

## North Welo - Food Security Situation: Effects of consecutive crop losses on farm households in Selected Areas

*Rapid Assessment Mission: March 15-20 1999*

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### Background and introduction

To understand the current situation in Welo it is important to know how households in the area make a living and what coping mechanisms they use to survive. How do households react in critical situations such as consecutive bad harvests and crop failures? A comprehensive study on household food economy in North Welo has been carried out by Save The Children Fund - United Kingdom (SCF/UK), an international NGO operating in the area with years of experience (see SCF/UK, 1998d).

A characteristic of vulnerability to food insecurity in the North Welo highlands is peoples' heavy dependence on other areas. The majority of households from all wealth categories (for definition see section below) purchase a large amount of their annual food requirements, i.e. 40-60%, from stocks originating from other areas of the region and the country (SCF/UK, 1998d). Therefore, it is important to know about farmers' coping mechanisms and their income sources.

A major source of income for farmers in North Welo is the sale of their labour outside the highlands. Labour opportunities are usually found in nearby lowland areas such as Raya Akobo Wereda in the east, and further away towards Gonder and Gojam in the west and also in the Humera area in western Tigray on state farms producing cotton, sesame and sorghum. One to two male family members seasonally migrate for two to three and more months to these areas to earn cash. There exists a complementary relationship between the lowland areas and the highlands of North Welo; poor production in the highlands mostly coincides with good production in the lowland areas. A reason for this phenomenon is that excess rains in the highlands harm crops whereas in the generally dryer lowlands, excess rain has a rather positive impact on crop production (see Table 3 and compare the 1994 '*meher*' crop production for lowland Kobo and highland Gidan Weredas). The money earned from seasonal labour in the lowlands is mainly used to buy food and seeds. North Welo, especially the visited weredas of Gidan and Bugna, are food deficit areas and therefore have a history of chronic food insecurity. Livestock is exported as is barley, the only potentially surplus crop produced in the highlands. Food, especially grain, has to be imported from elsewhere. Most goods can only be moved by animals, i.e. donkeys and mules and in small amounts at one time due to lack of a developed road network. On the other hand, this traditional mode of transport provides work and income for many part-time small scale traders and provides additional income for about 25% of the families in North Welo (SCF/UK, 1998d).

The agricultural production in the highlands of North Welo, the so-called '*dega*' areas<sup>1</sup>, depends heavily on the short '*belg*' rains and harvest. Crop production is low due to the smallness of land holdings (on average 0.5 – 1 ha) and poor soils. Soils in the highlands are poor by nature and

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<sup>1</sup> Expression for one of the altitudinal agroecological belts in Ethiopia. In Wollo between 2500 to > 3000 msl.

have been even further degraded by lack of crop rotation and soil erosion due to unsuitable land use practices.

### **Methodology**

The United Nations Emergencies Unit for Ethiopia (UN-EUE), together with the World Food Programme (WFP), undertook a rapid assessment mission to North Welo to observe and discuss with concerned authorities at various levels and affected farm households the current food security situation. A previous visit to the area undertaken by WFP<sup>2</sup> (WFP, 1999) gave indications that the two neighbouring weredas of Bugna and Gidan are actually facing more serious problems than other weredas in North Welo. Therefore, the mission decided to cover these two weredas in particular. Nevertheless, informal interviews were also conducted and observations were made in other weredas, such as Guba-Lafto, Kobo and Delanta-Dawint.

This report includes not only results from the actual field mission, but tries to compare the present situation with previous years, referring to similar field missions, as well as including secondary data available from various sources.

### **Defined wealth groups in North Welo**

The international British NGO 'Save The Children Fund' made an attempt to categorise the population into different wealth groups and determine the most important indicators which differentiate the wealth groups. The study found that wealth is generally defined by the number and type of animals owned by a household, particularly the ownership of plough oxen (SCF/UK, 1998d). The study discovered that with increasing number of oxen per household, numbers of other livestock increase as well. Livestock is an important means of getting food. Plough oxen can be rented out to farmers who do not own oxen for field preparation. In return, the farmer who used the oxen for ploughing gives part of his future harvest to the oxen owner as a means of payment. Other animals are used as security assets. If needed, they are sold and food can for example be bought. Pack animal owners are also classified among the 'better-off'. They may rent part of their pack animal 'fleet' to part-time small-scale traders for grain and other food transport. Traders who are using the animals pay the owner a rent.

SCF/UK estimates the population distribution between the 'rich', i.e. the 'better-off' strata of the population, the 'middle' and the 'poor' as follows: 20 to 25% 'rich', 30 to 35% 'middle' and 45% 'poor' (SCF/UK, 1998d), whereas the 'poor' do not own oxen and own hardly any pack animals. The following range and variety of livestock is held by the different wealth categories defined by SCF/UK:

**Table 1: Type and number of livestock by wealth groups in North Welo**

Type of livestock	'Poor'	'Middle'	'Rich'
Oxen	None	1	2 and more
Pack animals	None to 1	1 to 2	3 and more
Sheep and/or goats	None to 10	10 to 20	More than 20

(Source: SCF/UK, 1998d)

The study defined a number of other wealth indicators, such as 'household size', 'food sources', 'market purchases', 'livestock production', 'exchange of labour for food', 'gift and relief', 'income sources', 'cereals and cash crops', 'off-farm labour', 'small scale trade', which are stratified into

<sup>2</sup> The visit by two WFP food monitors was undertaken between 3 and 8 March 1999.

the three wealth category groups. However, for this report the stratification by type of livestock will be sufficient to explain some of the phenomenon and developments observed.

