UNITED NATIONS

EMERGENCIES UNIT FOR ETHIOPIA (UN-EUE)

Hararghe Food Security hampered by long-term drought conditions and economic constraints

Assessment Mission: 2 - 13 March 2003

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1 Introduction and background

Three years of low rainfalls and poor harvests in Hararghe have spurred the UN-EUE to organize a follow-up assessment mission at small rainy season (*Belg*). Steep slopes in the highlands and the mid-highlands and large plains in the lowland areas characterize Hararghe. The highlands and mid-highlands are normally extensively cultivated with high pressure on land and deep erosion. The lowlands are partly cultivated and partly used for pasture (Klingele, Yesus, 1994). Both West and East Hararghe zones are prone to chronic food insecurity. Maize and sorghum crops are the most affected. Low prices on the international markets and pest combined with a lack of moisture have affected coffee cash crop since 2000. Khat (*catha edulis*), which represents the major alternative cash crop, is also facing declining prices on local markets, except for the top quality exported. Moreover, pastoralists from the lowlands in search of pasture generate growing population movements, which create tension and increasing danger of clashes between sedentary indigenous people and nomadic groups.

Dry Farm Land in Dogu, Girawa woreda (Photo by François Piguet, UN-EUE, March 2003)

The mission's major objective was to assess the humanitarian situation in East and West Hararghe, one of the most drought-affected areas in the present crisis. The assessment focused on the agricultural situation with an urgent need for seed, the livestock condition that deteriorated due to lack of grazing and the food security at household level, including unusual people and livestock migration. Special attention has been given to coffee and khat cash crops markets, as well as to the effects of a more thorough border control to limit and prevent contraband and smuggling activities from Somaliland and Djibouti.

2 Mission Results

2.1 Climate, rainfall pattern and moister

After three years of late onset and erratic rains, Hararghe farmers were waiting for *Belg* rain. During the assessment mission, with the exception of one shower in Dire Dawa and one in Bedeno, most of the areas visited were still waiting for the rain to start. In agricultural areas and particularly the *Belg* cropping areas in the high- and midlands, land preparation was still on its early stage as farmers delay such work following years of late rain onset.

However, northern lowlands in Mieso Woreda of West Hararghe and in Shinille zone of Somali Region (around Dire Dawa), recently received rain. Livestock returned from the highlands and eastern lowlands close to the Somali Region (SNRS) for grazing. Livestock from those areas is severely affected as Somali cattle driven back to Shinille are mostly in very poor condition and practically every second cow in Mieso is emaciated and in bad physical condition. Elsewhere animals look better but there are signs of stress around the main watering points in the lowlands with high concentration of livestock. Pastoralists in Abona (Darolebu Woreda) have pointed that most of their cattle run recently out of milk.

2.2 Seed provision is an important short-term challenge

At this stage, seed availability appears as the biggest challenge for the coming weeks both in East and West Hararghe zones. As farmers are waiting for the rain, most of the agencies working in the area are struggling to bring seed in time for the coming *Belg* planting season. End of March begin of April at the latest, seed should be in farmers' hands. Concerned seed needs focus on *Katomani*, a drought resistant short cycle maize variety. Local sorghum varieties are only available in small quantities. The quality of marketed seed remains questionable as traders who are buying grain in small quantities to the farmers use to mix it in 50 or 100 kg bags. Anyhow, most of the farmers have no money to buy seed. According to the rural development coordinator in Kersa Woreda, they need credit or revolving fund. Consequently, if rain is coming on time, they don't have seed and if rain delays, they are also in trouble.

ICRC is distributing seed in Gursum and Fedis woredas of East Hararghe, and in Boke and Darolebu Woredas of West Hararghe together with food aid[1]. The Hararghe Catholic Secretariat (HCS) has allocated 2,000 MT of seeds to Kersa, Meta and Goro Gutu Woredas of East Hararghe. The seed distribution system involves local traders in order to deliver in time and HCS will pay traders after distribution. In Girawa (East Hararghe), CARE received funds for seeds but the availability of seeds, mainly local sorghum varieties, remains problematic. Save the Children UK (SC-UK) has no seed for the coming *Belg* season but hopefully for *Meher* according to a project proposal submitted. In West Hararghe, CARE has recently purchased 250 MT of seed in Addis Ababa to be transported to Asbe Teferi. West Hararghe DPPD in Asbe Teferi has mentioned a total request of 2,512 MT of seeds including NGO seed contributions. Up to now, federal and regional level did not react to the request.

