Nutrition Situation

Post Gu 2014 Analysis
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This report summarizes the results of the Gu 2014 surveys by Food Security and Nutrition Analysis Unit (FSNAU) which assessed nutrition status of 34 162 children (6-59 months) from 18 022 households across most regions and livelihoods of Somalia. From May 2014 through July 2014, a total of 50 nutrition surveys were conducted, 45 of which were based on standard Standardized Monitoring and Assessment of Relief and Transitions (SMART) methodology and Mid Upper Arm Circumference (MUAC) was used as an indicator of wasting in remaining five. Nutrition data from about 130 health and nutrition facilities was also reviewed and used for triangulation of FSNAU results.

The basis of Gu 2014 results was FSNAU's partnership with Ministry of Health, Somalia, Ministries of Health in Somaliland and Puntland, Somalia Nutrition Cluster and key collaboration in some of the insecure areas : North Gedo with CAFDARO, Bakool Pastoral with EPHCO, Middle Shabelle with INTERSOS and Lower shabelle with SWISS KALMO. We are also grateful to 71 partner agencies listed in Annex 6.14 which participated in the planning and/or vetting of results without their support and invaluable inputs, this exercise would not have been possible.

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Sincere appreciation is expressed to FSNAU nutrition technical staff based in Somalia and various field enumerators for collecting the survey data which was instrumental for this assessment. The dedication of the FSNAU technical team based in Nairobi and FSNAU's focal point for Nutrition based in Mogadishu is highly appreciated as they not only analyzed the data but served as the primary drafters for this report.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF MAPS

LIST OF FIGURES

LIST OF ACRONYMS USED

ABBRAVIATIONS	DEFINITIONS
BF	Breast Feeding
CDR	Crude Death Rate
CMR	Crude Mortality Rate
CMAM	Community Management of Acute Malnutrition
ENA	Energy Networks Associations
FAO	Food and Agriculture Organization of the United Nations
FSNAU	Food Security and Nutrition Analyses Unit for Somalia
GAM	Global Acute Malnutrition
HAZ	Height for Age Z Scores
HIS	Health Information System
IDPs	Internally Displaced Persons
IYCF	Infant and Young Child Feeding
LZ	Livelihood Zones
MDG	Millennium Development Goals
MSF	Médecins Sans Frontières (MSF)
MUAC	Mid Upper Arm Circumference
NE	North East
NW	North West
PLW	Pregnant Lactating Women
SAM	Severe Acute Malnutrition
SMART	Standardized Monitoring and Assessment of Relief and Transitions
U5DR	Under-5 Mortality Rate
UN	United Nations
UNDP	United Nation Development Programme
UNICEF	United Nation Children's Fund
WAZ	Weight for Age Z Scores
WFP	World Food Programme
WHZ	Weight for Height Z Scores
WHO	World Health Organization
ToT	Terms of Trade
IPC	Integrated Food Security Phase Classification

FOREWARD

This Post Gu 2014 Technical Series Report is the ninth edition of bi-annual nutrition situation technical series launched by the Food Security and Nutrition Analysis Unit (FSNAU) Somalia, in February 2009. The publication complements the FSNAU bi-annual food security and nutrition technical series report and provides specific focus on current nutrition information and outlook for Aug-Oct 2014. The report includes a detailed analysis of the 45 comprehensive nutrition assessments and 5 MUAC assessments across Somalia- by region and rural livelihoods and displaced populations. Estimated data presented in this report are subject to revision.

We at FSNAU trust that you will find the report informative and useful.

Please contact info@fsnau.org with questions, comments, and feedback on this report.

EXECUTIVE SUMMARY

Malnutrition is a critical risk factor in Somalia, as in most countries where nutrition and food security remains a fundamental challenge to child survival. This report presents the summary of 50 anthropometric and retrospective mortality surveys conducted from May 2014 to July, 2014 (Post Gu) covering 34 162 children (6-59 months) from 18 022 households across most regions and livelihood zones of Somalia. The main objectives were to determine the nutritional status of children (6-59 months) and women of reproductive age group and to estimate both the crude and under-five mortality rates. The assessments were conducted in collaboration with government institutions (Ministries of Health) and partners. Surveys were conducted using standardized monitoring and assessment of relief and transitions (SMART) methodology. Weight/Height was measured for 45 surveys while Mid Upper Arm Circumference (MUAC) was used as an indicator of wasting in the remaining five.

Results from these surveys indicate that 14.9 percent of the populations of children under the age of five in Somalia are acutely malnourished, with 2.6 percent being severely malnourished. It was observed that in 19 out of 50 surveyed populations the prevalence of acute malnutrition exceeds the UN trigger for emergency action (GAM ≥ 15%). The highest levels of GAM (24.8 % or Critical) and SAM (6.3% or Very Critical) were recorded among Bakool Pastoral livelihood. Gu 2014 results show that Critical levels of acute malnutrition (GAM) were sustained among Bay Agro Pastorals, Bakool Pastorals, Beletweyne district and Internally Displaced Persons (IDPs) in Kismayo, Dollow, Dobley, Dhusamareb, Garowe and Galkayo as well as Bari urban. The median GAM (17.3%) and SAM (3.7%) prevalence rates for the South and Central region of Somalia are significantly higher when compared to 12.7 percent GAM and 2.2 percent SAM in the Northeast region and 10 percent GAM and 1.7 percent SAM in the North West region. The nutrition situation of children among IDPs is worst compared to those of rural and urban populations. Critical prevalence of acute malnutrition (GAM ≥15 %) was observed among seven out of 13 IDPs surveyed.

With GAM prevalence exceeding 15 percent accompanied by Crude Death Rate (CDR) exceeding 1/10 000 the situation of IDPs in Mogadishu and Kismayo is considered a Humanitarian Emergency. The precarious nature of the nutrition situation among IDPs is demonstrated among Mogadishu IDPs where GAM and SAM rates of 8.2 percent and 1.6 percent which were recorded respectively in *Deyr* 2013/14 deteriorated in less than six months (in Gu 2014) to 18.9 percent and 5.5 percent, respectively. The increase in GAM and SAM prevalence was accompanied by doubling of CDR (0.6 to 1.4) and a six fold increase in Under Five Death Rate-U5DR (0.5 to 3.4).

Since Deyr 2013/14, increase in GAM-MUAC as well as SAM-MUAC was noted among populations in Bay Agro Pastoral, North Gedo Pastoral, Riverine and Agro Pastorals, Mataban district in Hiran region, Hawd pastorals, Nugal Valley Pastoral , East Golis and IDPs in Mogadishu, Kismayo, Baidoa, Dollow and Hargeisa). Very Critical levels of SAM-MUAC prevalence (≥4%) were recorded among Kismayo IDPs and in Cowpea belt livelihood.

MUAC is an important measure of acute malnutrition that has a much closer relation to infant and child mortality than Weight for Height Z Score (WHZ). FSNAU data did not show any signification correlation between WHZ and U5DR,however a significant positive correlation was noted between GAM-MUAC and U5DR ($r = 0.63$, $p<0.01$) and GAM-MUAC and Morbidity ($r= 0.53$, $p<0.05$). Similarly a significant positive association of SAM-MUAC with U5DR ($r= 0.64$, $p <0.01$) as well as morbidity ($r=0.34$, $p<0.05$) was noted.

Comparison across different livelihoods shows that although the nutrition situation based on WHZ is Critical in all the livelihoods, prevalence is higher among the Pastorals (15.8%) compared to Agro Pastorals (15%) or Riverine (15.3%). Reverse trend was noted for prevalence of acute malnutrition based on MUAC as GAM-MUAC was 7.7 percent in Pastoral areas compared to 9.4 percent in Agro Pastorals or 9.7 percent among Riverine livelihoods. This was not unexpected as WHZ is a norm-referenced indicator while MUAC is a criteria-referenced indicator.

Even though the current CDR (0.40) and U5DR (0.68) are within the Acceptable range, many of those already undernourished are more susceptible to disease and this is reflected in high prevalence of morbidity. In nutritional crises most malnutrition-related deaths are due to severe diarrhoea and dehydration, in addition to malaria or acute respiratory infections; indeed, malnutrition is considered to be the underlying cause of death. A doubling of CDR within six months (since January 2014) was noted among Bakool Pastoral, Bay Agro pastoral, Hiran pastoral, Mataban District, Dusamareb IDPs and Bossaso IDPs. A doubling of U5DR was also recorded among Dhobley, Kismayo and Mogadishu IDPs. General trend analysis for CDR and U5DR show that mortality rate in South Central region is always higher than for Northeast /Northwest region with declining trend in Northeast and Northwest but not in South Central region.

Malnutrition and illness interact through a vicious cycle - a malnourished child is at high risk of infection, and illness contributes to malnutrition. This was reflected in high prevalence of GAM and SAM in areas with high morbidity. For example, Mataban with 57 percent morbidity shows 22.2 percent GAM. Prevalence of acute malnutrition also showed a significant association with morbidity prevalence.

High prevalence of chronic malnutrition ($r=0.29$, $p<0.01$) and underweight ($r=0.61$, $p<0.01$) was noted in livelihoods with high acute malnutrition, reflecting underlying nutritional vulnerability. The prevalence of stunting (chronic malnutrition) was higher among IDPs compared to rural population groups (16% compared to 7.1% for rural) and a similar trend was observed for underweight (18.7% among IDPs compared to 13.2% for rural).

Immunization is an important public health intervention which protects children from illness. A significant negative association between Vitamin A supplementation coverage with morbidity rates highlights its protective effect through increasing immunity and suggests need to improve the poor immunization coverage and vitamin A supplementation in Somalia.

Very Critical levels of maternal malnutrition (MUAC < 23 cms in ≥ 31.5% of PLW) were recorded among Dhusamreeb IDPs, North Gedo Riverine, North Gedo Agro pastoral and in Hawd Central. Critical levels of maternal malnutrition (23.4-31.4%) were also observed among North Gedo pastoral, East Golis, Addun Central, Bakool Pastoral and Qardho IDPs and Baidoa IDPs. Poor Infant and Young Child Feeding (IYCF) practices and high prevalence of maternal malnutrition suggests that marked reductions in current child malnutrition and, indeed, future cases of acute malnutrition can be achieved through improvements in women's nutrition before and during pregnancy, early and exclusive breastfeeding, and good-quality complementary feeding for infants and young children.

The current prevalence of acute malnutrition translates into 218 000 acutely malnourished children, including 44 000 who are severely malnourished across Somalia, with a majority of these children (>74%) being located in the South and Central Region. The overall figure represents a seven percent increase from the number reported in Deyr 2013/14 and signifies a deterioration in the overall nutrition situation in Somalia over the past six months period. It is important to note that this caseload is calculated as per 'prevalence'-based and does not take into account for those children who develop acute malnutrition at other points in the year, when the survey is not being carried out. Therefore, caseload based on incidence is 393 000 children with acute malnutrition in Somalia, including 79 000 children with SAM who will require treatment over the next 6 months (August - December 2014).

MUAC measurements are used worldwide for identification, referral and admission of severely malnourished children aged 6-59 months to nutrition programmes. FSNAU data shows large differences in the prevalence of acute malnutrition measured by weight-for-height (WHZ) versus MUAC (21800 versus 112000). This shows that GAM caseload based on MUAC is 94 percent lower than that based on WHZ. This has programmatic implications because if MUAC is used for active case finding, only a small proportion of children classified as malnourished according to weight-for-height would be identified and referred to the program. Using MUAC for identification and referral at the community level would mean that, as mentioned above, a very large proportion of children that are malnourished according to weight-for-height would be missed and the caseload would be so low that it would be difficult to justify the need for a programme. On the other hand, using only weight-for-height for active case finding, referral and admission is costly, takes more time and requires much better trained staff.

The Gu 2014 results suggest that risk of acute malnutrition is increasing in Somalia. Therefore the current nutrition services should be expanded to reach more children with special emphasis on the community component (MUAC screening and referral). The most vulnerable demographic are the under five children in South Central region of Somalia and those in IDP settlements. Contrary to popular belief, acute malnutrition in Somalia does not occur only in food insecure populations, implying that it not an issue of food access, but of caring practices, access to safe water/sanitation and disease. High prevalence of chronic malnutrition (stunting) and underweight in livelihoods with high acute malnutrition highlight the need for long term programs to prevent malnutrition. Additionally, results for Mogadishu IDPs highlight the necessity to rapidly detect the acute worsening of a protracted crisis, combined with the prompt adjustment and scaling-up of programmes (from routine activities to emergency response) at the earliest signs of such a worsening. Preventing infants and young children from becoming undernourished is much more effective than treating children who are already malnourished.

Table 1: Nutrition and Mortality Situation in Somalia *Gu* 2014

Livelihood Zone/ Population assessed	GAM	SAM	Stunted	Underweight	CDR	U5DR
LIVELIHOODS						
SOUTH CENTRAL (SC)						
Shabelle Riverine	11.2	2.6	19.5	15.6	0.5	1.1
North Gedo Agro-pastoral	14.9	0.2	19.8	13.5	0.8	1.2
Beletweyne District	15.0	3.5	23.5	24.8	0.3	0.1
Bay Agropastoral	17.1	3.7	38.1	32.4	0.5	1.0
Shabelle Agropastoral	18.8	5.4	10.3	19.9	0.7	0.8
North Gedo Riverine	19.3	3.1	21.4	21.4	0.7	0.9
North Gedo pastoral	20.7	1.0	4.2	10.2	0.5	0.9
Mataban District	22.2	5.1	9.9	16.7	0.7	0.2
Bakool Pastoral	24.8	6.3	3.0	14.7	0.4	0.8
NORTHEAST						
Nugal Valley	7.9	0.3	3.1	3.9	0.2	0.0
Addun Central	9.7	2.4	7.2	8.9	0.2	0.3
Sool plateau	12.0	2.2	3.6	6.3	0.1	0.2
Coastal Deeh	12.7	2.1	6.5	8.5	0.0	0.0
East Golis (NE)	15.8	2.8	9.1	13.2	0.2	0.1
Hawd Central	17.3	4.6	11.6	16.6	0.5	0.6
NORTHWEST						
Hawd Northwest	7.6	0.42	2.1	1.2	0.1	0.0
Nugal Valley	7.9	0.3	3.1	3.9	0.2	0.0
EGolis (NW)	9.0	0.4	1.6	4.3	0.1	0.6
Northwest Agropastoral	10.4	2.6	2.8	5.8	0.1	0.0
Sool plateau	12.0	2.2	3.6	6.3	0.1	0.2
WGolis/Guban	15.8	3.0	7.1	9.4	0.1	0.0
IDPs						
SOUTH CENTRAL						
Baidoa IDP	12.9	2.4	41.5	31.6	0.7	0.8
Dobley IDP	16.5	4.0	10.3	12.3	0.5	1.0
Kismayo IDP	16.6	3.6	39.8	32.8	1.3	1.4
Dhusamreb IDP	18.2	4.6	12.2	17.9	0.2	0.3
Dolow IDP	18.8	4.1	26.9	26.4	0.7	1.2
Mogadishu IDP	18.9	5.5	16.0	23.0	1.4	3.4
NORTHEAST (NE)						
Qardho IDPs	12.2	1.7	16.5	18.7	0.3	0.7
Bossaso IDPs	13.2	2.9	25.8	22.6	0.3	0.4
Galkayo IDP's	16.5	2.5	15.3	17.8	0.1	0.4
Garowe IDPs	21.0	4.4	22.3	25.6	0.1	0.1
NORTHWEST (NW)						
Hargeisa IDPs	8.1	0.3	4.1	7.4	0.7	0.7
Berbera IDPs	10.0	1.7	2.2	5.6	0.3	0.2
Burao IDPs	12.4	1.8	2.1	2.7	0.2	0.3
URBAN						
SOUTH CENTRAL (SC)						
Mogadishu urban	10.1	1.4	8.3	8.9	~	~
Kismayo Town	12.4	3.2	19.9	17.2	0.6	0.8
Galgaduud Urban	9.9	1.3	8.5	10.4	~	~
NORTHWEST (NW)						
Sanag Region Urban	5.5	0.4	5.5	3.9	~	~
Awdal Urban	6.6	0.8	14.4	9.0	~	~
Togdheer Region Urban	8.1	1.4	3.4	4.8	~	~
W/Galbeed Region Urban	8.6	2.0	1.7	4.3	~	~
Sool Region Urban	11.3	1.1	2.1	5.0	~	~
NORTH EAST (NE)						
Nugaal Urban	12.9	3.2	9.0	8.5	~	~
Bari Urban	17.5	4.0	7.5	13.5	~	~
MUAC - SOUTH CENTRAL	**<12.5**	**<11.5**				
Cowpea Belt	9.7	2.5	~	~	~	~
Coastal deeh Central	10.0	4.9	~	~	~	~
South Gedo Agropastoral	15.6	2.2	~	~	~	~
South Gedo Pastoral	16.9	1.9	~	~	~	~
South Gedo Riverine	17.7	3.4	~	~	~	~

See Appendix 6.13 for interpretation of colour codes used in the table above

1: BACKGROUND

Undernutrition is a serious global health and development challenge, particularly for countries like Somalia. In addition to its impact as a major risk factor for disease and mortality, undernutrition has significant societal implications, including decreases in educational attainment and productivity and increases in healthcare spending. Undernourished children who survive to adulthood are estimated to earn almost 20 percent less than those not affected.[1] Understanding the extent of malnutrition, its underlying causes, and how these change over time is essential to the design and implementation of nutrition and food security programs.

FSNAU provides a snapshot of the current nutrition situation in Somalia by conducting biannual assessments. Between May 2014 to July 2014 (Post Gu), FSNAU conducted 50 nutrition surveys across Somalia covering 34 162 children (6-59 months) from 18 022 households across most regions & livelihood zones. These assessments were planned in conjunction with the government authorities and partner agencies.

The primary objectives of the Post Gu assessment among 13 IDPs, 26 rural livelihoods and 11 urban areas in Somalia was to:

- Assess the prevalence of malnutrition amongst children aged 6 – 59 months
- Determine retrospective crude mortality rate (CMR) and under five mortality rate (U5MR)
- Determine Morbidity rate in children aged 6 – 59 months

The secondary objectives were to:

- Estimate overage with measles vaccination and Vitamin A supplementation
- Assess water, hygiene and sanitation factors that may contribute to malnutrition in children.
- Assess the infant and young child feeding practices amongst the community.
- Aassess the nutrition situation of the mothers (pregnant, lactating)

Two type of assessments were done:

1. Assessment using SMART[2] Methodology – Integrated Nutrition & Food Security Surveys in IDPs Urban livelihoods and Rural livelihoods
2. Representative MUAC based nutrition assessment — areas with insecurity

The Assessment among displaced and urban population were intergrated food security and nutrition surveys. Details of survey tools and time plan (when and where) were shared with MOH and all nutrition stakeholders in three regions of Somalia as well as in Nairobi for coordination and participation by interested partners.

SURVEY LIMITATIONS

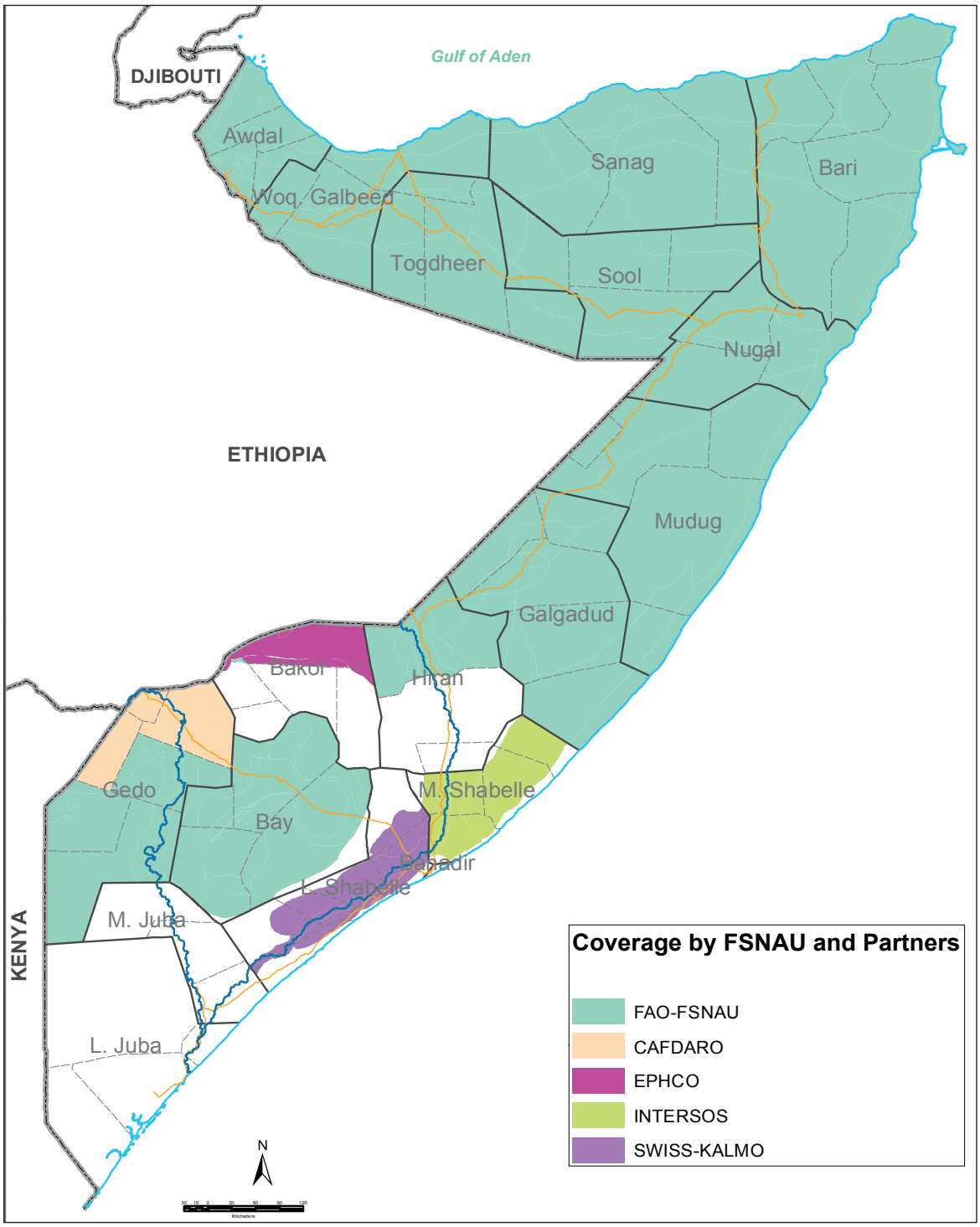
- Insecurity limits access to the population of concern and lack of qualified partners in some areas: Juba
- FSNAU Surveys are cross sectional surveys which limit our ability to draw conclusions on causality but where significant association exists between variables these are reported.
- The causes of malnutrition highlighted in FSNAU report are probable causes of malnutrition as no causal analysis/ studies were undertaken.
- Use of Official Population figures (UNDP, 2005) results in potential under estimation of the magnitude of the malnutrition in Somalia.
- Precise age estimation is a challenge due to lack of support documentations indicating birth dates.
- FSNAU surveys are livelihood based surveys. Some livelihoods are cross cutting and show a wide range of GAM.

1 Grantham-McGregor S et al. (2007) 'Development potential in the first 5 years for children in developing countries' *The Lancet* 369(9555), 60-70.
2 Standardized Monitoring and Assessment of Relief and Transitions

2: METHODOLOGY

FSNAU and partners conducted 50 nutrition surveys across Somalia covering most regions & livelihood zones (Map 1) between May 2014 and July 2014 (Post Gu). These were cross-sectional surveys, 45 of which used the comprehensive SMART methodology as their basis and five of which used the Mid Upper Arm Circumference (MUAC) as an indicator of wasting. The survey covered **34 162** children aged 6-59 months from **18 022** households. In total, 55 percent of the nutrition assessments were carried out in South Central Somalia, 26 percent in the North West and 19 percent in the North East.

Map 1: Gu 2014 Assessed Areas



* Three additional nutrition surveys conducted in Middle and Lower Juba were discarded due to problems with the quality of the survey data.

The anthropometric and mortality sample sizes were calculated using ENA for SMART Software (Sept 2013 version) after considering the minimum precision around the estimate of malnutrition or death rate and likely design effect. A two stage cluster sampling method was used: the first sampling stage involved the random selection of settlements from an exhaustive updated list of locations of the areas to be surveyed using probability proportionate to size (PPS). In the PPS sampling method, larger settlements have a higher chance of being selected as clusters compared to smaller settlements because the probability of selection is proportional to population size of the settlement.

The second sampling stage entailed the selection of individual households which was done randomly within clusters, using simple random sampling or Modified EPI methods. In some contexts, segmentation was done before applying one of the households selections methods above. Local events calendar was used to estimate age of children.

Both qualitative and quantitative data collection techniques were used. Quantitative data was collected through a standard household questionnaire for nutrition assessments in Somalia. Retrospective mortality data for 90 days prior to the assessments was also collected among the study households using mortality questionnaires. The 90 day recall period was calculated based from mid of data collection days.

Tools used include :

- Structured standard comprehensive nutrition questionnaire
- Mortality questionnaire
- Comprehensive short nutrition questionnaires

TRAINING AND SUPERVISION

Prior to data collection, FSNAU conducted 3-5 days training of enumerators and supervisors (depending on the type of survey). The training covered interview techniques, sampling procedure, inclusion and exclusion criteria, sources and reduction of errors, taking of accurate measurements (height, weight and MUAC), diagnosis of oedema and measles, verification of deaths within households, handling of equipment and general courtesy during the assessments. During the training, a standardization test was conducted to evaluate performance of each enumarator regarding the precision and accuracy of anthropometric measurements. This entailed each survey team member measuring twice at least ten healthy children (6-59 months of age). During the last day of the training, pre-testing of the questionnaire and equipment were carried out in non-selected clusters. The teams went through all the steps in conducting the survey, under supervision. After the field exercise, views were exchanged to address difficulties identified, appropriateness of the questions, and review of questionnaire, after which appropriate changes were made.

DATA ENTRY, CLEANING AND ANALYSIS

Survey data was entered into the computer using the data entry template and then transferred to Excel; ENA Software or EPi Info for analysis. Before definitive analysis was performed, any errors in the data were identified and corrected. This was done partly during data entry. Data cleaning was also done using plausibility checks. The computer automatically examined the data to see if there are values outside the usual or expected range and listed them in Microsoft Word. These values were then reviewed and checked against the original written data collection sheets, after which any error in data entry was corrected immediately.

QUALITY ASSURANCE

This was done by using the automated plausibility checks function in ENA for SMART surveys which tests for the following parameters :

- Missing/Flagged data
- Age distribution
- Overall sex ratio
- Digit Preference :Weight and Height distribution
- Standard Deviations WFH
- Skewness WFH
- Kurtosis WFH
- Poisson distribution

The Plausibility Check for Post Gu 2014 assessments highlighed the excellent quality of the anthropometric data, both in terms of sample representativeness and quality of anthropometric measurements (Table 2).

