be distributed irrespective of wealth.

Emergency livestock feed supplementation

Comparison of different livestock feeds

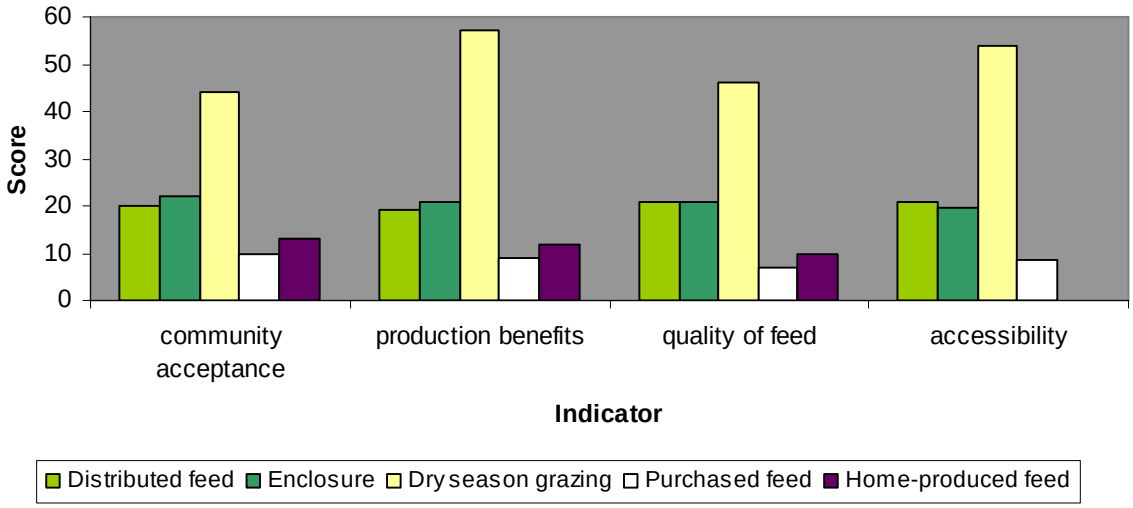
The different types of livestock feed used by informants during the drought are shown in Figure 3.8; distributed feed made up 41% of feed for livestock during the drought. The characteristics of different livestock feeds are shown in Figure 3.9.

Figure 3.8 Types of livestock feed used during the drought in Dire woreda



Results derived from proportional piling with 9 informant groups. Not all groups used all types of feed.
Distributed grass/straw - this was the teff and wheat straw distributed by the program
Enclosure - these were private enclosures of land accessible to specific individuals in the community
Dry season grazing areas - these were the normal dry season, communal grazing areas
Purchased feed - these were feeds such as cut grass purchased by households
Home-prepared feeds - these were other feeds prepared in individual households

Figure 3.9 Characteristics of different livestock feeds used during the drought in Dire woreda



Although traditional dry season grazing may have been the preferred choice for pastoralists, the decreasing availability of vegetation in these areas led to the use of other feeds. Informants stated

that the emergency livestock-feeding program had saved the lives of animals, and assisted the community to get more milk and receive a good price for their livestock due to maintenance of body condition. There were also labor-saving and time-saving benefits from the feed distribution. For example, people in Arbale explained that women previously had to travel for an hour to harvest grass and as the grass was found in very hilly areas, they were sometimes injured. The provision of feed prevented the need for this work and therefore, the risk of injury.

Many informants stated that the program has indirectly saved their lives, as their livelihood was based on their livestock. They also mentioned that it was very difficult to migrate with weak animals during the drought period and since no one will leave weak cattle in the course of migration, they were forced to spend many nights in the bush. After the rains started, people noted a far lower mortality in animals which had received feed compared with those which did not.