[1] Agencies are distributing seeds on the basis of 5 kg for a half-hectare plot.

2.3 Agricultural practices contribute to lower yield

After several years of late onset of *Belg* rains, farmers now tend to delay land preparation because early preparation might cause wind erosion of soil loosened by land preparation. Farmers do plant maize and sorghum together in the same field but generally with a slight delay in time. During the 2002 *Meher* season, maize died but sorghum survived. With abundant rainfall, maize is harvested in June at green stage and sorghum in December. Such practice has the advantage to bring at least some grain. But this type of intercropping that is largely in use is not recommended because both crops compete for the same phosphate and nitrogen. Another common intercropping is khat with maize and sorghum but yields also suffer, as khat is a perennial plant with deep roots catching most of the moister.

Land preparation in Dogu, Girawa woreda (Photo by François Piguet, UN-EUE, March 2003)

Three years of poor harvests forced farmers to cut down farm input expenses and agricultural package extension credit payment defaults concern most of them. Most of the agencies involved in agriculture and rural development programmes stated that the decline in the use of improved farm inputs during the last two previous years had important negative effects on crop yields. In Gelemso, Habro Woreda of West Hararghe for example, the Agricultural Office observed a total reimbursement failure of 100% for farm inputs received on credit. The agricultural extension package costs 260 ETB for a 0.5 ha plot with 6 to 10 kg sorghum, 50 kg DAP and UREA fertilizer. Such package exceeded input distribution set up by the NGOs with 5kg seed (*Katomani* variety maize or local sorghum) without chemical fertilizer.

From the 35,087 farmers in Habro Woreda, 1,932 are currently using agricultural extension packages. For the upcoming planting season it will depend upon woreda and kebele administrations, which farmers still are entitled to receive credit to purchase the agricultural extension package. In East Hararghe, the zonal Agricultural Office is planning for 18,700 households that are eligible to receive loans for extension packages that include either seed only or an integrated package with seed, fertilizer and other components. According to information provided by Agricultural Office technicians in Habro Woreda of East Hararghe zone most farmers could not pay back their credit in time and were furthermore bound to a 7.5% to 10% credit interest rate. Most farmers have asked for repayment delays. In Golo Oda Woreda the mission found a further example of the reduced significance of extension packages. Six years ago, the extension package credit programme involved 510 farmers whereas as currently only 159 farmers participate of whom 51 are not in a position to reimburse their credits from last year.

2.4 Food aid with strong NGO involvement

East and West Hararghe benefit from a strong NGO commitment and involvement for food aid distributions in most of the remote woredas of both zones. Presently, food aid distributions are organized as follows: East Hararghe: ICRC in Fedis and Gursum, Menschen für Menschen (MfM) in Babile Woreda, CARE in Bedeno, Girawa and Meyu Woredas, SC-UK in Golo Oda and possibly in Melka Belo Woredas. According to East Hararghe DPPD, the participation of NGOs in relief food distributions has improved the effectiveness and the efficiency, as NGOs boosted up capacity and speeded up logistics and monitoring activities. NGOs flexibility has improved food aid network capacity to deliver food in time to afore mentioned remote areas. Similar to East Hararghe also in West Hararghe most food aid distributions at woreda level are now under various NGO responsibility such as ICRC in Boke and Darolebu Woredas, MfM in Habro Woreda and CARE delivers relief food to about half a million beneficiaries in the five following Woredas: Anchar, Chiro, Guba Koricha, Kuni and Mieso.

SC-UK food distribution in Gaago, Golo Oda woreda (Photo by François Piguet, UN-EUE, March 2003)

