ETHIOPIAN MULU WONGEL AMAGNOCH CHURCH DEVELOPMENT ORGANIZATION (EMWACDO)

A REPORT

ON

NUTRITIONAL SURVEY CONDUCTED IN SEMU ROBIGELALO DISTRICT OF AFAR NATIONAL REGIONAL STATE

(December 2004)

December 30, 2004

Addis Ababa

ABBREVIATIONS

DPPB Disaster Prevention and Preparedness Bureau.

EMWACDO Ethiopian Mulu Wongel Amagnoch Church Development Organization

- GAM Global Acute Malnutrition (Severe +Moderate malnutrition)
- HFA Height for Age (Stunting)
- KA Kebele Administration
- PEM Protein Energy Malnutrition
- SAM Severe Acute Malnutrition
- WFA Weight for Age (Underweight)
- WFH Weight for Height (Wasting)
- KAs Kebele Administrations
- IDPs Internally Displaced People
- *m.a.s.l* Meters above seas level
- CI Confidence interval





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EXECUTIVE SUMMARY

Nutrition survey was conducted in Semu Robi district of Afar National Regional State Zone five in December 2004. The objectives of the survey are mainly to see the impact of the relief interventions, and provide information that can be used in the designing of relief programs in the future.

A two stages 30 cluster by 30 children survey methodology was employed in conducting the survey. A total of 900 children between the ages of 6 to 59 months were weighted and measured and 20 records (2%) were excluded because of their flag values. Proportion to Population Size (PPS) was used to identify 30 clusters within the district after having collected the population data of all Kebele administrations & villages. Enumerators (12th grade complete) who were trained for two days out of which one day was field practice on children measurement collected the data. Trained and experienced EMWACDO and line offices staff closely supervised the enumerators during the actual data collection. In addition to anthropometrical data other household questionnaires were prepared and information on food security situations was collected by the supervisors.

Global Acute Malnutrition (GAM) defined as weight for height index <-2 zscores/or Oedema was 9.2% with 95% Confidence Interval of 0.42-9.45%. Severe Acute Malnutrition defined as weight for height index <-3 z scores and/or oedema was 0 with95%CI 19.78-100%. In the presence of aggravating factors like low availability of food at household level, low water availability for human and livestock use, poor pasture condition for livestock and prevalence of diseases such as Diharria, measles, cough, fever, malaria and other. The nutritional status of children in Semu Robi district could be categorized as serious situation. As compared to the last survey result (May, 2004 when GAM was 10.8%) the condition improved by 1.6%. The improvement achieved is due to relief intervention by EMWACDO.

About 9.20% of the children less than five years of age were suffering from different diseases (mentioned above) within the last fifteen days prior to the survey. Some proportions of the malnutrition could be attributed to the prevalence of these different diseases.

Crude and under five mortality rates were 0.92deaths/10000/day and 2.98 deaths/10,000/day respectively. Measles immunization coverage as interviewed from mothers and confirmed with cards was 1.70% with 95% confidence interval of 2.34-41.6 during the survey.

EMWACDO have been involved in relief interventions to overcome the existing food shortage in the area. Consequently, EMWACDO has distributed supplementary food to under five children and pregnant and lactating women (PLW) starting from June 2004 up to until last November 2004. And also under proposal preparation to continue the intervention for this fiscal year as well. The organization has distributed a total of 324 metric tones (3240qt) of famix food and 36 metric tone (36000liter) of food oil during this period for severely and moderately malnourished children and drought affected pregnant and Lactating Women (PLW) and a total of 10000 under 5 children and 1000 PLW/Pregnant and lactating Women have benefited from the intervention for six months.

The major income and food source for almost all communities in the district is livestock rearing. Livestock holding per household decreased due to high death rate during last drought years. For the coming year also the households cannot able to feed their livestock due to poor condition of the pasture in the district. More over water availability in the area is very scarce as they travel long to get the Awash River and some boreholes are out of use as the result of the ethnic conflict occurred with Amhara. These compounded impact results in low productivity and led to food insecurity of majority in the area.

