



SPECIAL REPORT Beled-Xaawo¹, Somalia

Urban Food Security Assessment

October 2014

EXECUTIVE SUMMARY

Urban food security monitoring in Somalia began in 2008. While food security monitoring in rural areas was widespread, conflict and violence in much of the southern and central regions of Somalia, combined with the global food price crisis and high fuel prices highlighted an information gap and severe monitoring constraints for urban food security monitoring. To explore ways of improving urban food security monitoring, FEWS NET Somalia and partners conducted an urban food security survey in Beled-Xaawo in April 2014.

The purpose of the survey was to verify assumptions regarding the importance of several key indicators for urban food security monitoring, including, but not limited to, the importance of key expenditure items, particularly sorghum and water, and the most significant income sources. The lessons learned should inform strategies to address deficiencies in recent urban food security monitoring. Other objectives of the study included improving understanding the nutritional status of children and household characteristics correlated with acute food insecurity.

Key findings and lessons learned from the survey included:

- Acute food insecurity was not significant in Beled-Xaawo in April 2014.
- Imported rice and wheat flour rather than locally-produced cereals were found to be the main staples in Beled-Xaawo town. This means that the current, sorghum-based minimum expenditure basket is not applicable for the town. Further research on main staples in other urban areas is recommended to see if this issue is particular to Beled-Xaawo or if it is more generalized, likely in other urban areas some distance from major sorghum-producing areas.
- Casual labor, such as construction work and portage, and charcoal and firewood sales were confirmed to be important sources of income. However, petty trade, particularly in small livestock and livestock products, as well as the sale of own-produced livestock and livestock products were significantly more important than the sum of other income sources previously assumed to be the key. Remittances are also an important source of income for some households. Although Beled-Xaawo's location at the intersection of the borders of Ethiopia, Kenya, and Somalia may make livestock trade and remittances exceptional in this regard, the information suggests that assumptions regarding income sources in other urban areas need to be validated for effective food security monitoring.
- Water purchases accounted for 8-9 percent of household expenditures. This suggests that the minimum expenditure basket should be revised to more accurately take this major expense into account.
- The Kenyan shilling was found to be the major currency in use in Beled-Xaawo town, attributable to the proximity of the Mandera and northeastern Kenya and the high volume of cross-border trade. Economic shifts and exchange rates in Kenya are, therefore, important to Beled-Xaawo's market and economy.

The survey results suggest a number of early warning indicators for monitoring urban food security in Beled-Xaawo (Table 1). These parameters and their respective indicators may also be relevant for other urban centers of southern Somalia, subject to further research.

¹ Beled-Xaawo is the official Somali spelling. Common, alternative spellings include Belet-hawa, Buled-hawa, etc.

Table 1. Key parameters and indicative food security monitoring indicators for Beled-Xaawo

SN	Parameter	Indicators
1	Trade and commodity flows	Volume of trade, functioning of markets, changes of trade routes and restrictions of trade movement
2	Remittances	Remittance volume & number of households receiving remittances
3	Firewood, charcoal and water sales	Supply and prices
4	Wage labor	Supply and prices
5	Livestock and livestock product sales	Supply, demand and prices
6	Cost of living	Cost of the revised minimum expenditure basket
7	Imported food commodities (rice, wheat flour, oil, etc.)	Supply and prices
8	Water access	Availability and prices
9	Civil insecurity and population movement	Incidents and impact on livelihoods

Source: FEWS NET

The current monitoring strategy for urban food security in Somalia relies primarily on bi-annual surveys, though major changes in conditions may prompt additional rapid assessments where possible. This strategy is not always feasible in much of southern and central Somalia, where recurrent conflict frequently prevents surveys from taking place at all. Instead, rapid urban assessments in these areas rely on focus group discussions by telephone that are moderated by an FSNAU technical staff from Nairobi or Mogadishu and facilitated by a local resident enumerator in person. A potentially more feasible and less costly option might be to monitor food insecurity in urban areas on a more regular basis through field-based monitors or enumerators complemented by occasional phone calls with key informants.

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LIST OF ABBREVIATIONS

AMISOM	African Mission for Somalia
CeRID	Center for Research & Integrated Development
CPI	Consumer Price Index
CSI	Coping Strategies Index
FAO	Food and Agriculture Organization
FCS	Food Consumption Score
ENA	Emergency Nutrition Assessment
EPI Info	A public-domain statistical software for epidemiological analysis
FEWS NET	Famine Early Warning Systems Network
FSNAU	Food Security and Nutrition Analysis Unit for Somalia
HEA	Household Economy Approach
HDD	Household Dietary Diversity
HHS	Household Hunger Scale
IDP	Internally Displaced Persons
IFPRI	International Food Policy and Research Institute
IPC	Integrated Food Security Phase Classification
KDF	Kenya Defense Force
KSH	Kenyan Shillings
NGO	Non-Governmental Organization
MEB	Minimum Expenditure Basket
MUAC	Mid-Upper Arm Circumference
NIDs	National Immunization Days
PPS	Probability Proportional to Size
SOS	Somali Shillings
SPSS	Statistics Package for Social Studies
UNDP	United Nations Development Programme
WFP	World Food Programme, United Nations
VIP	Ventilated Improved Pit

BACKGROUND

Since the start of FSNAU (formerly FSAU) and FEWS NET food security monitoring and early warning activities in Somalia in the mid-1990s, food insecurity and early warning information systems focused primarily on rural areas. Urban areas are, however, relevant to food security monitoring in Somalia, particularly in southern and central Somalia. In 2007/2008, insecurity in the South-Central region resulted in large population displacements from Mogadishu toward other urban centers of the country². As urban populations rely on markets, food availability is vulnerable to significant disruptions in the event of conflict. At the same time, the 2008 global price crisis reduced supply and access to imported rice, wheat, sugar, and cooking oil, which are essential staples in urban areas. In addition, FSNAU estimates that more than sixty percent of the urban food-insecure population in Somalia live in southern and central regions³.

Donors and humanitarian agencies needed information about the prevailing urban crisis. In April 2008, FSNAU, in collaboration with partners, started urban food security monitoring in the South-Central Somalia through quarterly rapid urban assessments in key urban centers in the south and central parts of the country. The focus was on urban poor households based on the assumption that they were the first and most affected by the ongoing shocks. The quarterly assessments estimated incomes and expenditures of poor urban households through focus group discussions to measure expenditure deficits. At the same time, a benchmark minimum expenditure basket (MEB)⁴ was developed by FSNAU based on reviews of existing urban livelihood baselines (including Baidoa) and interviews with key knowledgeable staff members and key informants. The quarterly assessment income and expenditure data and other secondary information was compared to the cost of the MEB and used to classify poor households using the Integrated Food Security Phase Classification (IPC)⁵.

FSNAU and FEWS NET also conducted several urban livelihood baselines between 2008 and 2012 in parts of the North, particularly in Bossaso, Galkayo, and Garowe. However, due to conflict, there are no urban baselines for south-central Somalia, and historical price monitoring data is occasionally lacking, making it difficult to identify appropriate points of comparison. It is also important to note that some of these baselines are now outdated; field observations confirmed by this survey suggest that there have been changes to the minimum expenditure basket that would result in significant changes to food security monitoring.

Following situational improvements in urban areas and de-escalation of the hyper-inflation in the years that followed, FSNAU piloted reducing the quarterly monitoring effort to regular, biannual monitoring. FSNAU conducted first urban, population-based household surveys during the *Deyr* 2010 seasonal assessments in two areas in the North, Awdal and Waqooyi Galbeed. Considering the pilot successful, FSNAU has continued regular, biannual surveys in northern regions.

Monitoring food insecurity in southern and central Somalia, however, is extremely difficult due to insecurity. Though access to Mogadishu, Kismayo, Baidoa, and few other towns has improved since 2011 due to a military offensive by the federal government supported by AMISOM, most of the urban areas in the South-Central remain inaccessible on security grounds. Where conflict and violence prevented population-level surveys, FSNAU implemented rapid field assessments using focus group interviews with households targeted as “poor”. Better-off households were not incorporated into the food security monitoring.

FEWS NET Somalia and partners designed this survey to check current assumptions about urban food insecurity and to identify some potentially common, underlying characteristics of urban food insecurity that might be extrapolated to other, inaccessible urban areas in southern Somalia.