Nevertheless, in Kersa, Meta, Goro Gutu and Malka Balo Woredas, food aid cannot cover all needy people and, according to DPPD East Hararghe, some kebeles that have been excluded from relief are now facing difficulties. WFP together with DPPC are currently re-assessing beneficiary numbers. CARE has pointed out that distributing only grain for relief may not be sufficient to prevent extended malnutrition among people that suffer from food shortage. CARE witnessed that fact in Kurfa Chele Woreda. In Golo Oda Woreda SC-UK is currently distributing 700 MT of wheat and 87 MT of CSB supplementary food for 56,000 beneficiaries on a monthly basis. A therapeutic feeding programme should start soon as malnutrition is increasing among beneficiaries. On the other hand, DPPD highlighted another hotspot in Kersa Woreda with currently 23,800 beneficiaries and 290 MT (12.2 kg per beneficiary) of relief food distributed monthly. The UN-EUE mission also observed that relief food distributions led to new population movements for example from Golo Oda to Boke Woreda where ICRC distributes food as well as between Jarso (East Hararghe) and Genegsen (SNRS) Woredas, where food distribution in Oromiya has attracted some 6,000 Oromo agro-pastoralists who allegedly have been forgotten by the DPPB beneficiary targeting in Jijiga (SNRS).

2.5 Water stress in the lowlands

In East Hararghe, Girawa and Golo Oda Woredas, most of the springs are dry and water ponds are empty. People have to walk several hours to fetch water.

Dry water pond in Dogu, Girawa Woreda (Photo by François Piguet, UN-EUE, March 2003)

Livestock concentration around a water point in Burqa, Golo Oda Woreda (Photo by François Piguet, UN-EUE, March 2003)

In Golo Oda Woreda, that currently has 110,711 inhabitants and 55,600 food aid beneficiaries (according to woreda administration), suffers from five years rain shortage that resulted in a 60% maize and sorghum production reduction. In Golo Oda water shortage seems to be the main concern and people in the villages are waiting hours with jerry cans around the few remaining water points. In places like Burqa (Golo Oda), numerous animals are also lining up for watering. In Googa, a remote kebele visited together with a SC-UK food monitor, women searching for water try to stop the UN mission car to ask a ride to the nearest water source which currently is river Ramis located at a 10 hours walk from their village.

The Golo Oda Woreda Water Office has on its records 10 boreholes and 11 shallow wells in the woreda that supply 36,350 people with water. 11 kebeles over a total of 23 remain without permanent water sources. Water stress affecting both people and animals is not only related to drought. Spare parts and fuel for boreholes are lacking. Four hand pumps that need to be serviced or repaired are not functioning because there is no water technician assigned or available in the woreda that could do the repairs. Some water committees are actually disorganized after part of the money collected has been misused. It is important that these local water committees are reformed so that water sources can be repaired and maintained.

A similar situation has been observed in West Hararghe, particularly in the visited lowland areas. People in Mieso town did not have water for one week at the end of February and CARE organised water trucking operations (45,000 litres per day) to supply inhabitants at food distribution centres. In Kuni Woreda, shallow wells are drying up. The reason is unclear. It could be that the ground water level is decreasing or the lack of maintenance. CARE has planed a technical evaluation.

In the lowlands of Harbo and Darolebu Woredas, water stress is obvious, even though livestock remain apparently in good condition. In Mieso Woreda about half of the cattle is emaciated. Recent rains have attracted a lot of livestock to the area. A back migration of Somali cattle has been observed from Dengego and Adele Lake in East Hararghe to Harawa in Shinille zone.

2.6 Animal condition and great animal health concern

In the visited lowlands, animals have to walk hours between watering points and grazing areas. If this situation lasts for several weeks, cattle might get exhausted and die. Pastoralists are cutting tree branches to complement the poor fodder available. According to agricultural experts in Habro Woreda, pastoralists are also given salt and bone ashes mixed with feed as mineral complement. At Chopi watering point, animals are suffering from mineral deficiency and even eating dead turtles in search for the minerals they lack. Some of the cattle that ate dead turtles got intoxicated and died.

In December livestock moved to Habro Woreda from Mieso due to better grazing conditions but recently moved out again because the pasture has been depleted and also because of recent rains in Mieso and because prices for sugar cane bundles have gone up from 70 to 120 ETB. This apparently indicates grazing stress because farmers usually feed cattle during part of the dry season with sugar cane. Cattle herds have been seen walking along the Gelemso-Gololcha road towards Arsi zone. Livestock migration in that area is quite common and rather intense. Livestock is currently leaving Hararghe for grazing in Bale or Arsi before reaching Era market near Nazaret where they are expected to be sold for a good price.