### Unfavourable agroecological and climatic conditions

The topography of the North Welo wereda of Gidan, with its many escarpments and generally steep hill slopes, is vulnerable under conditions of continuous and intensified land-use practices with every hill slope, even the steepest, being used for cultivation. Trees are virtually non-existent in this bare-looking landscape. The whole area is deforested. Deep erosion gullies and the gravel, stone and rock covered valley bottoms are witnesses of high land degradation. From observation, it can be concluded that these slopes and escarpment areas are being used too intensively and in a highly unsustainable way. From an agronomic point of view, these areas are unsuitable for intensive agriculture. Gidan and Bugna Weredas have an estimated population density of approximately 120 inhabitants/km<sup>2</sup> and 66 inhabitants/km<sup>2</sup> respectively<sup>3</sup>. Population pressure is unlikely to ease in the near future. Hence, the ecology of those highland areas being fragile, the population will further suffer with rainfall remaining intermittent and erratic.

### Consecutive crop failure for the last four years, including *belg* 1999

Agricultural experts and old farmers having lived in the area for a long time, remember and indicate that the pre-conditions and symptoms in North Welo are now very similar to the ones experienced shortly before and during the famine in 1984. Especially in the two weredas of Gidan and Bugna visited by the mission there has been consecutive *belg* crop failure due to intermittent and erratic rainfall patterns for at least the last three years. The *belg* rains of the last three years have produced very few crops. Towards the end of the season, the 1998 *kiremt* rains in many highland places were extraordinarily heavy combined with hail storms and frost. Therefore, crop production was low. In addition, there has been heavy water logging in the *weyna dega* (lower highland: 1500 – 2500 msl) areas of Bugna Wereda, which caused substantial crop losses. This year, the *belg* rains, which are expected from mid-January onwards, failed to appear. Farmers in all the areas visited gave up hope for an eventual 1999-*belg* harvest. 'Even if there would be rain today, it would be too late. The season is once more over with no crop expected!'

Table 2 below shows data obtained by the Zonal Bureau of Agriculture in Woldiya from the pre- and post-harvest *meher* season assessment for 1998.

**Table 2: *Meher* 1998 crop production and estimated losses**

Wereda name	Planted area (ha)	Pre-harvest production projection (MT)	Production achieved (MT)	Difference between pre-harvest projection and achieved production		1998 yield kg/ha
				(MT)	%	
<b>Gidan</b>	<b>10,669</b>	<b>748.4</b>	<b>313.3</b>	<b>435.1</b>	<b>58</b>	<b>290</b>
<b>Bugna</b>	<b>19,564</b>	<b>1,139.6</b>	<b>728.5</b>	<b>411.2</b>	<b>36</b>	<b>370</b>
Guba-Lafto	17,666	1,759.7	1,064.8	694.9	39.5	600
Kobo	50,602	5,811.2	4,229.9	1,581.4	27	840
Delanta-Dawint	20,518	1,701.2	1,055.8	6,453.9	38	520
Meket	49,037	4,147.0	3,576.9	5,700.7	14	730
Habru	23,116	2,553.1	2,081.9	4,711.2	18.5	900
Wadla	19,276	2,191.4	1,931.7	2,596.0	12	1,000

<sup>3</sup> Data calculated through 1994 Population Census by the Central Statistical Authority and WFP projections through the VAM unit.

<b>Total</b>	<b>210,448</b>	<b>20,048.5</b>	<b>14,979.3</b>	<b>5068.7</b>	<b>25.3</b>	<b>710</b>
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(Source: Bureau of Agriculture, Woldiya)

Table 2 shows the lowest agricultural production as well as lowest yield per hectare for Gidan and Bugna Wereda in North Welo Zone for the *meher* production 1998. Late heavy rains combined with hail storms and frost have even further affected last season's *meher* production. Crop losses are considerable with 58% from the expected production in Gidan Wereda and 36% in Bugna Wereda. Similar losses were registered in Guba-Lafto (39.5%) and Delanta-Dawint Wereda (38%).

For Gidan and Bugna Weredas, none of the *meher* seasons between 1994 and 1998 were as bad as the latest 1998 season in terms of production and yield achieved with the average 1998 yield for both weredas considerably below the four-year average from 1994 to 1997 (see Table 3 below).

**Table 3: Meher production and area planted 1994 to 1997**

Wereda name	1994 Prod. (MT)	1995 Prod. (MT)	1996 Prod. (MT)	1997 Prod. (MT)	Avg 94-97 Area (ha)	Avg 94-97 Prod. (MT)	Avg 94-97 yield kg/ha
<b>Gidan</b>	<b>866.8</b>	<b>627.1</b>	<b>2,101.8</b>	<b>678.9</b>	<b>24,239</b>	<b>1,068.6</b>	<b>440</b>
<b>Bugna</b>	<b>799.1</b>	<b>818.6</b>	<b>1,874.2</b>	<b>986.1</b>	<b>19,932</b>	<b>1,119.5</b>	<b>560</b>
Guba-Lafto	1,345.4	1,463.1	2,821.0	1,136.5	26,448	1,691.5	640
Kobo	4,000.7	2,005.7	2,874.6	7,147.9	35,730	2,399.0	670
Delanta-D.	651.9	699.1	1,841.2	1,255.8	25,136	1,112.0	440
Meket	2252.0	4,180.3	4,101.6	1,728.9	70,077	3,065.7	440
Habru	1,692.6	2,261.6	2,123.1	1,373.3	22,157	1,862.7	840
Wadla	650.6	774.3	1,562.0	1,371.5	28,971	1,089.6	380
<b>Total</b>	<b>12,259.1</b>	<b>12,829.8</b>	<b>22,899.5</b>	<b>15,678.9</b>	<b>252,690</b>	<b>13,408.6</b>	<b>530</b>