Objectives of the Survey

The objectives of the survey were to:

- Identify food security-related underlying factors common to the most food-insecure populations
- Identify food and income sources and expenditures for households
- Determine the prevalence of wasting and stunting among children aged 6-59 months
- Determine the prevalence of some common childhood illnesses (measles, diarrhea, suspected malaria, and ARI)

² UNHCR estimates about 1.1 million are displaced in the country.

³ Food Security and Nutrition Analysis, Post-Deyr 2013/14, Technical Serious Report No VII.54/FSNAU.

⁴ Currently used for estimating the consumer price index (CPI) for Somalia.

⁵ The IPC is a set of protocols (tools and procedures) to classify the severity of food insecurity and provide actionable knowledge for decision support ([IPC Technical Manual Version 2](#), 2012).

- Determine the crude and under-five death rates
- Test several current hypotheses about urban food security:
 - Are casual labor (construction work, portage), petty trade and charcoal and firewood sales the most significant sources of income for poor households?
 - Is a sorghum-based MEB applicable to all urban areas in southern and central Somalia?
 - Are water expenditures significant for the MEB in urban areas, even in areas where water availability is relatively good, (such as Beled-Xaawo)?
- Identify and measure key indicators relevant to urban food security

FEWS NET and partners selected Beled-Xaawo for this work (Figure 1). The rationale behind the selection of this settlement first is on the basis of its importance as one of the main urban centers in the South. Second, it represents the urban centers with cross-border trade importance. Third, due to conflicts and access problems in the most parts of the South, it was seen as the most accessible and safest place to conduct a survey.

Beled-Xaawo is an important town as it is a cross-border trade point linking Somalia to Kenya and Somalia to Ethiopia. The town also shelters both urban and recent and long-term IDP populations. Beled-Xaawo is one of the five towns of Gedo region. It borders Mandera town of north-eastern Kenya and lies 40 kilometers north of Dolo Addo of Ethiopia. It is a key transit point for people and goods entering and leaving Somalia.

The geographic and trade context of this tri-state location is somewhat particular to Beled-Xaawo, potentially limiting the applicability of general findings from this study to urban areas in greater conflict and with less access to government and open markets. However, the authors propose that key findings of this survey will remain relevant to other urban centers in the southern and central parts of the country because the livelihoods of the urban populations are more or less similar. All urban areas depend on the market for their exchange entitlements, and most of the livelihood sources identified are available in other urban centers. What might differ is the extent of the economic activities. For example, areas like Beled-Xaawo may be more trade-oriented. In other areas, casual labor might be more significant due to substantial urban agricultural production or port-related portering and trade.

The exact population of Beled-Xaawo is not known, but United Nations Development Program (UNDP) estimated town population at 13,600 people in 2005. Other, more current, though unofficial, estimates suggest that the current population is 40,000 to 60,000.

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SURVEY METHODOLOGY

Instruments

Two survey instruments were administered at a household level. The first instrument was a survey questionnaire covering a wide range of food security and nutrition information which includes: a) household demographics, b) food consumption and food access indicators, such as food consumption, dietary diversity, household hunger score, coping strategies index, expenditure patterns and others, c) nutritional status, water and sanitation, d) assets and income sources and e) food security constraints and shocks. The second instrument was a mortality questionnaire.

Survey site and sampling procedures

A multi-stage clustering approach was used, and a representative sample of 507 households was interviewed for this survey. The sampling frame was obtained from World Health Organization's March 2014 data on National Immunization Days (NIDs).

Figure 1. Map showing Beled-Xaawo location at the intersection of Kenya, Ethiopia, and Somalia



Source: [Google Maps](#)

The WHO's polio vaccination statistics indicated coverage of 8,280 under-five children. The population of children under five years' old in Somalia represents 20 percent of the total population. Based on this, the total town population was estimated at 41,400 people or 6,900 households based on an average of six persons per family⁶.

A sample size of 511 households was drawn for the survey. The sample design was based on assuming a food insecurity prevalence of 20 percent among the town population (post-*Deyr* 2013/14 results), a desired precision of ± 5 , a confidence level of 95 percent, and a design effect of two. In addition, a non-response of three percent was assumed.

The town was divided into four major sections. Using ENA software, 25 clusters were randomly selected from a design of 28 clusters from the four sections with the chance of any cluster being selected being proportional to the size of section population (PPS method). The remaining three clusters were assigned as replacement clusters (Table 2).

The study uses a systematic sampling method with a random starting point and a fixed sampling interval of 12 for each cluster. A pencil-spin method was applied from the center of each cluster to get to the random starting point, after which every 12th household was interviewed until the desired sample units were exhausted. The non-response level was less than 1 percent against planned 3 percent in the survey design.

Table 2. Town sections, population, and clusters

Section name	Population	No. households	No. clusters per section
Qansah Omane	14,490	2,415	1, 2, 3, 4, 5, RC, 6, 7, 8, 9
Far Janno	12,420	2,070	10, 11, 12, 13
Dhabad	8,280	1,380	14, 15, 16, 17, 18, 19
Buurta	6,210	1,035	20, 21, RC, 22, 23, 24, RC, 25
Total	41,400	6,900	

Source: FSNAU and FEWS NET

IDPs in camps were not sampled in this study and therefore not part of the analysis. For the integrated IDPs identified in the sample, no distinction was made regarding duration of IDP status.

Data collection, management and analysis

Five teams, each with four enumerators and a team leader, participated in the survey. Enumerators and team leaders participated in the training for the study April 9-13, 2014. The training included the concepts on food security and nutrition, anthropometric measures, contents of questionnaire and ways to administer them, and techniques to select the sample units.

Prior to the survey, the enumerators and team leaders completed a pre-testing exercise of questionnaires and data collection techniques. After the field exercise, teams were brought back together to review tools and techniques and share experiences, which resulted in clarifications and fine-tuning of the survey tools. Enumerators entered data into an Excel data entry platform. Five members from FEWS NET, WFP and FSNAU/FAO, collaborated with the data collection team and provided supervision and technical support during data collection. Supervisors checked data quality daily.

The cleaned data were exported and converted into SPSS 20.0 for data transformation and analysis. Nutrition and mortality data were analyzed using ENA for SMART 2011 software while morbidity data was analyzed using EPI Info 3.5.1 software.

Study limitations

- As stated earlier, Beled-Xaawo has relatively better access to markets and governance than other urban areas of South-Central Somalia. The extent to which these characteristics limit analysts' ability to extrapolate assumptions and information from the Beled-Xaawo context to other urban areas is unknown.
- Although five days' training time was considered adequate at the planning stage, more time was required to train and review the combined surveys of food security and nutrition.
- In the data collection process, inconsistent readings were observed from several anthropometric weight scales. Team members that were close to one another occasionally shared more "accurate" scales, taking more time. Some enumerators also returned to households at later stages to collect the data. Anthropometric data is of poor quality with a high standard deviation from the mean. To address the wide standard deviation problem, technical partners involved in the assessment calculated the global acute malnutrition (GAM) rate using a standard deviation of one.
- The survey assessed household expenditure data based on respondents' recall capacity without strong analytical cross-checks. As a result, the data on household expenditures might not provide the most accurate picture of household spending.

⁶ Source: FSNAU food security and nutrition household surveys

- Finally, the survey was designed to be a representative sample of the population of Beled-Xaawo. The survey design does not accommodate statistically representative conclusions at a sub-population level. As a result, very little information was available to explore common characteristics and likely drivers of food insecurity among different groups within the Beled-Xaawo population. This disaggregation is necessary to accurately identify food security monitoring indicators. Conclusions regarding different wealth groups, (poor, middle, and better-off), residency status (permanent, temporary, and integrated IDP groups), or groups of households with common food security characteristics need to be considered with care.
- The scope of the study did not include an appreciation of seasonality. Review of price data series, including labor and livestock sales, suggest that seasonal changes in food costs and income are not a major issue in Beled-Xaawo.

Analytical methods

Data analysis for this survey is based on the food security dimensions of availability, access and utilization. Stability of these dimensions was not addressed as this is a one-off survey without a historical point of comparison. The first dimension of food availability relates to the amount of food that is physically available both at the household and in the area or the market. The second dimension is about food access, translated as the households' ability to physically and economically access adequate quantities of food, usually through production, exchange, and purchase. Survey time was insufficient to address dietary quality. The third dimension, food utilization, concerns the ability of households to store and prepare food, making accessed nutrients available within the household. Individual absorption of nutrients related to health status was assessed through the morbidity component of the survey.

