



Afar and Kereyu pastoralists in and around Awash National Park struggle with deteriorating livelihood conditions

A case study from Fentale (Oromyia) and Awash-Fentale (Afar) woredas

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1. Introduction and background

Between the end of May and mid-June, water and grazing stress was reported in several woredas: Afambo and Eli Daar (zone 1), Afdera (zone 2) and allover zone 3 and 5 following fighting between Afar and Issa, Kereyu and Ittu. The situation has reached a critical point in Awash-Fentale woreda (zone 3) where animals are dying, cattle and even drought resistant camels because of harsh grazing conditions. Twenty camel and cattle carcasses were observed near the hot springs in the Awash National Park. This situation is not limited to Awash Fentale woreda. The Kereyu (Oromo pastoralists) are suffering equally from drought conditions and insecurity in the neighboring woreda Fentale and Boset (Oromiya Region). Even the Afar admitted that the Oromo are facing difficulties from similar conditions.

Compared to the situation one month ago, sudden changes are being observed as the situation quickly starts to deteriorate. The turning point occurred in mid-June when livestock started to die.

Stress indicators first detected in early June are the following:

- High concentration of livestock was observed around all water points: i.e. in Guyah situated halfway along the Afdera road, along Awash River banks in Dubti and Assaita and allover zone 3.
- Animals and humans were concentrating together around half-full water ponds for consumption due to water scarcity.
- In zone 3, the conflict between the Afar and Issa disturbed livestock movements and changed the labour division between men and women by creating the need for men to accompany the herds for protection.
- Livestock was weak due to the daily long distance walk between grazing and watering points.
- Livestock marketing was virtually stopped due to the poor condition of the animals.
- Traditional coping mechanisms were particularly active, like firewood and charcoal processing, providing an alternative source of income to pastoralists.
- Women were preparing a mixture of sugar, milk or powdered milk together with coffee shells to feed small children and babies.

2. Mission findings Awash – Metehara

2.1 Afar Region - Awash Fentale woreda

All six of the kebeles in Awash Fentale woreda are affected by drought. Dry spell effects have been compounded by the surrounding conflict with Oromo pastoralists that are the Kereyu and the Ittu. According to extrapolated figures from a 1996 census by the Central Statistic Authority¹ calculated at a 3% annual growth rate, Awash - Fentale woreda population has reached a total of about 24,000 people with 12,000 in the rural areas (6 kebeles, see detailed data below) and over 10,000 in Awash town.

Table 1: Population in Awash Fentale woreda¹

	Both Sexes	Male	Female	No. of HH
Breakdown by kebele:				
Sabure	4,231	2,324	1,907	876
Boloyita	1,148	585	563	216
Deho	1,581	787	794	341
Kebena	1,205	703	502	229
Dudub	800	418	382	199
Awash National Park	944	514	430	199
Awash Fentale woreda total	9,909	5,331	4,578	2,060
Afar Region total	1,012,305	577,416	434,889	168,482

Concerns are that livestock are in such a weakened state that any disease would kill them at the present time. Fortunately, no specific animal disease outbreak has been reported in the woreda. On June 19, a development agent based in Doho kebele sent a report to the woreda administration estimating three cattle deaths daily in the woreda and 10 animal deaths per family. A further threat is the expected long rains (*karima*), as most pastoralists believe the animals will not survive the season due to excessive moisture stress and pneumonia. Furthermore, animal vaccinations in Doho, Sabure and Boulaita kebeles did not cover the entire livestock population. At this stage, animal health staff present in the woreda is limited to one animal health assistant and five technicians based in Doho (1), Boulaita (1) and Awash (3). In order to offer a better infrastructure, CARE has started to build a new veterinary clinic.

Usually pastoral groups are migrating into the Fentale highlands for grazing or in small pockets like Alideke located in the Awash National Park. Groups based in *Kabana* kebele migrate to Argobba area or even farther out. During the wet season, pastoralists take advantage of the Alta hillside, a place with good drainage in the Fentale mountains, for grazing in the west in order to minimize the risk of bovine pneumonia in weak animals. For the dry season, the usual pattern of movement is to drive livestock to the *kalou* around Doho, Sabure, Boulaita and Kabana kebele. If it is dry, they usually go back to the hillside. Only few migrations outside the woreda have been reported recently, as pastoralists are limited in their movements by the ongoing conflicts.