(Source: European Union, Local Food Security Unit (LFSU), data compiled from various sources)

Table 4 below for *belg* production in North Welo Zone shows that intermittent and erratic rainfall patterns produce also erratic agricultural production. Nevertheless, a downward trend in the *belg* production can be observed for Gidan, Bugna and Guba-Lafto Weredas. Agricultural production in the other weredas does not show any trend with the exception of lowland Habru Wereda with a dramatic upward trend. Anyway, when trying to talk about trends in agricultural production, the reader has to be aware of the generally 'low-confidence-level' of available data, which in this case is only available for the last three years. No data has been compiled for 1994 and 1995.

**Table 4: Belg production and area planted 1994 to 1997**

Wereda name	1994, 1995	1996 Planted area (ha)	1996 Prod. (MT)	1996 yield kg/ha	1997 Planted area (ha)	1997 Prod. (MT)	1997 yield kg/ha	1998 Planted area (ha)	1998 Prod. (MT)	1998 yield kg/ha	Prod. Trend 96-98
<b>Gidan</b>	*	<b>9466</b>	<b>588.7</b>	<b>621</b>	<b>8104</b>	<b>302.9</b>	<b>374</b>	<b>9545</b>	<b>211.6</b>	<b>220</b>	↓
<b>Bugna</b>	*	<b>3771</b>	<b>241.1</b>	<b>639</b>	<b>1200</b>	<b>61.0</b>	<b>508</b>	<b>2894</b>	<b>506.9</b>	<b>180</b>	↓
Guba-Lafto	*	9801	913.1	931	8794	617.4	702	13043	478.5	370	↓
Kobo	*	5996	393.2	655	3269	128.4	392	7588	474.1	620	↓↑
Delanta-Dawint	*	11837	905.1	764	9039	137.9	152	10442	1802.7	1730	↓↑
Meket	*	2566	196.0	763	4710	416.3	884	2159	190.1	880	→
Habru	*	3279	172.8	526	3174	384.5	1211	3565	1267.4	3560	↑
Wadla	*	9986	519.1	519	9997	438.4	439	9997	1507.8	1510	↓↑
<b>Total</b>	*	<b>56702</b>	<b>3929.1</b>		<b>48287</b>	<b>2486.8</b>		<b>59233</b>	<b>6439.1</b>		

(Source: European Union, Local Food Security Unit (LFSU), data compiled from various sources)

\* No data compiled and available for 1994 and 1995

There are indications that the cumulative effect of crop failures reduced the amount of available seed in the area and that farmers in Bugna and Gidan, but also in other areas of North Welo, are not able to cultivate all their land, due to lack of seed (SCF/UK, 1998b).

### **Coping and emergency mechanisms to compensate crop production shortages**

Farmers in the North and South Welo highlands have developed a range of traditional coping mechanisms to overcome prevailing chronic crop production shortages. In addition, the government and international organisations have set-up emergency mechanisms which consist of assigning farmers to food- and cash-for-work projects and distributing relief food to entitled individuals. Hereunder some of the coping mechanisms and the two emergency mechanisms are briefly described. The last paragraph describes the current situation and gives some indication why various coping mechanisms now fail to compensate crop production shortages.

#### *Livestock sales*

Surplus livestock is sold to buy additional food, which cannot be produced on-farm. Livestock is also kept for social security reasons. If a family member falls ill, the selling of an animal may cover the expense for drugs and treatment. Livestock sales and products accounts for 40 to 60% of total annual income earned by the 'rich' and 'middle' segment of the population (SCF/UK, 1998d), but is significantly less important for the 'poor' with only few livestock.

#### *Daily labour*

Shepherding for the 'rich' is a quite common occupation for a member of a 'poor' family. Sometimes the 'poor' also find temporary work such as weeding and harvesting for the 'rich' or by doing menial household chores such as fetching water and washing clothes.

#### *Migratory labour*

Usually at least one family member migrates to other areas to look for waged labour and food. In poor years, more family members migrate and for a longer period of time. SCF/UK estimates that approximately 10% of a family's yearly food requirements can be covered this way (SCF/UK, 1998d). In the lowlands of Raya-Akobo Wereda, 'Highlanders' from Gidan and Bugna Weredas seem to be highly appreciated for ploughing. The 'rich' lowland farmers, who pay them 2 to 3 Birr per day for ploughing, see them as ploughing experts.

#### *Petty trade*

Petty trade is a source of income, which adds to the coping mechanism variety for at least 25% of the population in North Welo, mostly for people from the 'better-off' and 'rich' wealth categories. Poor households neither have the capital to start a small trading business nor the pack animals needed. Most trade is in grain and with pack animals as means of transport.