Analysis explored relationships between several indicators with an emphasis on comparing correlations between food consumption indicators (food consumption score (FCS), dietary diversity (HDDS), and household hunger score (HHS)) and residency status. Analysts also explored common income sources, expenditures, and other relationships between these variables.

HOUSEHOLD DEMOGRAPHICS

About ninety percent of the sampled households were permanent residents, 6 percent were integrated IDPs (not living in camps), and 4 percent were temporary residents (Table 3). Half of the integrated IDPs lived in town more than a year (1-7 years) and the other half for less than a year. The majority of non-permanent residents (75 percent) stayed in town more than a year and the rest for less than a year. Insecurity was the primary reason for movement of the non-permanent residents (61.4 percent), followed by seeking employment opportunities (18.2 percent) and kinship support (13.6 percent). These non-permanent residents came from neighboring rural areas and other towns of Somalia.

Table 3. Household residency

Residency Status	N	%
Permanent residents	460	90
Integrated IDPs	28	6
Temporary residents	19	4
Total	507	100

Source: FEWS NET

Just above half of the household members (51 percent) were male, and 49 percent were female. Nearly two-thirds (63 percent) of households were children, and 37 percent were adults (Table 4).

Table 4. Household sex and age distribution

Age group	Male		Female		Total	
	N	%	N	%	N	%
0-5 years	276	16	274	17	550	16
5-18 years	835	47	683	41	1,518	44
18-60 years	583	33	656	39	1239	36
60+ years	70	4	68	4	138	4
Total	1,764	100	1,681	100	3,445	100

Source: FEWS NET

widowed and the rest (4.6 percent) were separated.

Nearly two-thirds of the sampled households were male-headed, and slightly more than one-third of households (34.5 percent) were female-headed⁷. The household heads in about 78 percent of total households were married, 12 percent divorced, 9 percent widowed, and 1 percent single. Out of the women-headed households, 52.6 percent were not married, 25.1 percent were divorcees, 22.9 percent were

⁷ Household headship is simply considered to relate to the primary decision maker for the household affairs. Somali society is patriarchal; as such females tend to assume this responsibility only in the rare cases of divorce, death of the husband, or long-term absence of the husband from the family.

Regardless of sex, 80 percent of household heads did not have any formal education. The remaining 20 percent of heads attended primary schools (15.2 percent), secondary schools (3.4 percent), and tertiary education (1.4 percent). By sex, non-formal education was more common among female heads (86.2 percent) than male heads (76.8 percent) signifying that male heads had more access to formal education than female heads.

FOOD AVAILABILITY

It is important to note that Beled-Xaawo residents are not predominantly food producers and depend on market purchase. Most households purchase food almost daily, and food stocks at a household level is negligible. Secondary information from FSNAU and FEWS NET, as well as informal discussions with traders suggested that markets were functioning fully due to improved security situation in the last one year. Imported goods were flowing generally from Mogadishu port through the Baioda (Bay) and Luuq and Dolow towns (Gedo). However, key informants complained of multiple checkpoints in between Mogadishu and Beled-Xaawo that extort transporters to pay substantial amounts of money, which are ultimately transferred to consumers.

FOOD CONSUMPTION

Food Consumption Score (FCS)

The variety and frequency of foods consumed by household members as described via the FCS is a proxy indicator of household food consumption. More than 80 percent of households exhibited “acceptable” food consumption, and fewer than five percent of households had “poor” food consumption (Table 5).

Household Dietary Diversity Score (HDDS)

Household Dietary Diversity Score also measures the level of food access. Household dietary diversity was disaggregated into three categories thresholds of poor (< 4.5 food groups), medium (4.5 – 6 food groups) and good (6+ food groups)⁸ (Table 5) out of seven food groups. HDDS and FCS were highly correlated as over 90 percent of households with “poor” and “borderline” FCS had low HDDS compared to 23 percent of households with “acceptable” FCS. The variation in dietary diversity by residency status was not significant.

Household Hunger Scale (HHS)

The sampled households were asked about experience of hunger by any member of the household. Nearly 30 percent of the sampled households reported feeling hungry in the month prior to the survey (Table 5). As would be expected, more households with “poor” or “borderline” FCS reported hunger than those with “acceptable” FCS. Additionally, the experience of hunger was observed more among integrated IDPs (46 percent) than permanent and temporary residents (29 percent and 11 percent, respectively). Despite this, the correlation between the two measures was not strong, likely due in part to differences in recall periods⁹.

Coping Strategies Index (CSI)

The CSI is a relative, proxy indicator for food consumption. It measures a households’ consumption coping problems such as food rationing, dietary change, and increasing short-term food access or decreasing household members to survive. Generally, the higher the CSI scores compared to other CSI scores for the same season and area, the poorer the food consumption of the household and vice versa. CSI results did not correlate as expected with FCS. CSI did not show significant variation across different FCS levels or residency status. Moreover, CSI scores were somewhat lower for households with “poor” or “borderline” FCS and higher in households with “acceptable” FCS. This further supports the conclusion that differences in CSI values are not statistically significant in this survey.

Table 5. Summary of food consumption indicator measurements

FCS	%	Avg
Poor (≤ 28.0)	3.4	21
Borderline (28.1-42.0)	15.2	33
Acceptable (≥ 42.1)	81.5	77
HDDS	%	
Low	36	
Medium	51	
Good	13	
HHS	%	
Little/no hunger	70.5	
Moderate hunger	27.5	
Severe hunger	2	
CSI	Mean	Median
CSI	22	12

Source: FEWS NET

⁸ Smith Lisa, Ali Subandoro: Measuring food security using household expenditure surveys /IFPRI. This method is based on seven different food groups.

⁹ Food consumption score use a recall period of 7 days while household hunger scale uses a recall period of four weeks.

The main consumption coping options used were rationing strategies, such as limiting portions sizes (17 percent), reducing number of meals (34 percent) and restricting adult consumption in favor of children (10 percent). Dietary change strategies were also reported including shifting to less-preferred foods (31 percent of households). Other households also resorted to increasing short-term food access including credit purchase (12 percent) and to borrowing from friends and relatives (10 percent of households). In short, the coping strategies that were used most were relatively mild to moderate in severity. There were no observations of severe coping strategies, such as dependency on humanitarian donations, removing children from school, selling household assets, sending household members to eat elsewhere, begging and consuming of leftover foods.

In general, while food consumption outcomes are slightly worse among integrated IDPs than among residents, poor food consumption outcomes are not limited to IDPs; both permanent and temporary residents are also at risk of similar outcomes. This being said, acutely poor food consumption outcomes were not widespread in Beled-Xaawo in 2014.

FOOD UTILIZATION

Access to water

The Dawa River is the main source of water for the town, and most households consume potable water either from trucks or pipes (Table 6). Virtually all households purchase water, which cost, at the time of the survey, 10 KSH per 20-liter jerry-can or 4-5 KSH per 20-liter jerry-can for bulk buyers.

Table 6. Percent of households accessing water by source

	Tanker	Tap	Donkey Cart	River
Sampled households	87%	10%	2%	1%
Permanent	88%	10%	2%	0%
Temporary	79%	11%	5%	5%
Integrated IDPs	75%	14%	7%	4%

Source: FEWS NET

Quantity of water at the household level is also measure of food security. Comparing against the benchmark of minimum acceptable water consumption of 15 liters per person per day, about one-fourth of the sample households did not purchase the minimum water consumption. By residency status, proportions with low water consumption were 23 percent of permanent residents, 21 percent of integrated IDPs and 36 percent of temporary residents.

Clean and safe water is vital for maintaining personal health and good nutrition status. Unsafe water could be sources of diseases such as diarrhea and other water-borne diseases. While nearly two-thirds of sampled households reported access to clean (treated) water, more than one-third of households did not purchase clean water.