Finally, the following recommendations are made based on the survey results,

- > Short term
 - 1. Strengthen and continue the full general ration, supplementary food distribution to all affected people in Semu Robi district till the amount of rain fall is sufficient for pasture growth.
 - 2. Close monitoring of the overall food security situation of the area is very important in planning other interventions to prevent further deterioration of the condition. Using the same methodology, nutrition survey needs to be conducted around June 2005 to see the food security situation in the area.
 - 3. Implementation of activities related to health of children like measles immunization, malaria control and other health related issues.

> Long term

4. Designing holistic and integrated development programs to address underlying/root causes of food insecurity and vulnerability in the area.

2. INTRODUCTION

2.1. Background information

Semu Robi is located in Zone five of Afar National Regional State. The district is bordered to the North by Fursi district of Afar, to the East by Amibara of Afar and Dulecha special district to the South and West by Kewot district of Amhara regional state. Semu Robi is sub-divided into 12 Kebele administrations.

Semu Robi is mainly lowland area with an average altitude 1100 m a.s.l. Major types of vegetation in the area include shrubs, bushes, and few acacia species. The coverage of protected forests is almost nil in the district. However, the existence of some exotic species like Palm trees, and small patches of acacia, indicates the area was possibly covered by deep rooted and deciduous arid tree species.

The area is mainly characterized by rugged topography of the rift escarpment. The average altitude in the area is 1100 m a.s.l. Geologically large part of the Woreda is characterized by weathered basalt with some alluvial and lacustrine deposits. The ground water potential in the Woreda is generally low and it is found only along river cuts with thick alluvial deposits or fractured basalts.

Dominantly the population in the Woreda is pastoral with very few agro Pastoralists in two kebele namely Adlehangeg and Kede Bura which are located at the boarder of Amhara in the district.

The area is characterized by Uni-modal type of rainfall, erratic in distribution and very small in amount. Except for windy and irregular Meher rain used for rejuvenation of pasture and collection of water in traditional wells, rain-fed agriculture is not realistic in the area. The average temperature ranges from 15 to 40 degree centigrade and months from April to July is considered as hot season.

The total population of the district is projected at about 56,000. In addition to the Afar community, there are also other ethnic groups who mainly come from the surrounding highlands and settled around Kewot district.

Afar communities derive their livelihood mainly from livestock sector, which is pastoral type. The communities run livestock rearing primarily to produce milk and meat needed to fulfill the dietary requirement of all household members. In addition, livestock is the main source of cash income and means of transport.

Traditionally, there is periodic movement of the Afar people to neighboring areas in search of pasture and water for their livestock that covers long ways from neighboring districts to other regional states in most cases. They stay for 3 to 4 months (mainly from the month of April to July). This is to save their animals from death that may happen as a result of shortage of pasture and water. But last year, the situation was very different and beyond the capacity of the community to save the life of the livestock

Livestock diseases, shortage of livestock feed and water, poor animal husbandry due to lack of knowledge, and livestock marketing problems are the most important constraints related to livestock production in the area. There is no clinic and cattle crush to serve the livestock population in Semu Robi district. Contagious Bovine Pleura Pneumonia (CBPP), Contagious Caprice Pleura Pneumonia (CCPP), Render pest, Foot and Mouth Disease (FMD), Anthrax, Liver fluke, Facio/Laisis Pasturelosis, Sheep pox, and Pneumonia, and external parasites are major livestock diseases.

Crop production is the second important source of revenue for Afar communities in Semu Robi district. Out of the total 12 kebeles only two kebeles are benefiting from crop production in the district.

The major factors that contribute to the low crop production and productivity in this area are:

- ✓ Lack of area specific extension and research services,
- ✓ Weed problem
- ✓ Lack of experience and knowledge of Afar farmers on how to undertake farming activities
- ✓ Lack of crop diversification,
- ✓ Prevalence of crop pests and diseases.
- ✓ Low/erratic rain fall in the area

In the rural KAs of Semu Robi district, Awash River is the main source of water both for human and livestock consumption. Out of the total population only about 3.6 % (UNICEF study) get hold of safe water. As a result, people are greatly suffering from water borne diseases.