#### *Firewood/charcoal sales*

Only a very limited number of people especially in the Bugna Wereda area can use firewood cutting and charcoal burning as a source of income. It is only practised in the *weyna dega* areas. In the *dega* and 'high *dega*' highlands of both Gidan and Bugna Weredas, not enough trees are produced to make it a source of income for farmers.

#### *Tella and Araki brewing*

Especially women brew *Tella* and *Araki*, local alcoholic drinks sold to farmers in local bars. Women can make a profit out of the brewing throughout almost all the year.

#### *Selling of straw*

Generally 'poor' farmers do not own livestock and therefore are willing to sell the straw remaining from their crops to farmers who have animals to feed. The selling of straw is a rather minor source of income.

#### *Food and cash for work projects*

A significant number of people are engaged in food and/or cash for work projects at one time or another during the year. People are listed and called by the local administration to work usually for a period of two to three weeks, twice to three times a year. The payment is either 3kg of grain or 5 Birr per person per day. The World Food Programme (WFP), the Netherlands Development Organisation (SNV), Plan International (International NGO), DPPC's Employment Generation Scheme (EGS) and the Organisation for Relief and Development in Amhara Region (ORDA) are offering a variety of food- and cash-for-work activities such as road construction and maintenance, small water dam construction and terracing of hill sides. Most of the farmers and households the mission met in Bugna have one family member working in a food or cash for work activity. Food and cash for work activities were normally regarded as supplementary activities to acquire additional food. With general food shortages they are becoming increasingly important for people's livelihood.

#### *Relief food*

For quite a number of farmers in Welo, especially in the highland areas, relief food has become an important additional source of food, contributing somewhere between 10 and 20% of the households' annual food requirements, even in the so-called 'normal' years. Those who are entitled to relief food are usually classified in the lowest strata of the population, such as families without oxen and other animals, destitute persons, handicapped, widows and old people. For Gidan and Bugna Weredas approximately half of the total population is entitled to relief assistance. Unfortunately, relief assistance over the past years did not prove its reliability because not all entitled persons were able to benefit. From those who benefited, not all received the amount of food required. To rely on relief food for survival seems to be a risky option, even for those who are entitled.

#### *Traditional coping mechanisms fail to compensate consecutive crop losses*

A crisis is likely to develop in the North Welo highlands because the traditional mechanisms used by farmers to face and cope with consecutive crop losses may now have come to an end. Many people have sold most of their animals and household belongings, and have cut down the remaining trees left on their farm for cash or in exchange for food. Many families sent more members than usual to look for migratory work. Daily work is hardly available anymore neither in Bugna nor in Gidan. Many are trying to leave and the ones still remaining are mostly those who used to belong to the 'rich' strata of the population. But by now the former 'rich' have also become 'poor' because they, like their poorer neighbours one or two years ago, were forced to sell their wealth assets such as oxen, donkeys and other animals in order to buy food. Most farmers and people the mission talked to informally used to be relatively wealthy with two and more hectare land holdings, oxen, cattle and a number of sheep and goats. Many of those interviewed are in addition also involved in trading. But most told the mission that they sold or lost most of their animals during the last two years. *Tella* and *Araki* brewing activities ceased in Bugna Wereda because farmers, the main consumers, don't have any money left for this pleasure. Coping mechanisms that are still effective and working are the two 'emergency' coping mechanisms, i.e. food- and cash-for-work activities and relief food distributions that were put in place by the government and international organisations.

The progressive impoverishment of farmers in parts of North Welo Zone began many years ago. This process definitely led to increased numbers of very poor and destitute families in these highland areas, which again will lead to a number of other problems related to continuous and growing impoverishment. Similar and even identical concerns were repeatedly reported in

various previous UN-EUE mission reports and in other reports published in 1997 and 1998 (see Ahrens, 1997a, 1997b, 1998; Klingele, 1997a, 1997b, 1998; SCF/UK, 1998a, 1998b).

### Food shortage indicators

Various food shortage indicators can be defined. Below a selection of indicators which apply to the situation in the highlands of North Welo is presented and described.

#### *'Poor' nutritional status of the population*

According to SCF/UK's periodic nutritional surveys, the nutritional status in Bugna Wereda has remained 'poor' since the disappointing 1997 *belg* rains. And in Gidan, since 1996 the nutritional status has shown a downward trend. The nutritional status, i.e. mean weight for lengths level has been below 90 % over the last few years, which should raise serious concern (SCF/UK, 1998a, 1998b). In addition, DPPC, on a mission to North Welo in March 1999, did a nutritional survey on children in Bugna, Gidan and Guba-Lafto Weredas. Results for mean weight for lengths are in all the three Weredas below 90%, i.e. 88% for Bugna, 88.2% for Gidan and 86.5% for Guba-Lafto respectively.

#### *Deteriorating terms of trade*

Terms of trade in North Welo Zone are defined by the amount of grain that can be bought by selling livestock. Livestock prices have decreased gradually and have been low for more than one year. Grain prices on the other hand increased and have remained high since 1997. In Table 5 (next page) actual market prices for most common crop and livestock are listed and compared with pre-1997 prices.

Livestock prices are low due to livestock's physical condition, which was already qualified as 'poor' to 'very poor' (SCF/UK, 1998a) one year ago. In addition, more people offer livestock on the market, needing cash to buy food. On the other hand, local demand for livestock ceased. Nobody can afford to buy livestock anymore. Consecutive crop losses and failure considerably reduced local supply and made the population even more dependent on crop purchases from outside the area.