¹ Population of Kebeles by sex in Afar Region's rural areas (CSA 1996).

Along the border of Awash-Fentale in locations like Madala, Semain and Safi that are exclusively under the control of the Afar, there have been no incidences reported from the conflict and therefore no grazing restrictions, although, at this stage they cannot extend livestock movements outside of this area like they would do during peaceful periods. Due to overgrazing, Safi for example has been unable to keep but a small amount of grass. Also around the hot springs and the Kesem River, aquatic grasses have been harvested to feed weak animals. There is very little aquatic grass remaining and it is not accessible.

2.2 The present situation

a) Around Awara Melka State farm north of Awash National Park

- Cattle and camels are dying, with 20 carcasses observed in Bonti Guna (Doho kebele), a place located near the hot springs. In order to feed their livestock, pastoralists are resorting to cutting down bushes and trees branches.
- The usual coping mechanisms are starting to be exhausted as most of the people are surviving mainly by selling doum palm leaves and doum fruits sold in bag. Prices of such items have diminished drastically such as doum palms going from 6 to 2 ETB for a bundle.
- Deteriorated terms of trade were observed on the market. Sheep and goats are being sold in Awash for between 30 and 40 ETB while at the same time food prices are increasing. Within a three-month period, maize prices rose from 0.5 to 1.5 ETB per kg, sugar from 4 to 5.5 ETB per kg. A tin of Nido (milk powder), highly appreciated by pastoralists when their animals are dry, rose from 21 to 30 ETB and on Thursday July 4 it was out of stock in Awash shops.
- In Awara Melka in Sabure kebele, prices reached a similar level. Maize flour sold at 1.4 ETB per kg and 1.5 ETB for millet. Oil is rather expensive selling between 9 and 12 ETB per liter and Nido is not available in the shops.
- As far as migration and pastoral groups splitting are concerned, no significant changes in movements have been noticed, as pastoralists are not able to move to better grazing areas due to the security conditions around Awash National Park. Large concentrations of livestock have been observed around the hot springs and all water points. In previous times livestock used to move to Kabana kebele but now it is not possible due to the recent fighting with the Kereyu.
- According to elders and pastoralists met in Bonti Guna in a permanent settlement visited on Wednesday July 3 in Doho kebele, among some 2000 people in the kebele, 1000 are caring for animals around the hot springs and elsewhere, 500 are remaining in the settlement and 500 left for urban areas or around irrigated agriculture schemes looking for casual work. The last figure could be exaggerated, as pastoralists tend to incorporate members of their clan living away from their home area into their calculations. Among the 500 people declared living away from their home area, some members of the group are regularly settled and do bring support to their relatives and kinship.
- Milk availability within settlements appears to be one of the main issues. Families have not relied on cow milk for the past three months, either for their children or for marketing. Goat milk is also not available. The little camel milk remaining appears to be insufficient for fulfilling social obligations of sharing milking animals and for the normal custom offering camel milk free to all kin-men, affiliates and even outsiders.

Due to the scarcity of camel milk, it is being restricted to only the family members, particularly children.

- As far as nutrition is concerned, only one child with a distended belly has been observed, usually the sign of intestinal parasites. Similar to observations in Dulecha of Amibara woreda in early June, except for the absence of goat milk, babies are being fed with a mixture of coffee shells, sugar and milk powder as a breast-feeding substitute.
- In the Awash dispensary, vaccinations' drop out rate didn't reach a significant level as most of the patients are coming from urban areas and surrounding villages.

b) In and around Awash town

- Numerous livestock in poor condition surround urban areas. Water for both human and animal consumption is scarce and critical. As the urban water pipe distribution system is under rehabilitation², water is pumped directly from the Awash River and currently sold for 3 ETB for a 25-liter jerry can.
- Livestock watering facilities set up near a plaster factory has stopped providing water. Water is exclusively used for the factory and animals do not benefit anymore from the surplus. This situation has forced pastoralists to drive their cattle down the Awash gorge, an additional walk rather difficult for weak animals. Also at the watering point, carcasses are seen near the river.

