

An Analysis of Nutrition Surveys in Ethiopia

**Background Paper for workshop on contextual
information collected in emergency nutrition
assessments in Ethiopia**

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Abbreviations and acronyms

| | |
|---------|--|
| ACF | Action Contre la Faim |
| CI | Confidence Interval |
| CRS | Catholic Relief Services |
| CTC | Community Therapeutic Care |
| CMAM | Community Management of Acute Malnutrition |
| DRMFSS | Disaster Risk Management and Food Security Sector (Ethiopian Government) |
| DPPA | Disaster Prevention and Preparedness Agency |
| EMWACDO | Ethiopian Mulu Wengel Amagnoch Church Developmental Organization |
| ENCU | Emergency Nutrition Coordination Unit (Ethiopian Government) |
| EOS | Expanded Outreach Services |
| EWS | Early Warning System |
| EWRD | Early Warning and Response Directorate (Ethiopian Government) |
| FHI | Family Health International |
| GAM | Global Acute Malnutrition |
| GFD | General Food Distribution |
| HEA | Household Economy Approach |
| IFRC | International Federation of the Red Cross |
| IMC | International Medical Corps |
| MOARD | Ministry of Agriculture and Rural Development |
| MSF | Medecins Sans Frontieres |
| MUAC | Mid Upper Arm Circumference |
| NGO | Non-Governmental Organisation |
| OCHA | Office for Coordination of Humanitarian Affairs |
| OTP | Outpatient Therapeutic Programme |
| PSNP | Productive Safety Net Programme |
| RNA | Rapid Nutrition Assessment |
| SAM | Severe Acute Malnutrition |
| SC UK | Save the Children UK |
| SC US | Save the Children US |
| SFP | Supplementary Feeding Programme |
| SNNPR | Southern Nations and Nationalities Peoples Regional State |
| SCUK | Save the Children United Kingdom |
| UN | United Nations |
| WASH | Water, Sanitation and Hygiene |
| WVE | World Vision Ethiopia |

1. Introduction

This background paper has been prepared by NutritionWorks (a partnership of international nutritionists based in UK) for a workshop to be held in Addis Ababa, Ethiopia on 22nd and 23rd September 2009. The paper presents findings and conclusions of an analysis of nutrition surveys that will help to further develop the government interim Guidelines for Emergency Nutrition Surveys in Ethiopia 2008. The analysis has been carried out jointly by NutritionWorks, the Emergency Nutrition Coordination Unit (ENCU) of the Early Warning and Response Directorate/Disaster Risk Management and Food Security Sector (EWRD/DRMFSS) and UNICEF with funding from the Global Nutrition Cluster and Office for Coordination of Humanitarian Affairs (OCHA) Ethiopia.

The focus of the analysis is on the ‘contextual’¹ data that are routinely collected during nutrition surveys in Ethiopia. Currently, nutrition surveys collect a large quantity and range of data on context but guidelines on methods and indicators are unspecific². Nutrition surveys carried out between 2003 and 2008 were analysed and interviews were conducted with key staff from a range of agencies to assess how contextual information is used for decision-making.

2. Objectives

The objectives of the analysis are:

- (1) To evaluate the methods and indicators used to collect ‘contextual’ data in nutrition surveys conducted in Ethiopia.
- (2) To evaluate the recommendations made from the data.
- (3) To examine the use made by agencies or programmes of the survey data collected.
- (4) To support further development of the Government of Ethiopia’s interim Guidelines for Emergency Nutrition Surveys 2008 by determining whether standardised methods and indicators for contextual data collection and analysis can be employed.

¹ ‘Contextual’ data refers to all information collected in nutrition surveys with the exception of anthropometric and mortality data. These data are sometimes referred to as ‘non-anthropometric’ and are usually collected to help understand the causes of malnutrition.

² Revised Guidelines for Emergency Nutrition Surveys in Ethiopia were produced by the ENCU in September 2008. The section on non-anthropometric data is brief and unfinished. The previous Guidelines of 2002 include an extensive description of non-anthropometric data collection but don’t specify particular methods or indicators. International guidelines such as SMART and Sphere do not currently specify standard methods and indicators for the collection of ‘context’ data.

3. Methods

Data collection was carried out in two stages:

3.1 Analysis of survey reports

All reports of nutrition surveys carried out in Ethiopia from January 2003 to December 2008 and available at the ENCU/EWRD/DRMFSS office in Addis Ababa were examined. Summary survey reports without details of methods were excluded. Information was extracted and summarised on an EXCEL spreadsheet with 15 sheets. Each sheet summarised information on the following areas:

- Objectives
- Methods
- Background
- Anthropometry
- Micronutrients
- Mortality
- Morbidity
- Vaccination
- Water and sanitation
- Health
- Infant feeding
- Food security
- Coping strategies
- Conclusions
- Recommendations

The data were then transformed into STATA files for tabulation and description.

3.2 Interviews with key informants

Interviews were carried out with key informants from agencies actively involved in carrying out nutrition surveys and using the results for programming purposes/advocacy in Ethiopia. Those interviewed included staff from government departments (Health and Food Security), donors, United Nations (UN) agencies and Non-Governmental Organisations (NGOs). See annex 1 for list of key informants.

A semi-structured interview was conducted lasting around one hour and based on pre-designed questions. See annex 2. Interviewees were asked to complete an information scoring sheet. This involved scoring information, typically collected in nutrition surveys, based on its importance for decision-making. A score of 1 was equivalent to “very important” and a score of 10 meant “not important at all”. See annex 3. Any number from 1 to 10 could be allocated to each area of information collected.

Interviews were held with national-level staff (based in Addis Ababa) and with regional-level staff in Amhara and SNNPR. A large number of nutrition surveys are carried out every year in SNNPR and a large number of agencies are actively carrying out interventions. In comparison, Amhara is less accessible, fewer surveys are carried out and fewer agencies are active. Acute malnutrition prevalence is generally higher in Amhara than SNNPR.

4. Results

A total of 341 surveys were carried out between 2003 and 2008. The ENCU/EWRD/DRMFSS began quality checks on anthropometric data in the first quarter of 2006 using the SMART software, *Nutrisurvey*³ (<http://www.dppc.gov.et/pages/ENCU.htm>) and as a consequence nine surveys were rejected between 2006 and 2008 because of concerns about quality. Of the remaining 332 surveys, full reports were available for 219 and short reports were available for 113. For 41 surveys there were insufficient details on methodology and key data were missing. These were therefore excluded from the present analysis. A total of 291 surveys were included in the final analysis.

A total of 64 interviews with key informants were carried out in three locations in Ethiopia: Addis Ababa, Amhara region and SNNP region.

4.1 Methods and indicators of ‘contextual’ data

Section 1 of the results presents tables derived from the analysis of 2003-2008 survey reports.

Of the 291 surveys analysed, the majority were carried out in SNNP and Oromia regions (see table 1). Five agencies carried out over 70 per cent of all surveys examined (see table 2).

These were Concern, GOAL, the government (ENCU/EWRD/DRMFSS), SC UK and WVE.

Table 1: Numbers of nutrition survey reports examined by region and by year

| Regions | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | Total |
|---------|------|------|------|------|------|------|-------|
| Afar | 1 | 2 | 5 | 2 | 1 | 2 | 13 |
| Amhara | 13 | 6 | 4 | 5 | 4 | 7 | 39 |
| Harari | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Oromia | 20 | 14 | 14 | 14 | 6 | 8 | 76 |
| SNNP | 21 | 11 | 20 | 19 | 17 | 30 | 118 |
| Somali | 5 | 8 | 3 | 12 | 3 | 0 | 31 |
| Tigray | 3 | 3 | 0 | 0 | 7 | 0 | 13 |
| Total | 63 | 44 | 46 | 52 | 39 | 47 | 291 |

³ SMART recommends several methods to check for measurement bias and quality of anthropometric data:

- The distribution of the final decimal for weight and height measurements (digit preference).
- The standard deviation of weight-for-height.
- The skewness of weight-for-height.
- The kurtosis of weight-for-height.

Table 2: Numbers of nutrition survey reports examined by agency and by year

| Agency | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | Total |
|-------------------|------|------|------|------|------|------|-------|
| ACF | 1 | 0 | 2 | 6 | 2 | 4 | 15 |
| CRS | 1 | 4 | 0 | 0 | 0 | 0 | 5 |
| Care | 2 | 1 | 3 | 3 | 0 | 0 | 9 |
| Concern | 11 | 10 | 5 | 8 | 7 | 8 | 49 |
| EMWACDO | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| FHI | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| GOAL | 2 | 4 | 13 | 11 | 6 | 8 | 44 |
| Government | 7 | 6 | 3 | 0 | 11 | 12 | 39 |
| IFRC | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| IMC | 4 | 4 | 3 | 1 | 0 | 2 | 14 |
| MSF | 3 | 0 | 1 | 3 | 0 | 0 | 7 |
| Merlin | 1 | 0 | 2 | 0 | 0 | 0 | 3 |
| Oxfam | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| SC UK | 9 | 9 | 6 | 11 | 6 | 4 | 45 |
| SC US | 8 | 2 | 4 | 6 | 2 | 1 | 23 |
| Samaritan's Purse | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| WVE | 9 | 4 | 3 | 3 | 5 | 7 | 31 |
| Total | 63 | 44 | 46 | 52 | 39 | 47 | 291 |

4.1.1 Objectives

The most common objectives for carrying out surveys as cited in survey reports were to assess the prevalence of acute malnutrition, mortality rates and vaccination coverage. The objective of assessing the causes of malnutrition was included in just over half the surveys (see table 3).

Table 3: Objectives of surveys as stated in reports

| Objective | % of surveys (n=279)* |
|--|-----------------------|
| To assess the prevalence of acute malnutrition | 98.9 |
| To assess mortality rates | 96.0 |
| To assess vaccination coverage | 86.3 |
| To make recommendations | 63.8 |
| To assess the food security situation | 61.3 |
| To assess morbidity rates | 58.8 |
| To assess the causes of malnutrition | 51.6 |
| To assess vitamin A coverage | 50.2 |
| To assess the impact of an intervention | 33.1 |
| Other objectives* | 24.1 |
| To assess the prevalence of micronutrient deficiency | 1.4 |

*Objectives were not stated in 12 survey reports.

**Other objectives included: assess prevalence of chronic malnutrition; identify 'at risk' age and sex groups for malnutrition; assess breastfeeding practices; assess programme coverage (EOS, therapeutic and supplementary feeding, mosquito nets); to assess family planning practices; assess malnutrition in mothers; assess access to potable water and health facilities; compare results with previous surveys; obtain baseline nutrition data.

4.1.2 Methods

Only one survey (of 250 surveys with methods fully recorded) adopted non-standard methods for sampling children and collecting information on anthropometry and mortality⁴.