**Table 5: Current average market prices in central markets of Lalibela (Bugna) and Muja (Gidan) town**

Traded goods	March 1999 prices	Pre-1997 prices	Trend
<b>Crops</b>			
Barley	5 Birr/3kg*	1-3 Birr/3kg	↑
Wheat	6 Birr/3kg	3 Birr/3kg	↑
Teff	6 Birr/3kg	4 Birr/3kg	↑
Peas	6 Birr/3kg	2.5 Birr/3kg	↑
Beans	6 Birr/3kg	2 Birr/3kg	↑
Lentils	9 Birr/3kg	1 Birr/3kg	↑
<b>Livestock</b>			
Oxen and cows	200-300 Birr/piece	800-1000 Birr/piece	↓

Sheep	20-40 Birr/piece	80-100 Birr/piece	↓
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\* Birr/3kg is the standard measurement unit, called 'Guchiye', used on markets in the area.

Local markets, which are geographically nearer or in the vicinity of lowland Raya-Akobo Wereda, east of Gidan, offer slightly lower crop prices. Therefore, local traders of Gidan Wereda buy grain on these local markets, e.g. Wotchat, and sell it in Muja central market. One *Guchiye* (3kg) of maize goes in Wotchat for 7 Birr. In Muja it can be traded for 8 to 10 Birr.

#### *Selling-off permanent household assets*

Draft oxen are considered permanent household assets. No farmer sells his draft oxen unless there is an emergency in the household or other grave circumstances force him to do so. Farmers usually rent their oxen to other farmers who do not possess such animals for ploughing and other fieldwork. Many farmers to whom the mission spoke were forced by the desperate agricultural circumstances of the last three years even to sell their oxen. Other livestock had already been sold off in 1997 and 1998. Some farmers also explained that recently they had to slaughter animals because they could not get an acceptable price on the market and the family was hungry.

#### *Increasing temporary and permanent out-migration*

Temporary and seasonal migration for off-farm income opportunities to other areas and regions has become even more important than it used to be before 1997. More family members migrate to work for a longer period of time. Many teenagers, young and middle aged men have left to look for work in other parts of the region and even to other regions in Ethiopia. Even though seasonal migration is one of the traditional coping mechanisms, interviewed persons confirmed that since end of last year and certainly in the beginning of 1999 many more people of the active labour population migrated for work outside the zone than usual. The months of October and November are the *meher* harvesting months. Therefore, it seems an unusual time to migrate and look for off-farm income elsewhere. Farmers would normally harvest their crops instead of leaving their farms. Fortunately, good harvests in most other areas of Amhara and also in other regions provided ample work opportunities. The overall harvest and food prospects for Amhara region are qualified as 'much better as what has been witnessed in the past five years' (DPPC, 1998, p.19). Also in other regions such as on state farms in Western Tigray, many people found work during the *meher* harvesting season.

The mission spoke to two farmers in Bugna Wereda who found work in the Humera area in Western Tigray on the state farms for the sorghum *meher* harvest. Both farmers worked for three months from November 1998 to January 1999 and returned in early February. Part of their earned money was used for transport. With the remaining they bought food for their families. In the nine farm households the mission spoke to, only women and young children were present. Beside women of all ages and children, old people and disabled persons have been observed.

Permanent out-migration does take place, but is difficult to verify. Furthermore, migration issues can be sensitive. Nevertheless, in both weredas, a number of kebeles have reported 'closed doors', which means the whole household has left. Kebele reports of 'closed doors' are being verified by the wereda administration 'Early Warning Committee' and reported to the zonal administration in Woldiya.

The Early Warning Committee for Gidan Wereda stated that, compared to previous years, both temporary migration of single family members and permanent migration of entire households



increased significantly since September 1998. Even though no data is available on the issue, there are strong signs to believe this is so.

For food- and cash-for-work activities the wereda administration selects people from a list of entitled persons. These days in both visited weredas many enlisted persons entitled to work in these projects, do not show up. The administration believes that these households have left their kebele. In Alumi Yosef Kebele of Bugna Wereda, the wereda administration counted 52 'closed door' houses, i.e. 52 (~10%) of the approximately 600 families living in the kebele have left. From Wotchat Kebele of Gidan Wereda, 58 families have left. From Shibena Kebele of Gidan Wereda, 53 households left since September 1998. Similar numbers of 'closed doors' are found in other highland kebeles of both weredas. There are grounds for the assumption that 10-15% of the households in the highland kebeles of both weredas have left either on a temporary base or for good.

#### *Decreasing general health situation*

High morbidity and mortality rates are indicators of weak general health conditions, as well as the number of malnourished children under five. Reliable data is not available for these indicators. Data compiled in local health clinics do not reflect the reality in the kebeles. First of all, only 'better-off' and 'rich' people can afford to consult health centres. Secondly, many people of the remote highland areas have to walk one or even more days to reach one of the health centres. Therefore, only very few people needing medical treatment are actually treated in such health centres. To get a picture of the general health situation, the mission had to rely on qualitative information gathered in the field when talking to farmers and government officials.

