

WEST AND EAST HARARGHE AFTER THE MEHER HARVEST: SIGNIFICANT YIELD REDUCTIONS

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Introduction and background

Both zones of Hararghe, West and East, located in Oromyia Region, are characterised by a diversity of agro-climatic conditions which determine the composition of the rural economy. From lowlands (*kolla*) to midlands (*weyna dega*) and highlands (*dega*) the economy reflects patterns which are to a certain extent typical for Ethiopia in general: the lower the altitude the more important becomes the livestock-based economy while, due to climatic constraints, possibilities of crop production are limited. In the lowlands of Hararghe, however, the livestock economy does not reach the same level of importance it does in the purely pastoralist areas of Afar and Somali Regions or of Borena Zone of Oromyia Region. In *kolla* areas of West Hararghe, for example, livestock economy represents, according to CARE estimates, about 20 to 30 per cent of the overall economy while food crops still predominate. On the other hand, higher elevations allow a more diversified crop cultivation with livestock being of minor importance (3 to 10 per cent) for the livelihood of the population.

Unlike other areas in Ethiopia, the Hararghe mid- and highlands enjoy a terrain which, in addition to food crops, also favours the extensive cultivation of cash crops such as coffee and *chat*, a mildly narcotic leaf appreciated as a stimulant in many parts of the Horn of Africa as well as in Arab countries. While coffee is not perishable and can be traded at any time, *chat* is a highly perishable commodity requiring, once harvested, speedy delivery to the consumer in order to maintain quality and to achieve an optimal price. Therefore, only those *chat* farmers whose plantations are located at or near main roads — or at least reliable rural roads — have adequate market access and can benefit from trading opportunities. Farmers without such access have to rely on small domestic markets and local consumption. The mission, having had the capacity to gather rather general information only, feels that a detailed study of the *chat* business and its implications for the local economy might be very useful to all agencies concerned with the broader aspects of food security.

Given the considerable economic diversity of Hararghe – livestock, food crops and cash crops with particularly the latter also providing waged labour opportunities – the two zones enjoy, overall, a certain wealth and are usually better off than entirely food crop dependant areas with unfavourable soil and erratic weather conditions. However, Hararghe also has its vulnerable areas with unstable food security, mainly in the lowlands and in pockets at higher altitude, where a significant dependency on suitable rainfall patterns goes along with development deficits and structural poverty.

The objective of the mission, which took place from 20-25 January, was to look into the current status of food production shortly after the long *meher* season harvest which accounts for up to 95 per cent of the annual production – the rest is made up by the short *belg* season.

West Hararghe

Livestock in good condition

As most parts of Ethiopia, Hararghe also had its share of very unseasonable rainfall in October and November last year. Even in mid-January, one week prior to the visit, many parts of West Hararghe received rather heavy rainfall according to representatives of the Disaster Prevention and Preparedness Bureau (DPPB), the Bureau of Agriculture (BoA) and CARE in Asbe Teferi (Chiro), the

capital town of West Hararghe Zone. As anticipated, and experienced in other parts of the country, the unseasonable rains, which regenerated pasture and increased the availability of surface water, were a positive benefit to areas where livestock is of importance. Driving through the lowland wereda of Mieso the mission noted livestock in good condition, and even further west, seasonal tributaries to the Awash river, like the Herdim river, were in spate and flowing through unusually lush surroundings. Up to September the lowland areas, now observed to be very green, were reportedly suffering from drought. Not surprisingly, livestock condition in the mid- and highland areas throughout West and East Hararghe is very satisfactory, as the mission observed during its field coverage.

Major losses on food crops

At a time when food crops were mostly, but not yet entirely harvested, the zonal DPPB and BoA, jointly with CARE, carried out a preliminary post-harvest assessment. Pending consultations with the regional authorities, this assessment was, however, not yet finalised by the time of the mission. Without being in the position to give precise figures, the zonal authorities indicated that, compared to the two previous years, rather significant yield reductions are to be expected. According to information provided by the DPPB, the zonal food crop production of the *meher* season 1995 amounted to 185,094 tons while in the 1996 crop year an amount of 199,466 tons was actually harvested. For this season, 1997/98, only the pre-harvest estimate figure of 97,903 tons was released. While the total area of cultivated land remained relatively stable over these three seasons at about 200,000 hectares, the sharp decline of production this year over the two previous years is clear – even with final results still pending and taking possibly over-pessimistic pre-harvest estimates into account. Representatives from the BoA describe the 97/98 *meher* season as “the worst in the last five years” in West Hararghe.