There are only two clinics and one health post that render service to the district community. These institutions are serving not more than a quarter of the total population. Around seven kebeles do not have health institution and suffering from health related problems.

The district has five schools, three 4th grades and two 6th grades. The district center is accessible by all season gravel road from Shoa Robit. However, large part of the Woreda is inaccessible.

2.2. Objectives of the survey

- ✓ To assess level of malnutrition among children 6 to 59 months of age.
- ✓ To assess immediate causes of malnutrition in the study area
- ✓ To estimate retrospectively the crude mortality rates with in the same population.
- ✓ To assess level of morbidity with in the last two weeks from the day of the survey.

✓ And see the overall food security situation of the area

2.3 Survey methodology

Two stages 30 clusters by 30 children sampling methodology consistent with international standards were employed. And children 6 to 59 months of age and 65 to 110 cm height/length were included in the survey. Pre-tested formats were used to collect data on Anthropometry, age, retrospective mortality, morbidity, and family size of the households.

Local calendar and seasons were employed to aid mother's recall the ages of their children. Proportion to Population Size (PPS) was used to identify 30 clusters within a district after having collected the population data of all Kebele administrations & villages/clusters. Random walk method was utilized to identify households in each cluster. Mortality data was collected from all households contacted regardless of the presence of under five children for the past three months from date of the survey. Finally a total of 900 children were weighted and measured in December 2004. But 20 records were excluded from analysis due to their flag values. No methodology alternative was made during the survey.

2.3.1 Developing sampling frame in two stage cluster sampling

Stage one selecting the cluster

Geographical units and their population determined

Villages were taken as the smallest geographical unit. Hence, a list of existing peasant associations and respective villages that would be included in the sampling frame with their estimated population was prepared.

Calculation of the cumulative population

A list of villages is established, as well as their respective population. In a third column, the cumulative total is calculated by adding the population of each unit to the sum of the population of the preceding sections. To calculate cumulative population, the total population of the villages was used.

Calculation of the sampling interval

The sampling interval, in cluster sampling is the total number of population divided by the desired number of clusters that is 30.

Determination of the location of the first cluster

A random number between 1 and the sampling interval calculated was randomly selected. That random number identified the first village or cluster to be surveyed.

Selection of the other clusters

The sampling interval was sequentially added to the starting (random number) until 30 numbers were chosen. Each number chosen represents the population of a geographic unit.

Stage two Selections of households/children in a cluster Random walk method

- ✓ Having identified the 30 clusters, a team of data collectors went to the center of the selected village.
- ✓ Randomly chosen a direction in which to walk by throwing a pen in the air, and walking in the direction that it pointed when it falls on the ground.
- ✓ Walked in the direction indicated by the pen, from the center to the outer perimeter of the locality, counting the number of households along this line.
- ✓ Selected the first household to be visited by drawing a random number between one and the number of households counted when walking.
- ✓ Went to the first household and examine all children aged 6-59 months in the household.
- ✓ The subsequent households were chosen by proximity.
- ✓ If there were no children under five in the household, the team proceeded to the next house after collecting other data like mortality.
- ✓ All eligible children were measured and weighed. This means that all children in the last house were also measured even if it exceeds the number required (30).
- ✓ If a child was not present at the time of the survey, the team went back to the house later to find the child. If the team could not find the child then they replaced it with another by continuing the sampling methodology.

2.3.2. Training and supervision

A two-days training was conducted for four survey teams (three persons per team) and four EMWACDO/government staff (health persons) who supervised the teams. During the first day, the trainees (enumerators and supervisors) attended theoretical and practical demonstration on body measurement and how to collect other related data. For the purpose of exercise, the survey teams collected data from field during the next day. They compared their results measuring the same children (inter observer error) under close supervision of the trainers. Experienced EMWACDO conducted the training. Staff drawn from the organization and district health office daily supervised the enumerators during the actual data collection. The training covered survey design, anthropometric measurements, signs and symptoms of malnutrition, other data collection and interview skills. As data collection formats were already piloted no changes were made after fieldwork.