Rather unexpectedly, malaria seems to be the most frequent cause of death in the highlands. The reason apparently is that many more of the 'highlanders' migrate to lower areas in search of work and food. In the highlands there is no malaria, hence, farmers from the highlands are more vulnerable to malaria infection. Even before, 'highlanders' who used to seasonally migrate to the lowland areas, died more often of malaria than others. In the present situation, where a high number of people were pushed into migration due to lack of food, increasing number of 'highland' people catch malaria. Due to continuous food shortages, people became physically weak. Once a person gets sick, the body is too weak to recover and within a short time the person dies. Indirectly, the cause of death may be malnutrition and famine, but people usually die from other diseases such as malaria, aggravated by the weakness of their body.

A comparison of death rates, obtained by some kebele administrations of the two weredas surveyed, indicate only a slight increase in death cases for most kebeles. But Bilballa Kebele in Bugna Wereda shows a dramatic increase in death caused by malaria, i.e. 393 cases, compared to the same period of time in 1998, when 125 died. General food shortages, consecutive crop losses and crop failures forced farmers to seek employment in the malaria infested lowlands. These circumstances are believed to be the root cause of the increased number of deaths.

#### *Changing eating habits*

Food shortages lead to decreasing cooking and eating frequencies, to the alternative collection and consumption of wild growing plants and in some areas in Welo to the cultivation of Grass Pea (also called Chickling Pea or Vetch – *Lathyrus sativus*), known in Amharic as *Guaya*.

Grass Pea, a drought resistant, high yielding nitrogen rich crop with high-quality protein and carbohydrate, is known as a survival food in chronic food shortage areas and as animal feed. Consumed excessively, Grass Pea causes irreversible crippling effects, a disease known as *lathyrism* (Tekle-Haimanot, 1994). The consumption of Grass Pea in North and South Welo and

the continuous increase of cases of human lathyrism, especially in the highlands above 2500 msl, has repeatedly been reported (see Ahrens, 1997a, 1998; Klingele, 1998; Getahun and Haimanot, 1998). This attractive survival crop is increasingly consumed in drought prone areas. The disease occurring after excessive consumption affects particularly the poorest and most active population segment. With continuous crop failures, a new lathyrism epidemic may be under way in the highlands of North Welo. The mission observed quite a number of Grass Pea planted plots in Gidan and Bugna Wereda. Even though the wereda administration and the agricultural office assured the mission that the cultivated Grass Pea will only be used for animal fodder, informally interviewed farmers near these observed fields confirmed the consumption of Grass Pea by themselves.

There are a number of other wild plants, which are consumed by farmers. Farmers in Wotchat Kebele, Gidan Wereda, presented two types of wild plants known under the Amharic name of *Getin* and *Sama*. *Getin* is a nettle plant and *Sama* has thick drought resistant leaves. Both plants have to be cooked and are consumed as a sort of vegetable. Other wild plants such as *Wushesh*, *Wofe* and *Gilmana* were mentioned. But the mission could not get hold of samples from those species. Anyway, farmers said that by the time of the mission in mid-March, even the wild plants were difficult to find.

Cooking and eating frequencies have changed. People are eating less food, less frequently and are also cooking less. With the reduction taking place gradually over a long period of time, people adapted their eating and cooking habits to chronic food shortage. To what extent these habits changed in more recent months could not be evaluated during this short assessment mission.

#### *Increasing number of beggars in wereda administrative centres*

During the mission's visit, Muja and Lalibela towns were crowded with people from other wereda kebeles. Many were waiting for food to be distributed for food-for-work activities. Others were awaiting relief food and many more were just roaming around town begging for food and money. The Head of the Agricultural Office of Gidan Wereda told the mission that never before had so many people begging and selling their household assets been observed in Muja town. This phenomenon started from August 1998 onwards. Some people went as far as Addis Ababa looking for better livelihood opportunities. In February 1999, 300 of these people were brought back from Addis Ababa to Gidan.

#### *Increased relief food requirements*

In one of the Bugna Wereda administration offices a column chart shows number of family heads that received food assistance since 1993. The number of assisted families consistently rose from 15,000 in 1993 to over 60,000 in 1998. But according to Bugna administration officials there always is a discrepancy between number of assisted households and number of households needing assistance. The progressing impoverishment of the population in Gidan and Bugna Weredas may be partly a result of insufficient assistance in the past years. In other words: basic relief food requirements were not met.

### **People needing assistance: food requirements**

There is need for significant food assistance in both weredas. While discussing the food security situation with Agricultural Bureau officials in Lalibela, the seriousness of the situation in the area became clear. The following example was cited: 'The food security situation in Tadios Amba Kebele looks relatively better than in other kebeles because the NGO 'PLAN International' is active with a number of food-for-work projects which help people to survive. Other kebeles do

not benefit from as many food-for-work activities. Hence, people in other kebeles suffer more from food shortages.' In other words: the situation for most people looks like there are no other survival alternatives left than food-for-work activities. Agricultural activities have ceased, terms of trade have deteriorated to the point where most people are unable to buy food on the market and most traditional coping mechanisms now fail to work.

Food distributions are taking place in both weredas. By the time of the mission, people were waiting in Muja and Lalibela for food to be distributed. In Muja food was distributed for EGS food-for-work activities people carried out in January 1999. The food was distributed to 1,500 people, but originally 8,000 should have benefited. In January, another food distribution took place in Gidan Wereda. The distributed food was for EGS food-for-work activities and for relief. In all, 55,000 people benefited. But according to the Wereda Early Warning Committee, the number of people entitled for relief and food-for-work food is significantly higher than the 55,000 assisted. Rations for those who received food are 12.5 kg per household of four. Households with more than four members are entitled to 25 kg. The ration is supposed to last for one month. Those rations are also applied in Bugna Wereda. Persons entitled to food assistance stated that 12.5 kg is distributed, regardless of the family size. In Bugna food is apparently only distributed in Lalibela town. People from all kebeles entitled to receive food have to come to Lalibela town. From the five highland kebeles, which are inaccessible by road, people have to walk more than one day to reach Lalibela. Only the fittest are able to walk such distances. Sick, undernourished and old people are not able to come for the distribution. Hence, they have to send somebody else to fetch the relief food for them. If not, they are not getting anything.