In the settlements, pastoralists are now facing a shortage of cash and are finding it difficult to purchase grain, sugar and other essential items like oil and milk powder. Even men have said that they are restraining from chewing khat. The pastoralist diet has incorporated palm fruits with water and grain. The mission was told that doum palm fruits saved the lives of some people for the past 8 months. Additionally, some pastoralists have already lost a large part of their livestock. One previously well to do pastoralist, Isse Elema, claims he lost 90% of his animals. Woreda livestock technicians have estimated the overall loss at an average of 40% of the total livestock.

2.3 Oromiya Region - Fentale woreda

a) Kereyu areas

For the Kereyu in Fentale woreda (East Shewa zone, Oromiya Region) and to a lesser extent in the neighboring woreda Boset, the situation appears rather serious. The area has not received rain since August 2001 and is facing a water shortage, when generally erratic rains are experienced. This has resulted in boreholes drying up and livestock movements as far as Wonji to the west and Sheshamane to the south. Furthermore, some pastoralists estimate that starting in June as much as 45% of the livestock died.

Fentale woreda is currently composed of 20 kebeles, 18 rural and two urban kebeles: Metahara and Addis Katama

² 35 millions ETB have been allocated to the present urban water supply project.

Table 2: Population in Fentale Woreda¹

Breakdown by kebele	No. of HH	
8 pastoralist kebeles		
Fentale Debit	264	1,584
Haro-karsa	1,986	11,911
Ilala-karari	394	2,364
Tututi	349	2,090
Dega-du	274	2,017
Kobo	267	1,604
Banti-Mogasa	645	3,865
Galcha-Ajotar	596	3,581
7 Agro-pastoralist kebeles		
Kanifa	550	3,294
Fate Ledi	238	1,425
Sara-weba	379	2,267
Gidara-kubi	1,003	6,020
Diresaden	339	1,927
Godo-Fafate	201	1,311
Turo-Badanota	317	1,900
3 Settled agro-pastoralist kebeles		
Gara-dima	213	1,280
Golala	256	1,794
Algea	105	374
Total	8376	50608

Table 3: CSA, The 1994 Population and Housing Census of Ethiopia²

	Both Sexes	Male	Female
Fentale woreda total	60048	31638	28410
urban	11934	5837	6097
rural	48290	25882	22408

“The Kereyu, who have been the indigenous inhabitants of the Metehara Plain and Mount Fentale area are Oromo-speaking transhumant pastoralists. Apart from livestock herding, the Kereyu who inhabit certain home neighborhoods, have also started practicing both rain-fed and irrigated agriculture. This is a recent but growing tendency, which emerged in the early 1980s and has continued to develop since. It began mainly as a response to the expropriation of their pastoral land and the subsequent weakening of their pastoral means of livelihood” (Ayalew Gebre, 2001, p. 83).

At this stage, stress indicators observed by the woreda administration are mostly related to poor livestock condition and animal deaths, although, some additional indicators were

¹ Woreda administration for the breakdown per kebele, 1994 data

² CSA, Results for Oromiya Region, Vol. 1, Part 1, p. 16.

Fentale Woreda Council has provided different figures for 1994:

Rural	24,276			
Urban	14,116			
Total	38,392	extrapolated data for 2002	3%	48634
Labour factory	28,677			28677
Total	67,069			77311

reported. People have been seen migrating and pastoralist families have split up in order to save part of their livestock by moving them to areas with better conditions. Usually camels are sent south to *Shashemene* and, according to the woreda administrator, for the first time goats and sheep were brought up to Wonji. As far as marketing is concerned, more animals than normal are currently being sold as well as more firewood is reaching urban areas.