> *The drought was strong so that we suffered much and we could cope with the drought only with the help of God and CARE. There were so many days in which my entire family went without food for the entire day. There was only CARE below God that came to save us through providing feed and purchasing of almost dead animals. The most surprising thing is that CARE slaughtered those animals and distributed the meat to us. The government does not know us. What my daily praying is "Please God, give long age to CARE".*
>
> Bonya Jarso, resident of Dillo PA

> *There was a severe shortage of pasture in our area and we traveled a long distance in search of pasture and water. We used to spend so many nights around water points and we were under attack by wild beasts and suffered much. CARE saved us from such misery through distribution of grass and purchasing of our weak animals that helps us to purchase water for our remaining livestock.*
>
> Diramu Guyo, residents of Dillo PA

Community suggestions for improving the livestock feed intervention

Despite the positive views presented above, there were also concerns about the design and impact of the feed intervention. Although feed supplementation started in mid-February 2006, the feeding center approach was viewed as largely unsuccessful for two main reasons. First, labor requirements were underestimated; labor was needed for tending animals, watering, feeding, searching for grazing and moving herds. Related to this labor problem was the fact that while the project and professional staff wanted to focus the supplementation on selected animals (breeding stock), pastoralists opted to

feed all weak animals regardless of their breeding importance and sex. Hence, the number of animals to be fed increased. Second, due to the onset of the *furmata* rains ('rescuer', 'savior' or 'liberator' rains) in mid-February 2006, pastoralists moved their livestock from the target kebeles to better areas. Therefore, the project had to change from a central feeding center approach to a blanket distribution approach.

Informants identified the following weaknesses in the livestock feed intervention and made suggestions for future improvements:

- Although teff and wheat straw was useful for saving livestock, in the future the community needs only grass and concentrates. There was no community dialogue regarding the type of livestock feed to be distributed; in future, this has to be improved.

- Instead of distributing feed at an individual level, it would be better to establish cattle camps at cluster level and to hire daily laborers to tend the livestock. There were very few feed distribution centers, and camels and equines were too weak to move.

- The program covered only a small segment of the livestock population due to the small quantity of feed; only calves and lactating cows benefited.

- In the future, the feed should be supplemented with salt and concentrates.

- The program started after high mortality of livestock; the timeliness of future responses has to be considered.

- The livestock feed program has to be conducted with water programs and veterinary care.

Emergency animal health interventions

Changing livestock disease prevalence

Informant's perceptions of the impact of livestock vaccinations and treatments are shown in Table 3.6. Although not all types of vaccination or treatment were assessed by all informant groups, the overall trend was a dramatic reduction in disease prevalence.

Table 3.5 Local perceptions of changing livestock disease prevalence in Dire woreda

Informant group	Proportional reduction in livestock health problem (%)						
	CBPP	Biting flies	Babesiosis	Helminthiasis	Pasteurellosis	Blackleg	Anthrax
1	16	55	68	100	100	7	-
2	84	-	-	-	47	-	-
3	69	79	86	-	90	81	81
4	88	51	-	-	-	-	-
5	70	-	-	80	-	100	-
6	11	19	-	-	9	9	79

The figures represent proportional reductions in disease prevalence to allow direct comparison of different diseases. If the prevalence of a particular disease was 10% before the intervention and 2% after the intervention, the proportional reduction would be 80%.

People mentioned that the prevalence of contagious animal diseases in the area before the drought was high and that drought exacerbated these diseases. In general, the emergency animal health intervention was viewed as playing a great role in saving the lives of many animals and maintaining the assets of the community. Participants in Arbale pointed out that in previous droughts the vaccination campaigns had targeted only cattle, whereas the most recent campaigns included shoats and camels.

Community suggestions for improving livestock vaccination and treatment

Informants identified the following weaknesses in the livestock feed intervention and made suggestions for future improvements:

- When the campaign was launched, many livestock had migrated to other areas and so only a small proportion of the livestock population benefited. Thus, the campaign should have taken place in those areas where livestock had migrated.

- As the campaign was conducted in very few clusters in a given PA, many animals were not reached as they were too weak to reach the campaign center; only those people who were living around the vaccination centers benefited from the campaign.

- It is difficult to vaccinate weak animals and so a vaccination campaign should be launched before livestock become emaciated.

- The intervention started after the death of many livestock and so earlier intervention is needed in future campaigns.