Animal health remains a major concern as vaccination is incomplete due to lack of vaccine and/or due to the fact that pastoralists escape the cost recovery system set up by the veterinary services. CARE in Girawa (East Hararghe) has expressed that livestock is the major concern together with water as pasteurelosis and black leg diseases are endemic. Pasteurelosis, black legs and anthrax are the most common animal diseases in Habro and Darolebu Woredas. In Habro Woreda, the local administration suspects some human anthrax cases but further in-depth investigations would be necessary to confirm. HCS has planed to vaccinate 140,000 animals in West Hararghe between March and June covering six woredas. HCS programme cannot cover the entire West Hararghe Zone with about 100,000 cattle per woreda. Livestock vaccination and other animal treatments remain difficult, as multi-vaccination cannot exceed two shots at the same time. Furthermore, some vaccination like anti-anthrax has to be repeated each six months. And however, vaccination is not advisable for physically weak animals. Facing numerous other animal diseases like black leg, CBPP (Contagious Bovine Pleuropneumonia), CCPP (Contagious Caprine Pleuropneumonia), pasteurelosis, trypanosomiasis, as well as internal parasites, veterinary services should be strengthened in order to reach both local and migrant livestock.

2.7 Coffee plantations affected by plant disease and low prices

Coffee tree affected by CBD and moister stress in Bedeno woreda (Photo by François Piguet, UN-EUE, March 2003)

Besides major coffee price drops on the international market since 1999, Hararghe coffee plantations are infested by CBD (Coffee Berry Disease) a fungal that together with drought drastically reduced 2002/2003 production (November – January). Even now in March, coffee is not available at the Bedeno market except for small quantities of lower quality and prices remain high at 10 to 12 ETB per kg. New coffee variety seedlings that are CBD-resistant, that for example have been introduced to farmers in Southern Ethiopia (e.g. Jimma) are not available in Hararghe. The Alamayu agricultural research centre that is cultivating these varieties has not yet released any seedlings for farmers. Fungicides such as *Roba*, *Dacolin* or *Deflotin* to control CBD are neither available in Harar nor in Dire Dawa markets. And, in any case, farmers cannot afford these products that cost 65 to 70 ETB per litre (giving 15 to 20 litres by dilution), when you need to spray every three days during a three weeks period.

2.8 Contraband

Following the new border control measures along the Ethiopian northern-eastern Djibouti-Somaliland border implemented in October 2002, contraband is still continuing on a micro scale with numerous transfers and middlemen. Farmers as well as demobilized soldiers in Harar are usually involved in contraband business and transport. Most of them are living with contraband as petty traders, brokers or transporters. Consequently transport prices between Hartisheik at the Somaliland border and Harar and Dire Dawa have increased six fold from 70 to 80 ETB to some 400 to 500 ETB for 50 kg of transport goods. Transport is very sensitive and as many people along the transport roads are involved, some of the informants expressed their fear that the present situation might bring new support to opposition-armed groups.

Prices for some basic food items have also increased significantly. In Dire Dawa and Harar a 100kg sugar bag is actually sold at 440 ETB, comparing to 340 ETB six months ago (+ 29,4 %); oil is sold for 185 – 190 ETB for 20 litres, comparing to 110 ETB six months ago (+ 72.7%) and 100kg of wheat flour is sold for 160 ETB, comparing to 120 ETB six months ago (+ 33.3%). Temporarily wheat flour prices could reach 200 ETB due to the high volatility of such commodities.

Despite patrols and numerous check-points set up by the Ethiopian Police and the Custom Authorities in order to cut down and control contraband trade, many people still take the risk a try to smuggle goods across the border because they lack any other alternative income opportunities.

2.9 National decentralisation process causes financial and technical bottlenecks

It seems that local woreda and kebele administrations, as the situation in Habro and Darolebu Woredas illustrates, neither do have the financial nor the technical expertise and means to fulfil newly assigned technical services at this level. The local administration of both mentioned woredas are bound to their offices because on one hand do not have the necessary transport means to organise a more permanent field presence in their respective areas of intervention, and on the other hand, particularly in the two above mentioned woredas of Hararghe, the local administration fears locally known opposition groups that fight the Federal Government as well as they fear wild animals such as hyenas and other predators. In addition, most of the time per diems for food and accommodation cannot be advanced or even paid due to financial constraints. Some people such as agricultural experts are provided with a motorcycle, but even then field visits are limited to the most accessible places and hence data collection is limited and information incomplete. For the livestock department in particular, this situation has negative effects on livestock vaccination campaigns for example. Efficient vaccination campaigns and other livestock health treatment should for example take place at watering points where livestock gathers and the chances are highest to reach most animals, both those from the local farmers as well as those form migrating pastoralists.