2.3.3. Sample size

According to the 30 clusters by 30 children survey methodology, a total of 900 children 6 to 59 months of age were weighed and measured but some20 records were excluded because of their flag values.

2.3.4. Variables measured and recording information

Age

All children 6-59 months were measured. If age is not known, children with height 65 to 110 cm were included.

Weight

A 25kg Salter spring scale was used. Weight was recorded to the nearest 0.1kg.

Height

Children under 85 cm or 6 - 23 months of age were measured lying down and over 85 cm or 24-59 months in the standing position. Children whose height/length ranges from 65 to 110 cm were included in the survey. Height was recorded to the nearest 0.1cm.

Oedema

The presence of nutritional oedema was determined by pressing both feet for three seconds. If shallow print remains in both feet it was recorded as positive to oedema.

Measles vaccination

Verbal and vaccination cards were recorded as positive for measles vaccination. Finally both verbal and cards were computed separately.

Retrospective mortality

The number of deaths by age group (under five and above five years) during the last 90 days was recorded retrospectively for all visited households. And causes of deaths were also traced if known.

Retrospective morbidity

Mothers were interviewed whether any type of disease has affected their children (6-59 months) in the last fifteen days prior to the survey.

Household questionnaire

Household questionnaire was developed based on the DPPC formats in the nutrition guidelines. Information collected includes health, food security situations and relief interventions. Out of the households contacted for nutritional survey, every third household was interviewed and household heads were accountable for the response.

2.3.5. Data analysis and Interpretation of the results

Data was edited on paper and also edited after being entered in to computer. WFH was expressed both in terms of Z-scores and percent of the median. EPI INFO 604 and excel computer software were used to analyze the results of the survey. Data was cleaned, edited, processed and analyzed at the head office by experienced staff.

The result of this survey could be compared to the following standard prevalence of low anthropometric values (<-2SD) for under five children. (DPPC guidelines May, 2002)

Indicators	Stage of Alert	
Global Acute Malnutrition prevalence >=20%		
AND/OR		
Severe acute malnutrition prevalence >=5%	Critical	
Global Acute Malnutrition prevalence 15-19%	Cilical	
AND		
Aggravating factors		
Global Acute Malnutrition prevalence 15-19%		
Global Acute Malnutrition prevalence 10-14%	Somioura	
AND	Serious	
Aggravating factors		
Global Acute Malnutrition prevalence 10-14%		
Global Acute Malnutrition prevalence 5-9%	Poor	
AND Aggravating factors		
Global Acute Malnutrition prevalence 2-9%	Normal for chronically malnourished	
	population.	

3. MAIN FINDINGS

3.1 _Age and sex distribution

total of 899 children were measured and weighed out of which 48.63% were female. One record was excluded during data processing because of their flag values. Children between 30 to 41 months of age constituted largest part of the sample (about 26.25%). The sex ratio was 1.05 for the district. (See table 1 below)

Age group	Boys	Boys		Girls		Total	
	No.	%	No	%	No.	%	Boy: Girl
6-17 months	78	8.86	95	10.79	173	19.65	0.82
18-29 months	82	9.31	90	10.22	172	19.54	0.91
30-41 months	133	15.11	98	11.13	231	26.25	1.35
42 -53	100	11.36	68	7.72	168	19.09	1.47
months							
54 - 59	59	6.70	77	8.75	136	15.45	0.76
months							
Total	452	51.36	428	48.63	880	100	1.05

Table 1: Distribution of age and sex in Semu Robi district

3.2. Prevalence of Acute Malnutrition (wasting /Low weight for height) Global Acute Malnutrition (GAM) defined as weight for height index <-2 z scores on children 6-59 months old with Oedema was 9.2%& with 95% confidence interval of 0.42-9.45%. And prevalence of Severe Acute Malnutrition (SAM) was 0.22% with 95% confidence interval of19.78-100 %. No Odema cases reported. (See table 2 and 3)

Table 2: Prevalence of acute malnutrition based	on weight for height z-scores	and/or oedema
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	6 - 59 months N= 880	6 - 29 months N=345
Prevalence of global malnutrition	81=9.20%	26=7.53%
(<-2 z-score and/or Oedema)	95%ci (0.42-9.45)	95%CI (1.03-26.60)
Prevalence of severe malnutrition	2=0.22%	2=0.57%
(<-3 z-score and/or oedema)	95%ci (19.78-100)	95%CI(19.78-100)