⁴ Methods were defined as 'standard' if the SMART methodology was used or if five criteria of validity and precision were met: (1) population-based sampling using probabilistic sampling; (2) sample size of 500 or more children aged 6 through 59 months; (3) 25 or more clusters; (4) 20 or more children per cluster; and (5) weight-

As table 4 illustrates a variety of methods were used to collect ‘contextual’ data. The majority of surveys used household questionnaires. The difference between ‘community questionnaires’ and ‘focus group discussions’ was unclear. Both appeared to be focus group discussions with key members of the community but different terms were used. They have been placed in separate columns in table 4.

There were considerable differences in the sample sizes used to collect household and community information (see table 5). This was because different sampling procedures were used to identify samples. For example, sometimes every third household was selected to complete a questionnaire, sometimes it was every fifth household or sometimes another process was adopted.

Table 4: Methods used to collect ‘contextual’ information

| (% of surveys n=291) | Household questionnaires | Community questionnaires | Focus group discussions | Key informant interviews |
|----------------------|--------------------------|--------------------------|-------------------------|--------------------------|
| Yes | 86.2 | 27.5 | 16.8 | 35.4 |
| No | 7.6 | 65.6 | 75.6 | 57.4 |
| Missing data* | 6.2 | 6.9 | 7.6 | 7.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

*Refers to reports where it was unclear whether a particular method had been used or not.

Table 5: Sample sizes of different methods used to collect ‘contextual’ information

| | Range of sample size | Comments |
|--------------------------|----------------------|--|
| Household questionnaires | 87 – 972 | Clustered around 90, 180 and 300 households in sample, depending on sampling method. |
| Community questionnaires | 26 – 45 | Clustered around 30 and 36 communities |
| Focus group discussions | 6 – 36 | Clustered around 30 focus group discussions |
| Key informant interviews | 30 – 45 | Few surveys reported sample size |

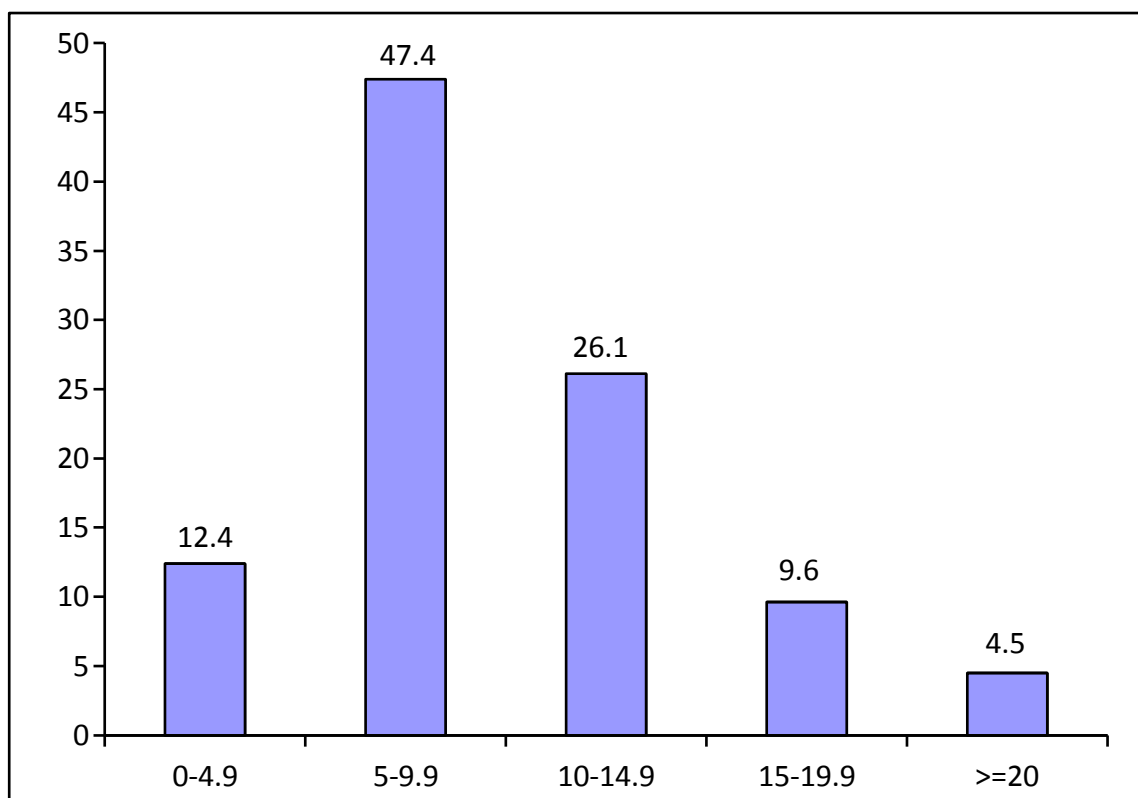
4.1.3 Anthropometric indicators

Figure 1 shows that the global malnutrition rate (GAM)⁵ was most commonly found to fall in the 5 to 9.9 per cent range. In nearly 75 per cent of surveys, the GAM rate fell between 5 and 14.9 per cent.

for-height used as the anthropometric index (Spiegel PB, Salama P, Maloney S, van der Veen A. Quality of Malnutrition Assessment Surveys Conducted During Famine in Ethiopia. *JAMA*. 2004;292:613-618).

⁵ Global acute malnutrition refers to children with moderate and severe acute malnutrition measured by weight for height <-2 Z scores or <80 per cent of the median plus oedema.

Figure 1: Distribution of acute malnutrition (% GAM n=291)



While the majority of reports presented anthropometric data broken down by age group, less than half (41 per cent) presented anthropometric data broken down by sex (see table 6).

Table 6: Acute malnutrition data analysed by sex and age group

| (% of surveys n=291) | Sex | Age |
|----------------------|------|------|
| Yes | 40.6 | 85.5 |
| No | 58.1 | 13.1 |
| Missing data | 1.3 | 1.4 |
| Total | 100 | 100 |

4.1.4 Contextual indicators

Table 7: Range of ‘contextual’ indicators collected

| | Indicator | % of surveys collecting data (n=291) |
|-------------------------|---|--------------------------------------|
| Health | Measles (coverage card and recall) | 96.6 |
| | Sick (in last 2 weeks) | 90.4 |
| | BCG (coverage) | 88.3 |
| | Water source (type) | 63.2 |
| | Vitamin A supp. (coverage) | 60.0 |
| | Water source (distance to) | 47.7 |
| | Access to safe water | 28.9 |
| | No. of health facilities accessible | 27.8 |
| | Health clinic (time to) | 26.1 |
| | Latrines (households with) | 10.0 |
| | Mosquito nets (used) | 7.6 |
| | Health clinic (took sick child to) | 2.1 |
| | Water (cost) | 1.4 |
| | Wash hands | 0.3 |
| Care | Maternal literacy (illiterate mothers) | 25.4 |
| | Meal priority (for children) | 22.7 |
| | Feeding practice in last 24 hours (reported) | 22.0 |
| | Weaning (introduced food at 6 months) | 17.9 |
| | Breastfeeding (starting feeding within 1 hour of birth) | 12.7 |
| | Breastfeeding (exclusive to 6 months) | 12.0 |
| | Breastfeeding (gave colostrum) | 3.4 |
| Food | Source of food (own production etc.) | 74.9 |
| | Source of income/cash | 74.9 |
| | Livestock condition (below average) | 67.7 |
| | Main staple food | 65.3 |
| | Source of food in future | 57.7 |
| | Pasture condition (below average) | 48.1 |
| | Last rainfall (worse than normal) | 47.4 |
| | Last harvest/crop production (worse than last year) | 41.2 |
| | Livestock death/herd size reduced | 38.5 |
| | Livestock prices lower | 37.4 |
| | Change in staple food from ‘normal’ | 34.0 |
| | Food prices higher | 33.7 |
| | Receiving relief food | 30.6 |
| Market access (time to) | 16.5 | |
| Coping strategies | Migration (unusual) | 46.4 |
| | Livestock sale | 39.9 |
| | Consumption of unusual/wild foods | 33.0 |
| | Meal reduction | 29.2 |
| | Asset sale | 23.0 |
| | Wage labour | 6.2 |
| | Dietary diversity score (adults) | 5.8 |
| | Dietary diversity score (children) | 5.8 |
| | School drop out | 5.5 |
| | Borrow food or money | 2.1 |
| | CSI scores | 1.0 |

Table 7 presents the range of ‘contextual’ indicators that were collected ordered into four categories: health, care, food and coping strategies. The first three of these categories are broadly related to the three underlying causes of malnutrition according to the UNICEF conceptual model⁶. Coping strategies are commonly collected in nutrition surveys to indicate the severity of the crisis.

A total of 46 of the most commonly collected indicators are presented in the table. Many surveys collected additional indicators that have not been recorded in the present study as they were so numerous. It was not possible to compute the average number of indicators collected per survey or the total number of questions asked in surveys.

Questions relating to vaccination, vitamin A coverage and recent morbidity were usually included on an anthropometric form or mother/child questionnaire. In addition, there were household and community questionnaires. Of the questionnaires that were attached to survey reports of 2008, it would appear that 18 to 48 questions were included in household questionnaires and a further 12 to 20 questions included in community questionnaires. Many questions required that several pieces of information were coded in the answer. Therefore the total number of data points recorded on contextual information usually exceeded 50 and was often substantially greater than this.

The indicators listed in table 7 were not necessarily collected in a consistent manner. For example, information on type of water source was collected in 63 per cent of surveys but as table 8 illustrates using results from six example surveys, the data were not comparable.

- In some surveys, data were reported but not numerically. For example, in one survey it was noted: *“According to the information obtained from the communities, key informants and the local authorities, the majority of the rural population is using water from unprotected sources like ponds or traditional wells.”* No figures were reported.
- An indicator like ‘spring’ was sometimes reported as ‘protected’ and ‘unprotected’ or just recorded as ‘spring’ without definition. Definitions of ‘protected’ and/or ‘unprotected’ were usually not included.
- Sometimes, a percentage was given to a group of water sources. For example, the category ‘other’ in survey 2 (of table 8) refers to hand-dug wells, hand pumps and traditional ‘Ella’.
- In many cases, water source was described by origin but no overall figure for ‘access to safe water’ was given.
- No indication was given as to whether the percentage access to safe water was ‘acceptable’ or not in any survey.

There was also variation in reporting periods for data such as sources of food and income, and receipt of food aid (see table 9)

⁶ The UNICEF conceptual framework was developed in 1992 to provide a basis for assessment, analysis, and action to improve child nutrition and development. The framework illustrates how child nutritional status results from a combination of factors which exert their influence at different levels: immediate, underlying and basic. The impact of these factors on an individual child will be context-specific and will also depend on the genetic make up of that child. The framework has been widely used to explain the multi-sectoral nature of nutrition and to emphasize that nutritional status does not depend upon food alone.