- The intervention overlooked some very important animal diseases such as contagious caprine pleuropneumonia, goat pox and coenuriasis. The campaign also overlooked diseases that occur during the rainy season i.e. which affect animals immediately after the drought.

- In Dillo, despite the high number of shoats and camels the campaign only targeted cattle.

- There were too few animal health professionals during the campaign and this has to be improved in future.

Comparison of different emergency interventions

A comparison of different interventions experienced by communities during the drought is shown in Table 3.6.

The comparative aspect of the methodology assumes that in the past, food aid was the most common emergency intervention and so to some extent it can be used as a reference point. Although food aid received the highest scores for coping with the immediate effects of drought, benefiting poor households, and accessibility, it was not useful for maintaining or rebuilding assets nor was it particularly acceptable from a social or cultural perspective. In comparison, the purchase of livestock, vaccination and treatment, and animal feed supplementation were all useful in terms of maintaining or rebuilding assets. These results should also recognize that the de-stocking and animal feed interventions were new types of intervention and as indicated in the previous section, there were numerous suggestions for improving the design and coverage of these approaches in future droughts. The provision of CSB was viewed as a particularly suitable intervention for children.

DISCUSSION

General findings

The results of the livestock interventions should be viewed in the context of the need for a rapid response and the novel aspects of the de-stocking and feed supplementation interventions, which were new to both CARE Ethiopia staff and communities. In this situation, it is inevitable that the design and implementation of activities will be imperfect because they're being attempted for the first time. Despite this, the impact assessment clearly showed that the livestock interventions were a very useful way to protect livestock assets and assist people to buy the items and services they

needed during the drought. If some of the design and implementation issues (see sections 4.3.3, 4.4.2 and 4.5.2) can be addressed in a future response, there is good potential to achieve a far greater livelihoods impact in the future.

Table 3.6 Comparison of different emergency interventions in Dire woreda (n=9 focus groups)

	Median score (range) by type of intervention						
	De-stocking and slaughter[a]						
Indicators	Purchase of animals	Dried meat distribution	Animal feed supply[a]	Vaccination and treatment[a]	Provision of water	Food aid	Provision of CSB
Social and cultural acceptance *W*=0.33*	10 (5-28)	6 (4-16)	16 (9-26)	20 (8-36)	16 (10-24)	15 (7-31)	8 (3-15)
Benefits poor households *W*=0.56**	13 (5-22)	6 (3-14)	9 (5-17)	15 (6-19)	16 (5-22)	26 (12-71)	13 (4-23)
Helps to cope with drought *W*=076***	12 (7-24)	5 (0-9)	18 (12-35)	13.5 (0-18)	19 (11-24)	24 (8-53)	7 (0-11)
Helps to maintain or rebuild assets *W*=0.92***	33 (12-58)	0 (0-0)	29 (10-58)	30 (14-48)	0 (0-0)	0 (0-24)	0 (0-10)
Suitable for children *W*=0.94***	0 (0-20)	13 (10-16)	0 (0-0)	0 (0-0)	25 (12-31)	22 (16-28)	41 (25-54)
Accessible to all *W*=0.58***	13 (7-20)	6 (5-10)	15 (7-30)	11 (6-19)	17 (10-27)	28 (17-36)	10 (3-19)

[a] interventions by PLI/ENABLE
The Kendal coefficient of concordance *W* is a measure of the agreement between the 9 focus groups and the reliability of the method; *p<0.05, **p<0.01, ***p<0.001.

A commonly-expressed concern by community members was the timeliness of the interventions, and the need for a more rapid response. This need is discussed in more detail below.

Community participation, trust and attitudes

It was partly due to the previous long-term presence of CARE in the drought-affected areas which enabled these new interventions to be tested, because there was a level of trust between CARE and communities. Despite the challenge of ensuring community participation during an emergency

response, there was a high level of participation from the community, starting with the assessment of emergency needs through to implementation of the emergency responses. Local people were actively involved in the selection of beneficiaries, and deciding how to implement the program through establishing community-based emergency response committees. For example, the dried meat distribution properly targeted poorer households, pregnant women, lactating women, elders, and children under the age of five. People also constructed the fence and sharpened stones for de-stocking centers, helped to remove waste materials from slaughter sites, assisted with the unloading of animal feed, fenced the vaccination centers, and cleared bush so that vehicles could reach the centers.