The prevalence of oedema is 0%

Table 3: Prevalence of malnutrition by age based on weight for height z-scores and oedema

		Severe Malnut (<-3 z-s	t rition score)	Moder Malnu (>= -3 score)	rate etrition and <-2 z-	Norma (> = -2	n l z score)	Oeden	18
Age (mths)	Total No	No.	%	no.	%	no.	%	no.	%
06 - 17	173	1	0.11	9	1.02	163	18.52	0	0
<i>18 - 29</i>	172	1	0.11	16	1.81	156	17.72	0	0
30 - 41	231	0	0	28	3.18	203	13.06	0	0
42 - 53	168	0	0	17	1.93	151	17.15	0	0
54 - 59	136	0	0	9	1.02	127	14.43	0	0
Total	880	2	0.22	79	8.97	800	100	0	0

Table 4: Distribution of acute malnutrition and oedema based on weight for height z-scores

	<-2 z-score	>=-2 z-score
Oedema present	Marasmic Kwashiorkor	Kwashiorkor
	0 %	0%
Oedema absent	Marasmic	Normal
	81 9.2%	799 90.79%

3.3 Children's morbidity

Table 8: Prevalence of reported illness in children in the two weeks prior to interview (n=897)					
	6-59 months				
Prevalence of reported illness	9.20%				

Table 9: Symptom breakdown in the children who reported illness in the two weeks prior to interview (n=81)

Number		6-59 months
Diarrhea	19	2.15%
Cough	23	2.61%
Fever	21	2.38%
Measles	-	-
others	18	2.04%
Total	81	9.20%

3.4 Mortality Results (retrospective over 3 months prior to interview)

The Crude Mortality Rate (CMR) for the total population is estimated at: 0.92 Deaths/10,000/day

The under-five Mortality Rate (U5MR) for the population is estimated at: 2.98Deaths/10,000/day.

Mean household size is calculated as person 4.02 /household

3.6 Food security situation

≻	Main sources of income during last	t three i	months
	None	0%	
	Sell of livestock		66.6%
	Sell of livestock products	6.6 %	
	Sell of grain	17.7%	
	Petty trade	5.5%	
	Waged labor	0%	
	Sell charcoal, fuel-wood and poles	0%	
	Other		0%
⊳	Main food sources for the population	on duri	ng the last four weeks
	Own production		21.1%
	Own animal	74.4%	
	Purchase	23.3%	
	Relief	100%	
	Others		

- Received any food aid in the last two months Yes 100%
- > Main food for the last four weeks for those older than 5 years

	Milk	71.1%
	Barley/purchased	23.3%
≻	Sources of drinking water	
	River	71%
	Traditional wells	1%
	Spring	18%
	Borehole	0%

4. DISCUSSIONS

4.1. Nutritional status

s a general rule, if the sex ratio is between 0.9 - 1.1 then you can be confident that there was no sex bias in the selection. Accordingly, the survey result shows the sex ratio in Semu Robi district was 1.05, which is within the acceptable range. And hence there was no sex bias in the selection of the children.

Prevalence of Global Acute Malnutrition (wasting) in Semu Robi district is estimated at 9.2% with 95% confidence interval of (0.42-9.45). And prevalence of Severe Acute Malnutrition (SAM) was 0.22% with 95% confidence interval of (19.78-100). The level of GAM in the district during the survey was high and categorized as serious stage. With aggravating factors like food shortage, unavailability of pasture and water at household level this could be categorized as serious stage.

Compared to the previous survey result conducted in May 2004, when GAM was 10.8%, the current situation seems improved. The improvement achieved is mainly attributed to the relief intervention undertaken in the area for the past six months.