LIVELIHOOD OPTIONS

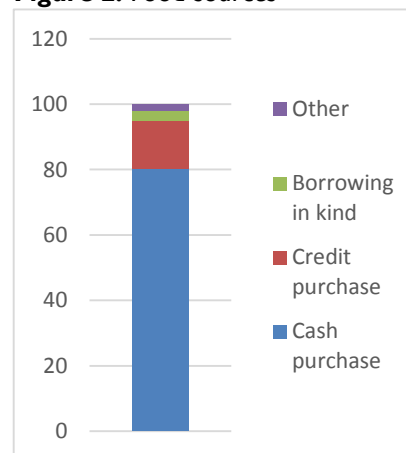
Food sources

A multiple response analysis of a range of eleven food sources¹⁰ revealed that Beled-Xaawo residents rely almost exclusively on markets for food, either directly or on credit. Other, insignificant food sources included borrowing food in-kind from other households, own production, and gifts and begging. Integrated IDPs reported purchasing on credit, borrowing food in-kind, and asking assistance from other households slightly more than residents (Figure 2).

Staple foods

Contrary to the assumption that locally-produced cereals, such as sorghum and maize were the dominant staple foods, the survey found that main staples for Beled-Xaawo were imported staple foods, notably rice supplemented with wheat flour, or pasta. Fewer than 15 percent of households reported consuming locally-produced sorghum and maize, and the contribution of these foods was considered minor compared to rice, wheat, and pasta.

Figure 2. Food sources



Source: FEWS NET

¹⁰ The range of sources: own production (crops, animals), fishing/hunting, gathering, loan (cash), loan/borrowing (in-kind), market purchase (cash), market purchase (credit), food aid, *shaxaad* (asking for help), labor exchange for food, and food gifts.

Expenditures and wealth

The survey gathered information on both total, monthly household expenditures and the proportions of spending on food and non-food items. Because income sources in urban areas are so variable, households were also grouped according to their per-capita expenditures to be used as a proxy for income or wealth. Using as a proxy for household income, quintile distribution of households by per capita expenditures indicated that households in the lowest two quintiles and a portion in the 3rd quintile of the sample as well as of different types of residents (equivalent to more than 40 percent of the sample) spent less than KSH 3,250/month (KSH 108/day, below the international extreme poverty line of USD 1.25 per person per day) (Table 7).

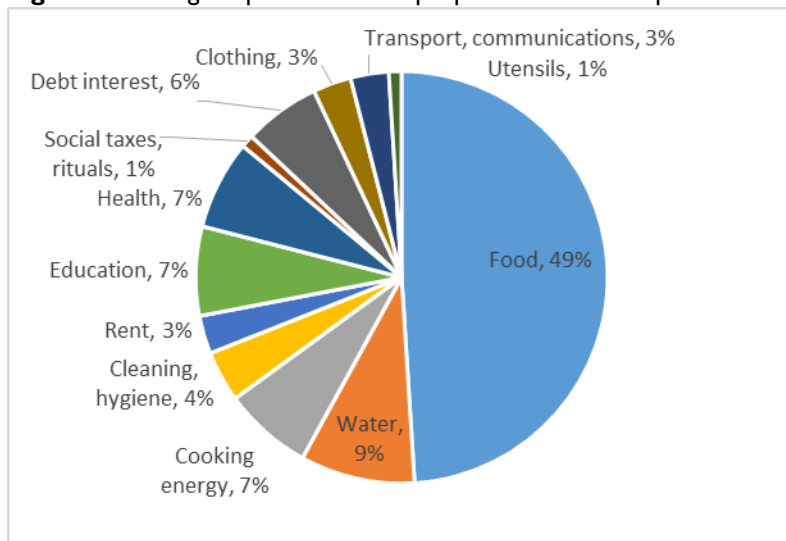
Table 7. Quintile distribution of monthly household expenditure

Quintile	KSH
1 st	< 2,200
2 nd	2,210 – 2,830
3 rd	2,833 – 3,500
4 th	3,500 – 4,600
5 th	> 4,620

Source: FEWS NET

Analysts also considered monthly household expenditures by quintiles (20 percent of households each). The first quintile with the lowest expenditures was considered to be the “poorest”, while the fifth quintile was judged as the better off. It is interesting to note that expenditures did not vary much between different types of residents analyzed, and the differences were not statistically significant. Similar to the food consumption indicator implications, a wealth breakdown by expenditure suggests that the worst-off population is worst off regardless of residency status, suggesting that monitoring integrated IDPs in urban areas would be insufficient for urban food security monitoring.

Figure 3. Average expenditures as a proportion of total expenditures



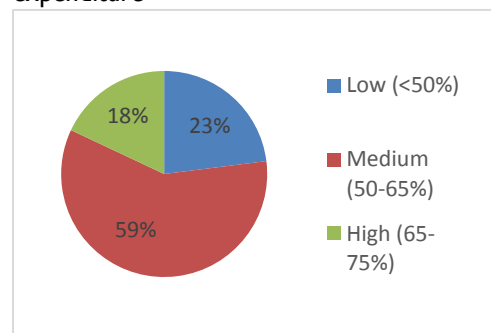
Source: FEWS NET

The survey also gathered household spending on food and non-food items¹¹. At the population level, nearly half of household expenditures were on food; other expenses critical to survival include water, firewood and charcoal for food preparation, and rent, totaling almost 70 percent of average household expenditures. Livelihood protection spending includes education, health, debt repayment and social taxes, and clothing for approximately 25 percent of total average household expenditures. Though there is room for economy in the prior expenditures, approximately 5 percent of average expenditures is considered discretionary (Figure 3).

Food expenditure as a proportion of total expenditure

Because purchases are such a fundamental food source, the share of expenditure on food is relatively high compared to rural areas. Still, households with the highest shares of expenditure towards food may be more vulnerable to food insecurity in the event of significant price increases. Food represents at least 50 percent of expenditures for more than 80 percent of households (Figure 4). No households reported spending more than 75 percent of their income on food. No significant variations in the share of food spending were observed among residents and integrated IDPs.

Figure 4. Proportion of households based on food expenditure as a proportion of total expenditure



Source: FEWS NET

Income sources

Urban dwellers tend to have relatively diverse ranges of income sources, and the residents of Beled-Xaawo are no exception. Households have a median of two income sources, and sources vary between 1 and five.

¹¹ Food, water, rent, education, health, debt repayment, clothing, cooking energy, cleaning/hygiene, transportation and communication, household utensils, social taxation, rituals and festivals.

Trade, remittances, informal employment, animal or animal product sales and wage labor were primary sources of income for the town (Table 8). Over 60 percent of households depend on trade as a primary source of income, and trade in livestock and livestock products (as opposed to the sale of own-produced livestock, listed separately) was predominant. About 25 percent of the sample also reported remittances as a primary source of income. About 33 percent was engaged in self-employment activities including crafts, manual trades, and firewood, charcoal, or water sales. Fewer than 20 percent

Table 8. Sources of income by household (hh)

	No. hh	% hh	Primary (% of hhs)	Secondary (% of hhs)
Petty trade	216	43	74	26
Remittances	130	26	58	42
Crafts, carpentry and other services	107	21	65	35
Animal or animal product sales	88	18	46	54
Casual wage labor	76	15	26	74
Formal trade	71	14	80	20
Firewood, charcoal or water sales	61	12	51	49
Employment in NGOs, businesses	33	6.5	76	24
Crop sales (vegetables and fruits)	28	5.5	39	61
Employment in government	19	4	68	32
Rent (stores or vehicles)	10	2	90	10

Note: multiple responses are allowed

Source: FEWS NET

of households sold their own livestock or livestock products. Casual wage labor was not as significant a source of income as expected, with only 15 percent of households reporting this as a significant source of income. Formal employment, crop sales, and other types of social support were not common sources of income. It is important to note that most, but not all, households reported at least two major sources of income. Also, IDPs reported remittances as an important source of income significantly more than residents. Residents, both temporary and permanent, had significantly better access to formal employment.

Indebtedness

About 85 percent of the sampled households reported they had at least some outstanding debts. The median debt amount reported was KSH 8,000 (approximately USD 90), approximately 2.5 times the median monthly income. Debt is most commonly used for food purchase (Table 9).

Asset holdings

Beled-Xaawo residents and integrated IDPs reported ownership of a large range of assets with varying importance (Table 10). Some have economic significance by providing direct income or food, or they are used as investments on which to fall back in the event of a shock.