At important result of the de-stocking and dried meat distribution was a change in local attitudes towards the consumption of meat from emaciated livestock. Whereas people had previously regarded this as unacceptable, clearly a substantial quantity of dried meat was prepared and consumed, and local perceptions were changing. This indicates that a future response involving meat from emaciated livestock would be easier to implement.

Although community involvement in the livestock interventions was generally strong, there were also specific aspects of the activities where project or professional staff seemed to disagree with pastoralists over the appropriate way to run the activity. For example, while teff and wheat straw was used as the feed supplement, the local preference was for grass and concentrates. Regardless of the technical pros and cons of each option, there is an opportunity to work with communities to define drought responses before the next drought so that everyone is aware why a certain intervention has been designed in a certain way. There is also a need to design interventions to achieve greater coverage.

Organizational issues and the timeliness of the response

Despite the novel nature of the de-stocking and dried meat distribution, the assessment indicated that CARE had responded well and the program was able to purchase all of the livestock which had been presented for sale. However, community members felt that the capacity of CARE was relatively small with regards to livestock vaccination and treatment, as the intervention did not cover a large segment of the livestock population.

A finding common for all three types of livestock intervention was a delay in implementation, meaning that many animals had already died before livestock support was delivered. The time-lines in Figure 4.4 show the initial signs of drought appearing in March 2005, and substantial livestock

mortality from August 2005. The USAID-funded PLI/ENABLE program started in October 2005, and an alarm was sounded at the first PLI technical coordination meeting in early December. Within days of this meeting it was apparent that USAID had built a 10% variance arrangement into the program, allowing NGOs to re-allocate up to 10% of their total budgets without prior approval from USAID. This flexibility provided an opportunity to respond quickly and innovatively to the drought. However, de-stocking and feed supplementation began at community level in March 2006, and emergency livestock vaccinations and treatments started in April 2006. It began raining soon afterwards.

This sequence of events points to a need to critically review assessment procedures and decision-making processes in relation to livelihoods-based, non-food responses to emergencies in pastoral areas. Although a full cost-benefit analysis has not yet been conducted, it seems likely that a more rapid response would have resulted in a far greater economic and livelihoods benefit.

Lessons Learned and Policy Implications

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When comparing the two case studies presented in this report, it's important to examine the findings from the perspective of lessons learned and the relevance of these lessons to the emerging national best-practice guidelines for livestock relief interventions in Ethiopia. Both agencies describe the strengths and weaknesses of their respective interventions, and as such, represent frank and therefore useful bodies of experience. While both case studies suggest how the agencies might respond better in future, the impacts described would not have occurred at all if they had been unwilling to take risks and push their operational norms beyond the usual boundaries.

The two case studies presented in this report describe different interventions by different agencies in different areas and therefore, a direct comparison of findings is not appropriate. However, some very useful policy lessons are evident from the assessments. These lessons include: the importance of early response; the rational use of cash derived from livestock sales; the need for integrated responses; the role of pre-existing services, markets and infrastructure; and some ways for government to better enable livestock trade in times of drought. The case studies also show the value of flexible funding arrangements, thereby indicating an opportunity for NGOs in terms of a space for innovation and learning.

TIMING IS CRUCIAL: THE IMPORTANCE OF EARLY RESPONSE

The commercial de-stocking intervention in Moyale presents some impressive results in terms of the amount of cash injected into de-stocked households (average of $186 per household), the number of households reached (around 5405 households) and the very limited cost to the main implementing agencies, Save the Children US and the DoLFM (around $24483 in total). In terms of the aid investment the approximate benefit-cost ratio was 41: 1 for this intervention (see Annex 1 for a detailed estimate of costs). By way of comparison, some donors will support proposals for development projects when the predicted benefit-cost ratio exceeds only 1:1.