Three months ago, because of the persistent dry conditions in the woreda, a special report was sent to the zonal administration. Consequently, a zonal assessment team was sent to the area resulting in the delivery of relief food in June 2002. 170.7 MT of maize was distributed in 8 kebeles and in addition 400 MT from DPPB Oromiya will be arriving soon. Moreover, in May, a month after issuing the Fentale special report, four trucks were provided by DPPB to transport sugar cane tops to the pastoral areas. Similarly, CARE transported sugar cane tops to feed livestock for 20 days and also hired four trucks for fodder trucking. CARE has now stopped trucking as they no longer have funding for transport. Additionally, the Metehara sugar cane factory is closed for maintenance.

In Fentale, a mostly agro-pastoral woreda, stress indicators are also related to agricultural cycles and techniques. Ten months without rain in an area where even during good seasons, rains remain erratic has forced farmers to adopt new strategies. Peasants are now sowing in June at the end of the dry season, in order to benefit from possible showers. Along the road between Metahara and Awash, the mission interviewed a farmer who was sowing teff at the end of the dry season.

Moreover, those Kereyu pastoralists who have relatives to the south have started to move with some unexpected migrations close to Arsi. Other movements have taken place to the west up to the Wonji sugar cane plantation near Nazareth. The neighboring Boset woreda still remains the main destination as was observed by the mission through the amount of camels that were seen along the road. The Agricultural Office in Metehara also confirmed that camels from Fentale woreda are actually in Gari Kebele in Boset woreda. Watering animals in Welenchiti, also in Boset woreda, is actually one of the main concerns even during a normal dry season. The River Tabo is dry and pastoralists have to walk within a radius of 10 km (three-hour walk) to bring their livestock to the Welenchiti water point. In this area, cattle can receive water every two days at a cost of 1 ETB per barrel (200 liters). In addition, there are two boreholes along the road before Metehara. 14 boreholes have been drilled in Fentale woreda and 5 are dried up, according to Agricultural Office's experts.

Goal, an Irish NGO, currently involved in human health projects in Fentale woreda are currently working in 16 kebeles with 13 clinics. They have noticed quite a significant level of EPI drop out compared to last year during the same period. This situation provides an indication of the level of migrations linked to the stress caused by drought.

Gudina Tumsa Foundation (GTF), a local NGO involved in education, has similarly noticed quite a significant level of school dropouts. In one school supported by the project, 36% of the primary school pupils registered in September 2001 did not attend final exams in June 2002, compared to the 10% drop out during the previous year with respective contingents of 250 and 200 pupils.

Early warnings caution that in all pastoral areas affected, the remaining animals might die at the beginning of the raining season due to moisture stress and pneumonia. Currently,

there is not enough grain in the woreda and milk and ghee are not available anymore in the pastoralist settlements. It was suggested to add vegetable oil as a substitute for ghee. According to the Goal medical coordinator, the nutritional status of children seems to be acceptable still, but further nutritional surveys are required in the next few weeks to monitor the situation. On the other hand, reports were received that 12 lactating women died not noting the cause of the death. Therefore, it has not been determined if these deaths could be related to nutritional status and associated diseases.

b) Kereyu pastoralists situation around Merti sugar cane plantation

Over eight pastoral kebeles are affected by drought conditions out of the total 118 kebeles currently in the woreda. Six of the agro-pastoralist and pastoralist kebeles are situated around the sugar cane plantation: Ledi, Fate Ledi, Kanifa, Saraweve, Galcha and Gola. Competition for resources and fighting with the Afar is not limited to the Awash National Park. At the end of June, four Afar were killed and one Kereyu in the hills southeast of Ledi's kebele. Within the plantation, security and free access to sugar cane tops is assured by kereyu guards appointed by the sugar factory.

“Hostilities among the nomadic pastoral groups in this region have largely been aggravated by the expansion of large scale irrigated agriculture and an extensive network of conservation areas for game/tourist parks. The Afar and Arsi Oromo have long been traditional enemies of the Kereyu, Ittu and Issa Somali. On the other hand, the Kereyu have enjoyed peaceful relationships with the Ittu and Issa Somali mainly as a result of their goal of solidarity against their common enemies the Afar and Arsi Oromo” (Ayalew Gebre, 2001, p. 82).