Table 2: Plausibility Checks

	Missing/ Flagged data	Overall sex ratio	Overall age distribution	Digit Preference score-weight	Digit Preference score-Height	Digit Preference score-MUAC	SD WHZ	Skewness WHZ	Kurtosis WHZ	Poisson Distribution	Overall Score
RATING											
Excellent	0-2.5(0)	>0.1(0)	>0.1(0)	0-7(0)	0-7(0)	0-7(0)	<1.1 (0)	<±0.2(0)	<±0.2(0)	>0.05(0)	0-9
Good	>2.5-5.0 (5)	>0.05(2)	>0.05(2)	8--12(2)	8--12(2)	8--12(2)	<1.15(2)	<±0.4(1)	<±0.4(1)	>0.01 (1)	10--14
Acceptable	>5.0-7.5(10)	>0.001 (4)	>0.001 (4)	13-20(4)	13-20(4)	13-20(4)	<1.20 (6)	<±0.6(3)	<±0.6(3)	>0.001(3)	15-24
Problematic	>7.5 (20)	<=0.001(10)	<=0.001(10)	> 20 (10)	> 20 (10)	> 20 (10)	>=1.20(20) &<= 0.8 (20)	>=±0.6 (5)	>=±0.6 (5)	<=0.001(5)	>25
LOCATION	**North East**										
Bosasso IDPs	0 (1.7%)	0 (p=0.542)	4 (p=0.004)	0 (4)	2 (10)	2 (8)	0 (1.01)	0 (-0.14)	0 (0.07)	1 (p=0.014)	9
Garowe IDPs	0 (2.1 %)	0 (p=0.501)	0 (p=0.628)	0 (3)	0 (7)	0 (7)	0 (1.09)	0 (-0.07)	1 (-0.26)	5 (p=0.000)	6
Galkayo IDPs	0 (1.2%)	0 (p=0.517)	2 (p=0.060)	0 (3)	0 (5)	0 (6)	0 (1.04)	0 (0.11)	0 (0.00)	0 (p=0.148)	2
QardhoIDPs	0 (0.2%)	0 (p=0.379)	4 (p=0.017)	0 (3)	2 (9)	0 (5)	0 (1.02)	0 (-0.01)	0 (0.10)	N/A	6
East Golis-NE	**0** (0.9 %)	**0** (p=0.770)	**4** (p=0.038)	**0** (3)	**2** (9)	**2** (8)	**0** (1.08)	**0** (-0.01)	**1** (-0.32)	**0** (p=0.238)	9
Coastal Deeh(N.E)	0(1.3%)	**0** (p=0.204)	**10** (p=0.000)	0(5)	0(3)	0(4)	**0** (1.05)	**0** (1.05)	**0** (-0.11)	**0** (p=0.071)	10
LOCATION	**North West**										
Hargeisa IDPs	0 (0.3 %)	0 (p=0.757)	10 (p=0.00)	0(4)	2 (7)	0 (5)	0 (1.01)	0 (0.15)	1 (-0.23)	3 (p=0.002)	14
Burao IDPs	0 (0.0%)	0 (p=0.510)	10 (p=0.000)	0 (4)	2 (7)	0 (7)	2 (1.14)	0 (0.09)	1 (-0.34)	5 (p=0.000)	18
Berbera IDPs	0 (0.6 %))	0 (p=0.453)	0 (p=0.022)	0 (6)	2 (9)	2 (8)	0 (1.02	0 (-0.2)	1 (-0.21)	3 (p=0.001)	13
West Golis	0 (1.1 %)	0 (p=0.638)	0 (p=0.864)	0 (6)	0 (7)	2 (8)	0 (1.06)	0 (-0.04)	0 (-0.16)	3 (p=0.010)	5
NW Agropastoral	0(1.8%)	0(p=0.721)	4(p=0.018)	0(7)	0(5)	0(6)	0(1.05)	1(-0.33)	0(-0.07)	0(p=0.189)	5
East Golis	5 (2.7 %)	0 (p=0.628)	0 (p=0.774)	0 (5)	2 (8)	0 (6)	0 (0.99)	0 (0.06)	0 (-0.13)	0 (p=0.057)	7
Hawd-NW	0(1.8%	**0** (p=0.768)	**4** (p=0.031)	0(7)	0(6)	0(4)	**2** (1.12)	**0** (0.09)	**1** (-0.23)	**0** (p=0.055)	7
Sool plateau	0 (0.3 %)	0 (p=0.267)	2 (p=0.068)	0 (4)	2 (8)	0 (5)	0 (1.04)	0 (-0.03)	0 (0.02)	0 (p=0.129)	4
Nugal Valley	0 (0.6)	4 (p=0.011)	10 (p=0.000	0 (5)	0 (5)	0 (5	2 (1.12)	0 (-0.07)	5 (-0.69)	3 (p=0.009	24
Sanaag Urban	0 (1.6 %)	2 (p=0.086	4 (p=0.025)	0 (6)	10 (21)	2 (12)	2 (1.11)	1 (0.22)	1 (-0.31)	0 (p=0.362)	22
Awdal Urban	0 (1.8 %)	0 (p=0.966)	4 (p=0.016)	0 (3)	4 (13)	4 (15)	2 (1.13)	0 (0.03)	1 (-0.22)	3 (p=0.007)	18
W. Galbeed Urban	0 (1.4 %)	0 (p=0.594)	4 (p=0.003)	0 (5)	0 (7)	0 (4)	6 (1.16)	0 (0.08)	1 (-0.23)	0 (p=0.231)	11
Sool Urban	5(4.2%)	0(p=0.902)	4(p=0.004)	0(6)	2(11)	0(6)	6(1.19)	0(0.10)	1(-0.3.2)	5(p=0.000)	23
Togdheer Urban	0 (0.8 %)	0 (p=0.823)	4 (p=0.012)	0 (6)	0 (6)	0 (7)	0 (1.00)	1 (-0.32)	0 (-0.07)	0 (p=0.734)	5
	Central										
Addun	**0** (2.1 %)	**0** (p=0.107)	**0** (p=0.329)	0(4)	0(5)	0(4)	**0** (1.04)	**1** (-0.22)	**0** (-0.11)	**5** (p=0.000)	6
Hawd/NE	**0** (1.3 %)	**0** (p=0.908	**2** (p=0.074)	0(5)	4(15)	2(10)	**6** (1.16)	**0** (-0.13)	**1** (-0.34)	**3** (p=0.002)	18
Coastal Deeh(Central)	N/A										
Cowpea Belt	N/A										
Dhusamareb IDPs	0 (2.1%)	0 (p=0.513)	0 (p=0.337)	0 (6)	2 (8)	2 (11)	2 (1.13)	1 (-0.35)	1 (-0.30)	N/A	8
Mudug		0 (p=0.872)	4 (p=0.018)	0 (5)	2 (8)	0 (7)	0 (1.03)	0 (0.03)	0 (-0.05)	0(P=0.373)	6
Galgudud	**0** (1.7 %)	**2** (p=0.086)	**0** (p=0.104)	0(6)	2(9)	2(11)	2(1.10)	**0** (0.00)	**1** (-0.24)	**3** (p=0.002)	12
	South										
Mogadishu Urban	5(2.9)	0(P=0.724)	10(P=0.000)	0(4)	0(5)	0(4)	2(1.14)	0(0.01)	3(-0.46)	0(P=0.126)	20
Mogadishu IDP	5(4.8)	0 (p=0.145)	10(0.000)	0 (4)	0 (6)	0 (5)	2(1.15)	0 (-0.15)	1(-0.29)	5(p=0.000)	23
Lower Shebelle	0(2.5)	0(p=0.541)	10(p=000)	0(4)	2(8)	0(4)	6(1.16)	1(-0.21)	0(-0.14)	1(p=0.024)	20
Middle Shebelle	5(2.6)	0(p=0.808)	10(p=000)	0(5)	0(6)	2(8)	2(1.13)	0(-0.01)	1(-0.33)	0(p=0.084)	20
Shabelle Agro pastoral	5(3.4)	0(p=0.767)	4(p=0.003)	0(4)	0(7)	0(5)	2(1.15)	0(-0.11)	1(-0.23)	0(p=0.193)	12
Shabelle Riverine	**0** (1.6 %)	**0** (p=0.206)	**10** (p=0.000)	0(6)	0(7)	0(7)	**2** (1.11)	**0** (-0.14	**0** (-0.13)	**3** (p=0.003)	15
Mataban	0 (1.5 %)	0 (p=0.446)	0 (p=0.163)	0 (3)	2(12)	0(6)	2 (1.13)	0 (0.11)	1 (-0.35)	3 (p=0.001)	8
Beledweyne	5 (2.6 %)	0 (p=0.294	10 (p=0.000)	0 (4)	4(13)	0(6)	0 (1.05)	0 (0.07)	0 (-0.09)	5 (p=0.000)	24
Bakool Pastoral	5(2.7)	0(p=0.966)	4(p=0.010)	2(9)	4(18)	2(11)	2(1.10)	0(0.00)	1(-0.36)	3(p=0.001)	23
Bay Agropastoral	0(2.5)	0(p=0.745)	10(P=0.000)	0(4)	2(9)	0(5)	2(1.13)	0(-0.12)	1(-0.25)	5(p=0.000)	20
Baidoa IDPS	0 (2%)	0 (p=0.594)	10 (p=0.000)	0(4)	2 (10)	0(4)	0(1.06)	0(-0.10)	1(-0.22)	1(p=0.014)	14
Dolow IDPs	0(2.5)	0(p=0.540)	4(0.008)	0(5)	0(6)	4(13)	0(1.05)	0(0.04)	1(-0.27)	0(p=0001)	9
Kismayu IDP	0(1.1%)	0(p=0.448)	10 (p=0.000)	0(4)	4(16)	0(4)	6(1.18)	0(0.04)	3(-0.52)	1(p=0.012)	24
Dobley IDP	0(1.8)	0(p=0.943)	10(P=0.000)	o(6)	2(10)	2(8)	2(1.12)	0(0.02)	0(-0.14)	0(p=0.001)	16
Kismayo town	0 (2-3)	0 (p=0.438)	4(p=0.006)	0(3)	2(9)	0(7)	6(1.18)	0(0.01)	1(-0.23)	3 (p=0.003)	16
North Gedo pastoral	**0** (0.0 %)	**2** (p=0.061)	**2** (p=0.061)	**2** (9)	**4** (16)	**2** (12)	**2** (1.11)	**1** (0.23)	**3** (-0.53	**0** (p=0.001)	18
North Gedo agro-pastoral	**5** (2.8 %)	**0** (p=0.965)	**10** (p=0.000)	**0** (4)	**4** (17)	**0** (5)	**0** (1.03)	**3** (0.48)	**0** (0.04	**0** (p=0.001)	22
North Gedo riverine	**0** (1.9 %)	**0** (p=0.320)	**0** (p=0.113)	**0** (3)	**2** (12)	**10** (39)	**0** (1.04)	**0** (0.03)	**1** (-0.31)	**0** (p=0.000)	13
Juba pastoral	**10** (5.9 %)	**4** (p=0.035)	**2** (p=0.079)	**0** (7)	**4** (13)	**2** (8)	**20** (1.21)	**1** (0.25)	**3** (-0.49)	**1** (p=0.012)	**47**
Juba agro-pastoral	**10** (7.5 %)	4 p=0.006)	10(p=0.000)	0(7)	**4** (15)	**4** (14)	**20** (1.32)	**0** (0.15	**5** (-0.76)	**3** (p=0.001)	**60**
Juba riverine	**5** (5.0 %)	**0** (p=0.367)	**10** (p=0.000	**0** (7)	**2** (9)	**2** (11)	**20** (1.24)	**3** (0.41)	**1** (-0.29)	**0** (p=0.175)	**43**

*Further details on methodology are provided in 6: Appendices

Quality of data was also ensured through:

a. Training of survey staff and supervision of field work by the FSNAU coordination team

b. Cross checking of filled questionnaires on daily basis and recording of observations and confirmation of measles, severe malnutrition and death cases by supervisors, who ensured that all households sampled were visited and details recorded including empty ones

c. Undertaking daily review with the teams to address any difficulties encountered,

d. Progress evaluation was carried out according to the time schedule. Progress reports were shared with partners on regular basis.

e. Monitoring accuracy of equipment (weighing scales) by regularly measuring objects of known weights

f. Quality assurance during data collection and entry

g. Data Quality validation by running frequencies.

h. Defining boundaries for exclusion for example:
   - If Sex is missing the observation is excluded from analysis.
   - If Weight is missing, no WHZ and WAZ are calculated, and the programme derives only HAZ.
   - If Height is missing, no WHZ and HAZ are calculated, and the programme derives only WAZ.
   - For any child records with missing age (age in months) only WHZ will be calculated.
   - If a child has oedema only his/her HAZ is calculated.

i. Continuous reinforcement of good practices. All measurements were loudly shouted by both the enumerators reading and recording them to reduce errors during recording.

Based on the results of the plausibility checks, data from Juba was excluded from further analysis.

DATA ANALYSIS AND INTERPRETATION:

FSNAU survey results were analyzed in ENA software for anthropometric and mortality data, and Epi info for cross tabulations and analysis of non-anthropometric data. Interpretation of findings on child growth indicators are based on internationally recognized thresholds, mainly the WHO-UNICEF/Sphere[1] . Household access to a variety of food was estimated through Dietary diversity, a qualitative measure of food consumption[2] . The Primary data collected through the SMART surveys was triangulated with secondary data– Morbidity trends and admissions trends of malnourished children into feeding programs. Data was interpreted taking into consideration many factors among such as :

- Trends and changes
- Seasonality
- Aggravating factors
- Mortality levels.
- CDC calculator was also used for further analysis and comparison of previous surveys to determine if there is a significant or not.
- Cross tabulation was also done for measure of association. e.g. GAM Vs. Mortality
- Data was disaggregated for age and gender

The contextually relevant analysis forms the basis for data interpretation:

- ❑ Reference Indicators-overall nutrition situation- GAM/SAM/CMR/U5MR/MUAC Children & Adults/HIS trends/Admissions in feeding centers
- ❑ Immediate Causes-Household Dietary Diversity, Morbidity/Disease outbreak
- ❑ Driving Factors-Breast Feeding practices, complementary feeding, Vitamin A supplementation coverage, Measles immunization coverage, water sanitation access

1 The WHO Child Growth Standard available at : http://www.who.int/childgrowth/standards/en/
2 Guidelines for measuring household and individual dietary diversity. FAO 2011

Reference indicators were categorized into five different phases based on the recognized thresholds: Acceptable, Alert, Serious, Critical and Very Critical[3]. (Annex 6.13). The outcome of the integrated nutrition situation analysis process and the estimated nutrition situation was based on convergence of evidence of the findings from the multiple indicators. A minimum of 2 anthropometric indicators (for example global and severe acute malnutrition rates) were used to make an analysis and classification of the situation into one of the 5 different phases. The overall analysis was consolidated into the **Estimated Nutrition Situation Map**. In the cartographical presentation, reliability of data source was illustrated through solid colour (for survey data which is quite reliable, R=3), or through slash marks (when statistically representative data is not available, in which case data reliability is lower and R=1).

ANALYTICAL PROCESS

To make a statement on the

- Nutrition situation: A minimum of **two Core indicators** were used
- Projected trend: A minimum of two **risk factors (immediate or underlying)** were used

The overall classification of the nutrition situation for a given area was done taking into account historical nutrition and contextual data. Triangulation of all indicators was also undertaken. An attempt was made to look at the bigger picture in terms of where the indicators currently are, where they have come from and where they are likely to go to make the overall statement of the situation.

ESTIMATION OF NUMBER OF CHILDREN WITH ACUTE MALNUTRITION

Caseload numbers refer to the approximate number of children who are acutely malnourished based on the current acute malnutrition prevalence rates obtained through biannual nutrition assessments conducted in Somalia. The prevalence rates are normally based on WFH and MUAC indicators. The computation of the caseload estimates is dependent on the population estimates and the prevalence rates. This provides the number of malnourished children and pregnant and lactating mothers at the time of assessment. The population figures currently used are the UNDP 2005 estimates of 7.5 million people. Given the global demographic patterns, children under the age of 5 years are estimated to account for 20 percent of the population. Because of the occurrence of new cases, an Incidence rate is factored in the computation, capturing additional cases that would occur over time. Currently for Somalia, an incidence factor of 1.8 is applied for estimating incidence over 6 months period.

Rationale: The caseload estimation is normally done for the whole of Somalia including areas that have not been surveyed. To derive these numbers, a rationale is developed based on one or more factors including;

- *Use of prevalence rates for similar livelihoods. Where prevalence rates of acute malnutrition are unavailable, the rates observed in similar livelihoods are applied considering also the food security situations.*
- *Seasonal trends analysis is used for a region to derive a median value.*
- *Median value of the nutrition phase for the area is imputed. For example if an area is considered to be likely serious based on other indicators, a value of 12.5 will be applied, if critical a value of 17.5.*

Caseload Presentation The prevalence and incidence caseload estimates are presented in the form of regional maps and graphs.

Formula for Caseload computation: Caseload = N x P x K

N is the size of the population. *This is usually the population aged:* between 6 and 59 months which is commonly estimated as 20% of the total population and 5% for P&L mothers.

- ***P is estimated prevalence of GAM/SAM/MUAC .*** This is usually estimated using a nutritional anthropometry survey (e.g. a SMART survey).
- ***K is a correction factor which accounts for new (incident cases) over a given time period (1.8).***
  - WFH in admitting case-definitions= lower levels of coverage
  - MUAC in admitting case-definitions= higher levels

N= At FSNAU the denominator is UNDP 2005 census figures…..
P- This is obtained from seasonal survey results conducted in Somalia (*Deyr and Gu Surveys*)

Case definitions

- GAM<-2 WHZ or SAM<-3 WHZ
- MUAC< 12.5cm or MUAC <11.5cm

3 Integrated Food Security Phase Classification. Technical Manual. .version 2 The Food and Agriculture Organization of the United Nations. Rome. 2012

3: FINDINGS OF THE NUTRITION ASSESSMENT (POST GU 2014)

Situation of persistent high level of acute malnutrition is sustained in Somalia where 1 in 7 children < 5 yrs. suffers from acute malnutrition at the time of the assessment (GAM 14.9%).

CURRENT NUTRITION SITUATION:

Nutrition is the key for sustainable development and the wellbeing of the population. However Somalia continues to report malnutrition rates above emergency thresholds. According to the WHO classification, Global Acute Malnutrition (GAM) not exceeding the five percent threshold is considered "Acceptable". However the current nutrition situation (Gu 2014) shown in Map 2 suggests that an Acceptable nutrition situation was not recorded in any of the 50 population groups surveyed in Somalia. It was observed that nearly 14.9 percent of the total under five population in Somalia is acutely malnourished with 2.6 percent of these being severely malnourished. Since Deyr 2013/14, worsening of nutrition situation was recorded among North Gedo pastoral and Riverine, Mataban district, Shabelle Agro pastoral, Hawd central, East and West Golis, Sool plateau, Northwest Agro pastorals, Mogadishu (IDP and urban) and Sool region urban. The nutrition situation can worsen quickly in Somalia. This was demonstrated by the rapid increase in GAM prevalence among Shabelle Agro pastoral (from 8% to 18.8%) Mogadishu IDP (from 8.2% to 18.9%), Hawd (13.2% to 17.3%) and in Sool urban (from 3.6 % to 11.3%).

Map 2: Somalia Estimated Nutrition Situation (GAM)
August 2014 (based on May - July 2014 Surveys)

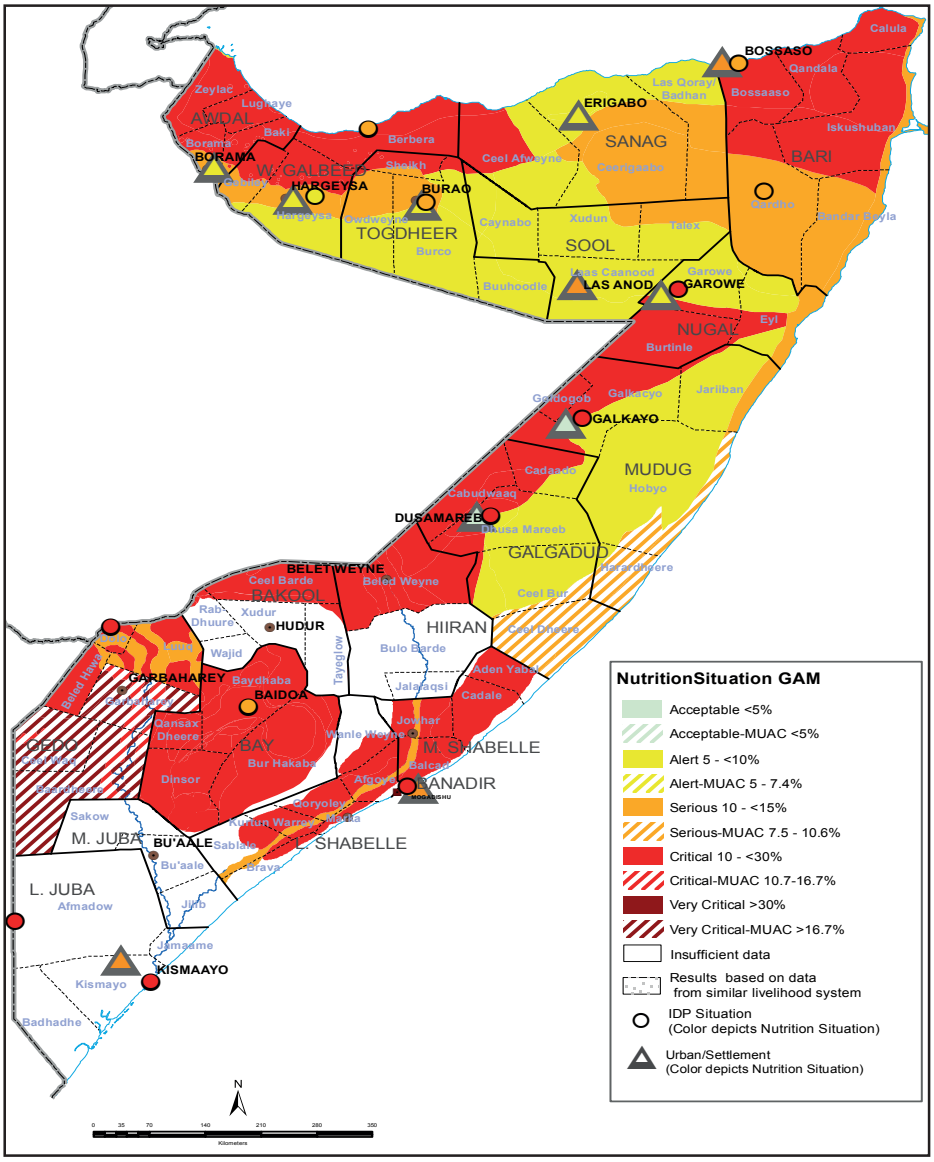
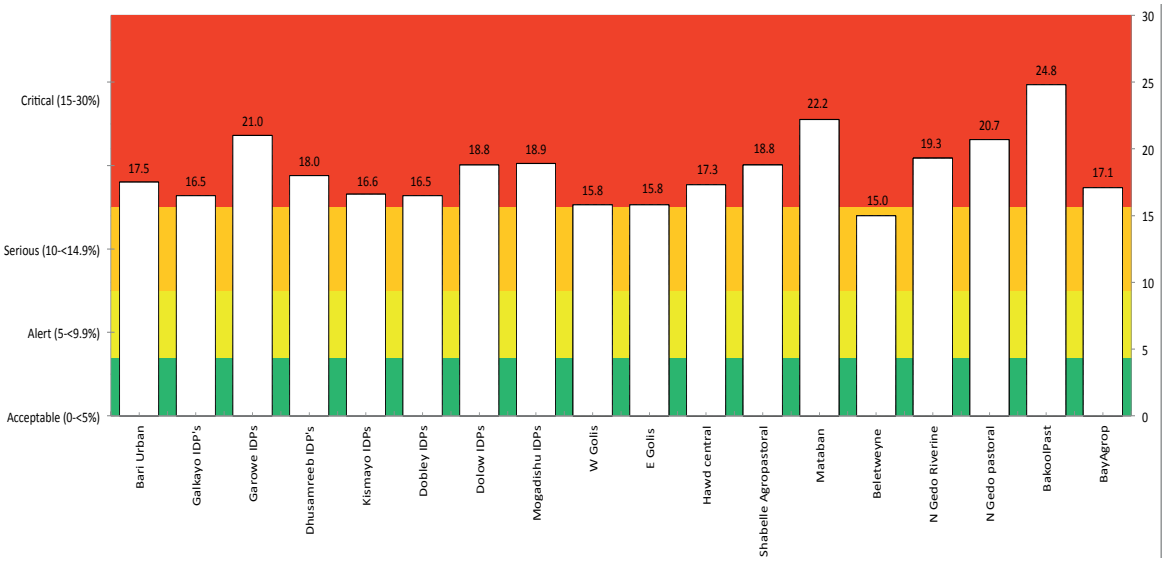


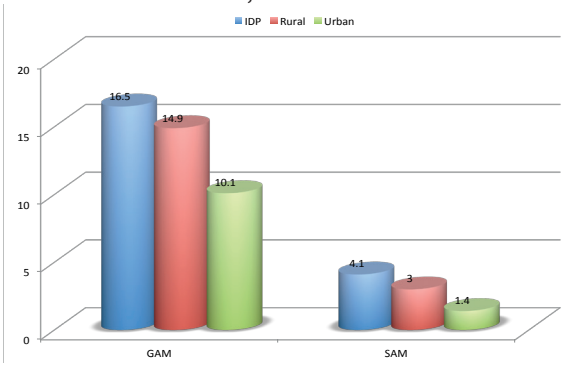
Figure 1 below shows that in 19 out of 50 population groups the prevalence of Global Acute Malnutrition (GAM) exceeds the UN trigger for emergency action (GAM ≥ 15%). Highest GAM prevalence was noted among Bakool pastoral (24.8 % -critical) which also recorded highest SAM prevalence of SAM (very critical -6.3%). Sustained Critical levels of Global Acute Malnutrition (GAM) were recorded among Bay agro pastorals, Bakool pastorals, and Beletweyne district and IDPs in Kismayo, Dollow, Dobley, Dhusamareb, Garowe and Galkayo as well as Bari urban (Table 1 and Annex 6.9). Improvement was noted among Nugal valley, East Golis, Northwest Hawd, IDPs in Baidoa, Qardho, Hargeisa and Berbera and urban areas of Sanaag region, Awdal region, Toghdeer region.

Figure 1: Population Groups with Critical GAM (≥15%) Prevalence in Somalia, Gu 2014



Prevalence of Acute Malnutrition was higher in children among IDPs (Figure 2) and critical GAM levels (≥15%) were recorded in 7/13 IDPs surveyed. Humanitarian Emergency situation was recorded among Mogadishu IDP and Kismayo IDP (GAM>15% accompanied by CDR > 1). That the nutrition situation can worsen quickly was well demonstrated among Mogadishu IDPs where GAM and SAM rate of 8.2 percent and 1.6 percent respectively recorded in Deyr 2013/14 increased to 18.9 percent and 5.5 percent respectively in Gu 2014.

Figure 2: Acute Malnutrition in Different Livelihoods, Gu 2014



Prevalence of Acute Malnutrition in children from urban areas is better as out of 10 urban areas surveyed critical GAM levels were recorded only in Bari. However even Bari shows improvement in nutrition situation since Gu 2013 as both GAM and SAM prevalence shows improvement (from 21.2% GAM and 5.7% SAM in Gu 2013 to 17.4 % GAM and 4% SAM in Gu 2014).

SEVERE ACUTE MALNUTRITION (SAM)

SAM carries the highest risk of death - nine times higher than for a healthy child. Gu 2014 results show that SAM prevalence was higher in areas with high GAM prevalence and among IDPs (Map 3). This is reflected in significant positive correlation of GAM with SAM ($r=0.79, p<0.01$). Very critical levels of SAM prevalence (6.3%) were recorded only among Bakool pastorals in Gu 2014 which also show critical prevalence of GAM (24.8 %).

Critical SAM levels were recorded in under five children among Mataban district, Shabelle Agropastoral, Bari urban, Hawd central and IDPs in Mogadishu, Dolow, Dhusamareb, Dobley and Garowe (Figure 3). Improvement in SAM prevalence was noted among Bay Agro pastoral, North Gedo Agro pastoral, South Gedo Agro pastorals and pastorals, Nugal valley, East Golis, Northwest Hawd, Baidoa IDP, Qardho IDP, Hargeisa IDP, Berbera IDP, Kismayo town, Bari urban and Sanaag region.