Trade goods¹², whether for petty trade or formal trade, are the most important productive asset in Beled-Xaawo, constituting a source of income from more than half of the sampled households. Interestingly, formal trade is dominated by permanent residents (90 percent) and non-permanent residents—not integrated IDPs. However, there was no significant difference between household types in the proportion of households engaging petty trade.

About half of the sample households reported ownership of **sheep and/or goats**; about half of permanent residents owned sheep/goats, and about 25-30 percent of nonpermanent residents or integrated IDPs owned sheep/goats. It is important to note that own livestock are not considered part of household's normal income generation activities such as trade. The few cattle and camels are usually kept in rural areas by relatives or friends as savings to fall back on during crisis; goats or sheep are kept for

Table 9. Debt spending by percent of households

Debt spending	%
Food	72
Water	24
Health	25
Education	9
Other	10

Source: FEWS NET

Table 10. Asset holdings by percent of households

	%	Asset type	%
Mobile phones	75	Land	23
Household utensils	74	Wheelbarrows	14
House	71	Kiosks	13
Furniture	57	Donkeys	12
Sheep and goats	50	TV sets	12
Radios	46	Formal trade goods	11
Petty trade goods	44	Camel	9
Tools	33	Cattle	9
Watches	29	Jewelry	7
Remittances	26	Motor vehicles	4
Poultry	23		

Source: FEWS NET

¹² Trade goods are food and non-food commodities and exclude livestock and livestock products, crafts, cooking energy, and water.

milk to supplement tea consumption at the household level. Poultry and donkeys were also reported by 23 percent and 12 percent of surveyed households, respectively.

The third major asset is **access to remittances**. About 26 percent of the sampled households reported access to remittances from family members and relatives in the diaspora.

SHOCKS

Nearly 90 percent of sampled households reported experiencing at least one constraint to food security in the month prior to the survey period. High food prices were the most common problem as it was reported by two-thirds of the different types of residents (Table 11). Other shocks may be less widespread, including equally reported are illnesses among household members, particularly productive members, which increase health expenditures and reduce incomes and which may have implications for debt repayment. More non-permanent residents than permanent residents reported high transport costs or insecurity as shocks, which may be due to their relatively greater exposure to violence as they travel more often.

Table 11. Major shocks by percent of households

Shock	%
High food prices	68
Illness/health costs	45
Lost income	32
Insecurity	16
Transport cost shock	6

Source: FEWS NET

FOOD CONSUMPTION CONCLUSIONS

The survey results show that acute quantity deficits in food consumption were not a major problem at the time of the data collection in April 2014. However, the few households that demonstrated the worst food consumption outcomes shared some common characteristics:

- Per-capita household expenditures below the sample median,
- Relatively low asset levels,
- Higher debt levels,
- Unskilled, low-value livelihood strategies (petty trade; firewood, charcoal or water sales; and self-employment in crafts or other), and
- Female-headed households and households of unmarried couples or individuals were disproportionately represented among households with worse food consumption outcomes.

NUTRITIONAL STATUS, MORTALITY, AND MORBIDITY

Global acute malnutrition (GAM)

Given the data collection quality issues, the nutrition information needs to be considered with care¹³. The nutrition indicators were assessed from a total of 511 children, aged 6-59 months, of whom 255 were boys and 256 were girls. The prevalence of global acute malnutrition (GAM), defined according to a weight-for-height Z score (WHZ) <-2 and calculated using a standard deviation of 1¹⁴ was 18.5 percent¹⁵, a critical level of acute malnutrition according to the WHO classification thresholds. These results are consistent with high levels of acute malnutrition recorded among the pastoral population adjacent to Beled-Xaawo town where a GAM prevalence of 20.7 percent was recorded in a nutrition assessment conducted by FSNAU in July 2014. Data further showed a relatively low stunting (height-for-age <-2 Z-score) prevalence of 14.7 percent (CI: 10.4-20.5).

Mortality

Results of the retrospective mortality survey recorded a Crude Death Rate (CDR) of 0.65 (CI: 0.44-0.96) and an under five death rate (U5DR) of 1.20 (CI: 0.48-2.95)/10,000 people per day. These rates indicate a non-emergency mortality situation.

¹³ The plausibility score for the nutrition data in this report is 31 percent.

¹⁴ The raw weight-for-height data showed a wide standard deviation of 1.23, reflecting possible measurement error and an over-estimation of the prevalence of acute malnutrition. For this reason, technical partners involved in the assessment resolved to estimate the GAM prevalence by applying a standard deviation of 1.

¹⁵ Confidence interval unavailable as standard deviation of 1 was applied to the data. See previous footnote.

Morbidity

The morbidity assessment was based on the caregiver's recall of whether the child had suffered from any of the four common diseases in the previous two weeks. Results of the assessment showed a high morbidity level with 31 percent of the assessed children having experienced at least one illness in the two weeks prior to the assessment. With a prevalence of 27.3 percent, fever was the most common morbidity reported (Table 12). Distribution of the other reported forms of illnesses are shown in the table below. Morbidity is an immediate cause of acute malnutrition, and this likely contributed in part to the high level of acute malnutrition recorded in the assessment.

Table 12. Proportion of surveyed children reporting illness over 14-day recall period by type of illness

	N	% (95% CI)
Reportedly ill	159	31.0 (22.1-40.0)
Diarrhea	19	3.7 (1.3-6.1)
Acute respiratory infection	39	7.6 (3.8-11.6)
Fever	140	27.3 (19.5-35.1)
Suspected measles	3	0.5 (0.0-1.3)

Source: FEWS NET

Table 13. Type of health care sought by Number (N) and proportion (%) of acutely malnourished children

	N	%
No assistance sought	9	5.7
Own medication	1	0.6
Traditional healer	1	0.6
Private clinic/pharmacy	113	71.1
Public health facility	35	22.0

Source: FEWS NET

Seeking health care

Access to and utilization of health services is crucial for the wellbeing of the population. Of the children who were reported to have been sick, 71.1 percent sought health care from private clinics or simply bought over-the-counter medications. Unexpectedly, only 22 percent reported to have sought health care from public facilities. In addition, 5.7 percent of the children who had been sick did not seek any form of health care, increasing the risk of prolonged illness (Table 13).

Registration in targeted feeding programs

Registration of acutely malnourished children in feeding centers was used as a proxy indicator of access to targeted feeding services in the population. Only 4.8 percent of the acutely malnourished children surveyed were registered in any one of the feeding programs, and most of these (3.5 percent) were enrolled in outpatient therapeutic feeding programs. Access to or coverage of feeding programs is low compared to the high proportion of the children with acute malnutrition. Improved targeting of feeding programs to treat existing cases of acute malnutrition and long-term interventions to prevent malnutrition by addressing the underlying causes of under-nutrition, including limited dietary diversity, suboptimal infant and young child feeding practices, and high levels of morbidity are needed.

Table 14. Number (N) and proportion (%) of acutely malnourished children registered in feeding programs

	N	% (95% CI)
Supplementary (SFP)	2	1.6 (0.0-4.9)
Outpatient therapeutic (OTP)	3	2.4 (0.4-5.2)
Other	1	0.8 (0.0-2.3)
Total	6	4.8 (0.4-9.1)

Source: FEWS NET

LESSONS LEARNED

Analysts learned several lessons relevant to future urban food security monitoring for Beled-Xaawo and possibly for other urban areas of South-Central Somalia.

- The primary staples consumed for nearly 90 percent of the surveyed population were imported cereals, mainly rice and wheat flour. Therefore, the current, sorghum-based minimum expenditure basket (MEB) needs revision to be a more effective tool for monitoring the cost of living. This finding also suggests that MEBs for urban areas, particularly those further from major sorghum-producing areas, should be revised.
- Casual labor and firewood and charcoal sales are sources of income for households at relatively greater risk of acute food insecurity. However, petty trade and trade in livestock and livestock products are significantly more important than the sum of other income sources previously assumed to be the key. Remittances are also important to quite a few of these households of concern. Though Beled-Xaawo's tri-state location may make it exceptional in this regard,

the information confirms that assumptions regarding income sources in urban areas do need to be validated for effective food security monitoring.