Table 8: Example from six survey reports of the different parameters collected on source of water

| (% of hhs reporting access to different water sources) | Survey 1 | Survey 2 | Survey 5 | Survey 108 | Survey 110 | Survey 272 |
|--|----------|----------|----------|------------|------------|------------|
| River | | 5.7 | 13.9 | 21.5 | 7.3 | 23 |
| Ponds | | 3.4 | 4.4 | | 21.7 | 2 |
| Irrigation canal | | | | | 41.3 | |
| Wells | | | | 0.7 | | 27 |
| Springs | | | | 66.2 | | |
| Springs (unprotected) | | 25.7 | 5.0 | | 3.7 | |
| Springs (protected) | | 6.3 | 2.8 | | | |
| Piped | | 33.7 | 70.6 | | | |
| Pump | | | | 3.3 | | |
| Boreholes | | | | | | |
| Cistern/rain harvest | | | 3.4 | | 9.7 | |
| Purchase/water tankering | | | | | | 13 |
| Other | | 25.1* | | | | |
| Total safe water | | | 73.4 | | 16.3 | 29 |

Table 9: Range of reporting periods collected on sources of food (past, current and future)

| Weeks | Current/past source of food (n=205) | Current/past source of income (n=140) | Future source of food (n=166) | Current/past receipt of food relief (n=63) |
|---------|-------------------------------------|---------------------------------------|-------------------------------|--|
| Current | 22.9 | 35.0 | - | 9.5 |
| 4 | 75.6 | 51.4 | 2.4 | 25.4 |
| 8 | - | 0.7 | 3.6 | 17.5 |
| 12 | 1.5 | 12.9 | 93.4 | 26.9 |
| 16 | - | - | 0.6 | 7.9 |
| 24 | - | - | - | 12.7 |

4.1.5 Correlations between anthropometric and contextual indicators

The dependent variable GAM was correlated with 93 independent contextual variables. Of these 1 in every 1,000 will be statistically significant with P values of <0.0001 by chance alone. As table 10 shows, in total 13 statistically significant correlations were found (P<0.001) which exceeds the number expected by chance alone.

Seven of the correlations were positive. This means that a high prevalence of the contextual indicator is associated with a high GAM rate. For example, high mortality rates were significantly associated with high GAM rates. Six of the correlations were negative. This means that a low prevalence of a variable like prevalence of BCG scar is associated with high GAM rates.

There are a number of problems with interpretation of the correlations which are discussed in detail in annex 4.

Table 10: Significant correlations between the dependent variable GAM and independent contextual variables

| Independent variables | r (correlation coefficient) | P (statistical significance) | N (no. of paired values) |
|--|-----------------------------|------------------------------|--------------------------|
| | POSITIVE | | |
| Crude mortality rate | 0.4909 | 0.0000 | 288 |
| Under five mortality rate | 0.5509 | 0.0000 | 288 |
| Main source of food in future: borrowed | 0.5147 | 0.0000 | 38 |
| Main source of food in future: food aid | 0.4049 | 0.0000 | 106 |
| Female headed household | 0.3320 | 0.0003 | 117 |
| Livestock sold as coping strategy | 0.3961 | 0.0000 | 116 |
| Unusual migration as coping strategy | 0.4051 | 0.0000 | 135 |
| | NEGATIVE | | |
| BCG scar (6-59 months) | -0.4285 | 0.0000 | 257 |
| Measles vaccination (card and/or caretaker recall) | -0.2704 | 0.0000 | 281 |
| Vitamin A coverage (caretaker recall of vitamin A in last 6 months) | -0.3688 | 0.0000 | 174 |
| Source of food: own production | -0.3179 | 0.0000 | 200 |
| Main source of food in future: own production | -0.3458 | 0.0000 | 153 |
| Price of livestock has fallen (lower) | -0.3637 | 0.0001 | 109 |

4.1.6 Background indicators

Surveys frequently reported on other important contextual factors based on secondary sources rather than primary data collection from the survey. The percentage of surveys that mentioned these other contextual factors, either in the introduction or in the discussion of the report, are presented in table 10. In 64 per cent of surveys, seasonality was mentioned.

Table 10: Background information reported from secondary sources

| Indicator | % of surveys collecting data (n=291) |
|---|--------------------------------------|
| Livelihood of population | 94.2 |
| Health and nutrition programmes functioning in area | 84.8 |
| Agro-ecological zones | 73.2 |
| Seasonality | 64.3 |
| Access to health services | 50.5 |
| Access to education services | 28.2 |
| Female-head of household | 0.7 |

4.1.7 Aggravating factors

A classification of overall severity based on GAM rates plus aggravating factors has been developed for Ethiopia. This is based on a similar classification system developed by WHO. See annex 5. There are five categories of aggravating factors described in the ENCU/EWRD/DRMFSS Guidelines for Emergency Nutrition Surveys in Ethiopia 2008 (see column 1 of table 11). Indicators are not specified for these aggravating factors in the guidelines.

From the 46 commonly collected indicators listed in table 7, potentially relevant indicators for the aggravating factors were identified and are listed in column 2 of table 11. Column 3 notes the percentage of surveys that collected these indicators. While over 90 per cent of surveys collected information relevant to aggravating factors category 2 (epidemics of communicable diseases) and category 4 (vaccination coverage), far fewer surveys collected

data relevant to category 1 (household food security) and category 5 (water and sanitation). No data were collected which related to category 3 (shelter).

Table 11: Aggravating factors and potential indicators to assess them

| Description of aggravating factors* | Relevant indicators collected | % of surveys collecting this type of data |
|--|--|---|
| 1. Poor household food availability and accessibility (due to a poor harvest, poor pasture conditions, high market prices, insecurity, or inadequate general distribution in a camp setting, etc.) | 2. Harvest worse than last year (yes/no) | 41.2 |
| | 3. Pasture condition below average (yes/no) | 48.1 |
| | 4. Price of food increased (yes/no) | 33.7 |
| | 5. Receiving food aid (% of households) | 30.6 |
| 1. Epidemics of measles, cholera, shigella and other important communicable diseases | 6. Sick in past 2 weeks (% of children aged 6-59 months) | 90.4 |
| 2. Inadequate shelter and severe cold | - | |
| 3. Low levels of measles vaccination and vitamin A supplementation | 7. Measles vaccination verified by card (% children) | 93.1 |
| | 8. Measles vaccination verified by card or caretaker report (% children) | 96.6 |
| | 9. Vitamin A supplementation (% children) | 60.0 |
| 4. Inadequate safe water supplies (quality and quantity) and sanitation | 10. Access to safe water (% households) | 28.9 |
| | 11. Access to latrines (% of households) | 10.0 |

*Taken from: Revised Guidelines for Emergency Nutrition Surveys in Ethiopia were produced by the ENCU/EWRD/DRMFSS in September 2008.

4.2 Recommendations in nutrition surveys

Section 2 of the results presents tables derived from the analysis of 2003-2008 survey reports.

Recommendations were grouped into 10 categories. Table 12 lists these categories with the percentage of surveys that made a related recommendation. The most common recommendations related to vaccination, general health and WASH (water, sanitation and hygiene). Examples of recommendations included in these three categories can be found in annex 6.

Many of the recommendations tended to be general and were usually not SMART⁷ (Specific, Measureable, Attainable, Relevant and Timebound).

⁷ SMART is usually applied to objectives but it could usefully be applied to recommendations.

Table 12: Recommendations by intervention type

| | % surveys |
|--|-----------|
| General ration (introduce or continue) | 46.7 |
| Supplementary feeding (introduce or continue) | 40.9 |
| Therapeutic care (introduce or continue) | 47.4 |
| Distribution of seeds | 10.6 |
| Agriculture general | 14.1 |
| Livestock feed | 6.5 |
| Veterinary services | 14.4 |
| Livestock general | 12.7 |
| Prevention/treatment of malaria | 22.7 |
| Vitamin A supplementation | 26.5 |
| Vaccination | 71.1 |
| Health/nutrition education | 40.5 |
| Health general | 70.8 |
| WASH programmes | 66.7 |
| IEC on feeding practices | 25.4 |
| Employment generation | 19.6 |
| Livelihood support | 24.7 |
| Capacity development | 37.8 |
| Repeat nutrition survey | 35.7 |
| Monitor nutrition and/or food security situation | 58.8 |
| Other* | 27.5 |

*Other included: support for school feeding and improved water provision; introduce small-scale savings and credit scheme; construction of flood protection structures; strengthen re-settlement programme; encourage population in asset building; resolve existing political conflicts to ensure peace and stability in the area; facilitate return of displaced populations; non-food distribution to address shelter and utensil deficits; advocate for increased female school enrolment; improve coordination of government bodies and agencies working in the area; provide emergency food relief, shelter and clothes for displaced; protect against further soil erosion; improve family planning activities; consider iron and iodine supplementation; strengthen existing early warning system; strengthen de-worming activities; alleviate the serious shortage of transport to deliver health supplies; promotion of kitchen gardens, fruit trees and nutrition education.

4.2.1 Specificity and categorisation of recommendations

There were different categories of recommendation ranging from the very specific to the very vague. Recommendations could call for

- Immediate action.
E.g. *“Implement blanket supplementary feeding for all the under five children, pregnant & lactating women for one/two months.”* SCUK survey of East Badawocho woreda, Hadiya Zone, SNNPR, May 2008.
- Longer-term actions.
E.g. *“Education intervention on maternal and child care in particular and females’ education in general should be enhanced.”* ENCU/EWRD/DRMFSS survey of Gonder Suria woreda, North Gonder Zone Amhara Region, March 2008
- Be directed at a specific agency
E.g. *“Samaritan purse should strengthen its CTC Program to address the problems of severe acute malnutrition; 203 under five severely malnourished children were estimated to be eligible for Program.”* ENCU/EWRD/DRMFSS survey of Alaba Special woreda, maize livelihood zone, SNNPR
- Be directed in general
E.g. *“Efforts should be made by all development actors in improving the use and distribution of ITN to minimize the effects of malarial disease and attention should be*

given for under 5 children and pregnant & lactating mothers.” ENCU/EWRD/DRMFSS survey of Alaba Special woreda, maize livelihood zone, SNNPR

- Recommend direct nutrition interventions
E.g. *“The EOS/TSFP program should be strengthened to treat moderately malnourished children as 579 children were estimated to be eligible to EOS/TSFP and OTP and it should be implemented on monthly bases.”* ENCU/EWRD/DRMFSS survey of Alaba Special woreda, maize livelihood zone, SNNPR
- Recommend interventions indirectly linked with nutritional outcomes
E.g. *“Regional cooperative office should introduce small scale saving and credit scheme in (collaboration) with Amhara credit and saving organisation so as to minimize asset depletion especially in PAs that have been producing surplus produce in order to fill food gaps during drought seasons.”* ENCU survey of Gonder Suria woreda, North Gonder Zone Amhara Region, March 2008

4.2.2 Relationship between GAM and recommendations

Figure 2 relates GAM rates with recommendations to introduce or continue general food distribution. In 11 per cent of surveys where GAM rates fell below 5 per cent, there was a recommendation to introduce or continue general food distribution. In 8 per cent of surveys where GAM rates exceeded 20 per cent general food distribution was not recommended.