Map 3: Somalia Estimated Nutrition Situation (SAM)
August 2014 (based on May-July 2014 Surveys)

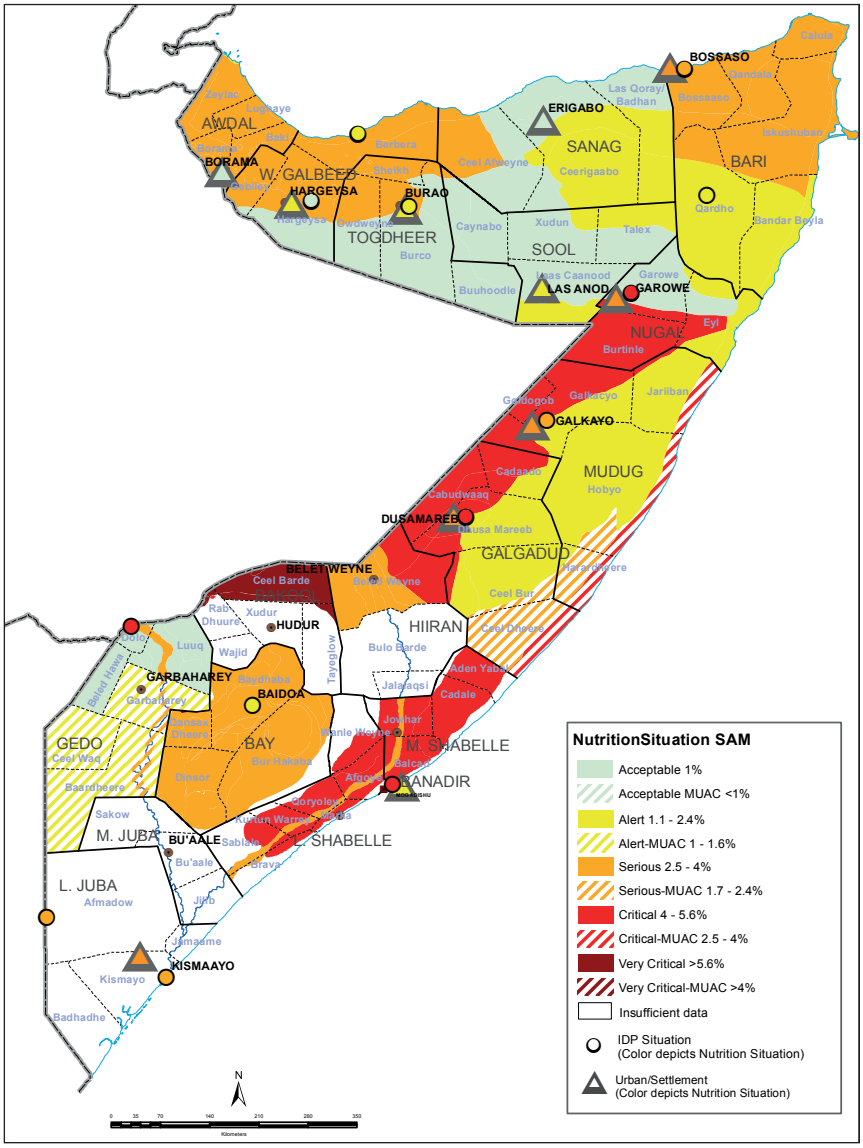


Figure 3: Livelihoods with Critical (>4%) and Serious (2.5-4%) prevalence of SAM, Gu 2014

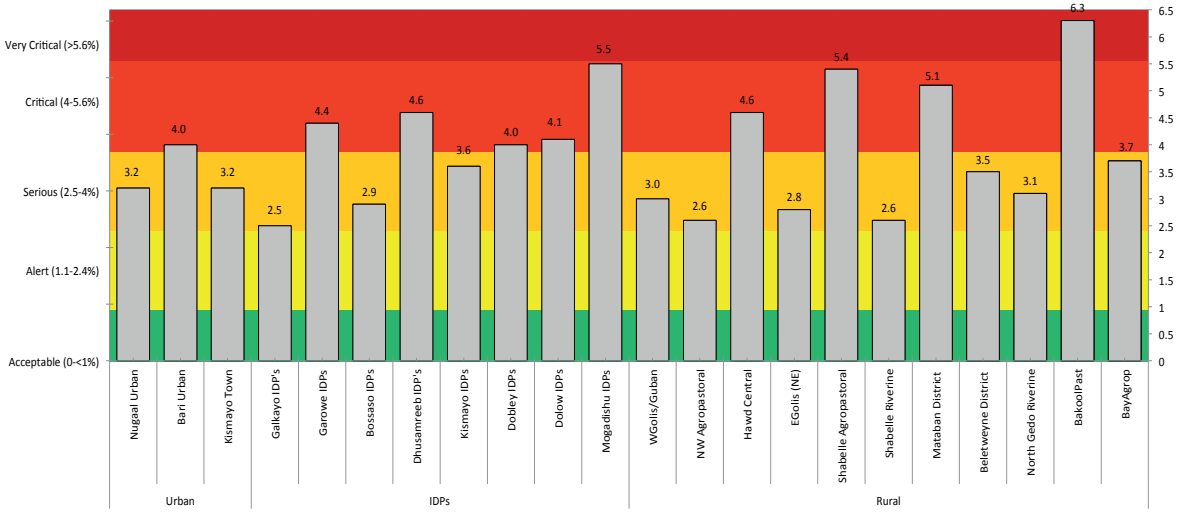


Figure 4: MUAC below 12.5cms in children 6-59 months in different livelihoods, Gu 2014

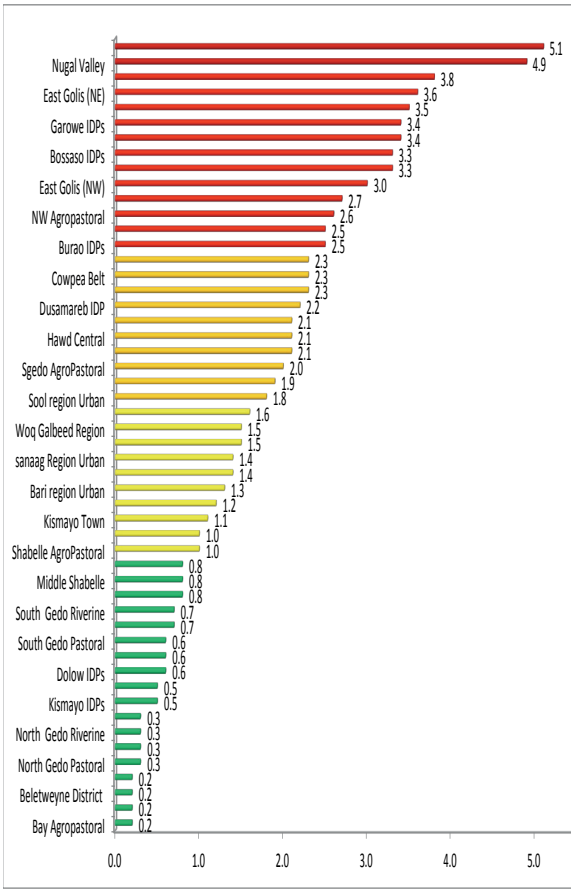
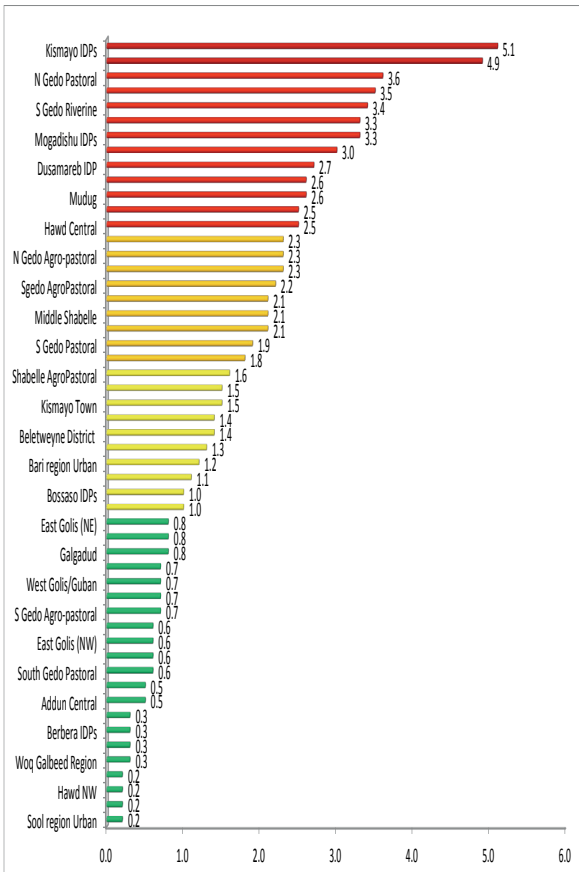


Figure 5: MUAC below 11.5cms in children 6-59 months in different livelihoods, Gu 2014



MID-UPPER ARM CIRCUMFERENCE (MUAC)[1]

A MUAC measurement of less than 12.5 cm indicates that a child is suffering from moderate acute malnutrition (GAM-MUAC). If the MUAC measurement is under 11.5 cm, the under-five child's life may be in danger as he or she is suffering from severe acute malnutrition (SAM-MUAC). MUAC is a criteria-referenced indicator. This means that we pick MUAC thresholds that identify children with a high risk of an outcome such as near term death if left untreated (and a good chance of survival if treated). WHZ is a norm-referenced indicator. FSNAU results show a significant positive correlation was noted between GAM - WHZ and GAM-MUAC (0.53, p <0.01).

Figure 4 shows prevalence of GAM using MUAC below 12.5 cm as an indicator. Very Critical levels of acute malnutrition (>16.7%) were noted among South Gedo Pastoral and Riverine, North Gedo Agro-pastoral and pastorals as well as Baidoa IDPs and Kismayo IDPs. Since Deyr 2013/14, increase in GAM MUAC as well as SAM MUAC was noted among populations in Bay Agro pastoral, North Gedo Pastoral, Riverine and Agro pastorals, Mataban district in Hiran region, Hawd pastorals, Nugal Valley Pastoral, East Golis, IDPs in Mogadishu, Kismayo, Baidoa, Dollow and Hargeisa (Annex 6.5). A significant positive correlation was noted between GAM-MUAC and U5DR (r = 0.63, p<0.01) and GAM-MUAC and Morbidity (r= 0 .53, p<0.05).

WHO and UNICEF have proposed the use of MUAC less than 11.5 cm as independent criteria for diagnosing non-oedematous severe acute malnutrition (SAM) in children aged 6–60 months. Studies using MUAC as diagnostic criteria showed that the risk of dying is increased below 11.5 cm. MUAC is an important measure of acute malnutrition that has a much closer relation to infant and child mortality than WHZ. FSNAU results also show a positive association of SAM-MUAC with U5DR (r= 0.64, p <0.01) as well as morbidity (r=0.34, p<0.05).

Figure 5 shows Very critical levels of SAM-MUAC prevalence (>4%) among Kismayo IDPs and in Cowpea belt. Critical SAM-MUAC prevalence (2-3.95%) was noted among Hawd Central, Coastal deeh Central, Mudug, Nugal region, Bay Agro pastoral, South Gedo Riverine, North Gedo Pastoral and among IDPS in Mogadishu, Dobley, Dusamareb and Baidoa.

1 Note that WFH and MUAC do not measure the same things and are not comparable

Comparison of Malnutrition prevalence in different regions/livelihoods of Somalia

Table 3 shows that prevalence of all type of malnutrition (wasting/stunting/underweight) was higher in South and Central Somalia compared to Northeast or Northwest regions. Median GAM (17.3%) and SAM rate (3.7%) in South and Central region of Somalia is significantly higher when compared to 12.7 percent GAM and 2.2 percent SAM in Northeast region or 10 percent GAM and 1.7 percent SAM in North West region. Trend of higher malnutrition in south central region is sustained over past 12 months though improvement in nutrition situation is noted in other regions of Somalia. Compared to urban areas/rural livelihoods both stunting and underweight were more prevalent in IDPs (16% and 18.7 % respectively in IDP vs 7.2% and 13.2 % in other livelihoods) [Annex 6.3].

Table 3: Malnutrition prevelence in differnt regions/livelihoods-Gu 2014

Region/ Livelihood	Wasting	Stunting	Underweight
South Central	17.3	11.6	16.6
Northeast	12.7	5.1	7.4
Northwest	10.0	3.0	5.1
Rural	14.9	7.1	13.2
IDP	16.5	16.0	18.7
Urban	10.0	7.9	8.7
Median	14.9		

Comparison of different livelihoods shows that nutrition situation based on WHZ is critical in all the livelihoods but higher among the Pastoralists and IDPs (Table 4). Higher prevalence of SAM is noted among Agro pastorals (3.5%). Acute malnutrition prevalence according to MUAC, however, was much lower in IDPs compared to other livelihoods[2]. This was not unexpected as WHZ is a norm-referenced indicator while MUAC is a criteria-referenced indicator. Using MUAC for identification and referral at the community level would mean that a very large proportion of children that are malnourished according to weight-for-height would be missed. On the other hand, using only weight-for-height for active case finding, referral and admission is costly, takes more time and requires much better trained staff

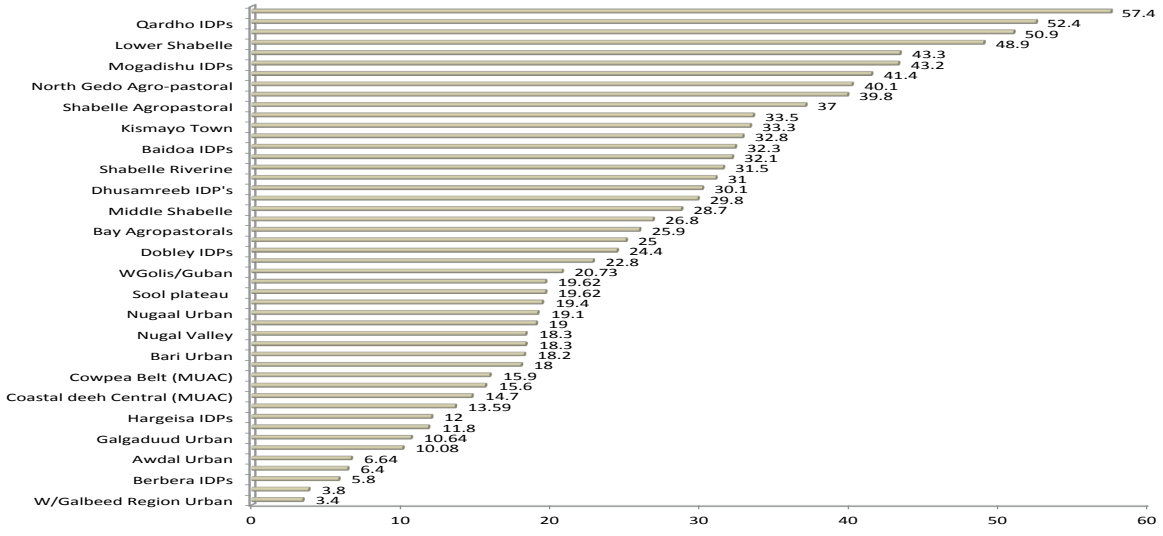
Table 4: Comparison of acute malnutrition based on WFH and MUAC-Gu 2014

Livelihood	GAM (WHZ)	SAM (WHZ)	MUAC <12.5	MUAC <11.5
IDP	16.5	2.9	6.6	1.5
Agro pastoral	15.0	3.5	9.4	1.6
Riverine	15.3	2.8	9.7	2.3
Pastoral	15.8	2.4	7.7	1.8

MORBIDITY

Malnutrition weakens the immune system, thus increases the risk of dying from pneumonia, diarrhoea, malaria, and other infectious diseases.High morbidity rates in a population predispose the population to malnutrition. Gu 2014 results, in figure 6 reflected this as prevalence of GAM/SAM was higher in areas with high morbidity. Mataban district with 57.4 percent morbidity has GAM rate of 22.2 percent and SAM rate of 5.1 percent. Significant correlation of Morbidity with GAM (0.65) and SAM (0.47) was noted.

Figure 6: Morbidity Prevalence in different Livelihoods - Gu 2014



2 WHZ is considered to be the base measure for Global Acute Malnutrition, but it should be clearly noted that it is not by any means a “gold standard” measure for acute malnutrition

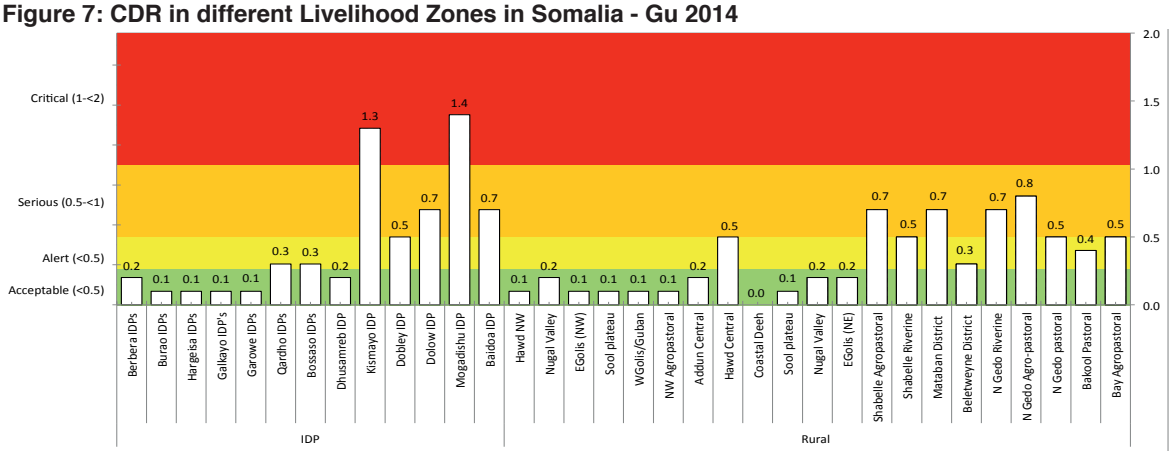
TOTAL CRUDE AND UNDER FIVE RETROSPECTIVE MORTALITY /10 000/DAY

Crude and under-5 mortality rates are key indicators to assess the severity of a crisis, and a doubling of non crisis (baseline) mortality is taken to define an emergency situation. Therefore measurement of mortality is an essential component of any effective public health intervention during health emergencies, from advocacy and planning to programme monitoring.

Most malnutrition-related deaths will be due to severe diarrhoea and dehydration, and others to malaria or acute respiratory infections. Indeed, malnutrition is considered to be the underlying cause for almost half of preventable childhood deaths.

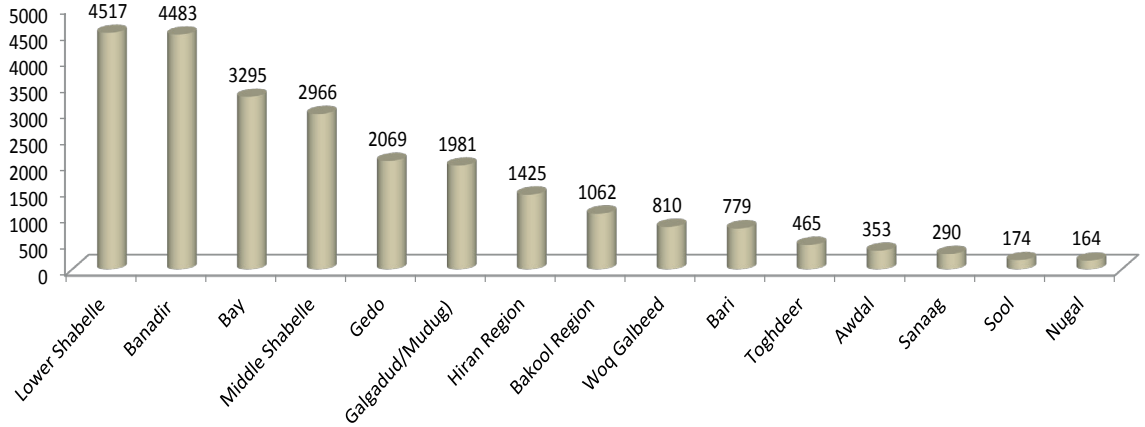
Median CDR (0.4/10 000/day) was recorded in Post Gu 2014 surveys. However doubling of CDR was noted among 6-59 month children in Bakool Pastoral, Bay Agro pastoral, Hiran pastoral- Mataban District, IDPs in Mogadishu, Dusamareb and Bossaso (Figure 7). The impact of an elevated CDR depends not only on its magnitude, but also on its duration, and on the size of the population experiencing it.

Figure 7: CDR in different Livelihood Zones in Somalia - Gu 2014



Based on CDR, during the 90 days before Gu 2014 surveys were undertaken it is estimated that 24 833 persons died due to various causes in different regions of Somalia. As expected the number of deaths is higher in areas with higher population (Figure 8).

Figure 8: Estimated Number for Crude Death in Somalia accross different Regions - Gu 2014



It should be noted that estimates provided in figure eight represent total death not excess mortality. When children suffer from acute malnutrition, their immune systems are so impaired that the risks of mortality are greatly increased. Post Gu 2014 results (Figure 9) show that despite high levels of GAM and frequent illness, mortality rates were not elevated (Median U5DR 0.68). However, many of already undernourished children are more susceptible to disease and this is reflected in the high prevalence of morbidity.

U5DR < 1.0 seen in most of the populations surveyed indicates that prevalence of malnutrition (GAM/SAM) is not strongly associated with under five mortality (r=0.) but other health determinants such as epidemics, poor sanitation, low vaccination coverage and access to health care plays an important part.

Figure 9: U5DR in different Livelihoods in Somalia - Gu 2014

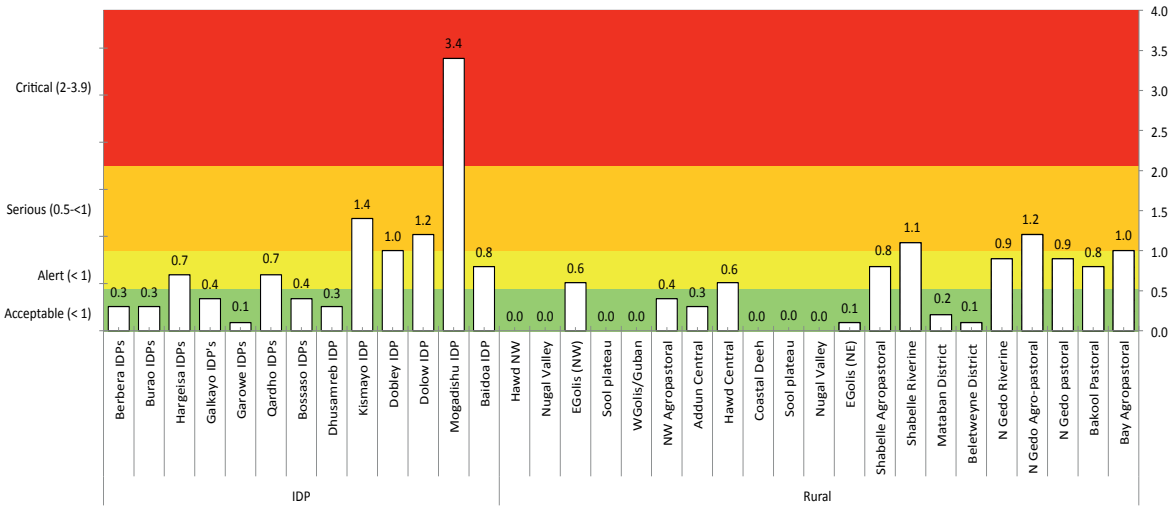
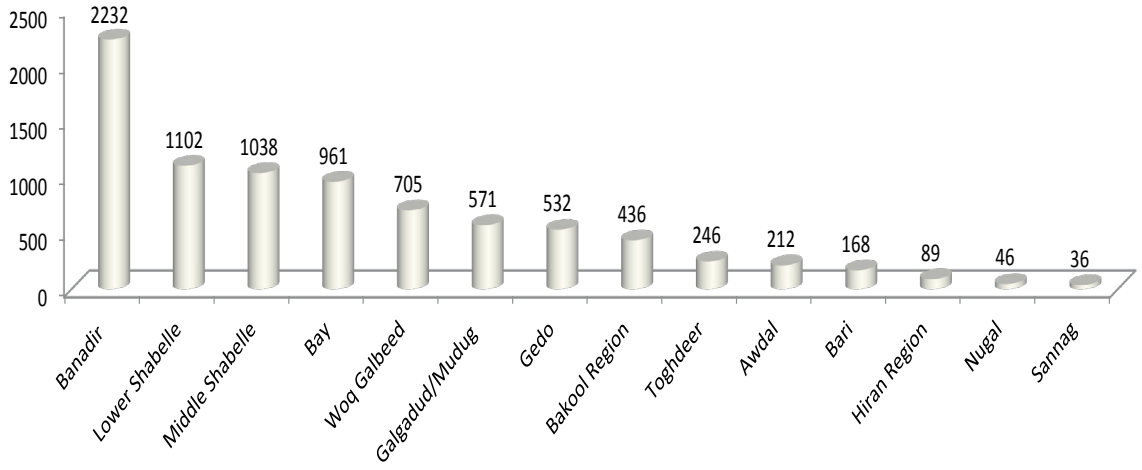


Figure 10 shows the estimated number of under five children based on U5DR who died in the preceding 90 days.

Figure 10: Estimated number of under five deaths in different regions - Gu 2014



The implications of doubling of CDR in Mogadishu IDP from 0.6 to 1.35 and 6 fold increase in U5DR from 0.5 to 3.4) are summarized in Table 5. Comparison is also made with Kismayo IDP where levels of acute malnutrition are persistently above 15 percent and sustained critical levels of CDR and serious levels of U5DR are recorded.

Table 5: Estimated number of deaths in Mogadishu and Kismayo IDP's

Mortality	Gu 2014	Deyr 2013/14	Gu 2013	Formula used for Calculation of numbers
CDR Mogadishu IDP	4483 (1.35/10 000/day)	1993 (0.6/10 000/day)	3553 (1.05/10 000/day)	CDR*IDP Population* 90 (Recall period in days)
CDR Kismayo IDP	1107 (1.28/10 000/day)	1176 (1.36/10 000/day)	510 (0.59/10 000/day)	
U5DR Mogadishu IDP	2232 (3.36/10 000/day)	332 (0.5/10 000/day)	565 (0.85/10 000/day)	U5DR* Under five IDP Population*90 (Recall period in days)
U5DR Kismayo IDP	245 (1.42/10 000/day)	242 (1.40/10 000/day)	263 (1.52/10 000/day)	

Mortality Trends

Change in median CDR over time is shown in Figure 11. Median CDR in South Central region has always been higher than the CDR recorded for Northeast / Northwest region. During famine peak CDR recorded in South Central region was 1.85 and it declined to 0.38 by Gu 2013 as the nutrition situation improved in Somalia. Reversal in the declining trend of CDR in South Central has been noted since 2013 Deyr. This trend of decrease in CDR continues in Northeast and Northwest region. Similar observations were made for U5DR (Figure 12).