On food quantities distributed, the mission collected the following information: the Netherlands NGO 'SNV' provided 60 tons for Gidan, Bugna and Meket Wereda, which is currently being distributed. SNV provided and distributed already approximately 154 tons in 1998. DPPD Woldiya distributed 100 tons of cereals in Gidan Wereda since December 1998. No information has been obtained about distributions in Bugna Wereda.

Unfortunately, the mission has not been able to draw a general picture on food distributions in Bugna and Gidan Wereda. Information gathered concerning distribution sites and dates, quantity and type of food, and number of beneficiaries who received food is limited to particular anecdotal descriptions from a variety of official and non-official informants.

Table 6 below shows official numbers of relief food beneficiaries for 1999 in North Welo Zone collected from the DPPD office in Woldiya.

**Table 6: Official relief food beneficiary numbers for North Welo Zone**

Wereda name	Beneficiary numbers based on pre-harvest assessment	Beneficiary numbers based on post-harvest assessment	Total beneficiary numbers
Gidan	75,545	*	75,545
Bugna	74,904	*	81,880 <sup>4</sup>
Guba-Lafto	17,175	20,357	37,532
Kobo	22,639	3,000	25,639
Delanta-Dawint	32,713	13,143	45,856
Meket	-	24,161	24,161
Habru	25,897	3,000	28,897
Wadla	-	10,552	10,552

<sup>4</sup> Total beneficiary number being higher than the number based on pre-harvest assessment, indicates that DPPD must have done an adjustment according to harvest losses.

<b>Total</b>				<b>330,062</b>
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\* No figures available<sup>5</sup>

(Source: DPPD Woldiya)

As of December 1998, and there has been no change in the current DPPC appeal (DPPC, 1999), the estimated total number of relief food beneficiaries for North Welo is 330,062. This number excludes people receiving food through regular food-for-work activities and other projects. The relief food beneficiary numbers in Table 6 also do not reflect the obvious food gap caused through consecutive crop losses and in parts of North Welo, total crop failure endured by parts of the population during the past three to four years.

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<sup>5</sup> In the two worst affected weredas, no figures based on the post-harvest assessment are available. It is unclear whether no post-harvest assessment was carried out or whether data has not yet been compiled.

## **Conclusions: Effective additional development incentives and adequate relief assistance necessary to reduce vulnerability to food insecurity**

### *Immediate action to address critical food situation*

Considering the actual livelihood situation of the population remaining in Bugna and Gidan Weredas where traditional coping mechanisms have failed to compensate for consecutive crop losses and where food shortage indicators point towards a looming humanitarian crisis, emergency mechanisms such as food- and cash-for-work and relief food distributions are considered as the most effective immediate solutions to ease current food shortages. But can these emergency mechanisms be implemented timely and effectively, knowing that they were unable to provide sufficient support in the past years when food shortages were less severe than in the present situation? A statement in a former UN-EUE report on South Welo (Klinge, 1998) is also very pertinent to the current situation in North Welo. Therein it was stated that a sophisticated early warning system, combined with accurate harvest assessments, does not make much sense as long as adequate responses are not made available. There are definitely improvements to be made concerning priority settings, management and implementation of the various food- and cash-for-work programmes. For one thing distribution sites may be diversified. Currently in Bugna and Gidan Weredas there are no distribution sites other than the wereda capitals. Improvements to the local road network should have been one of the first local development priorities which could have been addressed through food-for-work projects. But road investment programmes have other priorities. Hence, resources were not used to contribute to the set up of local low-cost labour-intensive road maintenance services and the like through food-for-work initiatives. And hence, most of the highland kebeles in both weredas are still not reachable by road.

Nevertheless, the very critical food needs of North Welo must be addressed now. In view of the limited pledges against the 1999 food aid requirements and the high demand in other food deficit areas, there appear to be few resources that can be spared to meet the increased demands of Welo. Donors are urged to respond to the DPPC's most recent appeal for food assistance (DPPC, 1999) so that provisions can be made to make immediate allocations to Welo.

### *Mid- to long-term solutions to be conceived for chronicle food deficit highland areas*

For people living in this fragile and marginal environment with unfavourable agroecological conditions, apart from food- and cash-for-work programmes and emergency relief assistance in the short run, viable mid- and long-term solutions have to be conceived.

To improve livelihood conditions and at the same time to ease pressure on fragile and marginal environments, one option would be to encourage and support the free and voluntary migration of families away from the heavily farmed highlands and to assist their resettlement and rehabilitation in other areas. Such initiatives are under way in other parts of Africa and have been, for example, successfully implemented in Uganda. Unfortunately, in Ethiopia earlier migration and resettlement programmes were related to a variety of problems and constraints. Therefore, a certain degree of hesitance seems to prevail and people appear less than enthusiastic.