2.10 Intra-Regional Resettlement Programme has started

On Saturday 8 March, about 1,500 people were waiting for trucks provided by the East and West Hararghe zonal authorities to be resettled in West Wollega. In Chelenko (Meta Woreda, East Hararghe) 700 to 800 persons were waiting to be removed and resettled (see picture below). Woreda administration has told the UN-EUE mission that 100 persons already left. In Karamile (Golo Gotu Woreda, East Hararghe) more than 200 persons were waiting as well as 500 in Wachu (Chiro Woreda, West Hararghe). For West Hararghe zone around 9,000 people are planned to be resettled, for East Hararghe the planned number is 10,500.

Chelenko, Meta Woreda: Resettlement candidates waiting for transport in precarious conditions (Photo by François Piguet, UN-EUE, March 2003)

According to DPPD East Hararghe, 2,150 hectares of land have been identified in Jimma Arjo (East Wellega) and 8,774 hectares in West Wellega that are suitable for resettlement. In Kersa Woreda (East Hararghe), 2,000 people are awaiting resettlement. According to the woreda authorities, 200 people have been moved during the first week of March. The land of the voluntary settlers will remain in their hands for a certain period of time so that there is a possibility for them to return back if resettlement does not fit them. However, the woreda and kebele authorities have already registered this land for further redistribution in case the settlers do not come back. In East and West Hararghe a total of 100,000 registered for voluntary resettlement.

In Meta Woreda, the first phase of the voluntary resettlement to Western Wollega included 120 households. Representatives from woreda authorities and kebele committees have visited the resettlement areas. Woreda authorities are mentioning that 10 families per kebele can be

selected. In Weber kebele for example, 10 households have been selected for resettlement among a total of 1,500 households within the kebele. Each kebele leader designates one candidate. Somehow memories of the 1980s Derg regime quota system emerge once more. Food aid targeting will take into account on-going resettlement activities and will redirect and retarget beneficiaries accordingly. For those who are moving and resettle in West Wellega, zonal authorities will distribute food aid to them.

2.11 Spontaneous migration to Bale, the push factors

Spontaneous resettlement movements to Bale have involved numerous people from Hararghe (Lemessa, 2002). West Hararghe DPPD has pointed out that those movements concerned at least 20,000 to 30,000 people. Most of those migrants left Hararghe between June and December 2002. Essentially, they did not only move because of food shortage but because they have been enrolled into the voluntary migration programme that has been initiated by the Federal Government nationwide. They have been expecting larger plots of land in the designated areas of resettlement. They also left Hararghe due to the lack of rain as well as the high price of agricultural inputs and extension credit. Others such as some pastoralists met in Chopi (Abona, Darolebu Woreda) use their polygamous to register their families both in their places of origin and in Bale zone, their place of resettlement.

Major push factors for migration are small land size, high land degradation and low soil fertility as a result of erosion and agricultural exploitation. More recently also frequent shortage of water has become one of the push factors out of the Hararghe low land areas. Before deciding to move, many migrants sold most of their assets. People confined to marginal land e.g. sloppy land full of rocks and stones, the whole family migrated. Others with more land and better conditions did leave some family members behind in case they might return from their designated resettlement areas.

Some migrants benefit from family ties such as Ato Ahmed Ali Tasse who was an administrator at the time of Haile Sellasie. Some of his extended family moved years ago to Ginir in Bale zone where they resettled and are now farmers using partly gravitation irrigation with precise labour division among themselves. Ato Ahmed Ali Tasse recently joined them such as did many others who have family ties with people that migrated and resettled before. Family ties therefore have played a major role in the most recent movements. On the other hand, DPPC in the 1980s, then called Relief and Rehabilitation Commission (RRC) resettled drought-affected people from Wello to the nearby village of Harawa with a mechanized farm producing mainly wheat. There is no social or economic tie between the host and the settler community.