Figure 11: Trends in CDR in different regions of Somalia

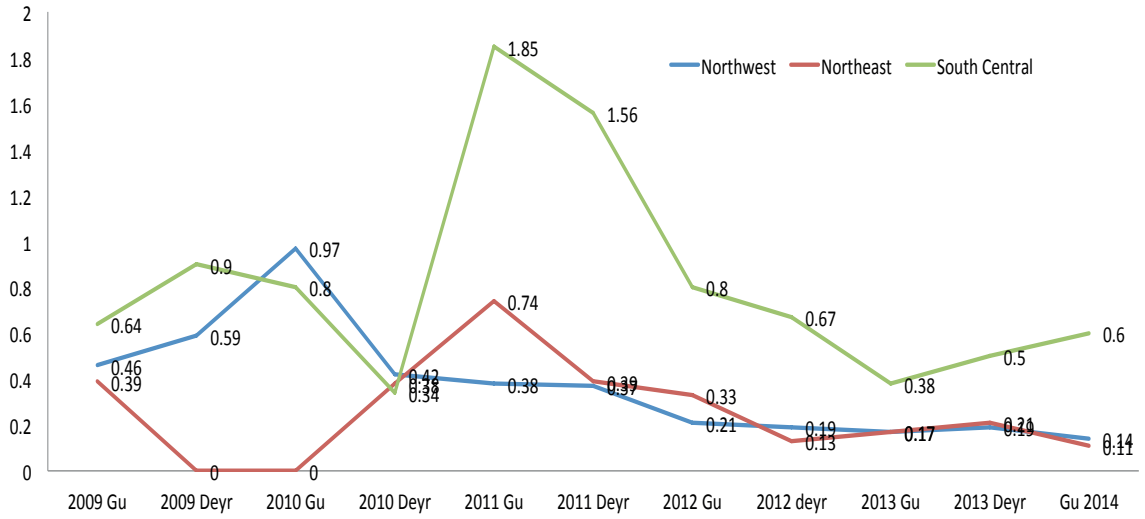
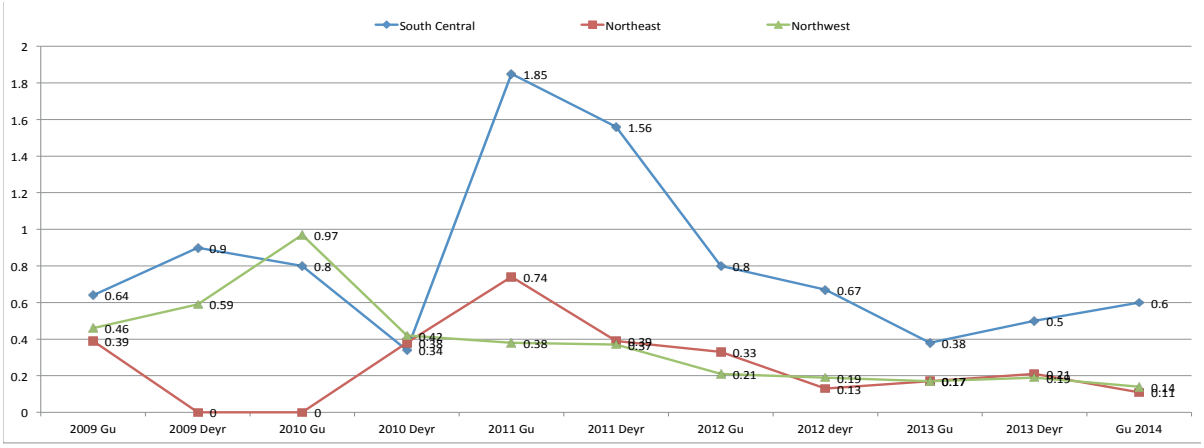


Figure 12: Trends in U5DR in different regions of Somalia

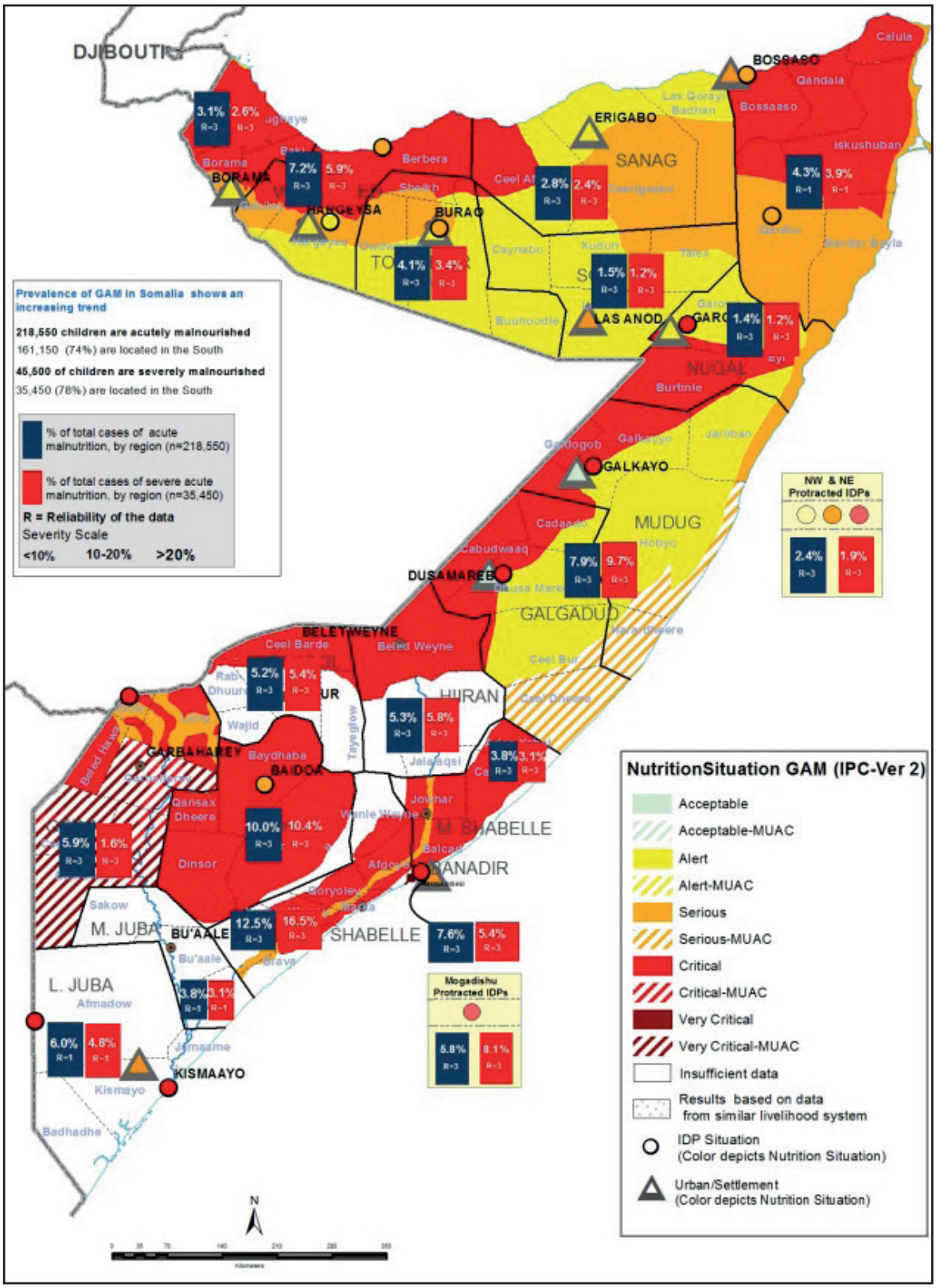


NUMBER AND DISTRIBUTION OF CHILDREN WITH ACUTE MALNUTRITION IN SOMALIA:

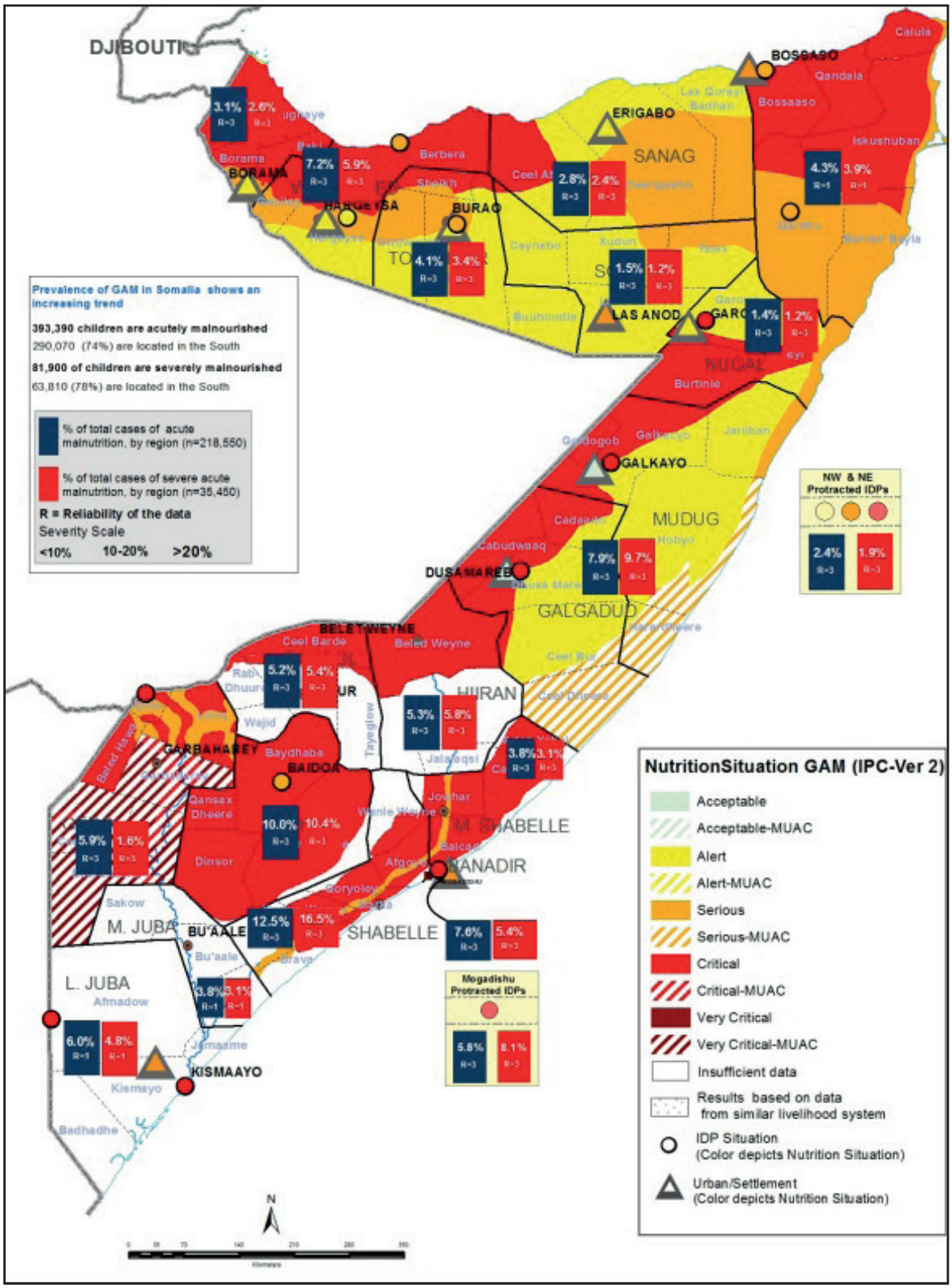
FSNAU in collaboration with partners calculated the distribution of GAM/SAM cases in Somalia to draw the attention of response agencies and donors to the needs in different regions in Somalia. By multiplying the prevalence rates of GAM/SAM in each assessed population group to the total under five populations during the *Gu 2014*, cases of acutely and severely malnourished children were calculated Map 4 shows the current caseload for acute malnutrition based on prevalence while Map 5 shows caseload based on incidence. For population groups where representative nutrition survey data for the whole population forms the main reference, reliability of data is high and is ranked as 3 (according to IPC Version 2.0 the highest reliability score is 3 with the least being 1)[3].

3 For the Juba Regions where it was not possible to collect nutrition survey data, the median rates for the surveys conducted in the *Deyr 2013/14* were applied and where there was no data previously we extrapolated (data from similar livelihoods systems).

Map 4: Distribution of Propotion of Acutely Malnourished Children (<5 Years) in Somalia by Region Based on GAM and SAM Prevalence (July 2014)



Map 5: Distribution of Propotion of Acutely Malnourished Children (<5 Years) in Somalia by Region Based on Incidence (July - December 2014)



Current estimates (based on WHZ prevalence) put the number of under-five children at risk of acute malnutrition as 218 300 including 44 000 cases of severe acute malnutrition (Table 6). This caseload is calculated as per 'prevalence'-based and fails to account those children who develop acute malnutrition at another point in the year, when surveys are not being carried out. Therefore 'incidence' is also factored in (1.8 factor) and caseload based on incidence is 393 000 children with acute malnutrition in Somalia, including 79 000 children with SAM who will require treatment over the next 6 months.

Table 6: Regional Distribution of Acute and Severely Malnourished children in Somalia (based on prevalence and incidence)

Based on Prevalence								
Region	**GAM WHZ<-2**	**% of Total WHZ<-2**	**SAM WHZ<-3**	**% of Total WHZ<-3**	**GAM-MUAC <12.5 cm**	**% of Total**	**SAM-MUAC <12.5 cm**	**% of Total**
South Central	161 000	73.8	34 300	78.2	95 450	84.9	21 050	85.7
North West	40 050	18.3	6350	14.5	11 450	10.2	2550	10.4
North East	11 900	5.5	2300	5.2	3900	3.5	650	2.6
Idps	5350	2.5	900	2.1	1650	1.5	300	1.2
Total	**218 300**		**43 850**		**112 450**		**24 550**	
Based on Incidence								
South Central	289 800	73.8%	61 740	78.2%	171 810	84.9%	37 890	85.7%
North West	72 090	18.3%	11 430	14.5%	20 610	10.2%	4590	10.4%
North East	21 420	5.5%	4140	5.2%	7020	3.5%	1170	2.6%
IDPs	9630	2.5%	1620	2.1%	2970	1.5%	540	1.2%
Total	**392 940**		**78 930**		**202 410**		**44 190**	

MUAC measurements are used worldwide for identification, referral and admission of severely malnourished children aged 6-59 months to nutrition programmes. FSNAU data shows large differences between prevalence of acute malnutrition measured by weight-for-height versus MUAC. GAM Caseload based on MUAC is 94 percent lower while SAM caseload is 79 percent lower. This has programmatic implications. If MUAC is used for active case finding, only a small proportion of children classified as malnourished according to weight-for-height would be identified and referred to treatment and feeding programs. Using MUAC for identification and referral at the community level would mean that, as mentioned above, a very large proportion of children that are malnourished according to weight-for-height would be missed and the caseload would be so low that it would be difficult to justify the need for a programme. On the other hand, using only weight-for-height for active case finding, referral and admission is costly, takes more time and requires much better trained staff.

Gu 2014 results show that caseload for acute Malnutrition has increased seven percent compared to Deyr 2013/14 and also six percent higher than Gu 2013 (Figure 13). However, SAM caseload for Gu 2014 is 14 percent lower than Deyr 2013/14 but seven percent higher than Gu 2013 (Figure 14). Increase in GAM caseload is reported in Banadir, Middle and Lower Shabelle , Galgadud / Mudug while decrease in SAM caseload reported in the last six months since Deyr 2013/14) because of decrease in SAM in Bay, Bakool and Gedo (Annex 6.4).

Regional distribution of caseload shows that South and Central of Somalia accounts for 74 percent of the GAM caseload (2 out of every 3) and 78 percent of the SAM caseload. Although Mortality is still low, the Critical GAM levels suggest treatment of SAM and MAM cases must become more central to the healthcare agendas. Multi-sectoral efforts to continue addressing the underlying causes of malnutrition are critical and must be supported by continued humanitarian action.

Figure 13: Trends in GAM Caseload Prevalence

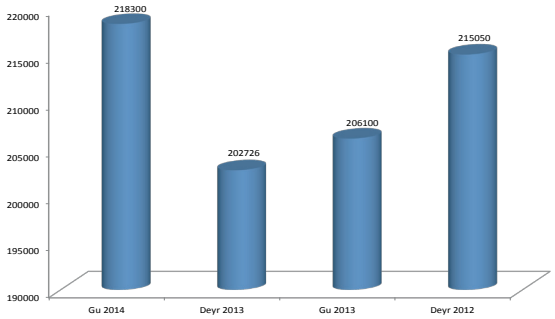
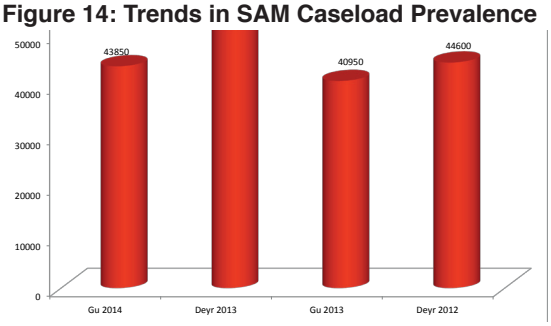


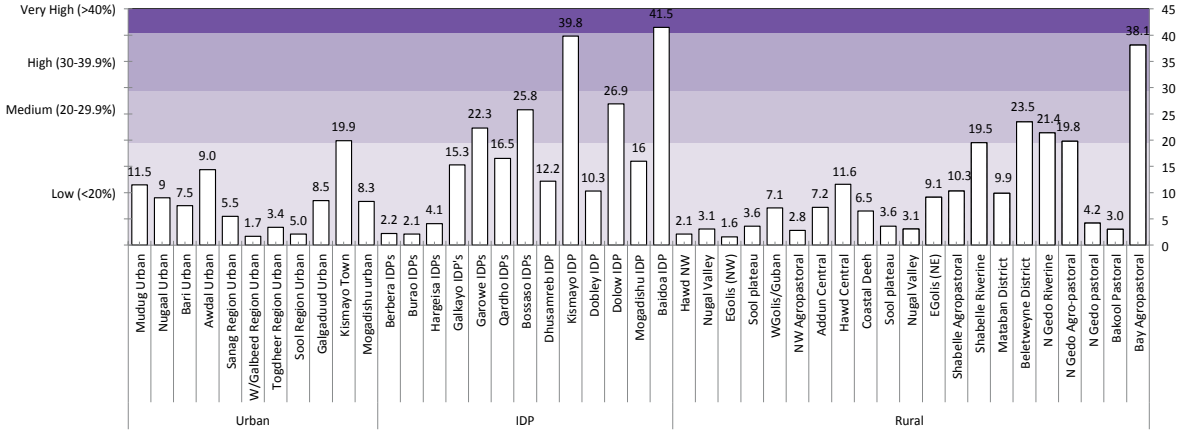
Figure 14: Trends in SAM Caseload Prevalence



STUNTING

Acute and chronic malnutrition often coexist in the same locations. Recurrent food insecurity, poor dietary diversity and repeated illness are among the root causes of stunting (low growth for age). Gu 2014 results show that Stunting is not a public health problem in Somalia. However, pockets of high stunting are seen among Baidoa IDP, Kismayo IDP and Bay Agro pastorals. The under five children in these areas show a level of chronic malnutrition considered "high", exceeding the 30 percent threshold (Figure 15). This reflects the existence of long term undernutrition and highlights the need to prioritize stunting prevention interventions in these IDPs and livelihood. Significant positive correlation between GAM and Stunting (r=0.39, p<0.01) was noted.

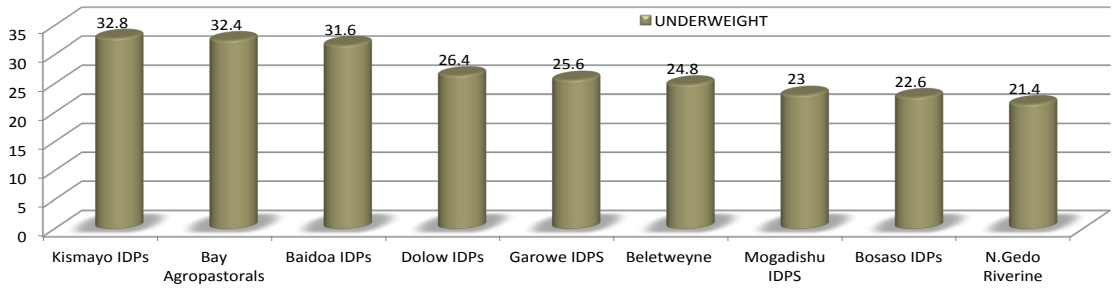
Figure 15: Prevalence of Stunting among different Livelihoods in Somalia - Gu 2014



UNDERWEIGHT

Prevalence of moderate and severe levels of 20-30 percent underweight in children under five years of age is a Millenium Development Goals (MDG) indicator of poverty and food insecurity. The prevalence of underweight, can be considered "high" by WHO cut-offs for level of public health significance. Very high levels of underweight (>30%) were seen in the Southern region of Somalia (Bay Agro pastoral, Beletweyne and Kismayo IDPs) while high levels (>20-<30) were prevalent among IDPs in Baidaoa, Dolow, Bossaso, Qardho, Garowe and Galkayo (Figure 16). Prevalence of underweight shows significant correlation with GAM prevalence (r=0.61, p<0.01).

Figure 16: Livelihoods with high and very high prevalence of underweight-WHO cutt-off for level of public health significance (>20%) - *Gu* 2014



VITAMIN A SUPPLEMENTATION

Provision of vitamin A supplementation every six months can help protect a child from death and disease associated with vitamin A deficiency and is recognized as one of the most cost-effective approaches to improving child survival. Gu 2014 results highlight the protective impact of Vitamin A supplementation on child's immunity as evidenced by a significant negative correlation of coverage with Vitamin A supplementation and prevalence of morbidity (-0.043, p <0.01). A significant negative association between Vitamin A coverage and prevalence of GAM (r=0.3, p<0.01) and SAM (r=0.42, p<0.01) was also observed.

The proportion of all children aged 6 - 59 months who had received vitamin A (based solely on recall) in the last six months prior to the survey was less than 90 percent in almost all livelihoods with the exception of Garowe IDP, Burao IDP and coastal Deeh (Figure 17). About 90 percent of children in parts of Shabelle and Bay areas did not receive any Vitamin A supplementation which is alarming.

MATERNAL MALNUTRITION

Women are particularly vulnerable to undernutrition from a physiological point of view due to their increased nutrient requirements, both for their own development and for their reproductive role. Undernourished mothers are likely to give birth to low birth weight babies than adequately nourished mothers. MUAC was used to assess nutritional status of women of reproductive age (15-49 years) and results are shown in figure 18.

Very Critical levels of maternal malnutrition (MUAC < 23 cms in ≥ 31.5% of pregnant and lactating women (PLW) were recorded among Dhusamreeb IDPs, North Gedo Riverine, North Gedo Agro pastoral and in Hawd Central (Figure 18). Critical levels of maternal malnutrition (23.4-31.4%) were also observed among North Gedo pastoral, East Golis, Addun Central, Bakool Pastoral and Qardho IDPs and Baidoa IDPs. No association was noted between prevalence of maternal malnutrition and prevalence of stunting in children (r=0.2, p>0.01) or underweight (r=0.28,p>0.01).

Figure 17: Coverage of Vitamin A supplemetantaion in children 6-59 months of age - *Gu* 2014

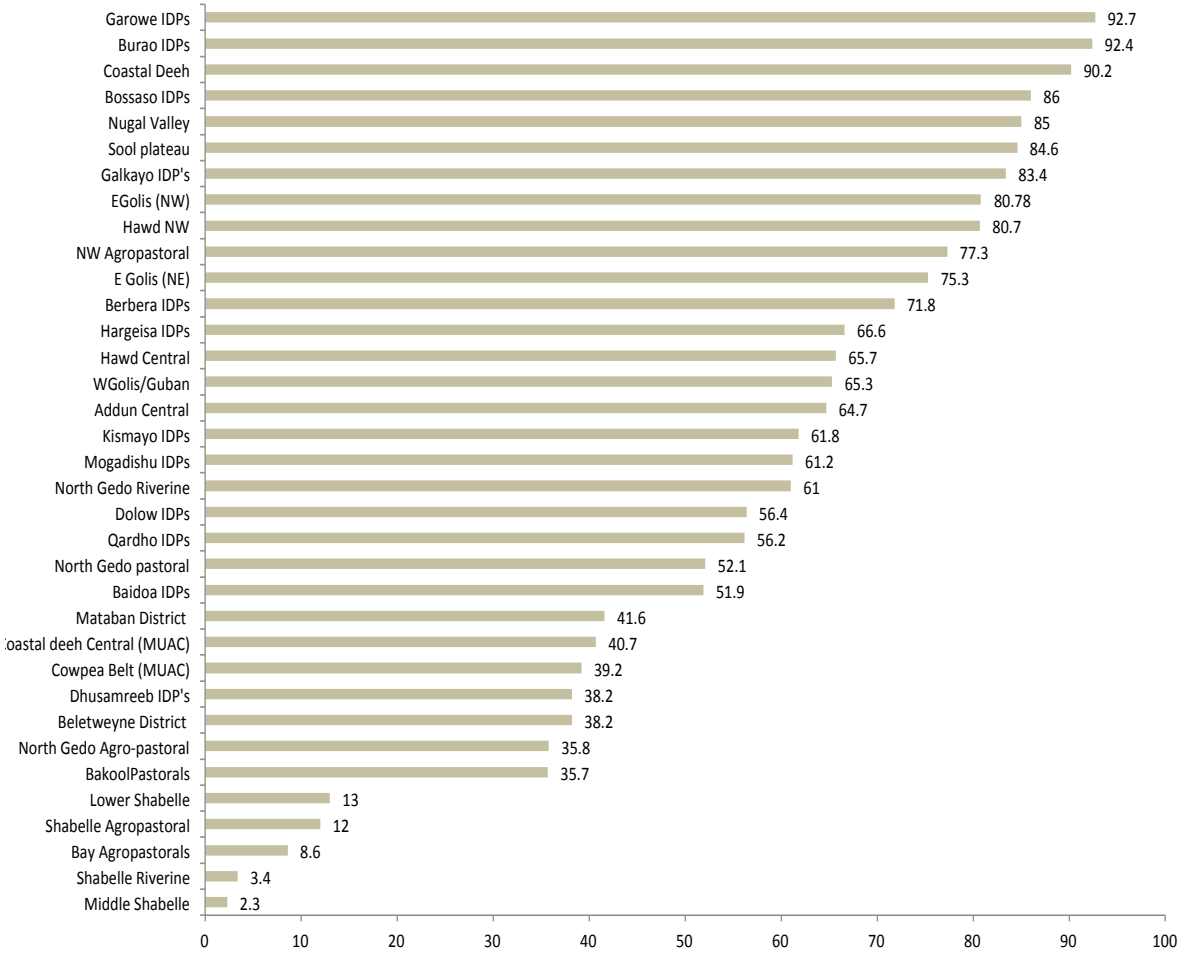
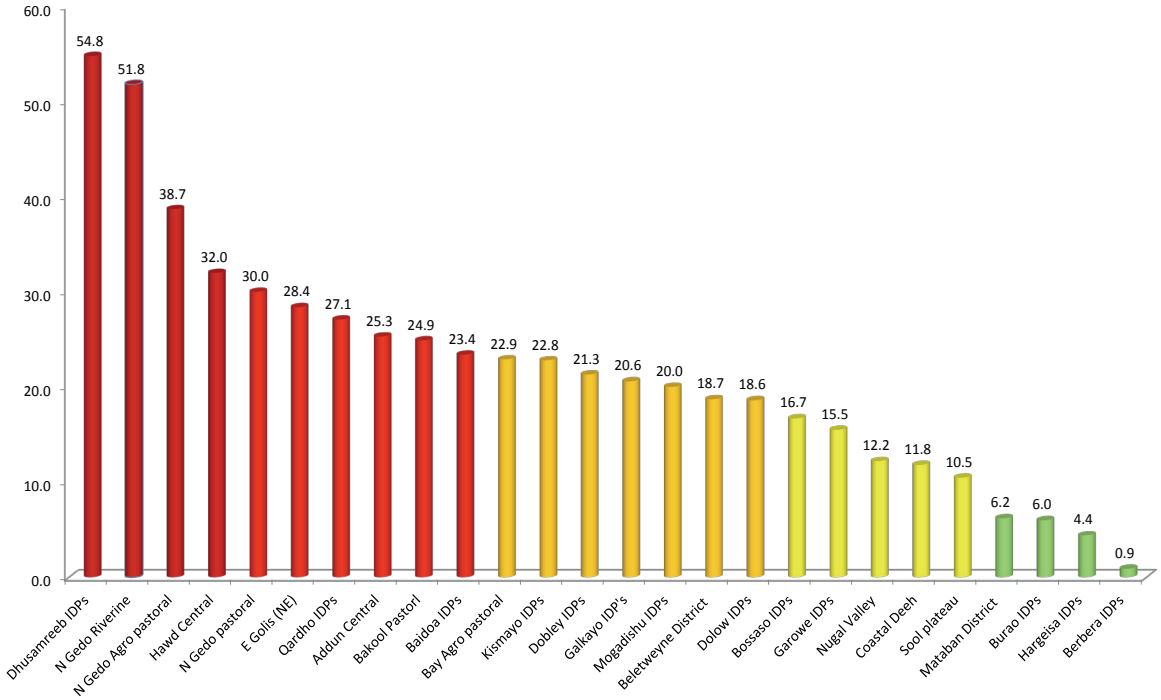


Figure 18: Prevalence of Maternal Malnutrition in different Livelihoods (MUAC <23cm) - Gu 2014



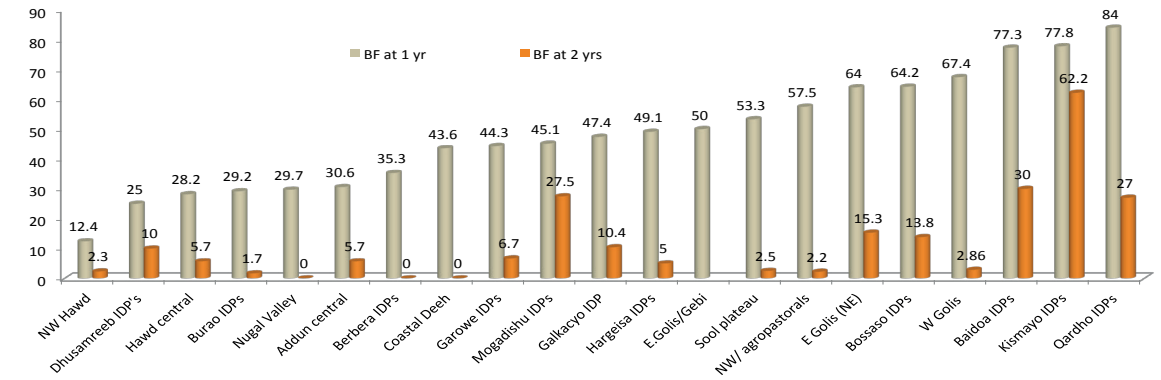
INFANT AND YOUNG CHILD FEEDING (IYCF)

Infant and Young Child Feeding recommendations in Somalia are aligned with the Global Strategy for Infant and Young Child Feeding and include initiation of breastfeeding within the first hour of life, exclusive breastfeeding for six months, and provision of appropriate, adequate and safe complementary food at six months while continuing breastfeeding until two years of age and beyond.