The main reason given for the decline in production was the very unusual rainfall pattern: while dry to erratic conditions hampered the crop development, particularly on lowland sorghum, up to the end of September, subsequent excessive rain led to losses in both quantity and quality. To various degrees the unfavourable conditions negatively affected all crops in all the three altitude zones, including long cycle crops such as sorghum and maize. Zonal experts observed both rotting and germination on standing sample crops, and also some freshly harvested crops showed, due to extreme moisture, signs of germination, leading to a significantly increased percentage of post-harvest losses. According to the BoA, particularly badly affected were pulses (haricot beans, peas, horse beans, chick peas, lentils), with estimates of damage put as high as 80 per cent. Further detrimental factors to crops were pest infestation in some areas, particularly stalk borer in sorghum.

In addition to the pastoral areas mentioned above, the excessive rains also had some positive effects on cropping areas in the lowlands. Where the harvest was already concluded the unseasonable rains allowed a second planting of maize. Furthermore, after the sorghum harvest - where stems are usually cut off ankle high and not removed from the ground – in a number of areas the continuing rains allowed young shoots to grow from old stems, a phenomenon referred to by agronomists as “tillering”. Even if unclear whether a second harvest of these crops will materialise thereby possibly increasing the overall *meher* production, these plants will at least provide additional fodder for animals.

Also cash crops affected to a certain extent

According to wereda estimates compiled by CARE, the share of coffee in the overall economy of the mid- and highlands of West Hararghe is in the range between 3 and 10 per cent while *chat* might be in the range between 5 and 10 per cent. These estimates, however, need to be further substantiated and probably replaced by more accurate figures. In certain areas, for example at mid-altitudes of Tulo wereda, coffee and *chat* combined might reach 25 per cent of the local economy, while in the weredas of Darolebu, Boke and Mesela (major producers and exporters) coffee might be of even greater importance.

The untimely and excessive rains had a negative impact on coffee production in West Hararghe according to preliminary findings of the BoA. Heavy precipitation led to coffee fruits being shaken off the trees prematurely, thus exposing them to rotting on the ground. Furthermore, Coffee Berry

Disease (CBD) might affect the remaining crops. Without being in the position to provide estimated figures, the BoA presumed a considerable reduction of the coffee harvest, both in terms of quantity and quality.

Less reason for concern is the impact of the rains on *chat* production, which had apparently increased significantly. While weather conditions were favourable for this cash crop in terms of quantity, there were, however, some quality losses with, in general, the *chat* leaves developing too quickly and too big. Moreover, some *chat* plantations had started to show the effect of a fungal disease, leading to a further reduction in quality. Main *chat* growing weredas such as Habro and Kuni are therefore now facing difficulties in selling their production in the usual markets of Dire Dawa and Djibouti where, even in normal times, they face tough competition from the more favourably located producers of East Hararghe. Increased supply combined with reduced quality caused off-farm wholesale prices to drop from 6 Birr per kg to 2 or 3 Birr on average, according to the BoA. Meanwhile, regular *chat* consumers the mission spoke to at Asbe Teferi market were enjoying their cheap chew, simply throwing away big and fungus-affected leaves, thus giving the goats a good time.

The market situation in Asbe Teferi

According to rather general information obtained from the BoA, unfavourable terms of trade are prevalent at Asbe Teferi market. Due to high supply and low demand, livestock prices were relatively low and also the price of cows milk had dropped from an average of 3 Birr or more per litre to 1.50 to 2 Birr per litre. At the same time, the BoA reported that sorghum and maize were slightly more expensive than a year ago while Teff was significantly more expensive.

A brief visit to the market confirmed the trend on relatively low cattle prices. The only grain commodity traded in major quantities was locally produced sorghum, which was changing hands at a price 60 Birr **lower** than the price of one year ago. Several traders at Asbe Teferi market confirmed that while in January 1997 a quintal (100 kg) of sorghum was traded at 180 (buying) and 200 Birr (selling), the same is now traded at 120 Birr (buying) and 140 Birr (selling). Maize, sold in small quantities only by women farmers, was fetching on 22 January a price which is about 25 per cent lower than that of last year at the same time. Traders and retailers gave two explanations for the relatively lower grain prices: One was the reduced quality – visibly the sorghum offered for sale contained significant amounts of spoiled grains. The other reason given was, in this area where a significant part of the population is Muslim, the ongoing fasting month of Ramadan. With Id al Fitr, the end of the Ramadan, approaching, traders expected grain prices to go up very soon.