Similarly, in 8 per cent of surveys supplementary feeding was recommended though rates of GAM were below 5 per cent while in 8 per cent of surveys no recommendation was made despite GAM rates exceeding 20 per cent. See figure 3.

4.2.3 Calculation of programme requirements

Supplementary and therapeutic feeding requirements were increasingly being calculated over time; 6 per cent in 2003 and reaching 78 per cent by 2008 as table 13 shows.

Table 13: Calculation of therapeutic and supplementary programme requirements

| (% of surveys n=291) | Year of survey | | | | | |
|----------------------|----------------|------|------|------|------|------|
| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Yes | 6.3 | 2.3 | 21.7 | 36.5 | 51.3 | 78.7 |
| No | 92.1 | 97.7 | 73.9 | 59.6 | 48.7 | 17.0 |
| Missing data | 1.6 | - | 4.4 | 3.9 | - | 4.3 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |

Figure 2: Relationship between GAM rate and recommendation to introduce or continue general food distribution

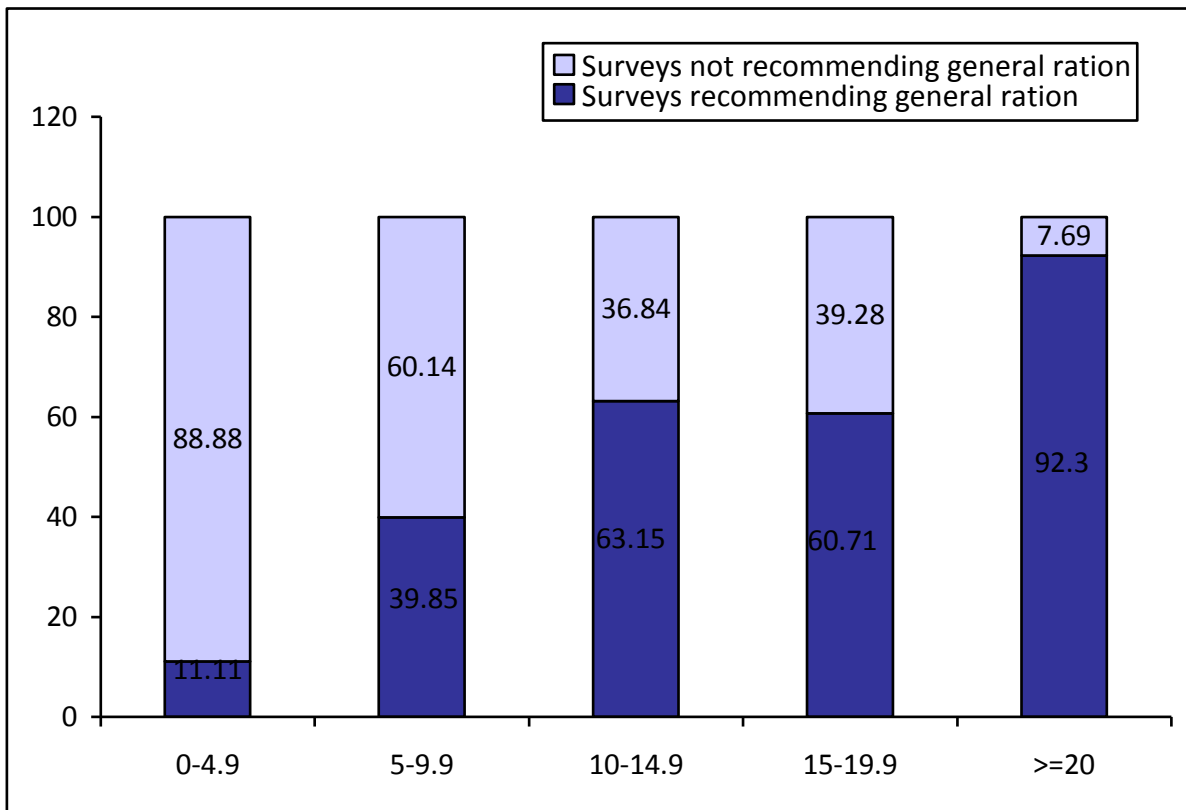
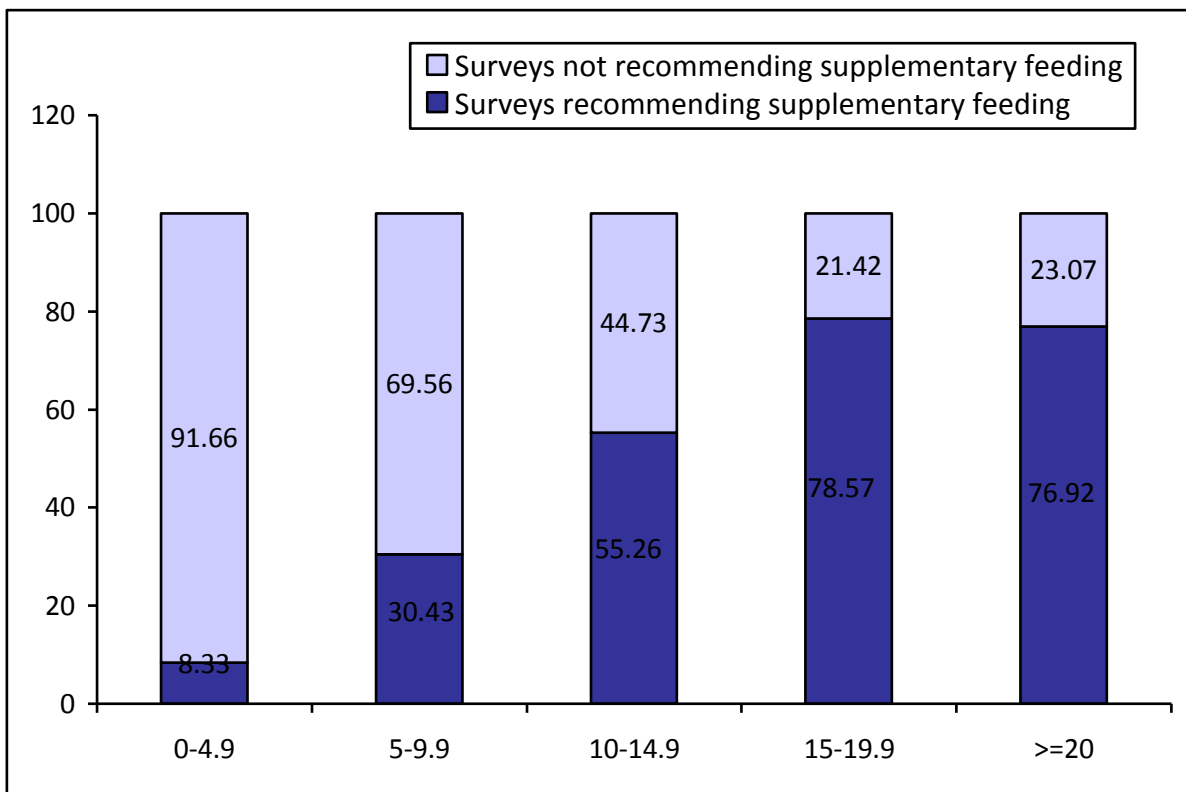


Figure 3: Relationship between GAM rate and recommendation to introduce or continue supplementary feeding



4.3 Use of nutrition survey data

Section 3 of the results presents the findings from interviews with key informants.

4.3.1 Purpose of nutrition surveys

Respondents were asked the reasons why nutrition surveys were carried out in Ethiopia. The reasons given ranged from purposes linked directly to ‘emergency response’ to more general purposes linked to ‘longer-term response’⁸. Most surveys were carried out for more than one overall purpose.

1. **Confirmation and identification of ‘hotspots’:** To confirm the severity of a situation. Nutrition surveys are sometimes done to confirm a problem after a rapid nutrition assessment (see annex 7 for details of rapid nutrition assessments) has shown potentially high levels of acute malnutrition based on MUAC or woreda officials have reported suspicions of high malnutrition which require objective verification. Box 1 provides an example of this kind of confirmation. Nutrition survey data are also used for classification purposes. The ENCU/EWRD/DRMFSS has a system for defining ‘hotspots’ (areas/woredas affected by current food insecurity due to drought, disease, flood, etc.) based on GAM rates and other factors. This is described in annex 8. The ENCU/EWRD/DRMFSS also have a classification system for severity of the situation based on GAM rates plus ‘aggravating’ factors as described in annex 5.

Box 1: Confirmation surveys: SCUK in Amhara, July 2008

A rapid assessment was carried out in *Gidan* woreda in June 2008 at the request of the regional food security authorities. The findings showed a GAM prevalence of over 32% and a tenuous food security situation following the failure of the *belg* rains. The situation was believed to be likely to have a negative impact on the health and nutrition status of the population.

A full-scale nutrition assessment was recommended in order to objectively measure the magnitude of the problem, to generate additional information to be used as a baseline and to determine the most appropriate interventions. This was undertaken in June to July 2008.

| | | |
|-------------------------------|------------------------------|---------------------------|
| June 2008 (Rapid Assessment): | GAM of 32.4 % | SAM of 2.9 % |
| July 2008: (Standard Survey) | GAM of 12.1 % (CI: 9.2-14.9) | SAM of 1.1% (CI: 0.3-1.8) |

The ‘standard’ nutrition survey found a much lower rate of GAM than the rapid assessment. A lot of food security data are described from the ‘standard’ assessment but not compared with data from the rapid assessment.

2. **Advocacy:** To convince donors or government to provide more funds. Nutritional information is highly sensitive in some regions of Ethiopia. For example in Somali region, NGOs have been trying to publicise nutrition survey results in order to highlight the severity of the situation.
3. **Entry and exit:** To provide evidence that either there is a need to intervene or that the situation has stabilised and emergency interventions can be handed over by the NGO to

⁸ Note that ENCU is the Governments *Emergency Nutrition Coordination Unit* and is within the Early Warning Unit/DPPA. It is therefore only involved in emergency assessment and response.

the government. This is particularly relevant for therapeutic care programmes that are opened in times of acute stress for relatively short periods of time (3-6 months)..

4. **Resource requirements and coverage:** To quantify resource requirements e.g. amount of therapeutic foods and to estimate the coverage of existing programmes. This information is useful to Operations Managers' to check on end-point delivery and coverage. For example, findings can help quantify need for CTC and OTP. See box 2.

Box 2: Calculation of CTC requirements: SCUK in Afar, August 2008

The inhabitants of Teru are pastoralists with a nomadic way of life. Following the failure of successive rains, animal food and water was becoming scarce and people were being forced to move long distances in search of water and pasture to sustain their livestock. Around half the livestock were reported to have died. The Regional Government identified and prioritized Teru Woreda as a hotspot that needed quick response and requested SCUK to carry out a nutrition survey.