Maintenance of breastfeeding

WHO/UNICEF recommends that frequent, on-demand breastfeeding until two years of age or beyond should continue. Figure 19 shows that proportion of children 12-15 months of age who continued receiving breast milk at one year of age ranged from a low of 12.4 percent in Northwest Hawd to a high of 84 percent among Qardho IDPs. Even though the proportion of children who were breastfed at one year was more than 60 percent among IDPs in Bossaso, Baidoa, Kismayo and Qardho, they also showed a significant decrease in the proportion who continued to receive breast milk till 24 months. Breast feeding at 24 months of age was not reported for any child in Nugal valley, Coastal Deeh or among Berbera IDPs. In other livelihoods it ranged from a low of 1.7 percent to high of 30 percent, Kismayo IDPs being an exception where 62 percent of the children continued receiving breast milk at 24 months.

Figure 19: Continued Breastfeeding at1yr and 2yr in 6-24 month children - Gu 2014



Minimum Meal Frequency

The 6–11 month period is an especially vulnerable time because infants are just learning to eat and must be fed soft foods frequently and patiently. The feeding frequency should increase as the child ages. The 6–8 month old infants should receive complementary foods 2–3 times per day, 9–11 month 3–4 times per day and 12–24 months 3–4 times per day. Figure 20 shows that the minimum meal frequency for young children (< 24 months) ranged from a low of 35.5 percent in Northwest Hawd to a high of 90 percent in Addun central. The low meal frequency may be related to mothers going out to earn some income and as a result the child is not breast fed but receives other foods.

Figure 20: Minimum Meal Frequency in 6-24 month children (% surveyed) - Gu 2014

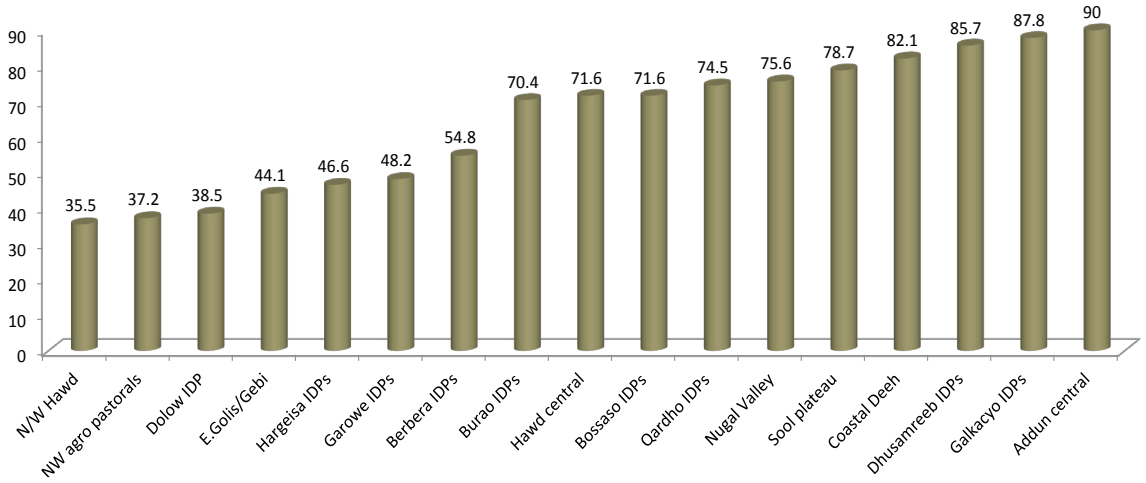
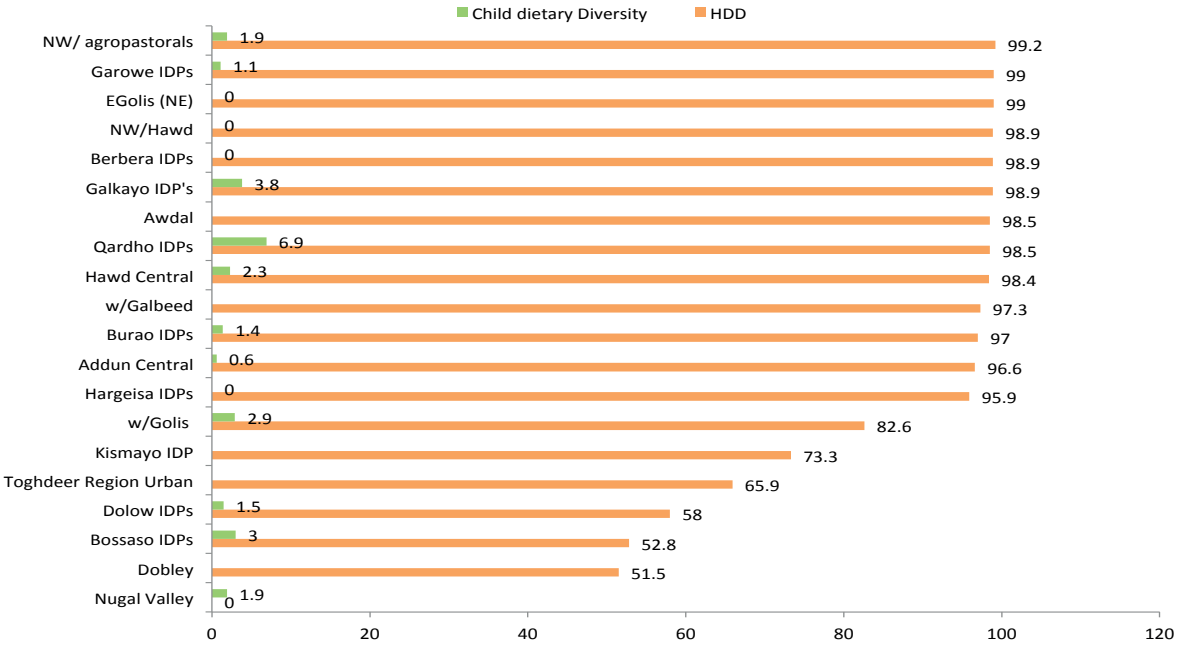


Figure 21: Dietary Diversity for Household and Children (<2yrs)



Dietary Diversity

A more varied diet (Dietary Diversity) is associated with better nutrition status. Increasing dietary diversity is associated with increased household food access as well as individual probability of adequate micronutrient intake. Information on Household Dietary Diversity (HDD) [the number of different foods or food groups consumed over a given reference period] was collected during the Gu 2014 assessment along with information on child dietary diversity (for children 6-23 months). The results (Figure 21) show that child dietary diversity was low even in livelihoods where over 95 percent of households reported consuming 4 food groups or more. The low Child dietary diversity (0-6.9%) suggests existence of poor IYCF practices.

FOOD SECURITY

The food security situation has deteriorated in parts of Somalia in the post-*Gu* 2014 season as a result of unfavourable *Gu* rainy season, active conflicts and reduced humanitarian assistance. FSNAU lead assessment results showed that an estimated 1 025 000 people will be in Crisis and Emergency (IPC Phases 3 and 4) between August and December 2014. This figure represents a 20 percent increase since January 2014. Internally displaced persons (IDPs) continue to constitute a majority (62%) of the total number of people in Crisis and Emergency (IPC Phases 3 and 4), followed by rural (27%) and urban (11%) populations.

As a result of delayed and erratic rainfall, the *Gu* 2014 cereal harvest in July/August is estimated to be 37 percent below the long-term average and 28 percent below the five-year average. The poor rains have also contributed to water shortages, poor livestock performance and reduced access to milk in several pastoral areas, particularly in parts of the Northeast and the Gedo region of Southern Somalia.

Trade disruption and reduced access to seasonal agricultural employment have also exacerbated the food insecurity situation in urban areas that came under government control following the military offensive against insurgents in March 2014. In these areas, access roads remained under insurgent control and trade flow is largely blocked, resulting in sharp increases in staple food prices. Cereal prices have quadrupled in Wajid (Bakool) and doubled in Hudur town (Bakool), Middle Shabelle and Hiraan (Buloburte district) regions between January and July/August 2014.

The populations in **Emergency** and **Crisis** (IPC Phases 4 and 3) require urgent lifesaving humanitarian assistance and livelihood support between now and December 2014 to help meet immediate food needs. Additional interventions will be required to protect livelihoods and build the resilience of communities against future shocks.

The food security situation of over 2.1 million additional people remains fragile and is classified as **Stressed** (IPC Phase 2). This group of households may struggle to meet their minimal food requirements through the end of the year, and they remain highly vulnerable to shocks that could push them back to food security crisis if no appropriate support is provided.

Areas and Populations of Concern

Populations experiencing acute food security crisis (IPC Phases 3 and 4) are found in large numbers in rural and urban areas and among displaced populations of Bari, Nugaal, South Mudug, Galgaduud, Hiraan, Middle Shabelle, Lower Shabelle, Bakool, Gedo, Middle Juba and Banadir regions. All of the assessed largest IDP settlements (13) in Somalia are classified in **Crisis** (IPC Phase 3) between August and December 2014. There is also a severe water shortage for livestock mainly in the Northeast but also in parts of Northwest, Central, parts of Lower Juba and North Gedo regions of Somalia. The water shortage is likely to be alleviated with the start of the *Deyr* rainy season (October-December), which is predicted as average to below average in the North and average to above average in South-Central parts of Somalia.

CURRENT HOTSPOTS FOR ACUTE MALNUTRITION

GAM among children aged 6- 59 months is a commonly used key indicator for describing the presence and magnitude of humanitarian emergencies. Livelihoods with GAM prevalence over 15 percent or GAM-MUAC prevalence over 16.7 percent during Post Gu assessments are identified as hotspots (Table 7). There is need to establish a robust nutrition information monitoring system in these hot spots of acute malnutrition to closely monitor the situation and deliver a timely response.

Table 7: Current Nutrition Hot Spots - Gu 2014

Livelihood	South Central	North East	North West
Rural	Bay Agro Pastoral Bakool Pastoral Lower Shabelle Shabelle Agro-pastoral North Gedo Pastoral South Gedo Pastoral South Gedo Agro Pastoral North Gedo Riverine South Gedo Riverine Beletweyne District Mataban District Hawd Central	East Golis	West Golis
IDP	Mogadishu IDP Kismayo IDP Dhobley IDP Dolow IDP Dhusamareb IDPs	Garowe IDP Galkacyo IDP	
Urban		Bari Urban	

Long term programs to prevent malnutrition should be in place to reduce the high chronic malnutrition in survey areas of Bay/ Bakool.

PROJECTED NUTRITION SITUATION[4]

The nutrition situation outlook for the period August –October 2014 is inferred from the current estimates of the nutritional situation, seasonal trends, historical disease patterns, and projected food security trends for August to December 2014 (Map 6). In general, the current nutrition situation is likely to remain stable across the country during August - October 2014 with the exception of the following:

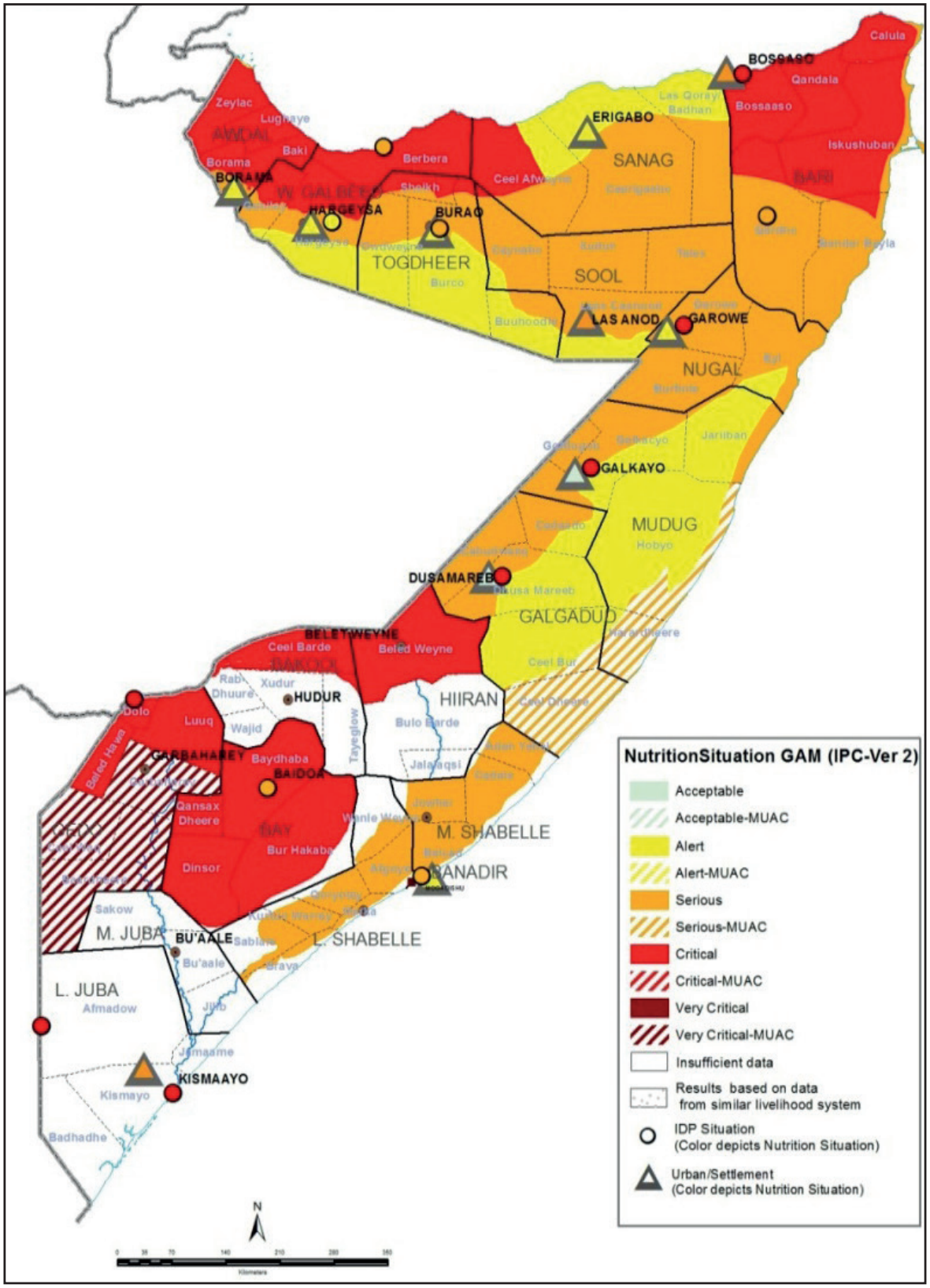
- Deterioration from Alert to Serious in Nugal valley, Sool Plateau and Sanag based on deteriorating health facility & historical trends;
- Deterioration from serious to critical among Bossaso IDPs (decreased labour opportunity during Hagga, very hot temperature and historical trend); North Gedo agro pastoral (high morbidity and low immunization coverage);
- Improvement from Critical to Serious in Hawd region in Central and Northeast region based on health facility and historical trend); Mogadishu IDP (because of increase coverage with humanitarian intervention); Shabelle Agro pastoral (based on projected Deyr rains, livestock movement and increased labour opportunity);
- Improvement from serious to alert-Mogadishu urban because of increased humanitarian intervention

Recommendations

- Preventing infants and young children from becoming undernourished is much more effective than treating children who are already malnourished.
- The implementation of community management of acute malnutrition (CMAM) needs to be targeted to areas with serious/critical levels of acute malnutrition (> 10% GAM).
- Current nutrition services should be expanded to reach more children with special emphasis on the community component (MUAC screening and referral).
- Malnutrition must be addressed in the first two years of life, the crucial period for a child's physical and cognitive development. If nutrition programmes wait until children have already become malnourished, their benefits are significantly diminished.
- Efforts should be strengthened to improve routine immunization coverage and vitamin A supplementation (80% target).
- Improved hygiene and sanitation practices will help reduce morbidity. Households need to be educated on proper care and hygiene practices and improving health seeking behaviour for management of children's infections
- Marked reductions in current child malnutrition and, indeed, future cases of acute malnutrition can be achieved through improvements in women's nutrition before and during pregnancy, early and exclusive breastfeeding, and good-quality complementary feeding for infants and young children, with appropriate micronutrient interventions.
- MOH should be supported to establish a robust nutrition information monitoring system in the hot spot areas of acute malnutrition in order to closely monitor the situation and deliver a timely response.
- Improving household food security may be necessary but not sufficient to improve the nutritional status of young children 6-23 months of age.
- An integrated strategy that improves the overall socio economic wellbeing of families, maternal education, and knowledge of improved IYCF practices and also ensures optimal maternal malnutrition will probably be more effective in improving child nutritional status over the long term.
- Long term programs to prevent malnutrition should be in place to reduce the high chronic malnutrition reported in some areas.
- Build the capacity of national and local institutions and structures in the fight against child malnutrition.

4 Anthropometric surveys only estimate the prevalence of malnutrition at the time the survey was done; they give no indication whether the findings are abnormal or how the rate of malnutrition is likely to evolve, which are necessary factors in planning a response.

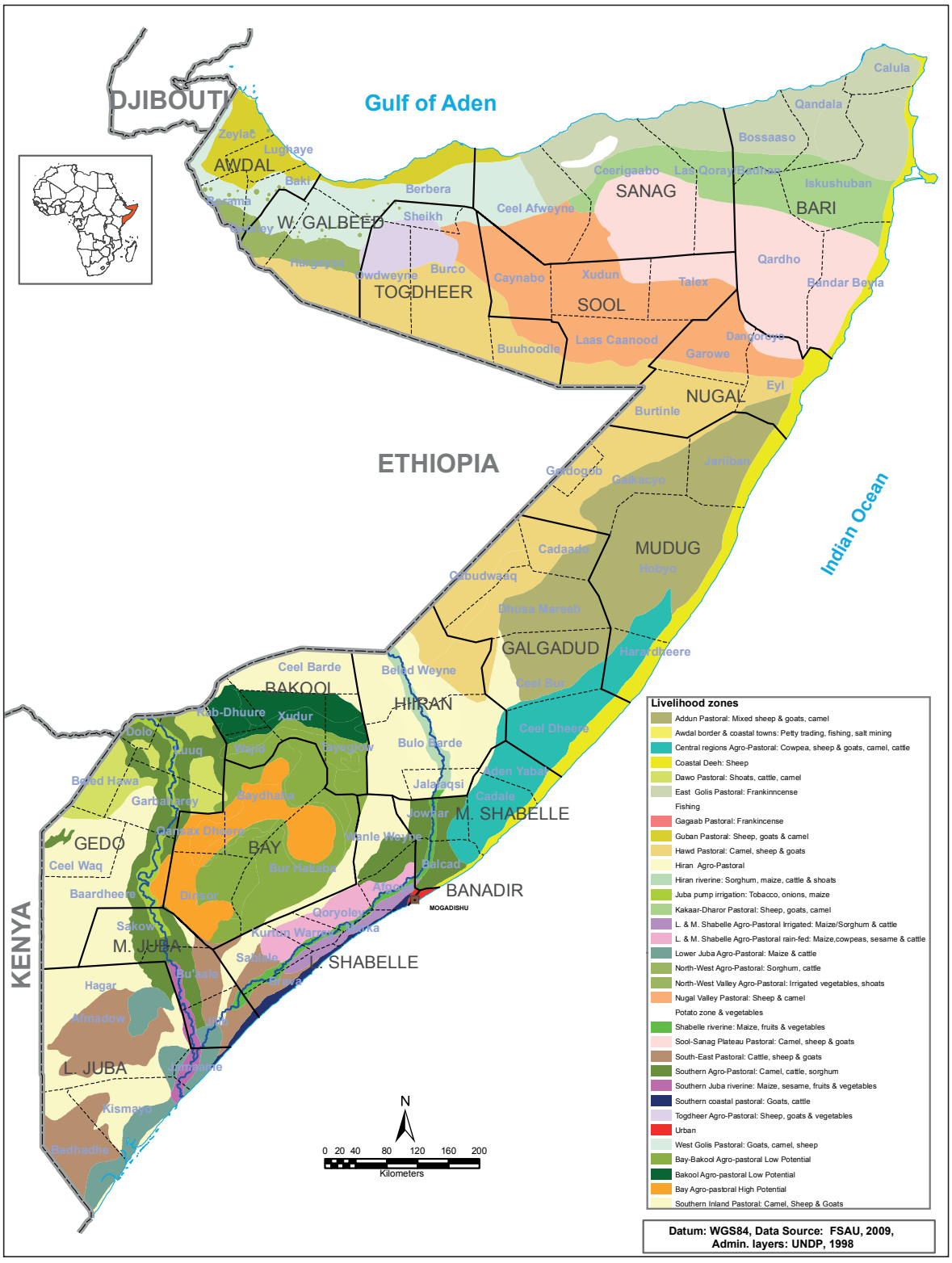
Map 6: Nutrition Situation Outlook (Aug – Oct 2014)



4: REGIONAL NUTRITION ASSESSMENT

FSNAU conducted 50 nutrition surveys and assessed the nutrition status of 34 162 children (6-59 months) drawn from different livelihood zones in Somalia (19 in South, 7 in Central, 10 in Northeast and 14 in Northwest). Out of the total 26 nutrition surveys were done among rural populations, 11 among urban populations and 13 among IDPs. The samples for nutrition surveys were done on the basis of a combination of regional boundaries and livihood zones (Map 7).

Map 7: Somalia Livelihood Zones

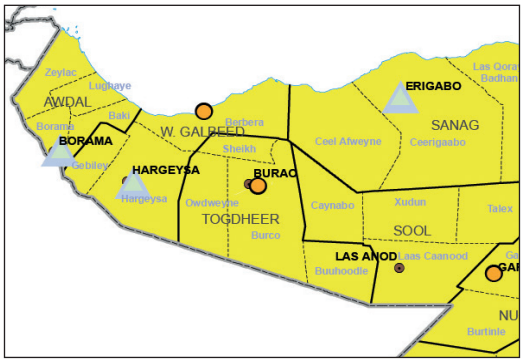


4.1: NORTHWEST REGIONS

FSNAU conducted a total of 14 comprehensive assessments in North West region of Somalia (5 urban livelihoods, 6 rural livelihoods and 3 IDP livelihoods). A total of 7 831 children (6-59 months) and 2 039 pregnant and lactating women from 4 279 household were surveyed.

The food security situation has remained stable since the post Deyr 2013/14 season in most pastoral livelihoods of Northwest regions but it has deteriorated in the agropastoral livelihood. In July 2014, all livelihoods of the region were classified as Stressed (IPC Phase 2). In the most likely scenario, the area classification remains Stressed (IPC Phase 2) in all livelihoods in August-December 2014.

Map 8: Food Security Situation in Northwest Regions - Gu 2014



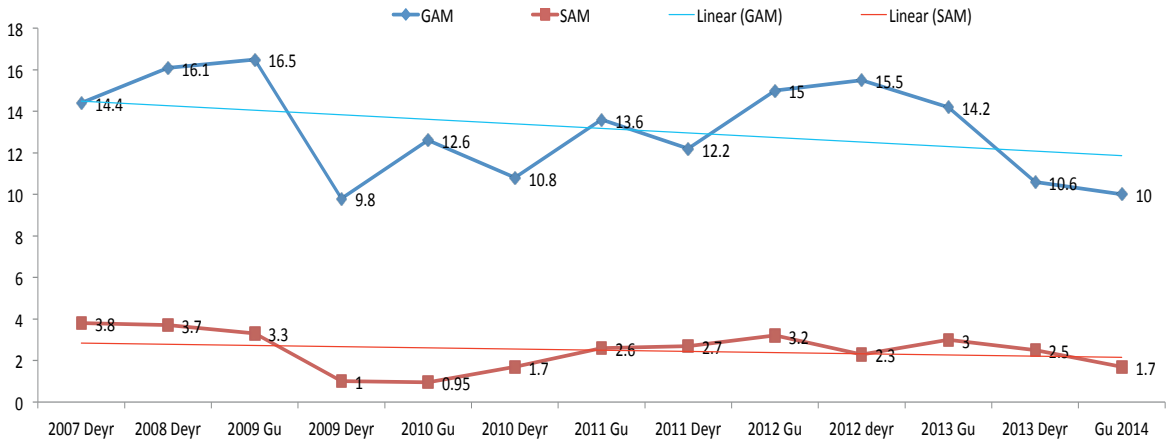
Urban areas of Awdal, Waqooy Galbeed and Sanag regions were classified in Minimal (IPC Phase 1) and urban areas of Togdheer region were classified in Stressed (IPC Phase 2) the Post Gu 2014 (July) period. The projection for August-December 2014 remains unchanged. Internally Displaced Persons (IDPs) in Northwest regions (Hargeisa, Burao and Berbera) were in Crisis (IPC Phase 3) in the Post Gu 2014 (July) period and are projected to remain in Crisis (IPC Phase 3) during August-December 2014.

For further details on analysis of the food security situation in Lower Shabelle and Middle Shabelle regions, please see sections 4.1, 4.2 and 4.3.8 of the Food Security and Nutrition Analysis Post Gu 2014 Technical Series Report No VII. 56 at www.fsnau.org

Trends in Acute Malnutrition

For the last eight years, **Serious** levels of GAM prevalence and decline in GAM rate has been noted (Figure 22). During the same period, decline in the median SAM rate from **Serious** levels (2.5-4 %) to **Alert** levels (1.1-2.4 %) was also recoded. This suggests an improvement in overall nutrition situation in the North West region of Somalia.

Figure 22: Trends in Acute Malnutrition



GU 2014 SURVEY RESULTS

The results of the *Gu* 2014 nutrition assessment conducted in North West Somalia are summarized in tables 8-12. Key highlights are discussed below:

Acute Malnutrition

The summaries of GAM and SAM prevalence are shown in Figure 23 and 24. Out of 14 livelihoods surveyed, only one (West Golis) registered **Critical l**evels of GAM (15.8 %), five livelihoods had **Serious** nutrition situation and the other seven livelihood zones show an **Alert** nutrition situation.