As Save the Children US explained, their support to commercial de-stocking was designed rapidly and with limited prior experience of supporting this kind of work in Ethiopia. The intervention also took place late in the drought, starting in early February 2006 and ending in March 2006 (Figure 2.2). These features of the intervention prompt the question "What would have happened if an

earlier intervention had taken place?" While it's impossible to know for sure, it is reasonable to surmise that more cattle, and possibly other livestock species, would have been purchased. It's also possible that the coverage of the intervention would have increased, perhaps through assisting traders to access pastoralists in more remote areas.

Although a comparison of the commercial de-stocking (Moyale woreda) and slaughter de-stocking (Dire woreda) is problematic due to the different contextual and organizational factors in the two areas, the slaughter de-stocking took place at a time when private trade had ceased and traders were unwilling to purchase more livestock. Compared to commercial de-stocking, slaughter de-stocking led to a much lower level of cash transfer, and the cash used for livestock purchases was aid money, rather than private sector money. Although slaughter de-stocking is clearly a less preferred option than commercial off-take, it is still a useful approach in situations where an earlier response isn't possible, or where private traders have stopped trading and seem unwilling to purchase more animals. The assessment in Dire woreda explained how Borana pastoralists were initially skeptical of the de-stocking approach and culturally, meat from thin cattle was not consumed. The fact that CARE was able to work at community-level to overcome these perceptions deserves credit and probably reflects the previous long-term engagement of the agency in the area. Although household level information was not collected on food consumption patterns during the drought, dried meat has a very high protein content of 55.4g/100g edible portion. For a family of six, comprising two adults and four children, 2.16 kg of dried meat (the average amount received per family) would cover their crude protein requirements for about one week (see Annex 2). If the adults restricted their intake of dried meat, then the children's protein requirements would be covered for a far longer period.

The timelines for the interventions during the drought in Moyale and Dire woredas indicates a delayed response for all types of livestock intervention viz. de-stocking, veterinary care and supplementary feeding. Although these types of support were appreciated by pastoralists, they also recognized that an earlier response would have achieved greater impact. For many of the large NGOs and UN agencies reading this report it's possible that if a rapid livelihoods-based livestock intervention needed to happen next week or even next month, their operational and financial procedures would hinder this[1]. Agencies need to ask themselves whether they're really set up to lead livelihoods-based, innovative and flexible responses which might involve working with partners they've never worked with before, buying items they've never bought before or even providing rapid

[1] This was confirmed at a PLI Program-Wide Technical Coordination meeting in July 2006. When reviewing strengths and weaknesses of their programs during the droughts, NGO partners in PLI highlighted their own organizational constraints related to decision-making, prompt action, procurement arrangements and other issues. In contrast, very few technical constraints were identified.

or unsecured loans to private sector actors. Thinking ahead to the next drought and putting more enabling systems in place is a challenge, but not insurmountable.

THE RATIONAL USE OF CASH

Both case studies show that the cash derived from de-stocking was used rationally by recipient households (Figures 2.4, 2.5, 3.4 and 3.5). The main use of cash in both woredas was to purchase food, followed by various expenditures on domestic items (e.g. clothes and medicines), support to relatives, and livestock health and production. The expenditure patterns indicate the benefits of livelihoods-based programming in terms of meeting people's immediate needs (e.g. by enabling the purchase of food), supporting the local services and markets needed for recovery (e.g. through local purchase of food, animal fodder, human and animal health care), and protecting assets (especially livestock). In Moyale, people used the income from commercial de-stocking not only to buy animal feed, but also to arrange the private trucking of cattle to areas with better grazing.