August 2008: GAM 22.5 % (CI:18.1-27.0) SAM 4.5% (CI:2.3-6.8)
 MUAC <125mm 23.3% MUAC<110mm 5.6%

Using population figures available, it was possible to translate these prevalence data into absolute numbers of children in need of TFP and SFP as shown in the table below:

| Weight For Height | 6-59 months |
|--|--------------|
| Estimated number with SAM (MUAC <110 mm and/or Oedema) | 547(5.6%) |
| Estimated number with MAM (MUAC >=110 mm and <125 mm) | 7,444(23.3%) |

MSF Greece / Holland had already mounted a nutritional response in Teru Woreda, running an OTP programme covering 6 of the 12 Kebeles starting from August 2008. Only 5 children could be physically identified as beneficiaries through bracelets. While this could have been a possible indicator of low programme coverage, it may also be because bracelets had simply been removed

The Woreda is not targeted for the EOS programme but there is a PSNP covering 21,000 people. Between May and August the food ration was only grain (60 kgs per month per household) and only met half the requirements of a family with 8 members.

Based on the findings, it was recommended that the existing OTP/SC programme should be scaled up to a fully fledged CTC (OTP, SFP and SC) programme to increase access and coverage. In addition, a three month blanket SFP should be initiated immediately and GFD with a full ration should be provided to those not covered by the PNSP.

5. **Baseline and monitoring:** To have baseline information at the start of a programme or intervention. Follow-up surveys are used to monitor the situation regularly while interventions are being carried out. See box 3. This is usually done by NGOs who are running programmes in a particular woreda.

Box 3: Monitoring surveys: Concern in Amhara, 2000-2008

Concern has carried out 18 surveys in Dessie Zuria woreda in Amhara Region since October 2000. This is a chronically food insecure area and as the results below suggest, the GAM rates are always slightly higher than the national norm of 10%. The reason for the repeat surveys is to monitor the nutrition and food security situation. Concern's response has mainly been to open and close therapeutic and supplementary feeding programmes. The overlap between confidence intervals (CIs) means that it is not possible to establish whether changes in GAM and SAM are statistically significant or not.

| | % GAM | (CI) | % SAM | (CI) | |
|-----------------|-------|-------------|-------|-------------------|----------------|
| October 2000 | 16.9 | (13.6-20.8) | 2.1 | (1.0-4.0) | |
| March 2001 | 13.0 | (10.1-16.6) | 0.9 | (0.3-2.4) | |
| July 2001 | 13.3 | | 0.7 | (No CIs reported) | |
| February 2002 | 11.6 | (8.8-15.1) | 0.8 | (0.2-2.3) | EMERGENCY YEAR |
| December 2002: | 17.2 | (13.9-21.2) | 3.1 | (1.7-5.3) | EMERGENCY YEAR |
| April 2003: | 15.8 | (12.6-19.6) | 1.1 | (0.4-2.7) | EMERGENCY YEAR |
| July 2003: | 11.7 | (9.4-14.4) | 0.2 | (0.0-0.7) | |
| November 2003: | 12.0 | (9.6-14.7) | 0.5 | (0.1-1.9) | |
| March 2004 | 11.5 | (8.9-14.1) | 0.3 | (0.2-0.8) | |
| August 2004: | 13.8 | (10.8-17.5) | 0.8 | (0.2-2.3) | |
| December 2004: | 9.5 | (7.0-12.8) | 0.3 | (0.0-1.6) | |
| July 2005: | 11.2 | (8.5-14.6) | 0.9 | (0.3-2.4) | |
| January 2006: | 12.4 | (9.5-15.9) | 0.5 | (0.1-1.9) | |
| August 2006: | 12.4 | (9.6-15.1) | 1.2 | (0.4-2.0) | |
| January 2007: | 16.2 | (13.5-18.9) | 1.4 | (0.6-2.2) | |
| September 2007: | 11.9 | (8.8-15.1) | 1.1 | (0.3-1.8) | |
| May 2008: | 12.2 | (9.4-15.0) | 0.5 | (0.0-1.0) | EMERGENCY YEAR |
| December 2008: | 14.4 | (11.7-17.1) | 0.9 | (0.1-1.7) | |

6. **Impact:** To assess the impact of a particular intervention typically CTC/CMAM. It is difficult to use survey data to measure impact. Frequently, impact is inferred but a direct relationship is not shown between intervention and effect. Impact/follow-up assessments are often not carried out in the same season because of donor reporting requirements. For example, OCHA funding cycles are six months so follow up has to be done after 6 months (see box 4 below). In addition, control groups are not used so it is not possible to determine whether any change is due to the intervention or to other factors.

Box 4: Baseline and impact surveys: GOAL in SNNPR, April and December 2008

In early 2008, there was an "acute seasonal food crisis" in Damot Pulassa woreda of SNNPR caused by a lack of *belg* rains and harvest failure. At the same time, the WFP-supported targeted SFP, which the community had over time adopted as a coping strategy, was stopped. In April 2008, a baseline survey was carried out by GOAL. This found a GAM of 17% and recommendations were made to implement CTC, GFD, SFP and to provide seed for vulnerable groups. The impact of the interventions was assessed through a survey implemented in December 2008 which showed a statistically significant decline of GAM to 4.7%.

| | | | | |
|----------------|--------------|----------------|--------------|-----------------|
| April 2008: | GAM 16.7 % | (CI 13.3-20.1) | SAM of 2.9 % | (CI 1.3 - 4.5). |
| December 2008: | GAM of 4.7 % | (CI 2.9 - 6.5) | SAM of 0.7% | (CI 0.0-1.5) |

Despite the normal seasonal fluctuation in GAM levels, which are higher in April during the hunger season, it was concluded that the significant drop in the malnutrition rate showed an improvement in the food security, health and nutrition situation of the population following a good *meher* production and the on-going intervention. No direct comparisons of food security data were reported upon though data were gathered in both surveys on sources of food and coping strategies. Rather, it was concluded that "generally the food security situation of the woreda has improved following the current *meher* harvest." Trend data on the number of admissions and enrolments in the CTC programme were presented, however. These data showed that admissions peaked in June 2008 and then followed a steady decline up to December 2008.

7. **General overview and understanding the causes of malnutrition:** To have a general overview of an area before any response can be mounted. In particular, respondents reported that it was important to understand the potential causes of malnutrition. Respondents mentioned that context data was often needed to interpret nutrition data, especially unexpected results. See box 5.

Box 5: Explanation of unexpected GAM results: GOAL in Oromiya, March 2008

GOAL carried out a nutrition survey in Dhaas woreda of Borena zone in response to a crisis caused by the failure of *hagaya* rains during 2007, combined with late and erratic *gana* rains in 2008. Pastoralism is the dominant livelihood.

The survey identified a severe lack of access to water, both potable and non-potable, so that the majority of women and many children were spending most of the day travelling 5–10 kms to fetch enough water to supply the homestead with the most basic needs. In general the livestock condition was extremely poor and the population’s main source of income and household assets were rapidly deteriorating. Due to huge price inflation of staples in local markets, many people couldn’t afford to buy grain and were being forced to migrate in search of daily labour such as salt/rock extracting. Schools had been forced to close as children were no longer able to attend, as they were required at home to assist with daily water collection.

March 2008: GAM of 12.8 % (CI 9.2-16.3) SAM of 0.0 % (CI 0-0)

Though the GAM was classified as ‘serious’, the SAM rate was negligible despite the apparently dire situation. A possible reason was the unusual coping strategy of prioritising children and infants for preferential feeding. The survey found that the majority (81%) of households gave priority to young children during meal times. Although household food reserves were reportedly low and diet diversity was notably poor, families reportedly tried to ensure that young children received richer foods (if available) and were fed first. The survey team observed that the elderly population were in a very poor condition in terms of their nutritional status, and other high risk groups including pregnant and lactating women were also reported to be suffering. The finding was reflected in the mortality statistics, in that the U5MR was reported to be 0%, whereas the CMR was 0.15% n=4.

4.3.2 Use of ‘contextual’ indicators collected in nutrition surveys

Most respondents recognised that a lot of the data collected in nutrition surveys are never used.

“We do almost nothing with that contextual data.....”

“20% of data can be used for immediate purposes, 30% can be used for long-term programmes and 30-40% of data collected in surveys can never be used”

Results from the information scoring sheet are shown in box 5. Data considered most important for decision-making were:

- Mortality
- Acute Malnutrition
- Current source of food
- Recent Harvest

Data considered least important were:

- BCG coverage
- Distance/time to water
- Access to latrines
- Hygiene habits
- Distance/time to health centre
- Literacy of mother

Box 5: Results of information scoring sheet

A total of 46 interviewees completed the information scoring sheet. They were asked to allocate each type of information with a score from 1 to 10 based on its importance in decision-making about response. A score of 1 meant it was very important. A score of 10 meant it was not important at all. The scores were averaged and rounded to the nearest whole number.

| Information | | Score |
|---------------------------|--|-------------|
| Mortality | CMR and U5MR | 1 |
| Malnutrition | Acute malnutrition in <5s | 1 |
| | Chronic malnutrition in <5s | 4 |
| Morbidity | Sickness in <5s in past 2 weeks | 3 |
| Vaccination | BCG coverage | 5 |
| | Measles coverage | 3 |
| | Vitamin A coverage | 3 |
| WASH | Access to safe water source | 4 |
| | Distance/time to water | 5 |
| | Access to latrines | 5 |
| Health | Hygiene habits | 5 |
| | Distance/time to health clinic | 5 |
| | No. of health services in area | 4 |
| Infant feeding | Exclusive breastfeeding to 6 months | 3 |
| | Age of introduction of weaning foods | 4 |
| | Literacy of mother | 5 |
| | Children given priority at meals | 4 |
| Food security | Current source of food | 2 |
| | Current source of income/cash | 3 |
| | Current main staples consumed | 3 |
| | Source of food in future (next 3 months) | 3 |
| | Recent rainfall | 3 |
| | Recent harvest | 2 |
| | Current livestock conditions and prices | 3 |
| | Current food prices | 3 |
| | Access to relief | 3 |
| | Coping strategies | Wage labour |
| Asset sale | | 3 |
| Livestock sale | | 4 |
| Borrowing food or money | | 4 |
| Reduction in no of meals | | 3 |
| Eating unusual/wild foods | | 3 |
| Migration | | 3 |
| School drop out | | 4 |

4.3.3 Usefulness of recommendations in nutrition surveys

“...no link between the information collected in surveys and action”

Some respondents reported that recommendations in nutrition surveys were generally very weak. They were vague, not time bound, not directed at a particular agency, and no idea was given of *how* improvement should be effected, or whether there would be extra funding.

One view expressed was that ultimately, whether a recommendation got carried out or not depended upon funding. For example CMAM is widely supported in Ethiopia but SFP is not. Therefore there is minimal funding for SFP even if it is recommended. The general view was that whatever was recommended, the response was going to be “*always food*”.