Serious levels of SAM were recoded among West Golis (3%) and Agropastoral (2.6 %). **Alert** levels of SAM prevalence was noted in 7 livelihoods (Sool Plateau, Agropastoral, Sool Urban, Togdher Urban, W/Galbeed, Berbera IDPs and Burao IDPs).

Figure 23: Prevalence of GAM among different Livelihoods in North West Somalia - Gu 2014

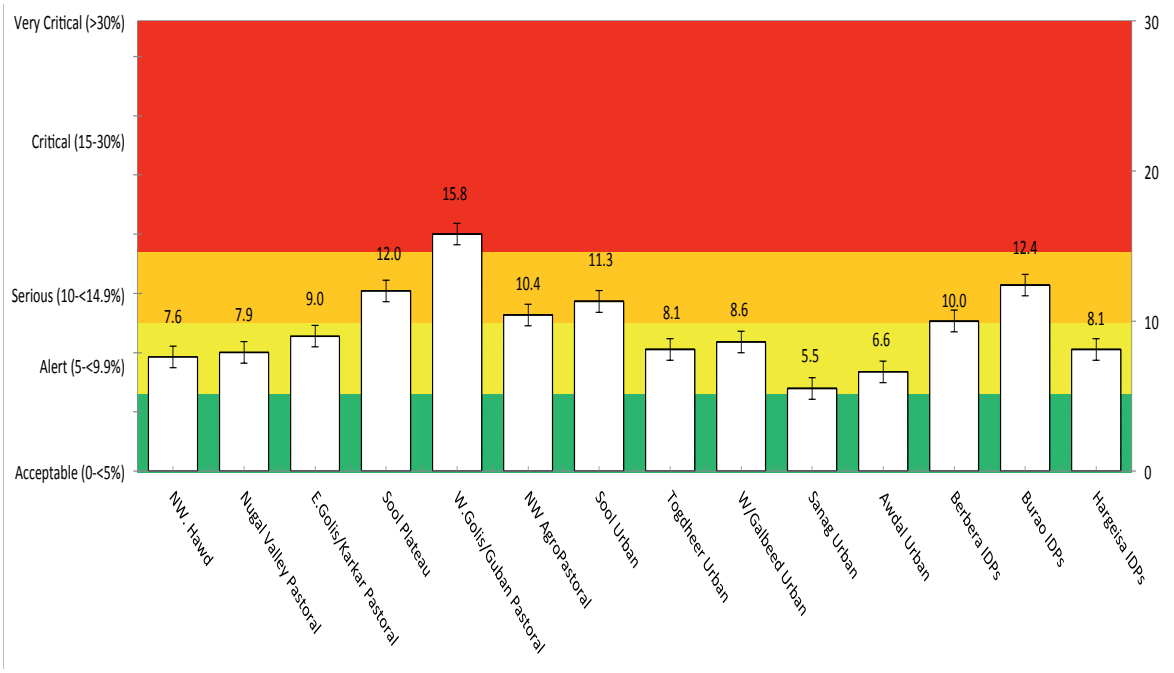
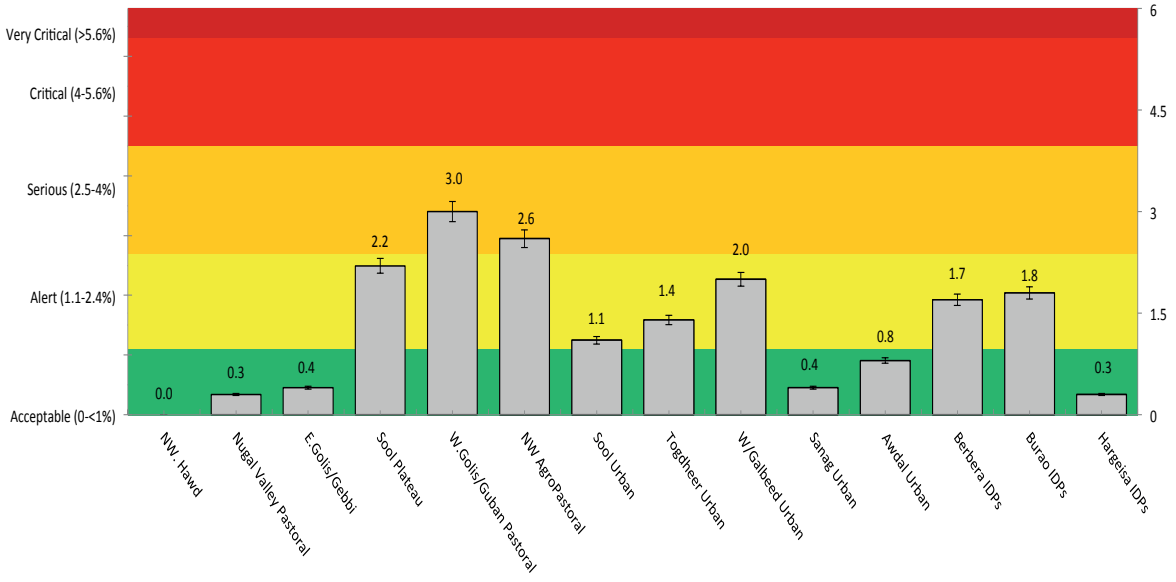


Figure 24: Prevalence of SAM among different Livelihoods in North West Somalia - Gu 2014



- **Northwest Agro pastoral** livelihood recorded **Serious** levels of both GAM (10.4 %) and SAM (2.6 %). Comparison with Gu 2013 indicates deterioration and a phase change from Alert (9.4 %) to Serious. This livelihood suffered a decline in crop production and pasture due to the poor performance of the *GU* 2014 rains (distribution and early cessation) which impacted on the household food security.

- **W.Golis/Guban** recorded **Critical** prevalence of GAM (15.8%) which is a deteriotation from **Serious** levels of GAM (14.%) recoded in Gu 2013. Deterioration in SAM was also noted from **Alert** levels (2% in Gu 2013) to Serious (3% in Gu 2014). This can be attributed to poor performance of the *GU* 2014 rains which led to reduced pasture, out migration of livestock and below average milk availability. High temperatures combined with sparse rainfall caused stress to crops, livestock and water reserves. This led to low cereal stock accompanied by increased cereal prices. Closure of the Djibouti and Ethiopian border further aggravated availability of food in markets in West Golis.

- **Sool Plateau: Serious** levels of GAM (12.0%) were sustained since Gu 2013 (10.8%).
- **Nugal Valley Pastoral: Alert** levels of GAM (7.9%) in Gu 2014 suggest an improvement from the **Serious** GAM levels seen in Gu 2013 (14.5%)
- **East Golis/Gebbi Valley Pastoral** show **Alert** levels of GAM (9.0%) and **Acceptable** SAM (0.4%) which suggest a marked improvement in nutrition situation when compared to the levels recorded in Gu 2013 (Serious GAM of 14.4% and alert SAM of 1.7%). Pasture conditions and availability of milk are also reported to be good and are contributory factors to this improvement. However, these resources are quickly being depleted and if the Deyr rains do not perform well this season then the livelihood zone can slip back to **Serious** nutrition classification.
- **Hawd Pastoral** record **Alert** levels of GAM rate (7.6%) in Gu 2014 with no SAM cases This is a marked improvement from the levels recorded in Gu 2013 (14.4% GAM and 1.7% SAM).
- **Hargeisa IDPs** show **Alert** levels of GAM (8.1%) and **Acceptable** SAM rate (0.3%) which reflects a steady improvement from the **Critical** levels observed in Gu 2013 (18.2%) to **Serious** levels (10.6%) in Deyr 2013. The improvement is linked to the continued humanitarian support in these settlements.

- **Berbera IDP** settlements have recorded **Serious** prevalence of GAM (10.0%) and **Alert** SAM rate (1.7%) which is an improvement from the **Critical** GAM rates observed during *Deyr* 2013 (16.1 %). When compared to the Gu 2013 the nutrition situation is sustained (10.8% GAM). Improvement is attributed to increased integrated humanitarian situation in the IDP camp.

- **Burao IDP** settlement show **Serious** levels of GAM prevalence (12.4%) and **Alert** levels of SAM (1.8%). This suggests a sustained **Serious** nutrition situation since Deyr 2013 (10.0%) . The current rates reflect a slight improvement from the rates observed in Gu 2013 (14.2%).

- **Sool Urban** have **r**ecorded a GAM rate of 11.3 percent and a SAM rate of 1.1 percent indicating a **Serious** nutrition situation which is a deterioration from the 9.8 percent GAM levels observed during Gu 2013.

- **Togdheer Urban** show a GAM rate of 8.1 percent and a SAM rate of 1.4 percent indicating an **Alert** nutrition situation. This is an improvement from Gu 2013 (GAM 11.5%).

- **Woq Galbeed Urban** record **Alert** levels of GAM (8.6 %) and SAM (2.0%) . This is a slight deterioration from GAM levels recorded in Gu 2013(7.7%)

- **Sanag Urban** show **Alert** levels of GAM prevalence (5.5%) and **Acceptable** SAM rate (0.4%) indicating improvement from the serious levels observed during Gu 2013 (12.7% GAM and 3.1% SAM).

- **Awdal Urban** record a Alert levels of GAM (6.6 %) and SAM (0.8%) indicating improvement in nutrition situation since Gu 2013 (9.8 % GAM)

Stunting and Underweight

Low prevalence of stunting and underweight was observed in all the livelihoods surveyed in Northwest. The low stunting as well as underweight prevalence is sustained since *Gu* 2013 (Annex 6.7).

Mortality

The Crude and under-five death rates in most of the livelihoods are **Acceptable** (<0.5 CDR and <1/10,000/ day U5DR). Only Hargeisa IDPs had CDR rate at a **Serious** level (0.7). This reflects stable mortality levels in all three seasons Gu 2013, *Deyr* 2013 and Gu 2014. (Annex 6.6).

Morbidity

Compared to the rural livelihoods (26.8% in Hawd Pastoral), the IDP settlements registered lower morbidity rates ranging from 5.8 percent in Berbera IDP to 15.6% in in Burao. Overall morbidity trends are reducing in the IDP settlements compared to the levels observed in Deyr 2013 (19.9% to 12% in Hageisa IDPs, 9.8% to 5.8% in Berbera IDPs). This can be attributed to an increased set of humanitarian interventions. Morbidity was lowest among the urban livelihood zones with the lowest rates in W/Galbeed (3.4%) and the highest rates in Sool (11.8%).

Immunization

The reported Vitamin A supplementation, measles vaccination and Polio immunization by recall were all below the recommended minimum SPHERE standards (≥ 95 coverage for vitamin A and measles). The two interventions are key to protecting children against infection and cushioning them against slipping into acute malnutrition. This trend is worrying even for the IDP settlement where all age groups (6 to 11 months and 12 59 months) can easily be accessed.

Maternal Malnutrition

Acceptable levels of maternal malnutrition were observed among all the livelihood zones (<10.4%) except West Golis (15.6%), Nugal Valley (12.2%) and Sool platea (10.5%) where **Alert** levels of maternal malnutrition were recorded.

Dietary Diversification

Household dietary diversity measured as proportion of households consuming more than four food groups is high. There is no significant change in household dietary diversity in since *Gu* 2013. Improved milk access and consumption is a key mitigating factor to malnutrition.

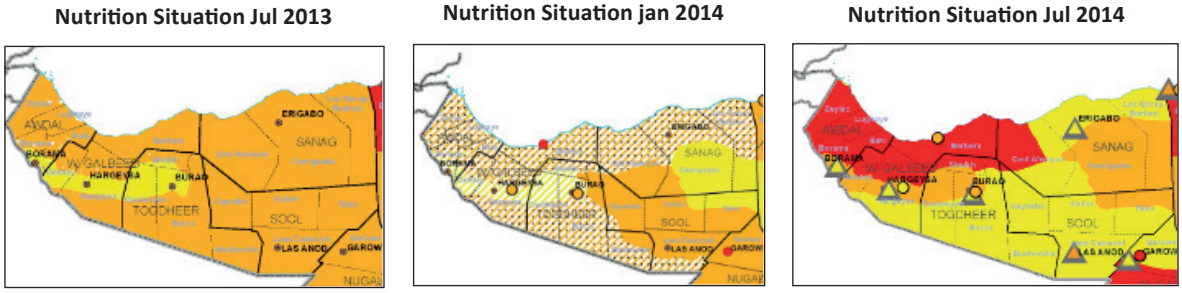
Infant Young Child Feeding

Suboptimal IYCF practices in terms of lack of continued breastfeeding for up to one year and 24 months, inadequate child dietary diversity and frequency of complementary feeding were observed in all the assessed population groups. A slightly higher proportion of children (83%) were not given breast milk upto the recommended 24 month in Gu 2014 compared to 78 percent in *Deyr* 2013. Dietary diversity was also poor with only 0.2 to 18.0 percent of children reported to be consuming food from four or more food groups. This is similar to the levels observed in *Deyr* 2013 (0.4 to 20.2%). This suggests that marked reductions in current child malnutrition and, indeed, future cases of acute malnutrition can be achieved through improvement in early and exclusive breastfeeding, and good-quality complementary feeding for infants and young children.

Change in Nutrition Situation

The maps below show the progression in nutrition situation from Gu 2013 to Gu 2014. The nutrition situation among the urban, IDPs and Rural livelihoods in Northwest regions have for the last twelve months (*Gu* 2013 to Gu 2014) ranged between ***Alert*** to **Serious** to **C*ritical*** levels. The nutrition situation has largely been influenced by food security factors particularly access to milk among the predominant pastoral communities and morbidity patterns.

Figure 25: Progression of the Nutrition Situation *Gu* 2013 to *Gu* 2014 in Northwest



CURRENT HOT SPOT FOR ACUTE MALNUTRITION IN NORTH WEST SOMALIA

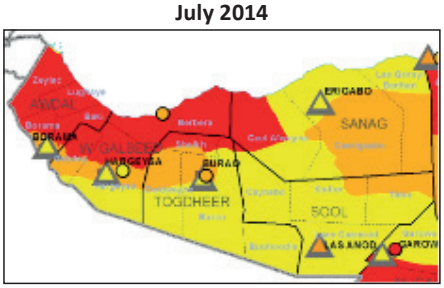
West Golis with a GAM rate of 15.8 percent is the only hotspot for acute malnutrition in Northwest Somalia that requires immediate comprehensive integrated lifesaving interventions (health and nutrition) both to treat the acutely malnourished children and to mitigate and reverse the deteriorating food security situation.

OUTLOOK FOR AUG to OCT 2014

Deterioration from **Alert** to **Serious** levels of malnutrition projected among in Agro pastoral and Sool livelihood zones while the rest of the livelihood zones in Northwest Somalia are projected to remain Stable in the coming three months. This is because of poor performance of the Gu 2014 rains which adversely affected crop production in the Agro pastoral livelihood zones and pasture availability in these zones.

Figure 26: Nutrition Situation Outlook July 2014 to October 2014 in Northwest

Current Nutrition Situation July 2014



Projected Nutrition Situation Aug to Oct 2014

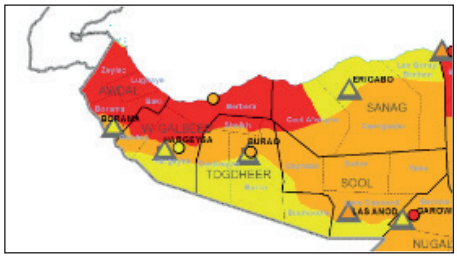


Table 9: Summary of Key Nutrition Findings: Northwest IDPs - Gu 2014

	Hargeisa IDPs			Berbera IDPs			Burao IDPs		
	Clusters :30 (N=:666; Boys=337; Girls=329)			Clusters :28 (N=641:Boys311=;Girls=330)			Clusters:32 (N=667:Boys=;342Girls=325)		
Indicator	n	Percent (CI)	Change from *Deyr* 2013	n	Percent (CI)	Change from *Deyr* 2013	n	Percent (CI)	Change from *Deyr* 2013
Child Nutrition Status									
Global Acute Malnutrition (WHZ<-2 or oedema)	54	8.1 (5.6-11.6)		64	10.0 (6.8-14.6)		83	12.4 (9.6-15.9)	
Boys	29	8.6 (6.1-11.9)	Improved	29	9.4 (5.9-14.6)	Improved	41	12.0 (8.7-16.30	Deteriorated
Girls	25	7.6 (4.3-13.2)		35	10.7 (6.9-16.2)		42	12.9 (9.1-18.0)	
Severe Acute Malnutrition (WHZ<-3 or oedema)	2	0.3 (0.1-1.2)		11	1.7 (0.9-3.7)		12	1.8 (1.0-3.2)	
Boys	1	0.3 (0.0-2.1)	Sustained	5	1.6 (0.7-3.8)	Improved	7	2.0 (1.0-4.1)	Deteriorated
Girls	1	0.3 (0.0-2.3)		6	1.8 (0.7-4.5)		5	1.5 (0.6-4.2)	
Mean of Weight for Height Z Scores	-0.63±1.01		Sustained	-0.68±1.02		Improved	-0.68±1.14		Sustained
Oedema	0	0.0	Improved	0	0.0	Sustained	0	0.0	
Proportion with MUAC<12.5 cm or oedema)	32	4.8 (3.0-7.5)		9	1.4 (0.6-3.6)		11	1.6 (0.9-2.9)	
Boys	16	4.7 (2.5-8.9)	Sustained	4	1.3 (0.4-4.3)	Improved	4	1.2(0.4-3.1)	Improved
Girls	16	4.8 (3.0-7.7)		5	1.5(0.5-4.3)		7	2.2 (1.0-4.6)	
Proportion with MUAC<11.5 cm or oedema	7	1.0 (0.5-2.1)		2	0.3 (0.1-1.3)		2	0.3 (0.1-1.2)	
Boys	3	0.9 (0.3-2.8)	Deteriorated	1	0.3 (0.0—2.5)	Improved	0	0.0	Improved
Girls	4	1.2 (0.5-3.2)		1	0.3 (0.0-2.4)		2	0.6 (0.2-2.4)	
Stunting (HAZ<-2)	27	4.1 (2.5-6.7)		14	2.2 (1.2-4.0)		14	2.1 (1.0-4.2)	
Boys	17	5.1 (2.5-10.2)	Improved	5	1.6 (0.7-3.7)	Improved	11	3.2 (1.5-6.5)	Deteriorated
Girls	10	3.1 (1.1-8.0)		9	2.7 (1.3-5.6)		3	0.9 (0.3-2.9)	
Severe Stunting (HAZ<-3)	7	1.1 (0.4-2.9)		3	0.5 (0.2-1.5)				
Boys	7	2.1 (0.8-5.6)	Improved	1	0.3 (0.0-2.5)	Improved	0	0.0	Improved
Girls	0	0.0		2	0.6 (0.1-2.5)				

Underweight (WAZ<-2)	49	7.4 (5.1-10.5)		36	5.6 (3.5-9.0)		18	2.7 (1.6-4.5)	
Boys	30	8.9 (5.4-14.3)	Improved	17	5.5 (3.1-9.4)	Improved	11	3.2 (1.8-5.7)	Deteriorated
Girls	19	5.8 (3.0-10.7)		19	5.8 (3.2-10.3)		7	2.2 (1.1-4.1)	
Death Rates									
Crude deaths, per 10,000 per day (retrospective for 90 days)	0.68 (0.21-2.18)		Deteriorated	0.32 (0.08-1.33)		Deteriorated	0.18 (0.02-1.38)		Sustained
Under five deaths, per 10,000 per day (retrospective for 90 days)	0.68		Improved	0.18		Improved	0.32		Sustained
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	0	0	Sustained	1	0.9 (0.0-2.7)	Sustained	0	0	Improved
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	6	4.4 (1.1-7.8)	Improved	1	0.9 (0.0-2.7)	Improved	9	6.0 (0.0-13.1)	Sustained
Morbidity Rates	Underlying and Risk Factors								
Morbidity	80	12.0 (6.8-17.2)		37	5.8 (3.4-8.1)		104	15.6 (9.4-21.8)	
Boys	37	10.9 (5.2-16.7)	Improved	18	5.8 (2.4-9.2)	Improved	56	16.4 (9.6-23.2)	Deteriorated
Girls	43	13.0 (7.2-18.90		19	5.8 (2.9-8.6)		48	14.8 (7.9-21.6)	
Diarrhoea	51	7.6 (3.3-12.0)		20	3.1 (1.4-4.8)		29	4.3 (1.8-6.8)	
Boys	24	7.1 (2.4-11.8)		10	3.2 (0.7-5.7)		18	5.3 (2.2-8.3)	
Girls	27	8.2 (3.1-13.3)		10	3.0 (1.2-4.9)		11	3.8 (0.7-6.0)	
Pneumonia	35	5.2 (2.6-7.9)		11	1.7(0.4-3.0)		49	7.3 (2.6-12.1)	
Boys	19	4.7 (1.4-8.0)		5	1.6 (0.0-3.7)		25	7.3 (2.0-12.6)	
Girls	16+	5.7 (2.7-8.8)		6	1.8 (0.1-3.5)		24	7.3(2.6-12.1)	
Fever	25	3.7 (1.8-6.6)		15	2.3 (1.1-3.6)		96	14.4 (8.3-20.5)	
Boys	11	3.2 (1.2-5.3)	Improved	9	2.9 (0.8-5.0)	Improved	52	15.2(8.6-21.8)	Deteriorated
Girls	14	4.2 (1.8-6.60		6	1.8 (0.2-3.5)		44	13.5 (6.7-20.4)	
Measles	4	0.6 (0.0-1.3)		4	0.6 (0.0-1.2)		3	0.5 (0.0-1.0)	
Boys	1	0.3 (0.0-0.9)	Improved	3	1.0 (0.0-2.1)	Sustained	1	0.3 (0.0-0.9)	Deteriorated
Girls	3	0.9 (0.0-2.3)		1	0.3 (0.0-0.90		2	0.6 (0.0-1.5)	
Vitamin A Supplementation	445	66.6 (52.3-81.0)		460	71.8 (69.3-74.1)		616	92.4 (86.5-98.2)	
Boys	231	68.3 (54.3-82.3)	Improved	219	70.4 (65.6-75.3)	Improved	323	94.4 (89.9 -99.0)	Improved
Girls	214	64.8 (49.5-80.2)		241	73.0 (70.2-75.8)		293	90.2 (82.1-98.2)	
Measles Vaccination	433	64.8(54.7-75.0)		440	68.6 (57.0-80.4)		608	91.2 (85.3-97.0)	
Boys	231	68.3 (57.4-79.3)	Improved	214	68.8 (55.0-82.6)	Improved	315	92.1 (86.5-97.7)	Improved
Girls	202	61.2 (50.2-72.3)		226	68.5 (56.9-80.0)		293	90.2 (83.4-96.9)	
Polio Immunization	458	68.6 (60.4-76.7)		466	72.7 (67.0-78.4)		485	72.7 (64.5-80.9)	
Boys	229	67.8 (58.6-76.9)	Deteriorated	233	71.7 (64.4-79.0)	Improved	243	71.1 (61.6-80.5)	Deteriorated
Girls	229	69.4 (60.3-78.4)		243	73.6 (67.1-80.1)		242	74.5 (65.8-83.1)	
Infant and Young Child Feeding (6-24 Months)	N=232			N=199			N=216		
Proportion still breastfeeding	122	52.6 (45.5-59.7)		93	46.7 (41.0-52.5)		82	38.0 (30.3-45.6)	
Boys	58	50.0 (38.2-61.8)	Improved	45	48.4 (39.0-57.7)	Improved	39	33.3 (23.7-43.0)	Sustained
Girls	64	55.2 (43.5-66.9)		48	45.3(35.9-54.9)		43	43.4 (33.6-53.3)	
	N=53			N=12			N=28		
Continued breastfeeding up to 12 months	26	49.1 (32.2 (65.9)	Improved	6	35.3 (2.1-68.5)	Improved	14	29.2 (12.1-46.2)	Improved
Boys	15	51.7 (32.0-71.4)		4	40.0 (8.6-71.4)		6	21.4 (0.0-43.4)	
Girls	11	45.8 (22.8-68.8)		2	28.6 (0.0-79.3)		8	40.0 (15.3-64.7)	
	N=2							N=59	
Continued breastfeeding up to 24 months	1	5.0 (0.0-12.5)	Improved	N=28	0	Sustained	1	1.7 (0.0-5.2)	Improved
Boys	1	4.5 (0.0-14.1)		0			1	2.9 (0.0-9.0)	
Girls	1	5.6 (0.0-17.1)					0	0	
Proportion meeting recommended feeding frequencies	108	46.6 (35.8-57.3)	Sustained	109	54.8 (42.4 -67.1)	Improved	152	70.4 (58.6-82.1)	Deteriorated
Boys	51	44.0 (29.7 (58.2)		46	49.5 (35.4-63.5)		81	69.2 (55.0-83.4)	
Girls	57	49.1 (36.0-62.3)		63	59.4 (45.1-73.8)		71	71.7 (58.9-84.5)	

Proportion who reported to have consumed ≥4 food groups	0	0	Deteriorated	0	0	Sustained	3	1.4 (0.0-3.0)	Sustained
Boys							2	1.7 (0.0-4.2)	
Girls							1	1.0 (0.0-3.1)	
Women Nutrition and Immunization Status									
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	0	0	Sustained	1	0.9 (0.0-2.7)	Sustained	0	0	Improved
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	6	4.4 (1.1-7.8)	Deteriorated	1	0.9 (0.0-2.7)	Sustained	9	6.0 (0.0-13.1)	
Proportion of Women who received Tetanus immunization	N=348			N=311			N=260		
No dose	20	5.7 (2.6-8.9)		21	6.8 (2.8-10.7)		26	9.8 (3.8-15.8)	
One dose	30	8.6 (5.1-12.1)	Deteriorated	22	7.1 (3.4-10.7)	Improved	30	13.2 (5.9-20.5)	Improved
Two doses	122	35.1 (27.5-42.6)		102	32.8 (22.9-42.7)		126	47.5 (35.5-59.6)	
Three doses	176	50.6 (41.8-59.4)		166	53.4 (41.3-65.4)		78	29.4 (16.2-42.7)	
Public Health Indicators	N=339			N=304			N=353		
Household with access to sanitation facilities	339	100	Improved	297	97.7 (94.7-100.7)	Improved	274	77.6 (67.3-87.9)	Deteriorated
Household with access to safe water	338	99.7	Sustained	304	100.0	Improved	353	100	Sustained
Proportion who reported to have consumed <4 food groups	14	4.1 (1.0-7.3)	Deteriorated	9	3.0 (0.8-5.1)	Improved	4	1.1 (0.1-2.2)	Improved
Household's Main Food Source- Purchase	335	98.8 (97.4-100.2)	Sustained	303	99.7 (99.0-100.3)	Deteriorated	328	92.9 (87.4-98.4)	Improved
Mean CSI	20.6			36.7			23.8		
OVERALL NUTRITION SITUATION	Alert			Serious			Serious		