Kereyu pastoralists have developed sophisticated coping mechanisms taking advantage of the irrigated sugar cane plantation. Livestock, mainly cattle are concentrated around Merti sugar cane plantation (Metehara) and are currently residing under the shade of nearby trees. Carcasses and dying animals were visible up to surrounding areas of the plantation. In Kanifa Kebele, a pastoralist testified to having lost all calves and four milking cows among a total of nine. Similar situations have been reported in the other PAs visited.

Pastoralists are entitled to use sugar cane tops freely but for the past month, the Metehara sugar factory has been closed for maintenance. Up to this point, since the plantation's workers were busy with seedlings, some sugar cane tops were obtained. But in August after the end of agriculture activities, no sugar cane tops will be available until October, when sugar production resumes. Beside sugar cane tops, pastoralists also have access to some grass growing along the irrigation canals, a resource shared with the highlanders working in the plantation camp who also have some livestock to feed.

Despite the fact that pastoralists are taking advantage of the nearby sugar cane plantation, it has to be noted that the entire agriculture scheme has taken the best of the Kereyu grazing land and water resources, as sugar cane plantations need an abundant supply of water to operate. Paradoxically, a few kilometers away, the water level of Lake Beseka (Metehara) rises and is invading a new three square kilometers surface yearly, mostly rangelands.

Compared to the Afar, the Kereyu are using a more intensive model of pastoralism during dry spells. They have organized a “cut and carry” system to bring to their animals grass

and straw and preserve them from long exhausting walks. Nevertheless, for those pastoralists settled around the sugar cane plantations, available grass will be insufficient to feed their animals. They also need hay and food complements for the animals (e.g. minerals) survival. The people consider food and particularly food for children and herdsmen as key-needs.

c) High contrasted situation on Metehara livestock market

The Metehara livestock market takes place weekly on Tuesday and already for several months, the Kereyu are playing a minor role at this time of the year. Actually, local emaciated cattle are sold on an average of 150 – 200 ETB per head. Sheep and goats are currently sold at 30 to 60 ETB per head. Even worse, traders are buying cattle in poor condition directly in the settlements for 50 ETB, and then they truck them out of the area to be fed.

On the Metehara livestock market, ploughing oxen prices are increasing, meat oxen from Western Hararghe are stable whereas prices for local emaciated cattle are decreasing. This clearly indicates that local livestock is not the main part of the market supplying urban areas up to Addis Ababa. Animals are trucked from West Hararghe to the market and, after transactions are finished, other trucks bring them to Nazareth and Addis Ababa. Healthy meat oxen prices can reach up to 1400 ETB and ploughing oxen are sold for 1100 up to 1500 ETB. Nevertheless, such “off-shore” market has limitations and traders are pointing out the high cost to feed animals in the marketplace, as oil cakes are sold from 30 to 100 ETB a quintal.

In Welenchiti (Boset woreda), the livestock market is open on Saturday and similarly, animals are not in good condition for marketing. Even agro-pastoralists started to sell small animals, shoat from 30 to 60 ETB per head for young males. For the time being, all over the area surveyed, only males are marketed.

d) Situation in Boset woreda

With a population of about 160,000 people, Boset woreda is divided into 33 kebeles (3 pastoralists, 30 agro-pastoralists). Since March 2002, the three pastoral kebeles have been receiving relief and distribution is planned to continue through September. Relief food is channeled through EGS mainly with road maintenance and water pond construction. The Early Warning Committees at woreda and kebele level participate in project identification. World Vision (WV) in Garinuzareda, Adetcha and Tuledimtu and Berta Wagare and Christian Children Fund (CCF) in Bochota are implementing EGS projects. Up to now, work has gone on for four months and two food distributions took place. The beneficiary population in the four kebeles has reached a total of 1,170 households and 5,262 people.