5. Discussion

5.1 Lack of standard methods for collecting ‘contextual’ information

Standard methods were employed to collect malnutrition and mortality information. In only one survey (of 250 surveys with methods fully recorded) were non-standard methods used. This is an enormous improvement since 2000 when only six surveys (9%) of 125 nutrition surveys conducted during the drought of 1999 to 2000 provided usefully representative data when evaluated against five criteria for the conduct of statistically valid cross-sectional cluster surveys.⁹ The criteria were: random sampling of communities in proportion to their size followed by random sampling of households to identify children; a sample of > 25 communities, >20 children per community and >500 children aged 6 – 59 months; and measurements of weight and height. By 2008, 100% of surveys were using standard methods to collect malnutrition and mortality information.

Standard methods were not employed to collect ‘contextual’ information. A variety of tools were used which were not standardised and differed in terms of sampling procedures and therefore sample size, methods for data collection and indicators collected.

The new 2008 ENCU/EWRD/DRMFSS interim guidelines based on SMART methods provide detailed guidance on sampling and data collection methods for anthropometric and mortality data.

Very little detail is given about contextual data collection, so those doing assessments have to rely on the 2002 ENCU/EWRD/DRMFSS guidelines. The 2002 ENCU guidelines provide broad but not specific guidance. It is therefore not surprising that agencies adopt a variety of different methods to collect contextual information

⁹ Spiegel, PB, Salama, P, Maloney, S, van der Veen, A (2004). Quality of malnutrition assessment surveys conducted during famine in Ethiopia. *JAMA*; **292**: 613-618.

The three main methods of collecting contextual data were household questionnaires, community questionnaires (or focus group discussions) and key informant interviews (usually with woreda government staff). While each of these methods has advantages and disadvantages, it is beyond the remit of this analysis to draw conclusions on which is the best method.

Standard methods for contextual data collection would help to ensure that results were comparable while clear recommendations on sample sizes required for particular types of context data could lead to considerable saving of resources.

5.2 Large numbers of contextual indicators collected

A very large number of contextual indicators are collected in each nutrition survey. Forty six indicators were commonly collected and the number of questions asked usually exceeded 50. The total number of data points collected was probably on average close to 100. In fact, contextual data were selectively reported upon as discussed in more detail in section 5.4.5 below.

While it was not possible to measure the time required to collect, record, analyse and report the large number of contextual indicators collected, it is likely to take days. This time is wasted if contextual indicators are not used.

A smaller number of useful contextual indicators would reduce time and costs.

5.3 Lack of standard contextual indicators

Four contextual indicators were defined in a consistently uniform manner and collected in the majority of nutrition surveys in Ethiopia. These indicators were:

- Vitamin A supplementation coverage (caretaker report that child had received supplement in last six months)
- BCG vaccination coverage (scar present)
- Measles vaccination coverage (card only; card and/or caretaker report)
- Child sickness in last two weeks (caretaker report)

For the remaining indicators, however, there was practically no consistency in which indicators were collected, definitions of indicators, cut-off points or methods of data collection.

Methods and results were not described or presented in any standard way in reports. It was therefore difficult to get an objective grasp on which indicators were collected, how they were defined and the methods used to collect them because of the lack of standardisation. Percentages were frequently quoted in the results, discussion or conclusions section, or even in recommendations, without explanation of how the figures had been derived while tables of percentages were sometimes compiled with no discussion of their meaning or inferences. .

There is as yet, no agreement amongst stakeholders in the emergency nutrition sector (either within Ethiopia or internationally) as to which contextual indicators should be collected. Respondents who filled out the indicator scoring sheet were almost unanimous in agreeing

that mortality and acute malnutrition were key indicators that should always be collected in nutrition surveys. There was little agreement about which other indicators were essential to collect and which weren't. Judgements were made using different criteria. For example, some indicators were given a low rank because they were judged to be unreliable, others because they didn't change much over time, others because they weren't going to have an impact on programming decisions in the short-term.

The result of these findings is that it isn't possible to compare survey findings (over time or between different places).

5.4 Problems of interpreting contextual indicators

Ideally, contextual data should provide an indication of the following:

- *Severity* of the current situation i.e. whether the nutrition situation (as defined by levels of GAM) is 'critical' or 'normal'. The judgement on severity requires information on seasonality and aggravating factors.
- *Future trends* i.e. is the situation likely to improve, deteriorate or remain the same in the short term. Previous trend data is important for this type of judgement.
- *Programme coverage* i.e. are programmes functioning in the area and are beneficiaries receiving services (e.g. food aid, vaccination, vitamin A supplementation, EOS, CMAM etc.)? Gaps and failures in delivery can then be detected.
- *Causes of malnutrition* This analysis has been unable to look at association between GAM and contextual indicators across surveys. It is anyway, probably impossible to identify clear associations between causal factors and malnutrition as an outcome, though it may be possible to identify causal factors crudely. For example, if there is an unexpectedly high malnutrition rate for that season and food aid delivery has failed plus there has been no harvest, food prices are increased etc. but health status is the same, then food security could be a major causal factor. Baseline and trend data are important for interpretation.
- *Coping strategies and capacity of population* Where rates of malnutrition are within normal bounds or not of concern, contextual data can indicate how a population is responding to stress. For example, are coping strategies and behaviour adversely affecting the population in economic, social or cultural terms and how sustainable are these strategies?

Ultimately the analysis should lead to clear conclusions and recommendations for action. Currently, however, the interpretation of contextual data is largely subjective and depends on the views of those carrying out the survey. A number of problems in interpretation of contextual information were identified.

5.4.1 Lack of baseline or comparative data

Baseline or comparative data for a particular indicator were rarely reported. No baselines for contextual indicators are included in the 2002 or 2008 guidelines. This makes it impossible to know whether the situation is 'normal', better or worse than 'normal'. It may be difficult to set baselines at a national level because there is so much divergence at the regional and woreda level. However, there may well be some disaggregated baseline data available which have been collected by other sectors. For example, livelihoods baseline data are being developed for every livelihood zone in the country by the Livelihoods Integration Unit (LIU),

within the national Early Warning Department of the Ministry of Agriculture and Rural Development (MOARD). This information could provide comparative datasets.

5.4.2 Lack of trend data

Trend data for contextual indicators are not usually presented in nutrition survey reports. The 2002 guidelines do not provide sources for potential trend data available from other sectors. Trend data for contextual data would provide some kind of benchmark to be able to interpret data. In particular, it would provide information on normal seasonal changes.

5.4.3 Thresholds for response

In the 2002 guidelines, there are no cut off points or thresholds for the contextual data discussed above for which some kind of response is recommended. The only guidance on thresholds is linked to ‘aggravating factors’. However, there are no clear definitions of aggravating factors given or cut-off points for response for these factors. They are therefore of little use in their present format for decision-making.

There are, however, international initiatives where thresholds for response are being developed. One such initiative is the Integrated Phase Classification (IPC) approach¹⁰ which is currently being introduced into Ethiopia.

5.4.4 Failure to collect essential information for interpretation

Background information essential for interpretation was often not reported. For example, seasonality was not mentioned in 32 per cent of surveys although this is crucial for interpretation of acute malnutrition figures. According to the ENCU/EWRD/DRMFSS guidelines 2008, in order to be able to interpret correctly the malnutrition rates from a survey, it is necessary to consider the following factors:

- Determine seasonal variations.
- Compare the results to previous surveys in the same area or livelihood zone at the same time of year.
- Using the livelihood analysis framework, explore how the levels of malnutrition can be explained by a change in the livelihood of the population compared to the baseline livelihood zone profile.
- Interpret all results in their cultural, socio-economic and agro-ecological context, together with other supporting data such as indicators on health, food supply, markets, etc
- Analyse mortality rates in the survey area.
- Look at what intervention are already being implemented in the survey area.

These essential pieces of information were frequently not mentioned in reports at all or mentioned in passing only. There is a need to routinely collect and present essential background information in a standard way.

5.4.5 Non-conformity in report formats

There is no consistency in the way that contextual data are presented in reports. While standard tables are always included for malnutrition and mortality data, this is not so for

¹⁰ The IPC is a standardised scale that integrates food security, nutrition, livelihood and other contextual information into a clear statement about the nature and severity of a crisis and includes implications for strategic response. It relies on secondary data and is primarily a tool that allows for consensus building and comparison of food security situations between geographic or administrative areas.

contextual data. Much of the data are not reported upon at all and the decision to report on some data but not others leaves room for bias. It is impossible to easily compare reports and determine whether there are differences between contextual indicators.

Interpretation of data could be greatly improved if clear guidance was provided on how to present and interpret context information. This would stipulate a minimum set of background information that should always be presented (e.g. seasonality) and a set reporting format including tables for contextual indicators where results are presented in a uniform way. Providing baseline data for contextual indicators would also aid interpretation. Clearly, guidance of this type is only useful when contextual indicators and methods of their collection have been agreed upon.

5.5 Importance of aggravating factors in identification of ‘hot spots’

A major purpose for conducting surveys is to identify ‘hot spot’ woredas. The present system sets three priorities based on the following criteria set out in annex 8.

At present the identification of hotspots is based on largely subjective indicators. The sources of information for the indicators are UN sub-office reports, Early Warning information from Regional Agriculture and Rural Development Bureaus, and Regional ENCU/EWRD/DRMFSS reports. To these are added objective indicators from nutrition surveys results. Classification and ranking is done collaboratively by the Central and Regional MOARD staff and through triangulation of all available information (ENCU/EWRD/DRMFSS personal communication 2009).

Given that the majority of nutrition surveys find similar rates of malnutrition (nearly half the surveys found a GAM rate between 5 and 10 per cent while three quarters of GAMs fell between 5 and 15 per cent), the availability of accurate information on aggravating factors is crucial. Data on aggravating factors are frequently not collected at all, however.

It would be useful to develop a core set of contextual indicators that can provide more objective information on aggravating factors. This information could be used in the decision-making process in relation to ‘hotspots’ and ensure greater accountability and reduce bias.

5.6 Contextual indicators not used for taking decisions

It is clear that a huge amount of contextual information is collected but a lot of it is never used.

5.6.1 Time and cost

The collection, coding, analysis and reporting of contextual data take time. As most NGOs do not keep a survey team, staff who could be used for other activities are employed doing surveys instead. Furthermore, additional data collection has a cost. The average nutrition survey costs around \$10,000. A total of 509 surveys were carried out over a 9 year period in Ethiopia according to the ENCU/EWRD/DRMFSS. This averages out at over one per week at the cost of more than half million US\$ per year.

It is essential that time and money is not wasted on collecting information which is not used for decision-making.

5.7 Lack of linkage between survey results and action

While there was some relationship between survey results and subsequent interventions, there were some odd exceptions. For example, even when GAM levels were low, calls for GFD were sometimes recommended. While there was a close relationship between recommending the general ration when GAM rates were low (below 5 per cent) and high (above 20 per cent), there was less of a relationship between the extremes. In fact, if GAM fell between 5 and 10 per cent, there was nearly a 40 per cent likelihood that general rations would be recommended, while between 10 and 20 per cent, it rose to over 60 per cent likelihood.