One way to consider de-stocking is as an indirect method of cash transfer to pastoral households during drought. As such, assessments of de-stocking are relevant to wider debates about the use of cash distributions during emergencies and the ways in which people use this cash. Cash-based approaches are not new in Ethiopia, and date back to the UNICEF Cash- for-Food program during the famine from 1983 to 1985, which targeted 95,000 people. A UNICEF evaluation team examined expenditure patterns and was surprised to find that even among famine-affected populations only 75% of the cash was spent on food (cited in Peppiatt et al., 2001). The remainder was spent on clothes, animals, seeds and tools, land taxes, dues to peasant associations and debt repayments. More recently, renewed interest in cash-based programs has led to an increasing body of evidence to support the notion that in crises, people use cash effectively. In addition to the findings of the two case studies in this report, cash-based approaches in other parts of Ethiopia (Knox-Peebles, 2001), and in Somalia (Narbeth, 2004; Ali et al., 2005), Malawi and Zambia (Harvey and Savage, 2006) are among the examples which show appropriate use of cash by recipient households. While proponents of 'food-only' approaches may argue that food aid should continue to be the dominant response during drought because markets are weak or because communities are unable to manage cash properly, experience in Ethiopia dating back over 20 years indicates otherwise. .

DE-STOCKING VERSUS INTEGRATED LIVESTOCK ASSISTANCE

If a livelihoods objective of livestock support during drought is the protection of key assets, then livestock require water, food and veterinary care. The case studies show that when pastoralists are de-stocked and receive cash, they automatically invest in protecting livestock assets through a mix

of inputs. In Moyale, people bought fodder and veterinary care, and trucked livestock to better grazing areas. In Dire, people bought veterinary care and water, and paid shepherds. Some people also bought goats as a way to start herd recovery. Most if not all of these inputs were purchased from the private sector.

These findings suggest that in situations where de-stocking is not possible, livestock-related assistance provided by aid agencies should be a 'combined package' comprising feed, water and veterinary support. However, the need for such a package increases the complexity of the program and as noted in previous sections, some NGOs currently face challenges with the rapid implementation of a single input, never mind integrated packages. Given that pastoralists are probably the best people to decide what their livestock need and how best to maintain a core herd during drought, it makes sense to enable them to make the decisions on livestock health and production. Cash derived from de-stocking assists them to act on these decisions and buy the livestock support they need from the private sector. Such an arrangement is likely to be far more efficient than either government or NGO provision of feed, water or veterinary inputs.

These ideas are not new. When looking at development rather than relief programs, the importance of livestock marketing in pastoral areas is well known as a means to enable herders to exchange livestock for cash and then buy the things they need. Livestock markets are the basis for both development and relief programming in pastoral areas.

THE IMPORTANCE OF LIVESTOCK EXPORT MARKETS

During the last six years or so the export of meat and live animals from Ethiopia has been growing. In 2006 the handling capacity of the five main private export abattoirs was around 8000 small stock per day and between 1998 and 2004, exports of chilled goat meat, mutton and beef increased from 2508 MT to over 5000 MT. The main importers of chilled goat meat and mutton were the United Arab Emirates, Saudi Arabia and Yemen, whereas chilled or frozen beef was exported to Cote d'Ivoire and the Congo; in 2005 Egypt started to import chilled beef. The livestock export trade was boosted in 2004 when Egypt also began to import large number of live cattle, peaking at around 7000 head/month, and resulting in rising meat prices in Addis Ababa (Aklilu, 2006).

At the time of commercial de-stocking described in the first case study (in February 2006) the livestock export market from Ethiopia was buoyant. The two traders involved in the de-stocking were able to invest substantially – around $1.01 million – because of the export trade, and cattle

were fattened before slaughter or export. One trader was willing to buy very thin cattle, because of the large profit resulting from the sale of these animals after fattening.

These experiences demonstrate a clear link between livestock/meat exports and pastoral vulnerability, and the kind of marketing arrangements which allow large-scale commercial de-stocking to take place during drought. The ongoing development processes and programs which are intended to strengthen the Ethiopian export trade have a direct impact on relief programming. The Moyale case study also indicated that further refinement of government procedures, such as easing of the frequent taxation points along main highways, would assist rapid commercial de-stocking.