Table 10: Summary of Key Nutrition Findings: Northwest Rural - Gu 2014

	Agro-Pastoral LZ (Togdheer)			West Golis /Guban Pastoral LZ			Sool Plateau		
	Clusters : 28 N=: 491 (Boys=240; Girls=251)			Clusters:35 N=545 (Boys=278;Girls=267)			Clusters :32 N=681 (Boys= 355; Girls= 326)		
Indicator	**n**	**percent (CI)**	**Change from Deyr 2013**	**n**	**percent (CI)**	**Change from Deyr 2013**	**n**	**percent (CI)**	**Change from Deyr 2013**
Child Nutrition Status									
Global Acute Malnutrition (WHZ<-2 or oedema)	51	10.4 (7.2-14.8)		85	15.8 (12.4-19.9)		82	12.0 (9.6-15.1)	
Boys	27	11.3 (6.7-18.2)		40	14.4 (10.6-19.2)		49	13.8 (9.8-19.2)	Deteriorated
Girls	24	9.6 (5.6-15.9)		45	17.2 (12.7-23.0)		33	10.1 (7.5-13.6)	
Severe Acute Malnutrition (WHZ<-3 or oedema)	13	2.6 (1.5- 4.6)		16	3.0 (1.9-4.7)		15	2.2 (1.3- 3.7)	
Boys	9	3.8 (1.9- 7.4)		6	2.2 (1.0-4.5)		10	2.8 (1.4- 5.5)	Deteriorated
Girls	4	1.6 (0.6- 4.2)		10	3.8 (2.2-6.6)		5	1.5 (0.7- 3.5)	
Mean of Weight for Height Z Scores	-0.66±1.05			-0.91±1.06			-0.79±1.04		Deteriorated
Oedema	0	0		0	0		2	0.3	Deteriorated
Proportion with MUAC<12.5 cm or oedema)	10	2.0 (1.1- 3.7)		19	3.5 (1.8-6.7)		10	1.5 (0.8- 2.7)	
Boys	3	1.2 (0.4- 3.7)	Sustained	11	4.0 (1.9-8.0)	Improved	5	1.4 (0.6- 3.3)	Sustained
Girls	7	2.8 (1.4- 5.4)		8	3.0 (1.5-6.0)		5	1.5 (0.6- 3.6)	
Proportion with MUAC<11.5 cm or oedema	1	0.2 (0.0- 1.5)		4	0.7 (0.3-1.9)		2	0.3 (0.1- 1.2)	
Boys	0	0.0 (0.0- 0.0)	Improved	3	1.1(0.4-3.2)	Improved	1	0.3 (0.0- 2.2)	Sustained
Girls	1	0.4 (0.1- 2.9)		1	0.4(0.0-2.8)		1	0.3 (0.0- 2.3)	
Stunting (HAZ<-2)	14	2.8 (1.5- 5.3)		38	7.1 (4.4-11.4)		24	3.6 (2.2- 5.7)	
Boys	7	2.8 (1.4- 5.7)		23	8.5 (4.9-14.3)		20	5.7 (3.7- 8.7)	Deteriorated
Girls	7	2.8 (1.2- 6.1)		15	5.7 (2.8-11.4)		4	1.2 (0.4- 4.1)	
Severe Stunting (HAZ<-3)	2	0.4 (0.1- 1.7)		7	1.3(0.6-2.9)		1	0.1 (0.0- 1.1)	
Boys	1	0.4 (0.1- 3.1)		3	1.1(0.4-3.4)		1	0.3 (0.0- 2.1)	Improved
Girls	1	0.4 (0.1- 3.0)		4	1.5(0.5-5.0)		0	0	
Underweight (WAZ<-2)	29	5.8 (3.8- 8.9)		51	9.4 (6.6-13.2)		43	6.3 (4.3- 9.2)	
Boys	19	7.8 (5.0-12.1)		33	11.9 (8.5-16.3)		33	9.3 (6.1-14.1)	Deteriorated
Girls	10	3.9 (2.0- 7.5)		18	6.8 (4.0-11.2)		10	3.1 (1.6- 5.8)	
Death Rates	Underlying and Risk Factors								
Crude deaths, per 10,000 per day (retrospective for 90 days)	0.14 (0.05-0.38)			0.14 (0.05-0.35)			0.06 (0.01-0.52)		Improved
Under five deaths, per 10,000 per day (retrospective for 90 days)	0.42 (0.10-1.74)			0.0 (0.00-0.00)			0		Deteriorated
Morbidity									
Morbidity	32	6.4 (2.4-10.4)		113	20.73 (17.46-24.43)		134	19.62 (16.75-22.84)	
Boys	13	5.3(1.5-9.1)	Improved	62	22.30 (17.55-27.66)	Improved	74	20.79 (16.77-25.45)	Deteriorated
Girls	19	7.5(2.4-12.6)		51	19.10 (14.57-24.34)		60	18.35 (14.39-23.07)	

Diarrhoea	14	2.8(0.7-4.9)		53	9.72 (7.43-12.60)		63	9.22 (7.21-11.71)	
Boys	5	2.0(0.3-3.8)	Improved	28	10.07 (6.80-14.23)	Improved	36	10.11 (7.27-13.84)	Deteriorated
Girls	9	3.5(0.4-6.7)		25	9.36 (6.15-13.51)		27	8.26 (5.61-11.92)	
Pneumonia	21	4.2(1.1-2.8)		31	5.69 (3.96-8.07)		19	2.78 (1.73-4.39)	
Boys	10	4.1(0.6-7.6)	Improved	13	4.68 (2.51-7.86)	Improved	9	2.53 (1.24-4.91)	Deteriorated
Girls	11	4.3(0.3-8.3)		18	6.74 (4.04-10.45)		10	3.06 (1.56-5.73)	
Fever	19	3.8(1.1-6.5)		81	14.86 (12.04-18.91)		65	9.52 (7.47-12.03)	
Boys	9	3.7(0.2-7.1)	Improved	46	16.55 (12.38-21.45)	Improved	34	9.55 (6.80-13.21)	Improved
Girls	10	3.9(0.4-7.5)		35	13.11 (9.30-17.76)		31	9.48 (6.63-13.32)	
Measles	1	0.2(0.0-0.6)		4	0.75 (0.24-2.05)		27	3.95 (2.67-5.78)	
Boys	0	0.0(0.0-0.0)	Improved	2	0.73 (0.09-2.61)	Sustained	15	4.21 (2.46-7.01)	Sustained
Girls	1	1.02(0.0-0.6)		2	0.78 (0.09-2.77)		12	3.67 (2.00-6.49)	
Vitamin A Supplementation	381	77.3(66.5-89.1)		356	65.32 (61.14-69.29)		578	84.63 (81.65-87.21)	
Boys	191	78.6(66.1-91.1)	Improved	183	65.83 (59.93-71.39)	Sustained	305	85.67 (81.50-89.06)	Improved
Girls	190	76(63.4-88.6)		173	64.79 (58.74-70.52)		273	83.49 (78.91-87.25)	
Measles Vaccination	358	72.8(60.7-84.8)		306	56.15 (51.86-60.35)		566	82.87 (79.78-85.58)	
Boys	182	74.9(61.5-88.3)	Improved	164	58.99 (52.96-64.83)	Sustained	298	83.71 (79.36-87.31)	Improved
Girls	176	70.7(58.4-83.0)		142	53.18 (40.71-53.00)		268	81.96 (77.26-85.88)	
Polio Immunization	450	90.0(82.5-97.5)		273	50.09 (45.82-54.37)		634	92.83 (90.56-94.59)	
Boys	219	89.0(79.8-98.2)	Improved	140	50.36 (44.33-56.39)	Sustained	332	93.26 (90.00-95.54)	Sustained
Girls	231	90.9(84.6-97.3)		133	49.81 (43.66-55.97)		302	92.35 (88.78-94.89)	
Infant and Young Child Feeding (6-24 Months)				N=208			N=255		
Proportion still breastfeeding	74	40.4(30.0-50.9)		104	54.45 (47.10-61.66)		96	37.65 (31.68-43.91)	
Boys	35	41.2(26.4-56.0)	Sustained	51	53.13 (42.66-63.39)	Sustained	47	38.52 (29.86-47.76)	Deteriorated
Girls	39	39.8(26.2-53.3)		53	55.79 (45.23-65.98)		49	36.84 (28.65-45.64)	
Continued breastfeeding up to 12 months	23	57.5(39.6-75.4)	Sustained	N=43 29 14 15	67.44 (51.46-80.92) 66.67 (43.03-85.41) 68.18 (45.13-86.14)	Sustained	N=60 32 14 18	53.33 (40.00-66.33) 56.00 (34.93-75.60) 51.43 (33.99-68.62)	Improved
Boys									
Girls									
Continued breastfeeding up to 24 months	4	2.2(0.0-4.8)	Sustained	N=35 1 1 0	2.86 (0.07-14.92) 4.76 (0.12-23.82) 0	Sustained	N=40 1 0 1	2.50 (0.06-13.16) 0 4.00 (0.10-20.35)	Deteriorated
Boys									
Girls									
Proportion meeting recommended feeding frequencies	68	37.2(30.3-44.0)	Sustained	76	37.62 (30.92-44.69)	Sustained	200	78.74 (73.19-83.61)	Sustained
Boys	30	35.3(25.2-45.4)		40	39.22 (29.69-49.38)		95	77.87 (69.46-84.88)	
Girls	38	38.8(27.4-50.1)		36	36.00 (26.64-46.21)		105	79.55 (71.65-86.07)	
Proportion who reported to have consumed ≥4 food groups	3	1.9 (0.0-4.7)	Sustained	6	2.97 (1.10-6.35)	Sustained	0	0	Deteriorated
Boys	1	1.4(0.0-4.3)			2.94 (0.61-8.36)				
Girls	2	2.2(0.0-6.9)		3	3.00 (0.62-8.52)				
				3					
Women Nutrition and Immunization Status	N=240			N=173			N= 153		
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	1	0.4(0.0-1.2)	Sustained	10	5.78 (2.81-10.37)	Sustained	4	2.61 (0.72-6.56)	Sustained
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	6	2.4(0.0-5.0)	Sustained	27	15.61 (10.54-21.89)	Sustained	16	10.46 (6.10-16.43)	Sustained
Proportion of Women who received Tetanus immunization									
No dose	38	15.8(9.6-22.1)	Deteriorated	19	10.98 (6.74-16.62)	Deteriorated	12	7.84 (4.12-13.30)	Deteriorated
One dose	41	17.1(9.8-24.4)		80	46.24 (38.65-53.97)		32	20.92 (14.77-28.22)	
Two doses	72	30.0(21.9-38.1)		41	23.70 (17.58-30.75)		65	42.48 (34.54-50.72)	
Three doses	89	37.1(28.6-45.6)		33	19.08 (13.51-25.73)		44	28.76 (21.74-36.62)	
Public Health Indicators	N=500			N=202			N =385		
Household with access to sanitation facilities	154	30.8(17.9-43.7)	Deteriorated	60	27.65 (21.81-34.11)	Deteriorated	284	73.77 (69.02-78.03)	Improved
Household with access to safe water	115	23(7.5-38.5)	Deteriorated	107	47.77 (41.07-54.52)	Deteriorated	61	15.84 (12.42-19.97)	
Proportion who reported to have consumed <4 food groups	4	0.8(0.0-2.0)	Improved	39	17.41 (12.68-23.02)	Improved	0	0	Improved
Household's Main Food Source- Purchase	454	90.8(84.3-97.3)		169	91.35 (86.34-94.98)	Sustained	375	97.40 (95.12-98.67)	Sustained
Mean CSI		16.6	Sustained		7.9			6.1	Sustained
OVERALL NUTRITION SITUATION		Serious			Critical			Serious	

Table 11: Summary of Key Nutrition Findings: Northwest Rural - Gu 2014

	East Golis/Gebi Valley Pastoral			Nugal Valley Pastoral			NW Hawd		
	Clusters : 28 N= 501 (Boys=256; Girls= 245)			Clusters: 30 N= 643 (Boys= 356 ;Girls= 287)			Clusters : 30 N=: 553 (Boys=277;Girls=276)		
Indicator	**n**	**percent (CI)**		N	percent (CI)		**n**	**percent (CI)**	
Child Nutrition Status			**Change from Deyr 2013**			**Change from Deyr 2013**			**Change from Deyr 2013**

Global Acute Malnutrition (WHZ<-2 or oedema) Boys Girls	45 29 16	9.0 (6.2-12.8) 11.3 (6.7-18.6) 6.5 (3.9-10.8)	Sustained	82 49 33	12.0 (9.6-15.1) 13.8 (9.8-19.2) 10.1 (7.5-13.6)	Improved	42 23 19	7.6 (5.3-10.8) 8.3 (5.0-13.4) 6.9 (4.2-11.0)	Sustained
Severe Acute Malnutrition (WHZ<-3 or oedema) Boys Girls	2 2 0	0.4 (0.1- 1.7) 0.8 (0.2- 3.3) 0	Sustained	15 10 5	2.2 (1.3- 3.7) 2.8 (1.4- 5.5) 1.5 (0.7- 3.5)	Sustained	0 0 0	0.0 (0.0- 0.0) 0.0 (0.0- 0.0) 0.0 (0.0- 0.0)	Sustained
Mean of Weight for Height Z Scores	-0.65±0.99			-0.79±1.04		Sustained			
Oedema	0	0		2	0.3	Deteriorated	0	0.0	
Proportion with MUAC<12.5 cm or oedema) Boys Girls	19 9 10	3.7 (2.3- 5.8) 3.4 (1.9- 6.1) 4.0 (1.9- 8.0)	Deteriorated	10 5 5	1.5percent (0.8- 2.7) 1.4 (0.6- 3.3) 1.5 (0.6- 3.6)	Improved	4 2 2	0.7 (0.3- 1.9) 0.7 (0.2- 3.0) 0.7 (0.2- 3.0)	Improved
Proportion with MUAC<11.5 cm or oedema Boys Girls	3 3 0	0.6 (0.2- 1.8) 1.1 (0.4- 3.5) 0	Sustained	2 1 1	0.3 (0.1- 1.2) 0.3 (0.0- 2.2) 0.3 (0.0- 2.3)	Improved	1 1 0	0.2 (0.0- 1.4) 0.4 (0.0- 2.7) 0.0 (0.0- 0.0)	Improved
Stunting (HAZ<-2) Boys Girls	8 6 2	1.6 (0.8- 3.2) 2.3 (1.1- 4.8) 0.8 (0.2- 3.2)	Sustained	24 20 4	3.6 (2.2- 5.7) 5.7 (3.7- 8.7) 1.2 (0.4- 4.1)	Deteriorated	12 7 5	2.1 (1.3- 3.6) 2.5 (1.2- 4.9) 1.8 (0.6- 4.9)	Sustained
Severe Stunting (HAZ<-3) Boys Girls	1 1 0	0.2 (0.0- 1.5) 0.4 (0.0- 2.9) 0	Sustained	1 1 0	0.1 (0.0- 1.1) 0.3 (0.0- 2.1) 0	Improved	2 0 2	0.4 (0.1- 1.5) 0.0 (0.0- 0.0 0.7 (0.2- 2.9)	Sustained
Underweight (WAZ<-2) Boys Girls	22 15 7	4.3 (2.7- 6.6) 5.7 (3.4- 9.6) 2.8 (1.2- 6.1)	Sustained	43 33 10	6.3 (4.3- 9.2) 9.3 (6.1-14.1) 3.1 (1.6- 5.8)	Deteriorated	7 6 1	1.2 (0.6- 2.4) 2.1 (1.0- 4.6) 0.4 (0.1- 2.4)	Sustained
Death Rates	Underlying and Risk Factors								
Crude deaths, per 10,000 per day (retrospective for 90 days)	0.07 (0.02-0.28)		Improved	0.06 (0.01-0.52)		Improved	0.06 (0.01-0.52)		Improved
Under five deaths, per 10,000 per day (retrospective for 90 days)	0.61 (0.20-1.89)		Improved	0		Improved	0		Improved
Morbidity									
Morbidity Boys Girls	70 39 31	13.59 (10.81-16.93) 14.83 (10.76-19.71) 12.30 (8.51-17.00)	Improved	134 74 60	19.62 (16.75-22.84) 20.79 (16.77-25.45) 18.35 (14.39-23.07)	Improved	151 72 79	26.8 (17.1-36.5) 25.3 (15.5-35.0) 28.4 (17.5-39.3)	Sustained
Diarrhoea Boys Girls	24 14 10	4.66 (3.07-6.95) 5.32 (2.94-8.77) 3.97 (3.07-6.95)	Improved	63 36 27	9.22 (7.21-11.71) 10.11 (7.27-13.84) 8.26 (5.61-11.92)	Improved	91 46 45	16.2((9.1-23.2 16.1(8.6-23.7) 16.2(8.6-23.8)	Deteriorated
Pneumonia Boys Girls	22 14 8	4.27 (2.76-6.50) 5.32 (2.94-8.77) 3.17 (1.38-6.16)	Improved	19 9 10	2.78 (1.73-4.39) 2.53 (1.24-4.91) 3.06 (1.56-5.73)	Improved	87 45 42	15.5(9.3-21.6) 15.8(8.4-23.2) 15.1(8.4-21.8)	Deteriorated
Fever Boys Girls	12 7 5	2.33 (1.27-4.15) 2.66 (1.08-5.41) 1.98 (0.65-4.57)	Improved	65 34 31	9.52 (7.47-12.03) 9.55 (6.80-13.21) 9.48 (6.63-13.32)	Improved	61 33 28	10.8 (3.4-18.2) 11.6(4.5-18.6) 10.1(1.6-18.5)	Improved
Measles Boys Girls	25 12 13	4.85 (3.23-3.23) 4.56 (2.38-7.83) 5.16 (2.78-8.66)	Improved	27 15 12	3.95 (2.67-5.78) 4.21 (2.46-7.01) 3.67 (2.00-6.49)	Deteriorated	485 245 240	88.7(78.3-99.0) 87.5(76.1-98.9) 89.9(80.5-99.2	Deteriorated
Vitamin A Supplementation Boys Girls	416 207 209	80.78 (77.05-84.04) 78.71 (73.26-83.50) 82.94 (77.71-87.37)	Sustained	578 305 273	84.63 (81.65-87.21) 85.67 (81.50-89.06) 83.49 (78.91-87.25)	Sustained	439 225 214	80.7(69.1-92.3) 80.9(68.8-93.0) 80.5(68.2-92.7)	Sustained
Measles Vaccination Boys Girls	411 205 206	79.81 (76.02-83.14) 77.95 (72.44-82.81) 81.75 (76.41-86.31)	Sustained	566 298 268	82.87 (79.78-85.58) 83.71 (79.36-87.31) 81.96 (77.26-85.88)	Improved	523 264 259	92.9(89.5-96.3) 92.6(88.2-97.1) 93.2(89.3-97.0)	Sustained
Polio Immunization Boys Girls	489 252 237	94.95 (92.59-96.61) 95.82 (92.64-97.89) 94.05 (90.37-96.63)	Sustained	634 332 302	92.83 (90.56-94.59) 93.26 (90.00-95.54) 92.35 (88.78-94.89)	Improved	109 49 60	50.2(40.7-59.7) 49.5(35.9-63.1) 50.8(41.5-60.2)	Sustained
Infant and Young Child Feeding (6-24 Months)	N = 188			N=255			N= 218		
Proportion still breastfeeding Boys Girls	94 48 46	50.00 (42.64-57.36) 52.75 (42.00-63.31) 47.42 (37.19-57.82)	Sustained	96 47 49	37.65 (31.68-43.91) 38.52 (29.86-47.76) 36.84 (28.65-45.64)	Deteriorated	109 49 60	50.2(40.7-59.7) 49.5(35.9-63.1) 50.8(41.5-60.2)	Sustained
Continued breastfeeding up to 12 months Boys Girls	N=26 13 8 5	50.00 (29.93-70.07) 57.14 (28.86-82.34) 41.67 (15.17-72.33)	Sustained	N=60 32 14 18	53.33 (40.00-66.33) 56.00 (34.93-75.60) 51.43 (33.99-68.62)	Improved	N= 27	12.4(6.3-18.6)	Sustained
Continued breastfeeding up to 24 months Boys Girls	N= 14 0	0	Deteriorated	N=40 1 0 1	2.50 (0.06-13.16) 0 4.00 (0.10-20.35)	Deteriorated	N= 5	2.3(0.0-4.7)	Deteriorated

Proportion meeting recommended feeding frequencies Boys Girls	83 35 48	44.15 (36.93-51.56) 38.46 (28.45-46.25) 49.48 (39.17-59.83)	Improved	200 95 105	78.74 (73.19-83.61) 77.87 (69.46-84.88) 79.55 (71.65-86.07)	Improved	77 35 42	35.5(23.3-47.7) 35.4(22.0-48.7) 35.6(21.9-49.3)	Improved
Proportion who reported to have consumed ≥4 food groups Boys Girls	3 1 2	1.60 (0.33-4.59) 1.10 (0.03-5.97) 2.06 (0.25-7.25)	Deteriorated	0	0	Deteriorated	0 0 0	0.0 (0.0-0.00) 0.0(0.0-0.0) 0.0(0.0-0.0)	Deteriorated
Women Nutrition and Immunization Status	N = 112			N= 153			N=288		
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	3	2.68 (0.56-7.63)	Improved	4	2.61 (0.72-6.56)	Improved	1	0.3(0.0-1.0)	Improved
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	10	9.09 (4.45-16.08)		16	10.46 (6.10-16.43)		3	1.0(0.0-2.6)	
Proportion of Women who received Tetanus immunization No dose One dose Two doses Three doses	7 14 31 60	6.25 (2.55-12.45) 12.5 (7.01-20.08) 27.68 (19.64-36.93) 53.57 (43.90-63.05)	Sustained	12 32 65 44	7.84 (4.12-13.30) 20.92 (14.77-28.22) 42.48 (34.54-50.72) 28.76 (21.74-36.62)	Improved	47 35 96 110	16.3(9.3-23.4) 12.2(6.1-18.2) 33.3(25.5-41.2) 38.2(25.5-50.9)	Sustained
Public Health Indicators	N=284			N =385			N= 563		
Household with access to sanitation facilities	85	29.93 (24.66-35.62)	Sustained	284	73.77 (69.02-78.03)	Improved	260	46.2(33.0-59.4)	Sustained
Household with access to safe water	47	16.55 (12.42-21.39)		61	15.84 (12.42-19.97)	Sustained	26	4.6(0.0-11.3)	
Proportion who reported to have consumed <4 food groups	0	0	Deteriorated	0	0	Sustained	6	1.1(0.0-2.4)	Deteriorated
Household's Main Food Source- Purchase	253	89.08 (84.87-92.46)	Improved	375	97.40 (95.12-98.67)	Sustained	509	90.4(84.3-90.6)	Improved
Mean CSI	7.1								
OVERALL NUTRITION SITUATION	Alert			Serious			Alert		

Table 12: Summary of Key Nutrition Findings in Awdal, Galbeed and Togdheer Urban Livelihoods - Gu 2014

	Awdal Region Urban		Woqooyi Galbeed Region Urban		Togdheer Region Urban	
	Clusters : 25 N= 531 (Boys= 267; Girls= 264)		Clusters :25 N= 347 (Boys=177;Girls=170)		Clusters:25 N=495:Boys=;249Girls=246)	
Indicator	n	percent (CI)	n	percent (CI)	n	percent (CI)
Child Nutrition Status						
Global Acute Malnutrition (WHZ<-2 or oedema)	35	6.6 (4.3-10.1)	30	8.6 (5.7-12.9)	40	8.1 (5.9-10.9)
Boys	16	6.0 (3.9- 9.2)	14	7.9 (4.2-14.4)	19	7.6 (5.0-11.5)
Girls	19	7.2 (3.8-13.2)	16	9.4 (5.6-15.3)	21	8.5 (5.8-12.5)
Severe Acute Malnutrition (WHZ<-3 or oedema)	4	0.8 (0.3- 2.0)	7	2.0 (0.8-5.0)	7	1.4 (0.6- 3.1)
Boys	3	1.1 (0.4- 3.5)	2	1.1 (0.3-4.7)	2	0.8 (0.2- 3.3)
Girls	1	0.4 (0.0- 2.9)	5	2.9 (1.0-8.3)	5	2.0 (0.9- 4.7)
Mean of Weight for Height Z Scores	-0.27±1.13		Mean ± SD = -0.44±1.16		-0.58±1.00	
Oedema	0		N=0	0.0percent	1	0.2
Proportion with MUAC<12.5 cm or oedema)	19	3.5 (2.0- 6.2)	4	1.1 (0.3-3.9)	17	3.4 (2.1- 5.6)
Boys	8	3.0 (1.3- 6.5)	2	1.1 (0.3-4.4)	6	2.4 (1.1- 5.0)
Girls	11	4.1 (2.0- 8.0)	2	1.2 (0.3-5.1)	11	4.5 (2.4- 8.3)
Proportion with MUAC<11.5 cm or oedema	6	1.1 (0.4- 3.0)	1	0.3 (0.0-2.2)	7	1.4 (0.7- 2.8)
Boys	3	1.1 (0.3- 3.5)	0	0.0 (0.0-0.0)	4	1.6 (0.6- 4.2)
Girls	3	1.1 (0.4- 3.3)	1	0.6 (0.1-4.6)	3	1.2 (0.4- 3.8)
Stunting (HAZ<-2)	75	14.4 (11.1-18.5)	6	1.7 (0.4-7.0)	17	3.4 (1.6- 7.0)
Boys	41	15.6 (11.7-20.7)	5	2.8 (0.7-10.6)	9	3.6 (1.6- 8.0)
Girls	34	13.1 (8.4-19.7)	1	0.6 (0.1-4.5)	8	3.3 (1.4- 7.7)
Severe Stunting (HAZ<-3)	10	1.9 (1.0- 3.5)	1	0.3 (0.0-2.2)	3	0.6 (0.2- 1.9)
Boys	3	1.1 (0.4- 3.4)	1	0.6 (0.1-4.4)	3	1.2 (0.4- 3.8)
Girls	7	2.7 (1.3- 5.5)	0	0.0 (0.0-0.0)	0	0.0 (0.0- 0.0)
Underweight (WAZ<-2)	48	9.0 (5.8-13.8)	15	4.3 (2.4-7.4)	24	4.8 (2.8- 8.3)
Boys	21	7.8 (4.6-12.9)	10	5.5 (2.7-10.9)	12	4.8 (2.3- 9.6)
Girls	27	10.3 (5.9-17.4)	5	2.9 (0.9-9.4)	12	4.9 (2.7- 8.6)
Morbidity	N = 542					
Morbidity	36	6.64 (4.76- 9.16)	12	3.4 (1.64-5.07)	19	3.8 (1.2-6.4)
Boys	20	7.35(4.55- 11.13)	6	3.26 (0.61-5.91)	13	5.2 (1.0-9.3)
Girls	16	5.93 (3.42- 9.45)	6	3.45 (0.8-6.11)	6	2.4 (0.0-5.0)
Diarrhoea	27	4.98 (3.37- 7.26)	9	2.17 (-0.35-4.7)	12	2.4 (0.8-4.0)
Boys	16	5.88 (3.40- 9.38)	4	2.89 (0.48-5.3)	7	2.8 (0.0-5.5)
Girls	11	4.07 (2.05-7.17)	5	2.52 (0.75-4.29)	5	2.0 (0.0-4.2)
Pneumonia	4	0.74 (0.24-2.01)	0	0.0(0.0-0.0)	7	1.4 (0.0-2.8)
Boys	1	0.37 (0.01-2.03)	0	0.0(0.0-0.0)	6	2.4 (0.0-1.9)
Girls	3	1.11 (0.23-3.21)	0	0.0(0.0-0.0)	1	0.4 (0.0-1.0)
Fever	1	0.18 (0.01-1.19)	2	0.56 (-0.22-1.34)	1	0.2 (0.0-0.6)
Boys	1	0.37 (0.01-2.03)	1	0.54 (-0.58-1.66)	1	0.4 (0.0-1.2)
Girls	0	0	1	0.58 (-0.57-1.73)	0	0.0 (0.0-0.0)
Measles	4	0.74 (0.24-2.01)	2	0.56 (-0.22-1.34)	41	0.6 (0.0-1.5)
Boys	2	0.74 (0.09-2.63)	1	0.54 (-0.54-1.63)	22	0.8 (0.0-1.9)
Girls	2	0.74 (0.09-2.65)	1	0.58 (-0.65 -1.8)	19	0.4 (0.0-1.0)
Public Health Indicators	N=533		N=			
Proportion who reported to have consumed <4 food groups	8	1.50 (0.70-3.06)	12	2.67(-1.43-6.77)	258	65.9(63.6-68.12)
Mean CSI	21.8		22.84		21.23	
OVERALL NUTRITION SITUATION	Alert		Alert		Alert	

Table 13: Summary of Key Nutrition Findings in Sool and Sanaag Urban Livelihoods - Gu 2014