4.2. Food security situation

Afar communities obtain their livelihood mainly from agro-pastoral livestock sub sector. Livestock is an important asset for Afar pastorals, sale of which is a strategic copping mechanism in period of food shortage. Sale of livestock and livestock products constitute major cash income sources and daily food requirements. This section of the economy has been affected by recurrent drought and significant percent of livestock death was reported in the year 2002 alone. The area receives the main rain from July to September with the short rains between February and May. The rainfall is erratic and the area suffers from drought in most years.

According to the December 2004 survey result, only 21.1% of the respondents utilized their own production as their main food sources during the last four weeks prior to the survey. The majority (71.1%) used own animal as main food sources. Animals products was the main food for 76.6% of the respondents during the last four weeks followed by barley (23.3%). 100% of the respondents was received food aid during the last two months. And 100% of the children measured are received supplementary food during the last three months. Major sources of income constitute sale of livestock (66.6%), petty trade (5.5%), wage labor (0%), sell of grain (17.7%) and sale of charcoal (0%). In general, the main supply of food for the communities mainly depends up on livestock and livestock products and food aid during the survey and the existence of food shortage at household level is factual.

4.3. Health and care

Crude Mortality Rate for the total population is estimated at 0.92deaths/day/10,000 and fewer than five mortality rates are 2.98 deaths/day/10,000 populations in Semu Robi district. Compared to International standard; the level of under five mortality rates is a bit higher. Measles vaccination coverage with cards or confirmation from mothers was 1.70% with 95% confidence interval of 2.34-41.61% during the survey.

About 9.20% of the mothers reported that their child had been ill in the preceding two weeks prior to the survey. Out of ill children about 10.6% went to clinics and the rest did not go to health institutions mainly due to lack of transportation, problem of money and the diseases were not considered serious due to lack of awareness.

About 71% of Semu Robi communities use River as source of drinking water. Spring 18%, borehole 0% and traditional wells 1%. On average, Semurobi community walks for six hours to fetch water (round trip) from respective water sources. One health post and 2 clinics are currently rendering services to the community in Semu Robi district.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

Y ear 2002/3 was a major drought moment for Afar region in general and Semu Robi district in particular. The pastoral and agro-pastoral communities lost over 60% of their livestock and as a result their asset has deteriorated. When we compare the year 2002/3 to 2003/4 the drought condition is relatively improved. EMWACDO and the government have been involved in relief intervention and relief food distribution. Better livestock and crop condition in two KAs namely Adlehageg and Kede Bura is observed during the survey.

The nutritional status of children has improved as compared to May 2004 survey this is mainly due to the relief intervention. Nevertheless, malnutrition rate is at a serious stage with aggravating factors such as low availability of food at household level and low availability of pasture and water for livestock.

The level of health services rendered to the community is at a low stage. Prevalence of different diseases during the survey in children 6-59 months of age was high and hence some proportions of the malnutrition could be attributed to the prevalence of the morbidity in the area.

Generally speaking the relief intervention has contributed a lot in improving the nutritional status of children in the area. The GAM was decreased from 10.8% to 9.2%; it shows a decrement by 1.6%. The impact of the intervention can be taken, as satisfactorily even though decreased in GAM result is low. If not for the sake of the relief intervention the situation had to be very serious.

5.2. Recommendations

> Short term

- 1 Strengthen and continue the full general ration, supplementary food distribution and school feeding to all affected people in Semu Robi district till the rainfall amount is satisfactory.
- 2 Close monitoring of the overall food security situation of the area is very important in planning other interventions to prevent further deterioration of the condition. Using the same methodology, nutrition survey needs to be conducted around June 2005 to see the food security situation in the area.
- *3* Implementation of activities related to health of children like measles immunization, malaria control, de worming, and vitamin A supplementation.