The commercial de-stocking also highlighted the importance of infrastructure if private livestock export traders are to access more remote pastoral areas. When roads are poor, transaction costs and risks increase. Given the benefit-cost of the commercial de-stocking of approximately 41:1, a further benefit-cost analysis is warranted to assess the economic rational for improving roads. For example, assume that a good road was built to a more inaccessible pastoral area and maintained for ten years, and that links between pastoralists and livestock exporters were normalized. If this situation, how would the cost of road-building and maintenance compare with the cost of the food aid needed to keep the population alive?

At the time of writing this report in early 2007, chilled meat exports from Ethiopia were continuing to Saudi Arabia, UAE and other countries. Although a drop in exports to Egypt due to foot-and-mouth disease was evident, efforts were underway to re-establish a centralized veterinary service which would be structured and accountable according to international standards.

FURTHER ASSESSMENT AND RESEARCH NEEDS

Benefit-cost analysis

In general, benefit-cost analysis has not been as widely applied in humanitarian programs compared to development programs. This difference in application probably relates to the humanitarian emphasis on saving humans lives and the difficulty of assigning monetary value to human life (Venton and Venton, 2004). However, as livelihoods programming may seek to protect assets or maintain services, benefit-cost analysis becomes useful in cases where assets have a clear financial value or where the cost of re-establishing a defunct service can be estimated. In the case of livestock interventions, livestock have a market value which is usually easy to define for different species and type of livestock, in different condition. It is also possible to predict and quantify the productive

potential of livestock in terms of milk production, sale of offspring or other production variables. For these reasons there are opportunities for greater use of benefit-cost analysis as a complement to participatory impact assessment of livestock relief interventions. Given the dominant role of food aid in emergency responses in pastoral areas, comparative assessments of livestock and other livelihoods-based inputs versus food aid would be valuable.

Food aid and safety nets

Both case studies indicated that pastoral communities regarded food aid as an important form of drought assistance, particularly for poorer households as a short-term measure during drought Figure 2.6 and Table 3.7). In Moyale, safety nets were also viewed as relevant to the poor (Figure 2.6) and comprised 21.1% of household income during the drought (Figure 2.3). For maintaining and rebuilding assets, livestock interventions scored higher than food aid. In Moyale food aid was either fed to livestock or exchanged for livestock feed.

These findings indicate that livelihoods-based inputs, food aid and safety nets need to be combined during drought response, particularly if the response is late. If so, questions can be asked about the right combination of inputs and different combinations for households of different vulnerability. Also, in some agencies there will be a need to improve the capacity of their emergency sections to design and implement livelihoods-based support, particularly if these sections currently focus on food aid. Some experiences to date indicate that livelihoods-based programs are most effective and timely when relief and development thinking is combined within a single team or unit within an agency. The impact of these new organizational arrangements needs to be assessed but so far, some of the best livelihoods-based relief work has been conducted by development programs which had an in-built capacity to respond to drought.

Environmental impact

From time to time, de-stocking has been advocated as a means to protect diminishing grazing resources in times of drought, by removing livestock from the rangeland. The two case studies did not aim to assess the impact of de-stocking on the environment, although previous studies have suggested that the relatively limited number of animals de-stocked results in minor changes to grazing pressure (Morton and Barton, 2002). The case study on commercial de-stocking suggested an off-take of 20,000 cattle during a four to six-week period, which is large compared to other de-stocking programs. Further research is needed to assess the environmental impact of commercial de-stocking and to suggest which impact indicators might be used in future de-stocking interventions.

POLICY IMPLICATIONS

The two case studies produced lessons relevant to national relief and development policy, and the policies of donors and NGOs.

- If it is accepted that drought in pastoral areas is a normal event and of slow onset, drought should be regarded primarily as a development problem. The repeated and serious impacts of drought reflect weak development. While livelihoods-based approaches to relief programming in pastoral areas can provide more appropriate assistance than typical emergency relief, to some extent livelihoods-based programs require the pre-existence of livestock services and markets. A strong, pre-existing livestock export trade will drive commercial de-stocking. A strong, pre-existing network of primary veterinary service delivery will provide a system through which emergency veterinary care can be delivered.