Interview with Tulo farmers threshing Sorghum

Driving through Hararghe it was noted that post-harvest activities were going on in a number of places. At a location called Serkam Feta, Tulo wereda, West Hararghe (some 40 kilometers from Asbe Teferi and 5 kilometers from Hirna), the mission spoke to a group of farmers. While two oxen were driven around in a circle stomping sorghum with their hoofs, two men were busy, using heavy clubs as flails, to thresh by hand the harvest, which contained, as could be seen on a pile of sorghum already threshed, considerable amounts of spoiled grains. Other men were engaged digging, on the top of a slight elevation, deep pits into the ground. This was done in order to prepare the traditional storage facilities, well-like shafts of a depth of six to eight meters. After lining the bottom and inside of the shafts with stones and particularly cow-dung, the grain to be stored is tipped-in, covered again with dung for isolation and protection, and thereafter soil is added to level the facility with the surroundings. In a well prepared storage pit, called in the Oromiffa language "*bolomitani*", the grain could be "kept safely for up to six or seven years", the farmers pointed out. But "this time", they say, "our storage system will certainly not be put on a long test – we will have to dig it out already after a couple of months to feed our families!" As an example, one farmer reported the harvest from his plot yielded 8 quintals (800 kg) of sorghum in 1996/97. After the harvest this year the same area of land produced, according to the farmer, "only 3 to 4 quintals". Of the 1996 sorghum harvest this man was able to sell 3 quintals to the market while the remaining 5 quintals were used for the family's own consumption. As opposed to that, the maximum quantity he would sell from the current sorghum production would be 1 quintal. Immediately after harvest a wholesale price of 70 or 80 Birr per quintal may be fetched at nearby Hirna market (a significant difference to Asbe Teferi market), while in

June/July farmers might sell, whatever is left, at 180 or 190 Birr. Cash is needed to buy food ingredients like oil, salt and sugar and household items and clothes. Asked for the reasons of this season's reduced production, the farmer, confirming independently official information, said that too much rain at flowering stage had caused considerable damage, while later on, in early January, further rains induced rotting on fruit-stands.

The other farmers met at the same location supported by and large the statements of their colleague, emphasising that all over this area of Tulo wereda – which is located at the *Weyna Dega* altitude and where reportedly one third of the farmers grow *chat* and coffee – most food farmers suffered yield losses of up to 50 per cent compared to last year. While these producers are mainly concentrating on the cultivation of sorghum, others in the area, who cultivate crops like barley, maize, pulses, root crops and vegetables, were apparently similarly affected by production losses. Particularly affected, the informants say, are the minority of farmers who cultivate teff, which was almost entirely destroyed.

While one has to bear in mind that these interviews, referring to a limited area of one wereda only and having been conducted in a informal, unstructured way, may not be fully representative, they nevertheless reflect to a certain extent the concerns at the grass roots. Tulo wereda level estimates indicate overall 34 per cent yield losses on cereals (at mid- and highlands) while preliminary CARE estimates for the same wereda assume losses of 20 to 25 per cent. More accurate figures are to be expected after CARE has concluded its post-harvest assessment, scheduled to start in late January, and once the zonal-regional findings have been finalised.

Relief needs considerably increased

Pending the finalising of the post-harvest assessment, the West Hararghe DPPB was not yet in the position to provide exact numbers of the people needing relief food support this year. The central DPPC identified, as reflected in the December Relief Appeal, for the entire zone 210,000 beneficiaries requiring a total of 28,350 tons of food assistance for 12 months (December 1997 to November 1998). While preliminary zonal estimates had assumed a number of some 290,000 beneficiaries, the DPPB expressed, for the time being, the possibility of a beneficiary number closer to the national level estimate. Whatever the exact figure, it seems likely that over last year, when a total of 135,405 people were assisted (including the victims of the failed 1997 *belg* season), relief needs have considerably increased. Based on 1994 census data, the total population of West Hararghe is projected to be close to one and a half million this year.

While national level programming suggested relief interventions should start in December, no food relief has been distributed so far in the zone. Reportedly this is due to delays in establishing EGS (Employment Generating Schemes) programmes at wereda level. To a certain extent this fact might indicate that the matter is simply not yet urgent enough, that the start of the lean period is still some time away and intervention need only to start, depending on the vulnerability of the respective area, say in March or later.

The DPPB has a reserve of some 700 tons of relief stocks pre-positioned at various locations. In addition CARE, although predominantly engaged in development activities, is already prepared to contribute some 2,000 tons of food for relief activities. These two resources combined still leave, however, a major gap to the requirements outlined at national level which were, for the period December to February alone, amounting to 6,300 tons. Obviously, the zone expects more resources to flow in.