- Although water availability was not a major concern in Beled-Xaawo, water expenditures were found to be significant, accounting for 7-9 percent of expenditures. Households at greater risk of acute food insecurity may spend a slightly larger proportion of their income on water than other households.
- The Kenyan shilling (KSH) was the dominant currency for Beled-Xaawo town. This is likely due to the proximity of Beled-Xaawo and Mandera town of northeastern Kenya and the high reliance on trade observed. Moreover, Beled-Xaawo residents depend heavily on social services in Mandera and other towns in the northeastern Kenya. Therefore, changes in the economic and social conditions in Kenya could affect food security in Beled-Xaawo.
- The current, bi-annual survey strategy for urban monitoring is expensive due to vast number of towns to monitor. It is also ineffective in southern and central Somalia, where recurrent conflict frequently prevents survey from taking place at all. Therefore, monitoring food insecurity through field based monitors complemented by occasional phone calls with key informants would be a cheaper, more effective means of monitoring urban food security than conducting surveys.

The study suggests below a set of parameters and indicators which are key to monitor the urban food security for Beled-Xaawo and also for other towns with similar characteristics of Beled-Xaawo town.

- **Trade flow:** In addition to the importance of trade as a means for supplying Beled-Xaawo markets with food, more than half (57 percent) of the households reported dependency on trade as their primary or secondary source of income. Insecurity, border closure, and high prices on global food markets may constrain movement of trade, elevate prices, and/or depress the incomes. It is, therefore, crucial to monitor trade contexts, flows, and prices, particularly for rice, wheat flour, and small ruminants. The FEWS NET trade flow baseline (2012) can be used to track changes of trade flow. Trade key informant interviews could be incorporated into the market monitoring to get insight into the trade activities.
- **Remittances:** Remittances constitute a major source of income in Beled-Xaawo, and this source is the least monitored. About 26 percent of households reported access to this source with nearly two-thirds of who depend on remittances as the primary source of income. Although there is no direct monitoring system of this source currently in place, efforts to monitor remittance flows is recommended.
- **Livestock and livestock product sales:** Animals and animal product sales provide incomes for nearly 18 percent of households, almost half of which use as the primary source of income. Nearly one-quarter of the households primarily depending on these sources faced relatively worse food consumption outcomes. The livelihoods of this group could be vulnerable to droughts, outbreaks of animal disease, and low demand for livestock. Hence, monitoring of livestock and livestock product supplies and prices would help monitor the livelihoods of these groups.
- **Firewood and charcoal sales:** Firewood, charcoal, and water sellers represent 12 percent of the sample households, with half of them reporting as a major source of income and the other half as a secondary source. One in four of the households depending on these sources as the primary livelihood faced relatively worse food consumption outcomes. Monitoring supply and price trends of these commodities would help track the incomes of this group. The prices of these commodities are already available in FSNAU/FEWS NET market information systems.
- **Casual wage labor:** Casual labor in the areas of construction and portage of commercial products support 15 percent of town residents as a livelihood. More than one third of households who depend on casual labor as a primary source of income faced relatively worse food consumption outcomes. Casual labor wages are already monitored in the current market information system. However, gathering the average number of days that casual laborers work in a week along the weekly market price data would improve income monitoring.
- **Imported foods:** The survey found that rice and wheat flour were the major staples for nearly 90 percent of surveyed households. As such, monitoring of these commodities together with sugar and vegetable oil will be vital to monitoring changes food access. About three quarters of households with the worst food security outcomes

reported high vulnerability to food prices changes. Prices of these commodities are already monitored in the FSNAU and FEWS NET market information systems.

- **Water Access:** Access to potable water is essential for food security and nutrition. The river is the main source of water, and it is often used untreated. In addition, water represented 7-10 percent of average expenditures for surveyed households. Water expenses are currently monitored in FSNAU/FEWS NET market information systems.
- **Conflict/Civil Insecurity:** Insecurity is a serious problem affecting urban livelihoods. Ongoing conflicts in parts of Gedo region as well as areas around the supply routes in the South, disrupts trade through roadblocks mounted by armed militias to extort money from traders and transporters which add to the transport costs and increase prices of food. The current insecurity crisis in other towns of the South such as Hudur, Bulo-burte, and Marka also restricts trade and commodity movements which highlights the negative impact civil insecurity can have on urban food security¹⁶.

¹⁶ FEWS NET Somalia Food Security Alert, 17 July 2014.

APPENDICES

APPENDIX 1: FOOD SECURITY AND NUTRITION QUESTIONNAIRE

FEWS NET SOMALIA Urban Household Food Security Survey April 2014						
Please complete all the below						
Region	<input style="width: 95%;" type="text"/>	Household #	<input style="width: 95%;" type="text"/>			
District	<input style="width: 95%;" type="text"/>	Enumerator's name	<input style="width: 95%;" type="text"/>			
Town	<input style="width: 95%;" type="text"/>	Supervisor's name	<input style="width: 95%;" type="text"/>			
Section	<input style="width: 95%;" type="text"/>	Date	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; padding: 2px;">DD:</td> <td style="width: 25%; padding: 2px;">MM:</td> <td style="width: 50%; padding: 2px;">YYYY:</td> </tr> </table>	DD:	MM:	YYYY:
DD:	MM:	YYYY:				
Cluster #	<input style="width: 95%;" type="text"/>	Start time of interview	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Hour:</td> <td style="width: 50%; padding: 2px;">Minutes:</td> </tr> </table>	Hour:	Minutes:	
Hour:	Minutes:					
		End time of interview	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Hour:</td> <td style="width: 50%; padding: 2px;">minutes:</td> </tr> </table>	Hour:	minutes:	
Hour:	minutes:					
<p>Consent: We are conducting a survey of the food security situation of families in (Beled-Xaawo). We would like to ask you some questions about your family. The survey will take about 30-45 minutes to complete. Any information that you provide will be kept strictly confidential and will not be shown to other people. This is voluntary and you can choose not to answer any or all of the questions if you want. However we hope that you will participate since your views are important. Do you have any questions? May we begin now?</p>						
1.0 BACKGROUND/HOUSEHOLD CHARACTERISTICS						
1.1	What is the sex of the respondent? (1 = Male, 2 = Female)		<input style="width: 95%;" type="text"/>			
1.2	What is the role of the respondent in the household?	_____				
1.3	What is the gender of the household head? (1 = Male, 2 = Female)		<input style="width: 95%;" type="text"/>			
1.4	What is the current marital status of the head of the household? PLEASE SELECT ONLY ONE OPTION and record its code	1. Married 2. Divorced 3. Separated	<input style="width: 95%;" type="text"/>			

		4 Widowed 5 Single 6 Other (specify)	<input type="text"/>															
1.5	What is the household head's highest level of education? PLEASE SELECT THE HIGHEST LEVEL ACHIEVED and record its code	1 Non-formal 2 Primary 3 Secondary 4 Tertiary	<input type="text"/>															
1.6	How many children go to primary schools?	1-Boys 2-Girls	<input type="text"/> <input type="text"/>															
1.7	How many people are living in your household (last 6 months)? PLEASE COMPLETE ALL THE SECTIONS	1 Total # of children <5 years (≤59 months) 2 Total # of children 5-18 years 3 Total # of adults 18-60 years 4 Total # of adults 60 + years	<table border="1"> <thead> <tr> <th>Total #</th> <th>Male #</th> <th>Female #</th> </tr> </thead> <tbody> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table>	Total #	Male #	Female #	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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<input type="text"/>	<input type="text"/>	<input type="text"/>																
1.8	How long did as your household live in this town/settlement? PLEASE PROVIDE THE LENGTH OF RESIDENCY in months or years	1-Months (if < 12 months) 2-Years	<input type="text"/>															
1.9	What is the current residency status of your household? PLEASE SELECT ONLY ONE OPTION and record its code	1 Permanent resident 2 Internally displaced (IDP) 3 Temporary resident/visitor	<input type="text"/>															
1.10	If your household is IDP or temporary resident, what is your area of origin before coming to town/settlement? PLEASE SELECT ONLY ONE OPTION and record its code	1 Neighboring towns/settlements 2 Other town/settlement 3 Rural area 4 Other (specify)	<input type="text"/>															
1.11	If your household is IDP or temporary resident, why did you move to this town/settlement? PLEASE SELECT ALL THAT APPLY and record their codes	1 Livelihood/employment 2 Insecurity 3 Kinship support	<input type="text"/> <input type="text"/> <input type="text"/>															