There were similar findings for supplementary feeding. The ENCU/EWRD/DRMFSS classification recommends that selective feeding is only considered when GAM rates are 10 per cent or over plus aggravating factors. However, in nearly 40 per cent of surveys where GAM levels were between 5 and 10 per cent, supplementary feeding was recommended.

In general, recommendations are weak in nutrition survey reports. Guidance on how to write SMART recommendations that link directly with results is sorely needed.

5.8 Importance of specifying the purpose of nutrition surveys

The underlying reasons (as opposed to the specific objectives) for carrying out nutrition surveys are often not explicit and there is a lack of clarity as to what a survey can or cannot achieve. For example, nutrition surveys are currently not designed to measure impact or coverage of interventions and are unable to identify causes of malnutrition though they may provide a crude indication of associated factors. Some nutrition surveys have purely short-term objectives while others are done for long-term purposes.

6. The Way Forward

6.1 Objectives of nutrition surveys

The underlying objectives (as opposed to the specific objectives) of carrying out nutrition surveys are often not explicit and there is a lack of clarity as to what a survey can or cannot achieve. Greater clarity of the overall purposes will help decisions about what information to collect. For example, if a survey is purely to monitor nutritional status, then it may only be necessary to collect anthropometric data. If the objective is as a pre-programming baseline, a large number of contextual indicators may be collected which can be measured as a follow up at a later date.

- *ENCU/EWRD/DRMFSS guidelines need to include specific guidance on setting survey objectives. This would clarify that there are different purposes for doing surveys, that these purposes will determine what type of context data to collect, and that the underlying purpose needs to be explicitly stated in the survey report.*

6.2 Robust methods for collecting contextual information

The methods currently used to collect a standardised set of contextual indicators require standard methods of collection.

- *The ENCU/EWRD/DRMFSS together with partners need to develop standard and robust methods for collection of contextual data.*

6.3 Core indicators for rapid emergency assessment

A large number of non-standardised contextual indicators are collected currently. It is important that a set of indicators for contextual data are agreed for Ethiopia, which are defined and collected in the same way. The frequency and rapid onset of crises in Ethiopia require simple methods for determining resource allocation. The ENCU classification of severity and categorisation of ‘hotspot’ woredas could be improved if a minimum core set of contextual indicators could be identified and uniformly collected in all nutrition surveys. The purpose of the indicators would not be to help to understand the causes of malnutrition, but to measure the general severity of a situation or crisis. The present system of rapid nutrition assessments is non-representative and uses MUAC, so cannot be compared to nutrition survey data. Consideration could be given to replacing the rapid nutrition assessments with rapid surveys or rapid emergency assessments that use SMART methods to collect anthropometric and mortality data plus a standard set of core contextual key parameters that reflect aggravating factors.

- *The ENCU/EWRD/DRMFSS together with partners need to identify a small set of core context indicators that can be used for classification of woredas and which help in decision-making*

6.4 Base-line data for comparison

Baseline data are essential for interpretation. There are probably Ethiopia-specific baseline data for at least some of the contextual indicators currently collected in standard nutrition surveys. These baselines may be by geographical area (e.g. access to safe water by province through the DHSS) or livelihood-specific (e.g. HEA baseline data). Baseline data may also be available from international sources e.g. WHO standards, Sphere standards. Baseline data will certainly be needed for the core set of contextual indicators used for classification of woredas.

- *The ENCU together with partners need to identify baseline data for contextual indicators based on Ethiopian and international standards.*

6.5 Linkage between results and recommendations

The linkage between nutrition survey results, the recommendations given and response is often tenuous. There were few examples where it was possible to explicitly link a response with the results of a survey and recommendations were frequently vague and not useful. Improving the reporting format and guidance on presentation of contextual results and recommendations would clarify the link.

- *ENCU guidelines need to provide a set reporting format and provide guidance on presentation of ‘contextual’ results and recommendations.*

6.6 Use of contextual data

Much of the contextual data that is collected is not used. There is a “*fog of information*” that doesn’t actually help to clarify or understand the situation. Only contextual data that is relevant should be collected. It is therefore important that survey objectives are explicit.

- *Agencies conducting nutrition surveys must ensure that contextual data that will not be used are not be collected.*

6.7 Thresholds for response

For some responses (e.g. opening of CMAM), it may be possible to set thresholds based on GAM and contextual data. The IPC may be a useful guide for setting these thresholds.

- *The ENCU and partners should identify responses for which thresholds could be set.*

6.8 Nutrition information systems

Three major data-gathering tools are available to assess nutrition in populations in crisis:

- Rapid nutrition assessments
- Population-based surveys
- Nutrition surveillance

In Ethiopia, population-based surveys have come to predominant. There is no functioning nutrition surveillance system¹¹ and rapid nutrition assessments have only become acceptable within the last few years (the methodology used in Rapid Assessments may require refinement (see annex 7 for details). This means that population-based surveys have been expected to fulfil the functions of all three forms of data-gathering tools.

Given the recurring nature of emergencies within Ethiopia and the fact that the Integrated Food Security Phase Classification (IPC) is being introduced, this may be a good time to review the need for a more comprehensive nutrition information system which includes all three forms of nutrition assessment.

- *Review nutrition information systems within Ethiopia; the experience of RNAs and the potential role for nutrition surveillance.*

¹¹ ACF is carrying out a form of nutrition surveillance in Somali Region using the lot quality assurance sampling (LQAS) approach. Weight for height and MUAC measurements are taken on a random sample of 6 children in 33 clusters (N=198) in one woreda every month. The clusters are health centre catchment areas. LQAS has been developed to estimate the coverage of selective feeding programmes and has been found to be quicker and more easily implemented than traditional cluster sampling methods. Furthermore, coverage estimates are likely to be more precise.

Annex 1: Key informants interviewed

Addis Ababa

| | | |
|------------------------|-------------------|--|
| Muluken Worihum | DMFSS/EW | Deputy Head |
| Jane Macaskill | LIU | Chief of Party |
| Zewdu Abera | EW/DMFSS | Early Warning Expert |
| Muluken Worihum | EW/DMFSS | Nutritionist |
| Melkamnesh Alemu | DFID | Livelihoods Advisor |
| Alberto Pasini | FAO | Emergency & Rehabilitation Coordinator |
| Nigist Biru | FEWSNET | Country Representative |
| Leah Finnegan | OCHA | Associate Information Officer |
| Senait Arefaine | OCHA | Associate Information Officer |
| Mohammed Siryon | OCHA | Head of Field Unit |
| Ezra Tefera | UNICEF | Nutrition Officer |
| Gugsa Abate | UNICEF/ENCU | Nutrition Officer |
| Elliot Vhurumuku | WFP | Head of VAM Unit |
| Tayech Yimer | WFP | Nutrition Unit |
| Gloria Kusemererwa | WFP | Nutrition Unit |
| Richard Quinby | USAID/OFDA | Senior Programme Officer |
| Million Belihu | USAID/OFDA | Programme Monitor |
| Amir Hossein Yarparvar | ACF | Country Programme Coordinator |
| Mesfin Mariam | ADRA | Programme Director |
| Samuel Tadesse | CARE | Emergency Operations Manager |
| Shishay Tsadik | CARE | Nutrition Advisor |
| Emily Mates | Concern | Country Director |
| Anne Berton-Rafael | CRS | Health Program Manager |
| Hailu Sitota Siniour | GOAL | Survey & Assessment Coordinator |
| Dinkineh Aspan | GOAL | Programme Manager |
| Zeno Mhanga | IMC | Nutritionist |
| Marefih Mamo | IMC | Nurse |
| Sara Bauler | Samaritan's Purse | Health Advisor |
| Biniyam Addis | Samaritan's Purse | Programme Director |
| Themba Nduma | SCUK | Nutrition Advisor |
| Asmelash Rezene | SCUK | Nutritional Assessment Team |
| Philip Upson | SCUK | Operations Manager |
| Alem Greling | SCUS | CTC Technical Advisor |
| Girma Akalu | SCUS | Nutrition Unit Head |
| Gedion Teferra | World Vision | Health and Nutrition Manager |
| Mesfin Beyero | World Vision | Nutrition Advisor |
| Girma Akala | SCUS | Head Nutrition Unit |
| Alem Greiling | SCUS | Nutrition Unit |
| Gideon | WVE | Health and Nutrition Manager |
| Dr Mesfin | WVE | Nutrition Advisor |
| Tesfasion | WVE | Early Warning Coordinator |

Amhara Region

| | | |
|-------------------|--------------|--|
| Aderaw Dagneu | DPPA/FS | Head |
| Melkamu Gashu | | |
| Addis Alemu | ENCU | Previously employed |
| Getenew | SCUK | |
| Wasse Arega | World Vision | Health, Nutrition and HIV/AIDS Officer |
| Mussie Assefaw | UNICEF | Nutrition Officer |
| Selamawit Teshome | UNICEF | Nutrition Project Officer |

SNNP Region

| | | |
|----------------------|-----------|--|
| Desalegn Tessema | DPPA/FS | Head of Early Warning and Response |
| Mesario Hillo | WVE | Health and HIV/AIDS Response officer |
| Tigist Gebre Michael | WVE | CTC Coordinator |
| Dr Mulligata | RHB | Child Health and Nutrition Team Leader |
| Getinet Babu | Sam Purse | National Nutrition Advisor |
| Jamal Seid | GOAL | Nutrition Programme Coordinator |
| Asfaw | ACF | Head of Monitoring and Survey Projects |
| Abirhnu | ACF | Nutrition Programme Manager |
| Dr Tesfaye | SCUS | Sub-Office Manager |
| Yohannes Gebre | WFP | VAM Unit |
| Mestewat G/Kidan | CONCERN | CTC Senior Officer |
| Abrham Asha | CONCERN | Programme Coordinator |
| Danielle Hagdu | IMC | Site Manager |
| Gashaw Ganebo | IMC | CTC Coordinator |
| Markos Paulos | IMC | EWS Trainer |
| Abraham Tadesse | EWS | Food Security Coordinator |

Annex 2: Semi-structured interview questions

1. When/why does your agency commission nutrition surveys?
2. For what purposes does your agency use nutrition survey data (needs assessment, programme design, monitoring or evaluation, advocacy)?
3. Has your agency adopted a particular methodology for collecting contextual data (agency protocols, standard questionnaires)?
4. Please describe the methodology that your agency uses to collect contextual data.
 - Sampling
 - Tools (questionnaires, focus group discussions, key interviews, qualitative methods)
5. What types of interventions are available to your agency in response to the results of nutrition surveys?
6. When you look at the results of a nutrition survey report, which types of information will trigger a response by your agency?

ASK INTERVIEWEE TO COMPLETE INFORMATION SCORING SHEETS 1 AND 2
(see below)

7. Survey results can be presented in a number of different ways. For example, as %s in tables, descriptively within text. In what format do you find the presentation of results most useful?
8. How do you interpret data? (trends, comparison with baselines, reference points, perception of chronicity)?
9. In your view what are the major weaknesses in relation to contextual data collected in the nutrition surveys?
 - Methodology
 - Analysis of results
 - Interpretation of results (conclusions)
 - Presentation of recommendations
10. What is the decision-making process of your organisation?