2.12 Seasonal and temporary labour migration

Seasonal and temporary migrations are mostly undertaken to seek for additional income opportunities for some of the family members, i.e. able-bodied males. In East Hararghe, people find work opportunities in khat plantations and in the commercialisation business of the same commodity, particularly in Kombolcha and Haro Maya Woredas. In other areas,

sweet potato harvest and a limited variety of off farm activities are the most common daily work opportunities. In Kersa Woreda, for example, some people have been employed by road construction. In Dogu, Girawa Woreda, several workers moved to Awaday (Haro Maya) and are bundling khat that is to be sold on the market. In Golo Oda Woreda, people are usually working in neighbouring Bedeno Woreda as shepherds or as firewood collectors. Many people from Bedeno go to Harar or Dire Dawa, looking for any job opportunity in these two biggest urban centres of the area. Short-term seasonal migration does not exceed three months and during the planting season, most of the people that migrated for daily labour are returning to their place of origin.

Chopi watering point, Darolebu woreda (Photo by Herbert Herzog, SHA consultant, March 2003)

Numerous pastoralists have moved for longer periods. Between Abona and Chopi (Darolebu Woreda) a lot of Somalis arrived with their camels for grazing and Oromo pastoralists interviewed around Chopi watering point have mentioned to be around since August 2002. Other pastoralists and agro-pastoralists migrate all along perennial rivers with their animals. In some places such as along Mojo Woldiya River, they can take advantage of some daily work opportunities in the irrigated schemes (Guinand, 2000). On the other hand, as mentioned above, relief became an attractive factor for migration like the case of Golo Oda (East Hararghe) moving to Boke (West Hararghe), where they usually benefit from kinship or relatives to get food aid.

3 Conclusions and recommended actions

Following 3 years of insufficient and unsatisfactory rain conditions, food security of an increasing number of households relies on relief. Harvests cover only a third of the average grain production for maize and sorghum and in some places, fields remained out of crop since one year. During the larger part of the year, livestock is under stress for grazing and watering creating animal concentrations in the Hararghe low lands and along rivers. The present situation in Hararghe is not exclusively linked to drought conditions but rather also to important structural deficits that hamper rural livelihoods. Major constraints that incite people to leave their environment and their homes are farm sizes that are too small to cultivate on a subsistence level, poor soils, low crop yields, land degradation and decreasing and very limited off-farm labour opportunities. One of the main problems to supply and distribute seeds are transport constraints at zonal level. But at the same time the UN-EUE mission observed that zonal authorities initiated the intra-regional resettlement programme involving some 19,500 people that need to be transported to their various new destinations for resettlement. In general, all over the visited Hararghe low lands people seem to be socially discouraged. They do not seem to be very positive or hopeful and confident about their future. This attitude may be illustrated by the increased khat consumption both in urban and rural areas that developed despite the extreme poverty of most of the khat-consuming people. Off-farm labour opportunities are gradually decreasing and people are confronted with growing difficulties to manage cash expenditures for basic necessities such as sugar and the like.

Seed distribution should be a top priority for *Belg* and *Meher* planting seasons. Food aid and seed distribution combined is probably the best way to minimize risk of seed being consumed instead of planted. Other seed supply programmes involving traders have to be supported even if non-certified seed quality remains a risk to generate low yield crops.

In Girawa and Golo Oda Woredas of East Hararghe Zone, and in Darolebu, Habro, Kuni and Mieso Woredas of West Hararghe Zone, urgent water interventions are necessary in order to service and maintain water points such as boreholes with mechanical pumping mechanisms, particularly in the lowlands. Water committees need support in order to strengthen water management and accountability at community level.

In Girawa Woreda of East Hararghe Zone, and in Darolebu and Habro Woredas of West Hararghe Zone, there are increasing risks of widespread diseases and at the same time, vaccination cover has decreased due to lack of means and also due to a lack of response from pastoralists to the introduction of a cost recovery system. In order to mitigate risks for people and animals, vaccination should take place at watering points to be able to reach as many animals and people as possible. Mobile veterinary services might strengthen cost recovery if pastoralists are not anymore forced to walk far to specific vaccination centres. Vaccination for trans-boundary diseases is still provided by the government for free and the problem remaining is covering the cost of organizing vaccination campaigns. NGOs could focus on supporting such campaigns. Projects initiated by specialized NGOs such as "Vétérinaires sans Frontières" could contribute to initiate a better animal health follow-up and to support woreda technical services.