In Boset woreda, Kereyu livestock migrated to lake Ziway in Arsi zone. The mission also witnessed camel herds that were on the move from Metehara towards Nazret that is very unusual. Cattle from Metehara (~70km away) arrived in Boset. This migratory livestock movements are due to serious grazing shortage in Fentale woreda. Despite of the important livestock influx, the Agricultural Office in Welenchiti did neither get any report of unusual animal disease outbreaks apart from usual the endemic ones, nor reports on animal deaths. Water supply is a priority, as all water ponds as well as the nearby Tabo River are dry.

Along the road between Welenchiti and Metehara, Karakurkura (Amhara Region, woreda Minjar, North Showa) with a non-Oromo population mixed Christians and Muslims is a good example of private water dam management. There, outsiders are not allowed to come for watering animals. At the time of our visit, about 250 heads of livestock were roaming around the water pool. According to some Amhara pastoralists interviewed near the water point, livestock is also suffering from drought conditions. The pound is their ultimate local source of water and only rain save livestock from dying. The nearest market town where they use to sell their animals is Hararti, where traders from Nazaret and Addis are regularly coming. The actual cattle prices are currently fixed between 150 up to 500 ETB.

3. Conclusions and Recommendations

Obviously, Afar Region as well as all its margin rangelands have now reached the first step of what could be in a few weeks times a major emergency. Moreover, the Drought Monitoring Centre in Nairobi predicts below-normal rainfall for north-eastern Ethiopia, including the Afar Region during the coming *karima* long rain weather (FEWS 8/7/02). This weather forecast should alert all agencies and allow them to plan emergency assistance ahead. Even if at this stage it remains difficult to assess the situation in detail and to differentiate the main parameters of the present crisis, drought conditions, insecurity and low-economic performances have contributed to make most of the Afar food insecure. It is also difficult to differentiate between chronic and acute food insecurity. For the time being, livestock has been seriously affected in zone 1, 2, 3 and 5 and even since a few days there is now and there evidence that people start to lack food and casual appearance of human malnutrition cases.

Communities met are all reporting that animal feed constitutes their first priority, followed by relief food. DPPC has already dispatched 3,600 MT of food aid to the Afar Region as well as 570 MT to the neighbouring Fentale woreda, with some complains in Metehara related to the quality of the supplied maize.

“Saving the breeding stock will ultimately determine the scale of the current crisis and the pace of post-drought recovery, given the very high dependency on livestock in the above areas. Without protecting and preserving pastoralist livelihoods, pastoralists are likely to quickly become highly food insecure, forced to reduce consumption below acceptable standards and dispose of their animals as productive assets, thereby undermining their future food security.” (FEWS-NET Food security warning 8/7/2002)

a) General measures to be implemented

Discussions during the second week of July among important stakeholders concerning the Afar crisis let to the following recommendations and measures that should be taken:

- (1) According to FEWS, malnutrition is expected at the end of July. Food aid as well as supplementary feeding (SF) or therapeutic feeding (TF) might be necessary after nutritional assessments have been carried out in the region
- (2) According to unfavourable weather forecast, preparations should be made for further emergency interventions.
- (3) With immediate non-food interventions in the affected areas of Afar and neighbouring areas, it is still possible to save part of the livestock, which will contribute to save human lives.
- (4) Small-scale projects with an immediate and visible output (water, animal health or feed supply like concentrates, conserved fodder, residues, etc.) should be pushed. Such projects should be implemented by NGOs already active in the Region.
- (5) UN-agencies

are preparing emergency project proposals for funding in co-ordination and cooperation with their UN, NGO and governmental counterparts.

The present crisis should also be an opportunity to launch longer-term activities in Afar region such as training and information programmes in sectors such as alphabetisation and literacy, water and sanitation, human and animal health, animal marketing and income diversification.

b) Specific sectoral measures to be implemented

Food

In order to reach immediate needs, the **following food items could be provided quickly**: (1) **Sugar** is an important item for the local diet and Afar food habits and prices have increased from about 25%. (2) **Vegetable oil** could be an important substitute to the present lack of milk produce, mainly *ghee*, common butter preparation used by most of the pastoralists. (3) **Maize** has also recently faced significant price increases for example in Awash town, where during the last three months, prices for maize rose from 0.5 to 1.5 ETB/kg, that is a 200% increase. Therefore with the crisis affected population segments cannot afford to buy maize anymore. (4) Despite strict prescriptions related to **milk powder** use, nutritionist experts should decide how far food aid could be adjusted according to local diet and nutritional coping mechanisms for babies (sugar, milk powder and coffee shells) to be supported.