A much more viable option for the time being is to provide additional development incentives. The idea is that through appropriate development incentives the population is encouraged to stay in their places of origin. In some areas, for various reasons land holdings have become too small for subsistence farming. Where subsistence farming became impossible, there may be an under-utilised potential for off-farm labour activities. Therefore, providing off-farm employment

through development activities and thus motivating people to remain in their home area, seems a good idea.

Small-scale development projects of the food-for-work or cash-for-work variety may directly benefit the population by providing an additional income source, by developing basic infrastructure requirements and by decreasing environmental degradation. Hence, in chronic food shortage areas, effectively implemented small-scale development activities together with relief food distributions for the most needy, may also act as disincentives to migration preventing people, for example, from seeking off-farm income far away from their homes.

In the mid- and long-term, off-farm income opportunities will need to gain greater importance relative to agricultural activities. If for one reason or another job opportunities, apart from the subsidised food-for-work programmes, cannot be expanded further locally, there is definitely significant potential for the development of such opportunities at the regional level, for example in the lowland areas and in urban centres. Quite a number of people from the highlands are already accustomed to seasonally migrate to other regions, e.g. Western Tigray and Afar to work on state farms. But regionalisation efforts in Ethiopia during the past few years have made it more difficult for people to travel and work outside their home regions. Unlike in the past, people who wish to work on the large state/commercial farms have to organise and pay for the necessary permits and transport themselves. Hence, their net gains from migratory wage labour decreased. In thinking of ways to maximise the additional income earning opportunities for families of crisis-prone highland areas in Welo, new mechanisms need to be developed which will help enhance the free movement of people from the highlands seeking labour opportunities.

## Annex

### Abbreviations

DPPB	Disaster Prevention and Preparedness Bureau (mostly at Regional level)
DPPC	Disaster Prevention and Preparedness Commission (Federal Government level)
DPPD	Disaster Prevention and Preparedness Department (mostly at Zonal level)
EGS	Employment Generation Scheme
ERCS	Ethiopian Red Cross Society
NGO	Non-Governmental-Organisation
ORDA	Organisation for Relief and Development in Amhara Region
PLAN International	International NGO involved in general infrastructure development
SCF/UK	Save the Children Fund United Kingdom
SNV	Netherlands Development Organisation
UN-EUE	United Nations Emergencies Unit for Ethiopia
UNDP	United Nations Development Programme
WFP	World Food Programme

### Glossary

<i>Araki</i>	Distilled alcoholic drink from various cereals.
<i>Belg</i>	Expression for the agricultural season in the short rainy season in parts of Ethiopia.
<i>Dega</i>	Expression for one of the altitudinal agroecological belts in Ethiopia. In Welo between 2500 to > 3000 msl.
<i>Kebele</i>	Smallest administrative unit in Ethiopia
<i>Kolla</i>	Expression for one of the altitudinal agroecological belts in Ethiopia. In Welo between ~1200 to ~1600 msl.
<i>Meher</i>	Expression for the main growing season in parts of Ethiopia
<i>Tella</i>	Locally brewed alcoholic drink made of barley and hops
<i>Wereda</i>	Local administrative unit
<i>Weyna dega</i>	Expression for one of the altitudinal agroecological belts in Ethiopia. In Welo between ~1600 to ~2600 msl.

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- SCF/UK (1998b) NSP Results; North Wollo/Wag Hamra, Kremt Report 1998, Save The Children Fund UK, Nutritional Surveillance Programme (NSP) - Ethiopia, 18 October to 2 November, Addis Ababa
- SCF/UK (1998c) Household Food Economy Analysis 'Woina Dega', South Wollo, Save The Children Fund UK, Food Economy Assessment Team (FEAT), East & Central African Regional Office, Nairobi
- SCF/UK (1998d) Household Food Economy Analysis 'Dega', North Wollo, North-East Ethiopia, Save The Children Fund UK, Food Economy Assessment Team (FEAT), East & Central African Regional Office, Nairobi
- SCF/UK (1998e) Household Food Economy Analysis Tekeze Lowlands, North-East Ethiopia, Save The Children Fund UK, Food Economy Assessment Team (FEAT), East & Central African Regional Office, Nairobi
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#### SOURCES:

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**Itinerary**

Addis Ababa - Dessie - Woldiya (15 March), Woldiya - Muja - Wotchat - Woldiya (16 March)  
 Woldiya - Kob - Lalibela (17 March), Lalibela - Shimshaha - Gelesot - Lalibela (18 March), Lalibela -  
 Woldiya - Dessie (19 March), Dessie - Addis Ababa (20 March)

**Distances and time table**

Addis - Dessie	400 km	7h to 8h
Dessie - Woldiya	120 km	2h 30'
Woldiya - Muja (Gidan Wereda)	80 km	2h 30'
Woldiya - Kob (turn off from Chinese rd. to Lalibela)	112 km	2h
Kob - Tekeze River crossing	49 km	1h 20'
Tekeze River crossing - Lalibela (new asphalt rd.)	22 km	30'

**NGOs and other organisations operating in North Wollo**

- ORDA Organisation for Relief and Development in Amhara Region
- SCF/UK Save the Children Fund United Kingdom
- WFP World Food Programme
- Plan International International NGO involved in general infrastructure development
- SNV Netherlands Development Organisation

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Mr. Takele	SNV, Dutch Volunteers, Bugna	
Ms. Wuditu Assefa	SNV, Dutch Volunteers, Gender specialist	

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