In order to indirectly support animal health efforts, mineral supplement should be directly supplied to livestock in order to avoid disease outbreaks or immediate effects such as botulism due to intoxication when providing improper mineral intake.

Beyond emergency, land degradation and other agricultural deficiencies and constraints have to be addressed. Soil conservation and water harvesting programmes have to be strengthened. Intercropping systems with khat or between maize and sorghum may be evaluated with a cost and benefit analysis and if necessary reconsidered as crops are competing below ground for nutrients and moister and above ground for light and hence their respective yields decrease compared to pure stand or mono cropping.

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4 Annexes

Abbreviations

CARE	Cooperatives for Assistance and Relief Everywhere
CBPP	Contagious Bovine Pleuropneumonia
CCPP	Contagious Caprine Pleuropneumonia
CSB	Corn Soya Blend
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)
ETB	Ethiopian Birr
FAO	Food and Agricultural Organisation
FEWS	Famine Early Warning System
Ha	Hectare
HCS	Hararghe Catholic Secretariat
ICRC	International Committee of the Red Cross
MoA	Ministry of Agriculture
MT	Metric Ton
NGO	Non-Governmental-Organisation
OXFAM	Oxford Committee for Famine Relief
PAs	Peasants Associations
RRC	Relief and Rehabilitation Commission (former DPPC)
SCF	Save the Children Fund
SF	Supplementary Feeding
SNRS	Somali National Regional State
TB	Tuberculosis
TF	Therapeutic Feeding
ToT	Terms of Trade
UNDP	United Nations Development Programme
UN-EUE	United Nations Emergencies Unit for Ethiopia
UNICEF	United Nations Children Fund
W./Hararghe	West Hararghe
WFP	World Food Programme

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Glossary

belg	Expression for the agricultural season in the short rainy season in parts of Ethiopia.
dega	Expression for one of the altitudinal agroecological belts in Ethiopia. In Wollo between 2500 to > 3000 msl.
Fafa	Local name to designate Corn Soya Blend, a supplementary food largely distributed and currently marketed for truck drivers
kebele	Smallest administrative unit in Ethiopia (communal level)
kola	Expression for one of the altitudinal agroecological belts in Ethiopia. In Wollo between ~1200 to ~1600 msl.
meher	Expression for the long rainy season in parts of Ethiopia
woreda	Local administrative unit (district level), next to zone
weyna dega	Expression for one of the altitudinal agroecological belts in Ethiopia . In Wollo between ~1600 to ~2600 msl.

Glossary of important meteorological and seasonal terms used for Ethiopian highland areas

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*)

Ethiopia's 'Keremt' or 'Meher' Rains Defined

Since Ethiopia and Eritrea are in the tropics, physical conditions and variations in altitude have resulted in a great diversity of climate, soil, and vegetation. Rainfall is seasonal, varying in amount, space, and time. There is a long and heavy summer rain, normally called the big rain or *keremt*, which falls from June-September. It is followed by the *baga* hot, dry period from October through February (see below for definition). In some areas there are short and moderate spring rains in March and April known as the little rains or *belg*. These rainy periods correspond to Ethiopia's primary and secondary agricultural seasons, known as the *meher* and *belg*. (Source: *FEWS*)

Ethiopia's 'Belg' Rains Defined

In spring, a strong cyclonic centre develops over Ethiopia and Sudan. Winds from the Gulf of Aden and the Indian Ocean highs are drawn towards this centre and blow across central and southern Ethiopia. These moist, easterly and south-easterly winds produce the main rain in south-eastern Ethiopia and the little spring rains to the east central part of the north-western highlands. The little rains of the highlands are known as *belg* rains, referring to the second most important sowing season of the region. (Source: *FEWS*)

Ethiopia's 'Baga' Season Defined

Since Ethiopia is in the tropics, physical conditions and variations in altitude have resulted in a great diversity of climate, soil, and vegetation. Rainfall is seasonal, varying in amount, space, and time. There is a long and heavy summer rain, normally called the big rain or *keremt*, which falls from June-September. It is followed by the *baga* hot, dry period from October through February. In some areas there are short and moderate spring rains in March and April known as the little rains or *belg*. These rainy periods correspond to Ethiopia's primary and secondary agricultural seasons, known as the *meher* and *belg*. (Source: *FEWS*)