Annex 3: Information scoring sheet

The list of information (below) is commonly collected in nutrition surveys. Please allocate each type of information with a score from 1 to 10 based on its importance in your decision-making about response. A score of 10 means it is very important. A score of 1 means it is not important at all.

| Information | | Score |
|-------------------|--|-------|
| Mortality | CMR and U5MR | |
| Malnutrition | Acute malnutrition in <5s | |
| | Chronic malnutrition in <5s | |
| Morbidity | Sickness in <5s in past 2 weeks | |
| Vaccination | BCG coverage | |
| | Measles coverage | |
| | Vitamin A coverage | |
| WASH | Access to safe water source | |
| | Distance/time to water | |
| | Access to latrines | |
| Health | Hygiene habits | |
| | Distance/time to health clinic | |
| | No. of health services in area | |
| Infant feeding | Exclusive breastfeeding to 6 months | |
| | Age of introduction of weaning foods | |
| | Literacy of mother | |
| | Children given priority at meals | |
| Food security | Current source of food | |
| | Current source of income/cash | |
| | Current main staples consumed | |
| | Source of food in future (next 3 months) | |
| | Recent rainfall | |
| | Recent harvest | |
| | Current livestock conditions and prices | |
| | Current food prices | |
| | Access to relief | |
| Coping strategies | Wage labour | |
| | Asset sale | |
| | Livestock sale | |
| | Borrowing food or money | |
| | Reduction in no of meals | |
| | Eating unusual/wild foods | |
| | Migration | |
| | School drop out | |

Annex 4: Correlations between GAM and contextual variables

The dependent variable GAM was correlated with 93 independent contextual variables. It should be emphasised that this analysis was of the database of up to 291 pairs of data points, each one from a separate survey. This is different from a correlations analysis of variables from a single survey where each pair of data points have been collected in the same sample.

This analysis looks at whether the variance in the prevalence of GAM, which ranges from 1.1 to 34 per cent, can be explained by the variance in another, possibly "explanatory" variable. The "explanation" is only statistical and may or may not be actually contributory or causative.

While 13 statistical significant correlations (14 per cent) were found, there are a number of problems in interpreting the findings.

Firstly, 1 in every 1,000 of the correlations will be statistically significant at P value <0.0001 by chance alone. This means that some of the correlations may not be "real" but simply a statistical "reality".

Secondly, the smaller the sample size, the more difficult it is to find a correlation. Only a small number of surveys collected information on some contextual variables. It will be very difficult to show a statistically significant correlation in these small samples.

Thirdly, the correlations tell us nothing about causation. For example, prevalence of a BCG scar was correlated negatively with GAM i.e. a high percentage of children without a scar was associated with high rates of GAM. It does not follow that not being vaccinated for BCG means a child is more likely to become wasted, simply that there was an association. The association may anyway be due to a third factor. For example, lack of access to health services may be a risk factor for both wasting and failure to get vaccinated. This is speculative, however.

Fourthly, the lack of standards in methods and definitions of contextual indicators means that the database is flawed. A variable such as "main source of food in the future: food aid" was defined in various ways in different surveys. In some surveys no time in the future was specified, in others it was specified as one month, in others three months etc. Thus, the variable was not measuring the same thing across surveys.

While it would have been very useful to have been able to look at association between GAM and contextual indicators across surveys, the lack of robustness of contextual data in the dataset precluded a thorough analysis.

Annex 5: Classification of malnutrition, alert stages and nutritional interventions (taken from ENCU nutrition assessment guidelines 2002, also reported in 2008 interim guidelines)

| Indicators | Stage of alert | Nutritional interventions |
|---|---|---|
| GAM 2-9 % | Typical for a chronically malnourished population | |
| GAM 10-14 % GAM 5-9 % <i>and</i> Aggravating factors | POOR <i>Food insecurity</i> | <ul style="list-style-type: none"> • Advocate for food security interventions • Continue to monitor the situation • Advocate for support to medical facilities (to treat severe malnutrition) if necessary |
| GAM 15-19 % GAM 10-14 % <i>and</i> Aggravating factors | SERIOUS <i>Food crisis</i> | <ul style="list-style-type: none"> • Ensure the population has adequate access to food • Implement selective feeding programmes if necessary and practical • Control epidemics and primary communicable diseases through provision of adequate health care (especially measles vaccination and vitamin A distribution) and sufficient water and sanitation • As soon as the situation is under control, focus on recovering livelihoods |
| GAM >20 % <i>And/or</i> SAM >=5 % GAM 15-19 % <i>And</i> Aggravating factors | CRITICAL <i>Famine</i> | <ul style="list-style-type: none"> • Ensure adequate GFD • Provide an increased general ration if necessary • Implement selective feeding programmes: TFP, SFP and blanket feeding programmes if necessary • Control epidemics and primary communicable diseases through provision of adequate health care and sufficient water and sanitation |

Potential aggravating factors include:

2. Poor household food availability and accessibility (due to a poor harvest, poor pasture conditions, high market prices, insecurity, or inadequate general distribution in a camp setting, etc.)
3. Epidemics of measles, cholera, shigella and other important communicable diseases
4. Inadequate shelter and severe cold
5. Low levels of measles vaccination and vitamin A supplementation
6. Inadequate safe water supplies (quality and quantity) and sanitation

Annex 6: Examples of common recommendations given in survey reports

| % of surveys with recommendation (n=291) | |
|--|---|
| Vaccination (71.1%) | <ul style="list-style-type: none"> - <i>BCG vaccination and measles by card is very low compared with the national reference this indicates that the routine EPI program is poor, requiring strengthening to increase the coverage.</i> - <i>Effort should be made by the woreda health office to improve the vitamin A supplementation, BCG, measles coverage and retention of immunization cards.</i> - <i>WOH and EOS should strengthen and expand EPI in the woreda. The EOS program should continue assisting the moderately malnourished children and in improving the coverage of measles immunization and vitamin A supplementation and de- worming.</i> - <i>The WOH should further strengthen EPI to reduce vaccine preventable childhood diseases.</i> - <i>Effort should be made by the woreda health office to improve the vitamin A supplementation, BCG, measles coverage and retention of immunization cards.</i> |
| Health general (70.8%) | <ul style="list-style-type: none"> - <i>MoH together with the assistance of an NGO must support primary healthcare provision</i> - <i>Public health care activities must be strengthened at the kebele level with capacity building initiatives.</i> - <i>All organizations working within the woreda should continue to strengthen their health, water and sanitation related activities, reproductive health and supporting primary health care provision.</i> - <i>Advocacy and support provided to the zonal health office to ensure the provision of essential drugs are made available to the woreda in a timely fashion</i> - <i>Access to health care in the Woreda is limited, and is low compared to the Government's National Health Policy therefore the service need to be improved to ensure full coverage.</i> - <i>The woreda health facilities are still low compared to the Government's National Health Policy. Therefore, construction of additional health facilities and equip with the essential drugs, related supplies and professionals help for providing better health care services for the population</i> - <i>All organizations working in the woreda should put their concerted efforts to increase access by the population to health service including reproductive health, water and sanitation services. The regional health bureau (RHB) should also to see to increased staffing in order to achieve same.</i> |
| WASH (66.7%) | <ul style="list-style-type: none"> - <i>NGO's and respective government organizations should give attention in construction of new water structures and maintenance of old structures in order to improve access to a safe water supply.</i> - <i>Developmental projects should be geared towards improving community's</i> |

| | |
|---|--|
| | <p><i>livelihood and improving safe drinking water</i></p> <ul style="list-style-type: none"> - <i>Advocate for maintaining better water sanitation practices at community and household level. More than 35% of the communities are using water from unprotected sources. Construction and strengthening of potable water supply system is important in the woreda.</i> - <i>There is a need to improve sanitation and personal hygiene as well as the public health situation in order to prevent the high level of malnutrition in children.</i> - <i>NGO's and respective government organizations should give attention in construction of new water structures in order to improve access to a safe water supply.</i> - <i>Need to also construct additional safe water sources to increase access to clean water.</i> |
| <p>Monitor nutrition and/or food security situation (58.8%)</p> | <ul style="list-style-type: none"> - <i>Closely monitor food security situation at the household level in the coming three months and identify further deterioration of the situation.</i> - <i>Both the zone DPPD desk and the woreda DPP desk should monitor the progress of the food security status of the community in the coming three months.</i> - <i>A repeat survey using a comparable methodology should be conducted in November/December 2008 to assess the nutrition and the food security status of the community.</i> - <i>The current prevalence of GAM of 7.7% could be aggravated due to the threatened food security situation. Hence it's advised that all agencies and organisations operating in the area needs to monitor closely the situation so as to prevent further nutrition deterioration in the area.</i> - <i>The coming belg season is the most important for belg crop performance and it determines the future food security situation. Therefore, monitoring the progress and performance of the coming belg rains is highly needed.</i> |

Annex 7: Rapid Nutrition Assessments in Ethiopia

The ENCU has developed guidelines on how to do rapid nutrition assessments (RNAs) in Ethiopia¹². RNAs are carried out when information generated by EWSs show a decline in food security and/or unusual increase in mortality, malnutrition, disease outbreak and/or displacement of people. RNAs are frequently followed up by nutrition surveys in order to verify the severity and size of the problem.

Rapid Nutrition Assessments in their current form have the following limitations:

1. MUAC alone is used to assess GAM. Nutrition surveys, however, are reporting weight for height (specified by SMART). Therefore it is not possible to compare GAM results from RNAs and nutrition surveys.
2. RNAs purposively select the worst off kebeles thereby over-estimating the GAM level of the woreda. Nevertheless the GAM from RNAs are referred to as ‘proxy GAMS’ which suggests that they are representative of the woreda. This gives an inaccurate impression.
3. RNAs involve anthropometric measurements, key informant interviews, focus group discussions and transect walks. This is a lot of work and it is arguable how ‘rapid’ this is in terms of both data collection and data analysis.

¹² ENCU/DPPA. Guiding Principles for Rapid Nutrition Assessments. March 2006.

Annex 8: Criteria to identify hotspot woredas¹³

First Priority:

- Very high food insecurity
- Global acute malnutrition prevalence 15 – 19 per cent and aggravating factors (recent nutrition survey results)
- Very high water shortage for humans and livestock
- High number of children in TFPs
- High population migration in search of labour

Second Priority:

- High food insecurity
- Global acute malnutrition prevalence 10 – 14 per cent and aggravating factors (recent nutrition survey results)
- High water shortage for humans and livestock
- Children in TFPs

Third Priority:

- Compared to second priority, better food security
- Global acute malnutrition prevalence 5 – 9 per cent and aggravating factors (recent nutrition survey results)

¹³ ENCU/EWRD/DRMFSS personal communication February 2009