East Hararghe

Due to similar rainfall patterns, the present status of the rural economy in East Hararghe throughout the three agro-climatic zones (*kolla*, *weyna dega*, *dega*) reflects the conditions prevailing in West Hararghe. In general terms: livestock and pasture quality are good, food crop production is significantly affected while cash crop production is characterised by both gains and losses. In order to avoid being repetitive, we highlight below only significant differences. One major basic difference is the fact that the population in the eastern zone is higher than in the western zone. While West Hararghe has a population of about one and a half million, East Hararghe's population is approaching

two million. Of these, roughly 44 per cent live in the midlands, 36 per cent in the lowlands and 20 per cent in the highlands, according to estimates provided by the zonal DPPB based in Harar. Reflecting the higher population, the occurrence of agro-climatic problems are possibly but not necessarily, affecting more people. This depends, from area to area, on the composition of the economy.

At the time of the mission the zonal authorities were just about to conclude the *meher* post-harvest assessment, having established preliminary findings in a first draft report (in the Oromiffa language). Accordingly, the annual relief plan (including EGS activities), to be submitted to the regional authorities, was still under preparation. Therefore, the following data shared by the DPPB with the mission have to be considered as first estimates.

Significant yield reductions

The major food crops, including sorghum, maize, wheat, barley and some teff, were planted last year on a total of 298,876 hectares yielding 241,446 tons. Adding also the yields of pulses (33,898 tons) and oil crops including ground nuts (6,256 tons), the grand total yield amounts to 281,600 tons. This production figure is about 33.6 per cent less than the pre-harvest expectation and 36.1 per cent less than the actual yield of the *meher* season 1996/97. Based on these findings, the DPPB expects for the entire zone a total beneficiary number of 328,899 while the duration of relief support, varying from place to place, is assumed to last five to nine months, with intervention starting in some areas as early as February. As opposed to these zonal figures, the central DPPC's Relief Appeal 1998 takes a much lower number of people needing assistance into account – 133,000 – but for a duration of twelve months (December 1997 to November 1998). The list of the weredas in need of relief intervention is led, according to the DPPB, by Fedis (43,038 beneficiaries), Gorogutu (39,097 – structural deficits are chronic here) and Girawa (34,330). For the previous intervention year, total beneficiaries in East Hararghe numbered about 60,000 in June (the final end-of-year figure was not available to the mission).

Particularly in the pastoralist areas of the lowlands, which benefited from the unseasonable rains as well as from the absence of any major livestock diseases, the beneficiary numbers might have to be reduced, as the DPPB points out. As in some areas of West Hararghe, the tillering of Sorghum was also observed in East Hararghe, for example in Gola Oda wereda. And in other areas, like Girawa, flood recession cultivation of maize was taking place where conditions allowed, producing the prospect of additional yields.

Yield reductions, on the other hand, were caused by the same reasons as in West Hararghe: not enough rain up to September, after that far too much rain. Too much moisture also led to some above-average post-harvest losses. In Jarso wereda, for example, where maize was already harvested but the corn not yet picked from the piled-up cobs, rotting had occurred. Excessive rainfall was also responsible for damaging potatoes, onions and vegetables, which are traded as cash crops and usually sold to urban centres like Harar and Dire Dawa.

Besides the rains, two other factors negatively affecting the traditional food crops were Stalk Borer, mainly on sorghum but also to a certain extent also on maize, and *striga* on sorghum. This parasitic weed (*Striga hermonitheca*, in Amharic called “*gelmit*” and in Oromiffa “*haramasap*”) seems to spread further each year and more so in East Hararghe. Reportedly, many farmers are not yet fully aware of the damaging effect of *striga* on their crops. Some appear even to enjoy the sight of the “beautiful flowers” and take them home “for decoration”, thereby unwillingly spreading the seeds of the plant, which effectively strangles and suffocates the roots of their sorghum. The DPPB, in its draft post-assessment report, emphasises the urgent need for a *striga* information and control campaign.

Coffee losses expected

East Hararghe's traditional cash crops – coffee and *chat* – currently present a mixed picture, according to information obtained from DPPB. Although coffee was initially developing well, CBD later started to affect the crop. Due to this infestation, which is paired with a lack of chemicals to face the problem, authorities expect yield reductions over last year. This, again, is a preliminary estimate since the coffee harvest is currently still going on.

The situation with *chat* is somewhat different. Major *chat* producing weredas like Alemaya, Deder and Kombolcha report a significantly increased production while, unlike in West Hararghe, quality has been maintained – though this might change if there are further significant amounts of rain. Over-production, however, has led to significant price reductions. Whereas normally a bundle of *chat* would fetch 40 to 50 Birr, the same quantity now is changing hands at 10 Birr.