- There are considerable opportunities for improving linkages between pastoralists and livestock traders during normal periods and during drought. Based on the case studies presented in this report, policy makers need to question the myth that pastoralists refuse to sell their animals during drought. Not only will pastoralists sell animals, they use the income in entirely logical ways to meet their immediate food needs and protect their remaining livestock assets.

- If commercial de-stocking is to become institutionalized in Ethiopia, livestock exports may need to be supported by stronger national veterinary services and certification procedures. Although the export of chilled meat overcomes many animal health issues, Ethiopia needs to support the export of both chilled meat and live animals due to consumer preferences in importing countries. The starting point is a strong, centralized government veterinary service structured and resourced according to international standards.

- At the level of aid donors and NGOs, livelihoods-based relief programming in pastoral areas raises a number of challenges. One set of challenges relates to the flexibility of NGO procedures, and the need to think ahead to the kinds of decision-making, procurement and other administrative systems which need to be in place to support livelihoods-based interventions.

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Annex 1.

Approximate benefit-cost ratio for the commercial de-stocking intervention in Moyale woreda

Benefits ($)	Costs ($)	
	Item	*Cost ($)*
	Save the Children US costs:	
	- SC US staff salaries	5090
	- Vehicle costs	7472
	- Workshops/meetings	1150
	- Temporary hires	542
	- Per diems	161
	- Admin support	100
	Subtotal	14515
	- SC US overhead @17%	2468
	SC US total costs	16983
	Dept. FLM costs, staff and vehicle provision – estimate only	7500
20,000 cattle purchased at an average price of Eth. birr 438/US$ 50.34, resulting in Eth.birr 8.76 million/**US$ 1.01 million** cash transfer	**Total costs**	**US$ 24483**

Notes

Two loans were provided to traders, valued at US$50,000. The loans were fully repaid and not included in the costs.

Estimate of benefits were based only on the value of the cash transfer to pastoral households.

Benefit-cost ratio = 41:1

Annex 2.
Estimated nutritional value of dried meat

The de-stocking intervention by PLI/ENABLE in Dire woreda involved the purchase and local slaughter of livestock, followed by distribution of dried meat. On average, each household received 2.16 kg of dried meat. Assuming that the main nutritional value of the dried meat is as a protein supplement, it's possible to calculate the number of days for which 2.16kg of dried meat would meet the Recommended Dietary Allowance (RDA) for different individuals by age and sex. Table 1 below is based on a protein content for dried meat of 55.4g/100g edible portion[2]. Note that the protein content of dried meet greatly exceeds that for fresh meat. The protein content of meat from a thin Zebu cow is around 20.6 g/100g edible portion[1].

Life Stage Group	RDA protein (g/d)[3]	Daily requirement of dried meat (g)	Number of days for which 2.16 kg dried meat will provide RDA protein
Infant			
7-12 months	11.0	20.1	108
Children			
1-3 years	13	23.5	92
4-8 years	19	34.3	63
Males			
9-13 years	34	61.5	35
14-18 years	52	94.1	23
19-30 years	56	94.1	23
31-50 years	56	94.1	23
51-70 years	56	94.1	23
>70 years	56	94.1	23
Females			
9-13 years	34	61.5	35
14-18 years	46	83.3	26
19-30 years	46	83.3	26
31-50 years	46	83.3	26
51-70 years	46	83.3	26
>70 years	46	83.3	26
Pregnancy			
14-18 years	71	128.5	17
19-30 years	71	128.5	17
31-50 years	71	128.5	17
Lactation			
14-18 years	71	128.5	17
19-30 years	71	128.5	17
31-50 years	71	128.5	17

For a family comprising one adult female (aged 28), one adult male (aged 30), two girls (aged 1 and 5) and two boys (aged 3 and 8), 2.16kg of dried meat would cover the family protein RDA for approximately 7 days.

[2] http://www.fao.org/docrep/003/X6877E/X6877E02.htm

[3] Source: National Academy of Sciences, 2002.