> Long term

4. Designing integrated development activities to address underlying causes of food insecurity in the area.

6. ANNEX

ETHIOPIAN MULUWONGEL AMAGNOCH CHURCH DEVELOPMENT ORGANIZATION Household questionnaire for nutrition survey

5.4 Wore	<i>Identification</i> da Enumerator_		Team #										
PA	Date #	_											
5.5 1.	HOUSEHOLD QUESTIONNAIR Sex of household head 1.	EE Male	2.	Fen	nale								
a.	Has your family received any food aid in the last 8 weeks?1=Yes 2=No												
b.	If yes for Q2, how foodw	long eeks	ago	did y	'OU	last	receive						
4.	<i>4. What is your main source of income in the last 3 months?</i> <i>0=none</i>												
	1=sell livestock												
	2=sell livestock products												
	3=sell grain												
	4=petty trade												
	5=waged labor												
	6=sell charcoal/wood/poles												
	7=other												
5. onlv)	What is normally your main food at this time of the year (most important												
0111)/	1=maize												
	2=wheat												
	3=barley												
	4=milk												
	5=meat												

6 = others

6. What will be your main source of income for the coming three months? 0=none 1=sell livestock 2=sell livestock products 3=sell grain 4=petty trade 5=waged labor 6=sell charcoal/wood/poles 7=other

7. What was the main food for people older than 5 years in the last 4 weeks 1=maize

2=wheat

3=barley

4=milk

5=meat

6=others_____

8. Where did you get the main food? 1=own crop production

2=own animal

3=purchase

4=relief

5=borrow from others 6=other____

- 9. If main food was from market purchase, what was the source of income? c. Waged labor
 - d. sale of fire wood
 - e. sale of charcoal
 - f. petty trading
 - g. sale of livestock produce
 - h. loans
 - *i. remittance*
 - j. Others_____

10. Where will you get your main food in next 2 months?

1=own crop

2=own animal

3=purchase

4=relief

5=borrow

6=other___

11. Livestock holding (write number of animals)

- k. ox_____
- *l. Cow____*
- m. Goat and Sheep____
- n. Equines_____
- o. Poultry_____ Others_____
- 12. How many hectares of land do you have? _____ha (Farm and other lands)

13. Compared to last year how do you evaluate your crop production of this year?

- a. Much greater than last year
- b. Equal to last year
- c. Much less than last year
- d. Similar to last year
- e. Not applicable

14. Is there anyone who unusually migrated from this household in the last two months?

f. Yes

g. No

15. If yes to Qes. Above, how many people migrated?

16. What is your main source of water?

1=river

2=hand pump

3=lake

4=traditional wells

5=spring

6=borehole

7= trucking

8=other____

17. How long does it take to collect water (round trip)? _____Hours

18. Are you eating any wild foods? 1. Yes 2. No 3.

19. If yes Q18, specify_____

20. Do you normally eat wild foods at this time of year?

1 Yes

2. No

21. Do you have latrine h. Yes

a. No

21. If yes Q20, do you use it regularly? b. Yes

c. No

ETHIOPIAN MULUWONGEL AMAGNOCH CHURCH DEVELOPMENT ORGANIZATION

Data collection format for Nutritional survey of the under five

Region_			Zone				Wore	da		Project	ţ			Date_							
PA			Village	/Cluster					Enumera	tor											
1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16	17	18	19		
HH code	Child code	Name of Child	Sex M=1 F=2	Age month	in We	ight Kg	Heig In cr	Oedema ht present=. 1. absent=2	Measles Imm. 1 1=Y 2=N 3=NA	Has Imm. Card 1=Y 2=N 3=NA	Illness	Went to clinic 1=Y 2=N 3=NA	If not (12) why.	Took supp food? 1=Y 2=N	Family size before 3 months	Family size now	, Death <5	Cause of death<5	Death >5		
	<u>11. Ш</u>	ness (with in last	st 15 days) 13. If not went to clinic why?						<u>14 Took supplementary food?</u>					18 Cuase of death for under 5 children							
	1. Watery diarrhea		1. Problem of money						It is within the last three months					1. Watery diarrhea							
	2. Bloody diarrhea			2. Problem of transport											2. Bloody diarrhea						
	3. Met	asles	3. Not serious											3. Measles							
	4. Fev	er		4. Not applicable										4. Malnutrition							
	5. Cou	gh													5. Malaria						
	6. Mal	laria	*Collect mortality data (family size and death) from all HHs contacted											6. Pneumonia							
	7. othe	ers	**All children 6-59 months in the HH should be measured										7. Others								
	8. Not	applicable	*** NA	l=Not appli	cable																