		4 Other (specify)	<input type="text"/>						
1.12	What is the type of housing for your household? PLEASE SELECT ONLY THE MAIN HOUSING TYPE and record its code	1 Stone (sar ama dhagax) 2 Corrugated sheets (Baraako/Jiingad) 3 Wood and muds (mundul/balballo) 4 Other (specify)	<input type="text"/>						
1.13	What is the housing arrangement for your household? PLEASE SELECT ONLY ONE OPTION and record its code	1 Owned 2 Rented 3 Free of charge 4 Public building 5 Other (specify)	<input type="text"/>						
1.14	What does your household use for lighting at night? PLEASE SELECT ALL THAT APPLY and record their codes	1 Electricity generator 2 Candle 3 Lantern (kerosene) 4 Lantern (Battery) 5 Flashlight	6 Firewood <input type="text"/> 7 Moonlight <input type="text"/>						
1.15	What does your household use as energy for cooking? PLEASE SELECT ALL THAT APPLY and record their codes	1 Firewood <input type="text"/> 2 Charcoal <input type="text"/>	3 Gas <input type="text"/> 4 Other (specify) <input type="text"/>						
2.0 CONSUMPTION AND EXPENDITURE									
2.1	How many meals did the following age-groups eat in this household yesterday? PLEASE RECORD THE NUMBER OF MEALS, NOT SNACKS	<table border="1"> <thead> <tr> <th>Under 5 yrs old</th> <th>5-18 yrs old</th> <th>Adults</th> </tr> </thead> <tbody> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table>		Under 5 yrs old	5-18 yrs old	Adults	<input type="text"/>	<input type="text"/>	<input type="text"/>
Under 5 yrs old	5-18 yrs old	Adults							
<input type="text"/>	<input type="text"/>	<input type="text"/>							
2.2	Could you please tell me how many days in the <u>past one week</u> did members of your household consume the following food items and what was their source? (Use codes at the bottom, write "0" for items not consumed over the last 7 days and if several sources, write up to two).								

		Number of days eaten in the past week (0-7 days) If 0 days, do not specify the main source	How was this food acquired? Main source of this food in the past 7 days Use codes below the table	Did you eat this food item Yesterday Indicate 1 if Yes and 0 if No	What are the two main cereals that the household consume?
2.2.1	Cereals and grain: rice; pasta; bread; cake; sorghum; maize; wheat grain; wheat flour				
2.2.2	Roots and tubers: potato, yam, sweet potato, and / or other tubers				
2.2.3	Legumes / nuts: beans, cowpeas, peanuts, lentils, soy, pigeon pea and / or other peas				
2.2.4	Orange vegetables (vegetables rich in Vitamin A): carrot, red pepper, pumpkin, oranges, etc.				
2.2.5	Green leafy vegetables: spinach, broccoli, amaranth and / or other dark green leaves				
2.2.6	Other vegetables: onion, tomatoes, cucumber, radishes, green beans, peas, lettuce.				
2.2.7	Orange fruits (fruits rich in Vitamin A): mango, papaya, apricot, peach.				
2.2.8	Other fruits: banana, apple, lemon, grape fruit, tangerine, etc.				
2.2.9	Meat: goat, beef, chicken (meat in large quantities and not as a condiment)				
2.2.10	Liver, kidney, heart and / or other organ meats				
2.2.11	Fish / Shellfish: fish, including canned tuna, escargot, and / or other seafood. (Fish in large quantities and not as a condiment)				
2.2.12	Eggs				
2.2.13	Milk and other dairy products: fresh milk / sour, yogurt, cheese, other dairy products. (Exclude margarine / butter or small amounts of milk for tea / coffee)				
2.2.14	Oil/fat/butter: vegetable oil, sesame, palm oil, ghee, margarine, other fats / oil				
2.2.15	Sugar or sweet: sugar, honey, jam, cakes, candy, cookies, pastries, cakes and other sweets (sugary drinks)				

2.2.16	Condiments / Spices: tea, coffee / salt, garlic, species, yeast / baking powder, tomato / sauce, meat or fish as a condiment, condiments including small amount of milk / tea, coffee			
	<u>Codes of Main Food Sources:</u> 1. Own production (crops, animal) 5. Loan/borrowing (in kind) 9. Shaxaad 2. Fishing / Hunting 6. Market (purchase with cash) 10. Exchange labor or items for food 3. Gathering 7. Market (purchase on credit) 11. Gift (food) from family relatives / friends 4. Loan (cash) 8. Food aid from civil society, NGOs, Government, WFP, etc			
2.3	In the past 30 days, was there ever NO food of any kind to eat in your household because of lack of resources to get food? How often? PLEASE SELECT ONLY THE RELEVANT OPTION and record its code	0 = Never 1 = Rarely (once or twice) 2 = Sometimes (once every week) 3 = Often (more than once a week)		<input type="text"/>
2.4	In the past 30 days, did you or any household member go to sleep at night hungry because there was NO enough food? How often? PLEASE SELECT ONLY THE RELEVANT OPTION and record its code	0= Never 1 = Rarely (once or twice) 2 = Sometimes (once every week) 3 = Often (more than once a week)		<input type="text"/>
2.5	In the past 30 days, did you or any household member go a whole day and night without eating anything because there was NO enough food? How often? PLEASE SELECT ONLY THE RELEVANT OPTION and record its code	0 = Never 1 = Rarely (once or twice) 2 = Sometimes (once every week) 3 = Often (more than once a week)		<input type="text"/>
2.6	What is your household's TOTAL EXPENDITURE estimate in the last 30 days?		Kenya Shillings:	
2.7	Can you please rank the following food and non-food categories in terms of percentages (%) out of the total expenditure? PLEASE USE PROPORTIONAL PILING TO GET APPROPRIATE ESTIMATES			
	Expenditure Category	% out of total expenditure		
2.7.1	Food			
2.7.2	Water			
2.7.3	House rent			
2.7.9	Education			
2.7.4	Health and medicine			

2.7.13	Debt repayment										
2.7.5	Human and bed clothing										
2.7.6	Firewood, charcoal, gas										
2.7.7	Cleaning and hygiene										
2.7.8	Transport & communication										
2.7.10	Household appliances										
2.7.11	Social taxation (qaraamaad, diyo, etc)										
2.7.12	Rituals & festivities (Alla-bari, weddings, etc.)										
2.8	What is the current debt amount of your household?	Kenya Shillings:									
2.9	What are the MAIN AREAS of your debt spending? PLEASE ENCIRCLE THE RELEVANT OPTIONS	1. Food 2. Water 3. School 4. Health 5. Other (specify) _____									
3.0 NUTRITION (children 6 to 59 months old)											
3.0.1	3.0.2	3.0.3	3.0.4	3.0.5	3.0.6	3.0.7	3.0.8	3.0.9	3.0.10	3.0.11	3.0.12
Age (month)	Sex 1-Male 2-Female	Oedema 0= No 1=Yes	Height (cm) To the nearest tenth of a cm	Weight (kg) To the nearest tenth of a kg	MUAC	Diarrhea[1] in last two weeks 0= No 1=Yes	Serious Pneumonia (oof wareen/ wareento)[2] in the last two weeks 0= No 1=Yes	Fever[3] in the last two weeks 0= No 1=Yes	Suspected Measles[4] in last one month 0= No 1=Yes	Where did you seek healthcare assistance when child was sick? (If yes in 7 – 10) 0=No assistance sought 1=Own medication 2=Traditional healer 3=Sheikh/Prayers 4=Private clinic/Pharmacy 5=Public health facility	Is the child currently registered in any feeding centers? 0=None 1=SFP 2=TFC/SC 3=OTP 4=Other
<p>[1] Diarrhoea is defined for a child having three or more loose or watery stools per day</p> <p>[2] ARI asked as oof wareen or wareento. The three signs asked for are chest in-drawing, cough, rapid breathing/nasal flaring and fever</p> <p>[3] Fever – the three signs to be looked for are periodic chills/shivering, fever, sweating and convulsions</p> <p>[4] Measles (Jadecoco): a child with more than three of these signs– fever and, skin rash, runny nose or red eyes, and/or mouth infection, or chest infectio</p>											