Water

In terms of water intervention, water tankers should be provided selectively as well as elsewhere cash or food for work programs could contribute to livestock water facilities maintenance as well as water points for human consumption. Additionally, the key question of conflict in zone 3 between Afar and Issa and Kereyu and Ittu over water resources should be addressed.

Livestock

In terms of interventions to save livestock, (1) **selective interventions in animal health** constitutes another priority. By providing supportive treatments including vaccination and de-worming at least the breeding and the lactating livestock could be saved. In general, there is a shortage of veterinary drugs in the region. (2) **Emergency control of animal epidemics** including regional cross-border campaign upon outbreak as well as community-based local disease surveillance could increase emergency related outbreaks detection. (3) In the meantime, **additional food and mineral lick** might contribute to animal health and could represent an immediate support. Actually, hay is available on the market in Nazaret at a high price, i.e. 11 ETB a large bundle. (4) Animal feed and rangeland management interventions could bring feed supply (concentrates conserved fodder, residues) for specific animals (lactating and breeding animals). (5) Furthermore, it is essential to **address issues of local conflict over resources** and to allow temporary access of livestock to National Parks and state ranches. (6) **Livestock marketing interventions** contribute to subsidized de-stocking and on the more long run they make market information available to all stakeholders through an information sharing system.

4. Annex

Abbreviations

ACF	Action Contre la Faim
APDA	Afar Pastoralists Development Association
CARE	Cooperatives for Assistance and Relief Everywhere
CCF	Christian Children Fund
DPPC	Disaster Prevention and Preparedness Commission (Federal Government level)
DPPB	Disaster Prevention and Preparedness Bureau (Regional level)
DPPD	Disaster Prevention and Preparedness Department (Zonal level)
EGS	Employment Generation Scheme
EPI	Programme Immunisation
ETB	Ethiopian Birr
EWS	Early Warning System
FEWS	Famine Early Warning System
GTF	Gudina Tumsa Foundation (local NGO)
MSF	Médecins Sans Frontières
MT	Metric Ton
NGO	Non-Governmental-Organisation
OSSREA,	Organisation for Social Science Research in Eastern and Southern Africa
SF	Supplementary Feeding
TF	Therapeutic Feeding
UNDP	United Nations Development Programme
UN-EUE	United Nations Emergencies Unit for Ethiopia
WFP	World Food Programme

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Glossary

Meteorological Drought Defined

Drought is a period of insufficient water initiated by reduced precipitation. The impacts of drought on crops and society are critical but not easily quantified. The result is that "drought" does not have a universal definition. "Meteorological drought" is defined as a sustained period of deficient precipitation with a low frequency of occurrence. While crops may be damaged by lack of precipitation and high temperatures in just a few days, such short periods are not considered to be meteorological droughts. A three-month period is defined by the American Meteorological Society to be the shortest period that can be defined as a drought. (Source: *The American Meteorological Society*)

Doum - Hyphaene thebaica

One of the tallest palm tree widely spread in all sub-desertic areas of the Horn of Africa around watercourses like the hot springs in Awash National Park. The fruits are in large bunches and each fruit is round and about 15cm in diameter, orange-brown in a calyx cup. Fruit pulp, seed and young seedlings are edible. And from the sap of the flower shots, palm wine is produced.

Dadaa rains

Local Afar expression defining few days of shower which normally occur between either in November or December.

Karma rains

Local Afar expression defining the long rains which usually occur between Jun and September in the Afar Region of Ethiopia. They can be compared to the long kiremt rains in the neighbouring Amhara Region.

Sugum rains: Local Afar expression defining the short rains which usually occur between March and April in the Afar Region of Ethiopia. They can be compared to the short berg rains in the neighbouring Amhara highlands.

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