Fattened oxen as a family food security reserve

During discussions with the DPPB in Harar and with the Hararghe Catholic Secretariat (HCS) in Dire Dawa the mission also exchanged observations on strategies used during lean periods by people trying to cope with food shortages. Like elsewhere in rural Ethiopia, traditional coping strategies such as the sale of firewood and charcoal, petty commodity trade, local labour, migratory labour, belt tightening, wild food consumption, selling of productive livestock and taking loans are common in East Hararghe. Since the lean period would not start until March for vulnerable areas, none of these strategies (except for the almost perennial firewood business of the poorest income groups) had been observed on a large scale. HCS, added as a general comment that land fragmentation as a result of growing population pressure is, particularly in the highlands, reducing productivity and noted that the practice of consuming wild foods such as a cabbage-like weed which is locally called "*hadessa*" is common in stress periods.

A representative from the DPPB, himself being a native of rural East Hararghe, pointed out an interesting additional coping mechanism which seems to be rather unique to Hararghe. Noting that because of over-population trading and labour opportunities were limited, some low income population groups with insufficient labour and market access traditionally buy at least one calf a year for fattening. During the year the animal is well fed and taken care of. As the informant says: "The peasant himself would rather sit in the scorching heat of the sun and offer the shadow of a small tree to his fattening ox. He pampers the animal like his own children." Finally, when the animal has become, so to say, a living "family security reserve", and is fully mature and in splendid condition, it is finally sold - at a price of around 1,000 Birr. With one part of the cash, the farmer can buy needed household items, while a certain amount is reserved to buy another calf to fatten. Perhaps due to this practice Hararghe beef has become famous and very much sought after.

Fedis farmers speak out

Just at the outskirts of Harar town, on the Harar – Dire Dawa highway, a rain-damaged track turns-off towards Fedis wereda. The mission drove down this road to meet some farmers and obtain an impression of the situation in an area identified by authorities as having major relief needs. Due to time constraints, aggravated by poor road conditions, the mission did not travel very far, not reaching the *Kolla* proper. During the course of this trip, the official information obtained earlier in Harar was, by and large, confirmed. One sorghum farmer, head of a family of five, said that he only harvested 4 quintals of sorghum, which would not be sufficient to feed his family until the next *meher* season (no *belg* in this area situated between *Weyna Dega* and *Kolla*). "Already now", the man said, "all family members are busy collecting and selling firewood. But what shall we do after running out of grain? Then we can only hope to get relief support. The little money we make from selling wood cannot support us." The location, where the discussion took place (Debeni) is at about 13 kilometers from the main road and the nearest place to sell firewood.

Another man spoken to had also harvested only 4 quintals of sorghum while the same field had produced 8 quintals one year ago. Besides the unfavourable rain conditions he named "*haramasap*" – *striga* – as the major factor for the loss of production on his field. Also this man is involved in the firewood trade and will later on, when food stocks come to an end despite all belt tightening, start to borrow money.

At yet another location called Merkule, some 20 kilometers away from the main road, the distance to the nearest major market is too far to trade firewood and hardly anybody bothers to try the wood business. The mission spoke here to a local merchant who runs a (sorghum) flour mill and also trades *chat*. "Doing very well, both in quantity and quality, is *chat* this year", he said. "But the other major

crop here, the sorghum, is doing badly. I guess we have at least 30 per cent less production than last year. After three to five months, many people around here will need help.” Asked for the reason for such a significant yield reduction this young merchant, far off the beaten track, whispered mysteriously: “Don’t you know – it is all because of El Niño!”

Conclusion

A formal post-harvest assessment covering Hararghe, conducted as a multi-agency mission to be led by the central DPPC, is scheduled to take place in late February. Moreover, zonal and regional authorities are about to finalise their findings and CARE is conducting its own assessment in both zones. Final facts and figures on the *meher* production, including the full impact of the untimely rains, are expected to be available after the completion of these missions. Whatever the exact outcome, it seems clear that significant yield losses in both zones have resulted in increased relief needs.

Beyond that, more information is needed on the composition of Hararghe’s overall economy and on interactions between the population groups which are dependent on livestock, food crops, cash crops and labour respectively. Once the parameters of a mixed economy – which appears to be rather complex in Hararghe – are better known, strategies adopted by people to cope with the deficiencies of one economic sector by pursuing alternative income generating activities become easier to monitor. To know to what extent people are able to cope and where such strategies start to become insufficient would definitely help to target those people most in need of relief support and to establish their numbers more accurately. High food crop losses do not always automatically equate to high beneficiary numbers. This statement, however, is not meant to deny the rising relief needs in Hararghe this year. The intention is rather to help initiate consideration of ways to “fine tune” the magnitude of the problem.

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