4.0 WATER SOURCES AND CONSUMPTION			
4.1	What is the <u>MAIN</u> source of drinking water members of your household used in the last 30 days? PLEASE PROVIDE ALL CODES THAT APPLY	1. Piped/tap water 2. Tanks/berkads 3. Donkey cart 4. Well 5. River/other surface water 6. Other (specify)	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
4.2	How long does it take your household to walk from your house to this water source and back home (two-way)? _____		Entry: 0-90 minutes
4.3	Did your household get water through purchase or free of charge?	1 Purchase 2 Free of charge	<input type="text"/> <input type="text"/> <input type="text"/>
4.4	How many 20 liter jericans (or equivalent) of water has your household normally used per day in the last month weeks?	Number of 20 liter jericans/day	<input type="text"/>
4.5	What was the price of 20 liter jericans of water in the last 30 days?	<input type="text"/>	
4.6	How would you rate the quality of water from your usual sources of water in the last 30 days?	1 Very clean 2 Clean 3 Dirty 4 Very dirty	<input type="text"/>
4.7	Are you satisfied with the water facilities considering adequacy of water, collection, and storage?	1 Unsatisfied 2 Satisfied 3 More than satisfied	<input type="text"/> <input type="text"/> <input type="text"/>
5.0 HYGIENE AND SANITATION			
5.1	What type of toilet facilities does your household mainly/most commonly use? PLEASE SELECT ALL THAT APPLY and record their codes	1 Pit latrine 2 VIP latrine 3. Flush toilet	<input type="text"/> <input type="text"/> <input type="text"/>
		4. Public toilet 5. Neighbor's toilet 6. No facility/Open air	<input type="text"/> <input type="text"/> <input type="text"/>
6.0 LIVELIHOODS			
	What types and number of the following assets does your household currently own? PLEASE INSERT RELEVANT CODES AND THE QUANTITY		

	Asset	1-Yes	2-No	Quantity / Amount		Asset	1-Yes	2-No	Quantity / Amount
6.1.1	Camel				6.1.16	Tools			
6.1.2	Cattle				6.1.17	Bicycles			
6.1.3	Sheep/goat				6.1.18	Motorbikes			
6.1.4	Poultry				6.1.19	Motor vehicles			
6.1.5	Donkeys				6.1.20	Sewing machines			
6.1.6	Petty trade				6.1.21	Kiosks			
6.1.7	Stable trade				6.1.22	Phones/mobile phones			
6.1.8	Remittance sources				6.1.23	Wheelbarrows			
6.1.9	Jewelry				6.1.24	Kinship support			
6.1.10	Watches				6.1.25	Access to loan			
6.1.11	Cash in saving				6.1.26	Furniture			
6.1.12	Home (residence)				6.1.27	Utensils			
6.1.13	Land (pieces)				6.1.28	TV sets			
6.1.14	Houses for rent				6.1.29	Radios			
6.1.15	Stores for rent				6.1.30	Other (specify)			
6.2	What are the main sources of livelihood for your household in the past 30 days? Please record the number of people involved in each source and classify by 1=Temporal/casual; 2= Seasonal; 3=Stable.TICK ALL THAT APPLY AND RANK THEM IN ORDER OF IMPORTANCE STARTING WITH 1	# of household members engaged		Temporary / casual	Seasonal	Stable	Rank in order of importance (1- Most Important; 2-Important; 3- Least Important)		
		1. Male #	2. Female #						
6.2.1	Production/sale of food crops								
6.2.2	Production/sale of animals and animal products								
6.2.3	Petty trade (retail, hawking, etc.)								
6.2.4	Trade (wholesale, etc.)								
6.2.5	Agriculture/portage/construction wage labor								
6.2.6	Self-employment (crafts, taxis, carpentry, etc.)								
6.2.7	Self-employment (firewood, charcoal, water, etc)								
6.2.8	Rentals (houses, vehicles, etc)								
6.2.9	Salaried employment - NGO, private sector								
6.2.10	Salaried employment - Government, civil service								
6.2.11	Remittances								
6.2.12	Other (specify)								
7.0	EXTERNAL ASSISTANCE AND SUPPORT								

7.1	Did you receive humanitarian/social assistance in the last one month?	1. Yes	2. No	<input type="checkbox"/>			
7.2	If YES, what did you receive? CIRCLE all that apply						
	1. Food	4. Water	7. Money/Voucher (Value: _____ KSh)				
	2. Medical	5. Livestock	8. Participation in a feeding program (Under five children only)				
	3. Clothing	6. Shelter	9. Other (Specify: _____)				
8.0	CONSTRAINTS AND SHOCKS						
8.1	In the last month, what difficulties have negatively impacted your household's ability to meet their food and non-food needs? (DO NOT READ THE LIST, once identified, ask household to rank the top 3)						
	SHOCKS	TICK ALL THOSE IDENTIFIED	RANK THE TOP THREE DIFFICULTIES (1-Very severe; 2-Severe; 3-Less severe)				
8.1.1	Sickness/health expenditures						
8.1.2	Death of household member						
8.1.3	Loss of employment/reduced salary						
8.1.4	High food prices						
8.1.5	High fuel/transport costs						
8.1.6	Debt to reimburse						
8.1.7	High house rentals						
8.1.8	Irregular/unsafe drinking water						
8.1.10	Bad climate (poor crop yields/harvests)						
8.1.11	Natural disaster (floods, droughts, fire etc.)						
8.1.12	Frequent school fees reviews						
8.1.13	Insecurity						
8.1.14	In-migration (IDPs from other areas)						
8.1.15	Others (specify)						
9.0	COPING STRATEGIES						
9.1	In the past 30 days, how frequently did your household resort to using one or more of the following strategies in order to have access to food? SELECT ONE ANSWER PER STRATEGY.	0=Never (zero times/week)	1=Hardly at all (<1 times/week)	2=Once in a while (1-2 times/week)	3= Pretty often? (3-6 times/week)	4=All the time (every day)	
9.1.1	Limit portion size at mealtimes?						
9.1.2	Reduce number of meals eaten per day?						
9.1.3	Rely on less expensive or less preferred foods?						
9.1.4	Purchase/borrow food on credit?						

9.1.6	Reduce adult consumption so that children can eat?					
9.1.7	Rely on donations from humanitarian organizations?					
9.1.8	Remove children from school?					
9.1.9	Sell household livestock?					
9.1.10	Send household members to eat elsewhere?					
9.1.11	Send household members to ask for food and money from others?					
9.1.12	Sell household assets?					
9.1.13	Consume spoilt or left-over foods					

After you finish the interview please THANK the respondent.

Please PROVIDE your comments, observation and any other comments or issues you may think important about the interview and the information provided.

Please STATE ABOUT THE RELIABILITY of the interview and contents (ENCIRCLE the relevant option). If all or some parts of the interview are unreliable, please indicate why?

a. Reliable

b. Generally reliable with some areas of concern

c. Unreliable

APPENDIX 2: MORTALITY QUESTIONNAIRE

Mortality Questionnaire, April 2014

Household No: _____ Date: _____ Team No: _____ Cluster No: _____ Enumerator's Name: _____

No.	1: First Name	2: Sex <small>(1=M; 2=F)</small>	3: Age <small>(yrs)</small>	4: Born since <small>___ / 04/ 2014</small>	5: Arrived since ___ <small>/ 04/ 2014</small>	6: Reason for leaving	7: Cause of death
a) How many members are present in this household now? List them.							
b) How many members have left this household (out migrants) since Jan __, 2014? List them							
c) Do you have any member of the household who has died since Jan __, 2014? List them							

Codes

1= Civil Insecurity
2= Food Insecurity
3= Employment
4=Divorce/ Married away
5=Visiting

Reason for migration
6= Hospitalised
7= In boarding school
8= Grazing/herding
9= Other, specify

1= Diarrhoeal diseases
2= ARI
3= Measles
4= Malaria
5= STD/ HIV/AIDS

Cause of death
6= Anaemia
7= Pregnancy/Birth complications
8= Accident/ killed/ physical injuries
9= Hunger/starvation
10= Other, specify (e.g. still birth)

Summary*

	Total	U5
Current HH Members		
Arrivals during the Recall period		
Number who have left during Recall period		
Births during recall		
Deaths during recall period		

* For Supervisor Only