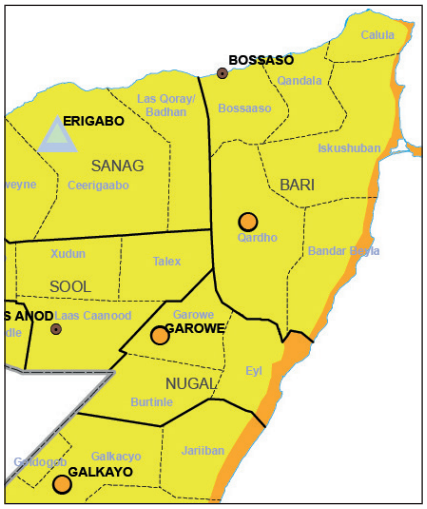
	Sool Region Urban		Sanaag Region Urban	
	Clusters :25 (N=564: Boys=280; Girls=284)		Clusters :25 N=506 (Boys= 236; Girls= 270)	
Indicator	n	percent (CI)	n	percent (CI)
Child Nutrition Status				
Global Acute Malnutrition (WHZ<-2 or oedema)	64	11.3 (8.0-15.8)	28	5.5 (3.6- 8.4)
Boys	37	13.2 (10.3-16.8)	11	4.7 (2.5- 8.5)
Girls	27	9.5 (5.0-17.3)	17	6.3 (3.7-10.)
Severe Acute Malnutrition (WHZ<-3 or oedema)	6	1.1 (0.5-2.1)	2	0.4 (0.1- 1.6)
Boys	5	1.8 (0.8-3.9)	0	0.0 (0.0- 0.0)
Girls	1	0.4 (0.0-2.7)	2	0.7 (0.2- 3.1)
Mean of Weight for Height Z Scores	Mean ± SD : -0.46±1.19		-0.41±1.11	
Oedema	N=0	0.0percent	0	
Proportion with MUAC<12.5 cm or oedema)	17	2.9(1.6-5.2)	22	4.3 (2.6- 7.0)
Boys	9	3.0(1.5-6.1)	6	2.5 (1.0- 6.4)
Girls	8	2.7(1.1-6.6)	16	5.8 (3.1-10.5)
Proportion with MUAC<11.5 cm or oedema	1	0.2(0.0-1.3)	4	0.8 (0.3- 1.9)
Boys	1	0.3(0.0-2.6)	1	0.4 (0.1- 3.0)
Girls	0	0.0(0.0-0.0)	3	1.1 (0.3- 3.3)
Stunting (HAZ<-2)	12	2.1(1.0-4.4)	28	5.5 (3.8- 8.0)
Boys	10	3.4(1.6-7.0)	13	5.5 (2.7-11.1)
Girls	2	0.7(0.1-5.2)	15	5.6 (3.5- 8.8)
Severe Stunting (HAZ<-3)	1	0.2(0.0-1.3)	5	1.0 (0.4- 2.3)
Boys	1	0.3(0.0-2.6)	2	0.9 (0.2- 3.5)
Girls	0	0.0(0.0-0.0)	3	1.1 (0.3- 3.5)
Underweight (WAZ<-2)	29	5.0 (2.8-8.7)	20	3.9 (2.5- 6.1)
Boys	16	5.5 (3.4-8.8)	7	2.9 (1.2- 6.8)
Girls	13	4.5 (1.9-10.4)	13	4.7 (2.8- 7.9)
Morbidity				
Morbidity	70	11.82(7.34-16.30)	51	10.08 (7.66-13.12)
Boys	42	14.05(9.33-18.86)	27	11.25 (7.55-15.94)
Girls	28	9.524(4.40-14.65)	24	9.13 (5.93-13.27)
Diarrhoea	70	11.97(7.42-16.51)	31	6.13 (4.27-8.68)
Boys	42	14.29(9.41-19.16)	16	6.67 (3.86-10.60)
Girls	28	9.62(4.45-14.79)	15	5.70 (3.23-9.23)
Pneumonia	7	1.20 (0.20-2.2)	19	3.75 (2.34-5.91)
Boys	4	1.02 (-0.184-2.22)	11	4.58 (2.31-8.05)
Girls	3	1.38(0.037-2.731)	8	3.04 (1.32-5.91)
Fever	10	1.72(0.7-2.73)		
Boys	6	2.05(0.57-3.53)	0	0
Girls	4	1.38(0.035-2.724)		
Measles	5	0.86(-.041-1.76)	1	0.20 (0.01-1.27)
Boys	3	1.02(-0.54-2.59)	0	0
Girls	2	0.69(-0.313-1.69)	1	0.38 (0.01-2.10)
Public Health Indicators				N = 554
Proportion who reported to have consumed <4 food groups			0	0
Mean CSI	14.64		25.0	
OVERALL NUTRITION SITUATION	Serious		Alert	

4.2 NORTHEAST REGIONS

FSNAU conducted 13 nutrition surveys (4 IDPs, 3 urban areas and 6 Rural livelihoods) in North East region of Somalia and assessed nutrition status of 8712 children aged 6-59 months old (4471 boys and 4241 girls) from 5943 households. Comprehensive assessments (nutrition and food security) were conducted in all IDPs, urban centres and Livelihoods using SMART methodology.

In the post-Gu 2014, the food security situation has slightly improved in pastoral livelihoods since post-Deyr 2013/14. In July 2014, most livelihoods of the region were classified as Stressed (IPC Phase 2) with the exception of the Coastal Deeh classified in Crisis (IPC Phase 3). In the most likely scenario, the area classification remains the same in most livelihoods during August-December 2014 with the exception of parts of the Coastal Deeh which are expected to improve from Crisis (IPC Phase 3) to Stressed (IPC Northeast Region Livelihood Systems

Map 9: Food Security Situation in Northeast Regions - Gu 2014



Urban areas of Northeast regions were classified in Stressed (IPC Phase 2) in the Post Gu 2014 (July) period. The projection for August-December 2014 remains the same. Internally Displaced Persons (IDPs) in Northeast region (Bossaso, Qardho, Garowe and Galkayo) were in Crisis (IPC Phase 3) in the Post Gu 2014 (July) period and are projected to remain in Crisis (IPC Phase 3) during August-December 2014.

For further details on analysis of the food security situation in Northeast region, please see sections 4.1, 4.2 and 4.3.7 of the Food Security and Nutrition Analysis Post Gu 2014 Technical Series Report No VII. 56 at www.fsnau.org

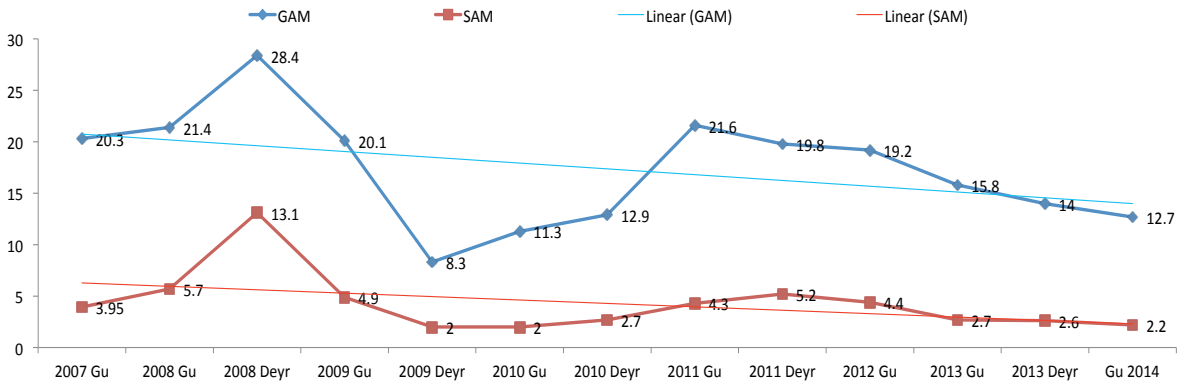
GU 2014 SURVEY RESULTS

The results of nutrition assessments done in North East Somalia are summarized in Tables 15-20. Key highlights are discussed below:

Acute Malnutrition

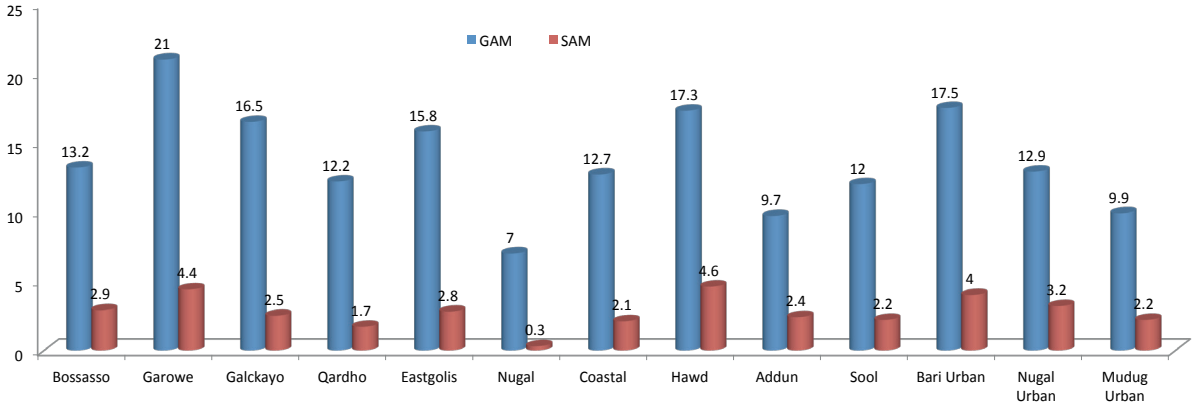
Based on the ten WHZ comprehensive assessments conducted in Northeast regions, a median GAM rate of 12.7 percent and SAM rate of 2.2 percent was observed. This is slightly lower than the median GAM rate of 14.0 percent and the SAM rate of 2.6 percent observed in *Deyr* 2013/14. Malnutrition trends shown in Figure 27 suggest improvement in nutrition situation in NE region. Both GAM and SAM show a declining trend over time. No significant gender differences were noted in the prevalence of acute malnutrition between boys and girls.

Figure 27: Trends in Acute Malnutrition in Northeast Region of Somalia



Levels of Acute malnutrition from the 13 assessed population groups (4 IDPs, 3 urban areas and 6 rural livelihoods) in Northeast regions show range from ***Alert*** in Nugal valley and Addun to ***Serious*** in Sool plateau and Coastal Deeh and ***Critical*** in Hawd and East Golis/Karkaar livelihoods. IDPs in Garowe and Galkacyo show a sustained ***Critical*** nutrition situation, while a sustained ***Serious*** phase was recorded among Bosaso IDPs. Improvement in nutrition situation from ***Critical*** to ***Serious*** was noted among Qardho IDPs.

Figure 28: Prevalence of Acute Malnutrition in Northeast Region - Gu 2014



The change in prevalence of acute malnutrition situation in *Gu* 2014 as shown in figure 28 is compared to the situation in Gu 2013 as well as *Deyr* 2013/14 is discussed below:

- **Bosaso IDP** settlements recorded a GAM rate of 13.2 percent and SAM rate of 2.9 percent indicating a **Serious** nutrition situation and sustained phase when compared with GAM rate of 13.5 percent recorded in *Deyr* 2013/14. This is an improvement from GAM rate of 17.3 percent recorded in *Gu* 2013.The improvement is linked to the continued improvement of the humanitarian support in these settlements.

- **Qardho IDPs** settlements recorded a GAM rate of 12.2 percent and SAM rate of 1.7 percent indicating ***Serious*** nutrition situation and showing improvement compared to the ***critical*** nutrition situation reported in Deyr 2013/14 (18.5% of GAM and SAM rate of 4.9%) but a stable situation when compared with GAM rate of 14.9 percent recorded in *Gu* 2013.

- **Garowe IDPs** settlement recorded a GAM rate of 21.0 percent and SAM rate of 4.4 percent indicating a ***Critical*** nutrition situation. This reflects a stable situation when compared to GAM rate of 15.8 percent and SAM rate of 4.1 percent recorded in Deyr 2013/14 and GAM rate of 19.2 percent which was seen in Gu'2013.

- **Galkacyo IDPs** settlement recorded a GAM rate of 16.5 percent and SAM rate of 2.5 percent showing a ***Critical*** nutrition situation reflecting a stable situation when compared with GAM rate of 15.0 percent and SAM rate of 2.9 percent recorded in Deyr 2013/14 and 18.4 GAM rate recorded in Gu'2013.

- **Sool plateau** livelihood recorded a GAM rate of 12.0 percent and SAM rate of 2.2 percent indicating ***Serious*** nutrition situation and deterioration when compared to the ***Alert*** level with GAM rate of 8.6 percent and SAM rate of 0.5 percent recorded in Deyr 2013/14, but stable situation when compared with GAM rate of 10.8 percent recorded in Gu'2013.

- **Nugal Valley** pastoral livelihood recorded a GAM rate of 7.9 percent and SAM rate of 0.3 indicating ***Alert*** nutrition status and improved nutrition situation when compared with the GAM rate of 14.5 percent and SAM rate of 2.3 percent recorded in Deyr 2013/14 and GAM rate of 11.3 recorded in *Gu* 2013.

- **Addun** livelihood recorded a GAM rate of 9.7 and SAM rate of 2.4 which is indicating an ***Alert*** nutrition situation and stable when compared to the GAM rate of 8.9 percent and SAM rate of 1.6 recorded in Deyr 2013/14 and the GAM rate of 8.0 percent reported in *Gu* 2013.

- **Coastal Deeh** pastoral livelihood recorded a GAM rate of 12.7 percent and SAM rate of 2.1 indicating a ***Serious*** nutrition situation which reflect a stable nutrition situation when compared to the GAM rate of 11.8 percent and SAM rate of 1.2 percent recorded in Deyr 2013/14 and the GAM rate of 10.8 in *Gu* 2013.

- **East Golis** livelihood recorded a GAM rate of 15.8 percent and SAM rate of 2.8 Percent which is ***Critical*** nutrition situation and indicating deteriorating situation when compared to the GAM of 10.5 percent and SAM rate of 1.2 percent recorded in Deyr 2013/14 but stable situation when compared to the GAM of 16.7 percent reported in Gu 2013. The major factors that worsened the nutrition status may include seasonality issues, low milk availability and water crisis due to below normal Gu 2014 rainfall and it was noted that only 25.9 percent of the households in East Golis/Karkaar have access to safe water.

- **Hawd** pastoral livelihood recorded a GAM rate of 17.3 percent and SAM of 4.6 which is ***Critical*** nutrition situation and indicates deterioration nutrition status when compared to the GAM rate of 13.2 percent and SAM rate of 2.4 percent recorded in Deyr 2013/14 and GAM of 10.6 percent recorded in *Gu* 2013 . Morbidity was high (33.5%) and there were also measles outbreak in Hawd livelihood zone which could be one of the major causes of deteriorated nutrition status.

MORTALITY

The 90 day retrospective Crude and under five death rates in the 10 assessed IDPs and livelihood population groups in Northeast regions are within the **Acceptable** levels of <0.5 and <1/10,000/day. This reflect a stable mortality levels since *Deyr 2013/14* (Annex 6.6).

MORBIDITY

High morbidity levels were noted among most of the IDPs settlements and rural livelihoods. The IDP settlements of Garowe, Galkacyo and Qardho IDPs have reported >30 percent morbidity level while Bosaso IDPs have reported 22.0 percent. Hawd and Addun livelihoods have also reported >30 percent morbidity level but the other rural livelihoods have reported morbidity level of about 20 percent. Highest morbidity level was recorded in Qardho IDPs where one in each two children reported sick in two weeks prior to the assessment. However, most of the assessments showed same trend of morbidity compared to previous months but cases of the measles are higher compared to previous results, where an outbreak of measles was reported in first and second quarter of this year 2014.

CHRONIC MALNUTRITION-STUNTING UNDERWEIGHT

Low prevalence levels of stunting were seen in all assessed pastoral livelihood populations as well as Galkacyo and Qardho IDPs. However among Garowe and Bosaso IDPs medium prevalence of stunting (>20%) was recorded. Low prevalence of underweight level (<10%) was recorded in most of the livelihoods, except Addun and East Golis/Karkaar and Qardho and Galkacyo IDPs where moderate prevalence of underweight was noted (10 – 20%). High prevalence of underweight was seen in IDPs in Bosaso and Garowe (20 – 30%) (Table 15).

Table 15: Stunting, Underweight and Mortality rates in different Livelihoods in Northeast region

Livelihood	Stunting	Underweight
Hawd Central	11	8.9
Addun Central	7.2	16.6
EGolis (NE)	9.0	13.2
Nugal Valley	3.1	3.9
Sool plateau	3.6	6.3
Coastal Deeh NE	6.5	8.5
Bossaso IDPs	25.8	22.6
Garowe IDPs	22.3	25.6
Galkayo IDP's	15.3	17.8
Qardho IDPs	16.5	18.7

IMMUNIZATION

The reported Vitamin A supplementation, measles vaccination and Polio immunization by recall in all the IDPs except Qardho were >80 percent Qardho IDPs show <60 percent coverage with both Vitamin A Supplementation and measles vaccination, The pastoral livelihoods show different results, where Coastal Deeh, Nugal valley and Sool plateau have recorded >80 percent coverage but lower coverage was noted among East Golis/Karkaar, Addun and Hawd livelihoods. None of the livelihoods/IDPs level, show coverage of 95 percent recommended by SPHERE.

MATERNAL MALNUTRITION

The levels of maternal malnutrition among the pregnant and lactating women in Hawd have shown ***Very Critical*** level 32.0 percent while East Golis, Addun and Qardho IDPs recorded ***Critical*** level (23.4 – 31.4%). **Serious** level of maternal malnutrition (20.6%) were observed among Galkacyo IDPs and alert level (10.6 – 16.7 %) in Bosaso IDPs, Garowe IDPs, Sool plateau, Nugal valley and Coastal Deeh.

DIETARY DIVERSIFICATION

Household dietary diversity measured as proportion of households consuming more than four food groups is high. There is no significant change in household dietary diversity between *Deyr* and *Gu* seasons, however milk access and consumption shows deterioration in some livelihoods compared to the previous *Deyr* 2013/14 season, due to below normal Gu rainfall. This could be one of the aggravating factors responsible for the increased malnutrition rates seen in some livelihoods: Hawd, East Golis/Karkaar and Sool plateau..

Infant and young child feeding in terms of continued breastfeeding for up to one year and 24 months, child dietary diversity and frequency of complementary feeding remain sub-optimal in all the assessed population groups. Majority of the assessed children were not breastfed for up to the recommended 24 months; dietary diversity was poor where <10 percent were reportedly consuming food from four or more food groups in all assessments.

Change in nutrition situation

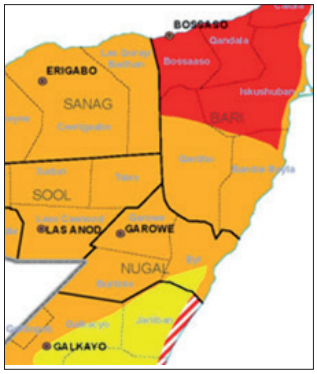
The maps below show the change in nutrition situation from *Gu* 2013 to *Gu* 2014 (Figure 29). The nutrition situation among the urban, IDPs and Rural livelihoods in Northeast regions has ranged between ***Alert*** to ***Critical*** levels for the last twelve months (*Gu* 2013 to *Gu* 2013). Access to milk among the predominant pastoral communities and morbidity patterns appear to be the underlying factors influencing the nutrition situation. The deterioration recorded in Hawd, East Golis/Karkaar and Sool Plateau livelihoods is attributable to decreased household milk access, and high morbidity.

CURRENT HOT SPOT FOR ACUTE MALNUTRITION IN NORTHEAST SOMALIA

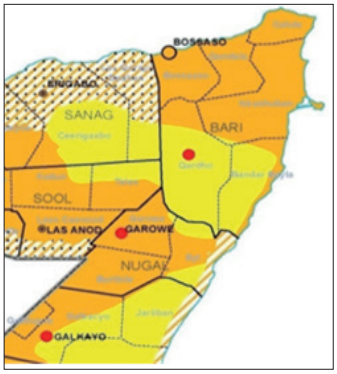
Garowe IDPs, Galkacyo IDPs, Bari urban, East Golis/Karkaar and Hawd livelihoods have reported >15% of Global Acute Malnutrition so they are current hot spots in Puntland requiring immediate interventions to both treat the acutely malnourished children and prevent further deterioration of the nutrition situation.

Figure 29: Progression of the Nutrition Situation *Gu* 2013 to *Gu* 2014 in Northeast

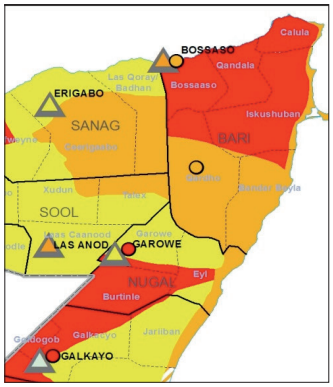
Nutrition Situation, Jul 2013



Nutrition Situation, Jan 2014



Nutrition Situation, Jul 2014



OUTLOOK FOR AUG- OCT 2014

Sustained: The pastoral livelihoods of East Golis, Sool plateau, Coastal Deeh and Addun, as well as the three IDP settlements of Garowe Galkacyo and Qardho are expected to remain in the same phase as current during the coming three months and neither improvement nor deterioration is projected.

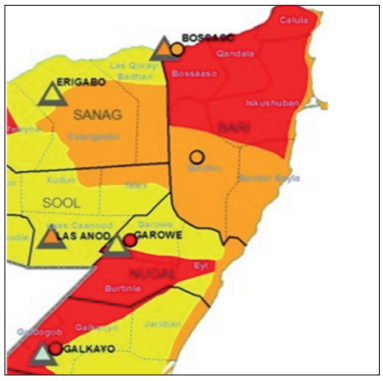
Deterioration: Bosaso IDPs will likely deteriorate from **Serious** to **Critical** during the coming three months due to decrease of labour opportunities and very high temperature during the Hagaa seasan while Nugal valley pastoral livelihood is also expected to deteriorate considering the historical trend and higher HIS level.

Improve: Hawd livelihood is expected to improve basing on the historical analysis and HIS trends.

Figure 30 shows current and projected nutrition situation across livelihoods in Puntland. The current Stressed food security situation in most livelihoods of Northeast regions is similarly projected to remain stable up to October 2014.

Figure 30: Nutrition Situation Outlook July 2014 to October 2014 in Northeast

Current Nutrition Situation - Jul 2014



Projected Nutrition Situation - Aug-Oct 2014

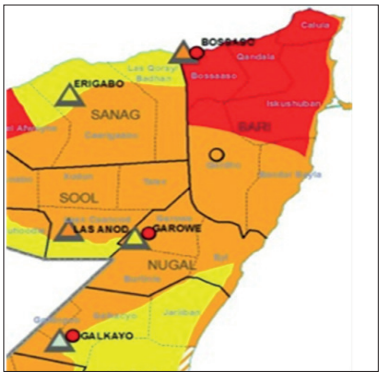


Table 16: Summary of Key Nutrition Findings in Northeast IDPs - Gu 2014

Livelihood/Indicator Indicator	Garowe IDPs Clusters :27 (N=: 859 Boys=; 437 Girls= 422)		Galkacyo IDPs Clusters : 28 (N= 849: Boys= 432; Girls= 417)		Bosaso IDPs Clusters : 28 (N=764: Boys=374; Girls=390)	
	Percent (CI)	Change from Deyr 2013	Percent (CI)	Change from Deyr 2013	Percent (CI)	Change from Deyr 2013
Child Nutrition Status						
Global Acute Malnutrition (WHZ<-2 or oedema)	21.0 (17.4 – 25.0)	Sustained	16.5 (13.4 –20.1)	Sustained	13.2 (10.3-16.8)	sustained
Boys	23.1 (19.0 – 27.8)		17.6 (13.7 – 22.4)		14.7 (10.3-20.5)	
Girls	18.7 (14.6 – 23.7)		15.3 (12.4 – 18.9)		11.8 (9.1-15.2)	
Severe Acute Malnutrition (WHZ<-3 or oedema)	4.4 (3.0 – 6.6)	Deteriorated	2.5 (1.5 – 4.1)	sustained	2.9 (1.7- 4.8)	Sustained
Boys	4.3 (2.9 – 6.9)		2.5 (1.3 – 4.8)		4.0 (2.1- 7.4)	
Girls	4.5 (2.7 – 7.4)		2.4 (1.2 – 4.7)		1.8 (0.8- 3.8)	
Mean of Weight for Height Z Scores	1.09±1.09	deteriorated	0.99±1.04	sustained	-0.90 ± 1.01	deteriorated
Oedema	0.1		0.0		0.0%	
Proportion with MUAC<12.5 cm or oedema)	8.3 (6.3 – 10.5)	Deteriorated	2.1 (1.1 – 3.7)	Improved	6.6 (4.5- 9.5)	Improved
Boys	5.1 (3.6 – 7.2)		1.4 (0.5 – 3.4)		6.3 (3.7-10.6)	
Girls	11.6 (68.7 – 15.3)		2.9 (1.4 – 5.7)		6.8 (4.6- 9.9)	
Proportion with MUAC<11.5 cm or oedema	1.5 (0.8 – 2.5)	Improved	0.2 (0.1 – 1.0)	Improved	1.0 (0.4- 2.4)	Improved
Boys	0.4 (0.1 -1.7)		0.2 (0.0 – 1.8)		1.1 (0.4- 2.7)	
Girls	2.6 (1.4 – 4.7)		0.2 (0.0 – 1.9)		1.0 (0.3- 3.2)	
Stunting (HAZ<-2)	22.3 (18.8 – 26.1)	Sustained	15.3 (10.9 – 21.2)	Improved	25.8 (21.2-31.1)	Sustained
Boys	24.5 (20.0 -29.8)		19.5 (14.2 – 26.2)		28.8 (22.6-35.9)	
Girls	20.0 (16.2 – 24.3)		11.1 (6.6 – 18.0)		22.9 (17.9-28.9)	
Severe Stunting (HAZ<-3)	4.9 (3.9 – 6.3)		4.6 (2.7 – 7.7)		6.9 (4.9- 9.7)	
Boys	5.6 (4.1 – 7.6)		6.1 (14.4 – 25.2)		8.3 (5.6-11.9)	
Girls	4.3 (2.6 – 6.9)		3.1 (1.7 – 5.9)		5.7 (3.5- 9.2)	
Underweight (WAZ<-2)	25.6 (22.1 – 29.4)	sustained	17.8 (13.3 – 23.4)	Improved	22.6 (19.6-26.0)	Sustained
Boys	28.6 (24.1 – 33.5)		19.2 (14.4 – 25.2))		25.5 (20.4-31.5)	
Girls	22.4 (18.9 – 26.4)		16.3 (11.4 – 22.8)		19.8 (16.6-23.5)	

Death Rates						
Crude deaths, per 10,000 per day (retrospective for 90 days)	0.10 (0.03 – 0.32)	Sustained	0.09 (0.03 – 1.12)	Sustained	0.32 (0.17-0.62)	Sustained
Under five deaths, per 10,000 per day (retrospective for 90 days)	0.12 (0.02 – 0.88)	Sustained	0.36 (0.12 – 1.12)	Sustained	0.40 (0.13-1.22)	Sustained
Morbidity	32.8 (23.6 – 41.9)		29.8 (22.0 – 37.6)		22.8 (13.5-32.1)	
Boys	35.1 (25.2 – 45.1)	Improved	27.8 (19.7 – 35.9)	Improved	20.3 (11.0-29.5)	Improved
Girls	30.3 (20.6 – 39.9)		31.9 (22.9 – 41.0)		25.2 (14.3-36.1)	
Diarrhoea	12.3 (8.5 – 16.1)		5.4 (3.1 – 7.8)		6.4 (2.5-10.4)	
Boys	11.5 (7.8 – 15.1)	Improved	5.2 (2.3 – 8.1)	Improved	6.6 (2.5-10.7)	Improved
Girls	13.1 (8.5 – 17.8)		5.7 (3.2 – 8.2)		6.3 (1.2-11.4)	
Pneumonia	5.4 (3.0 – 7.8		6.2 (2.5 – 9.9)		14.8 (7.7-21.9)	
Boys	5.9 (3.5 – 8.4)	Sustained	6.6 (2.5 – 10.6)	Improved	12.9 (5.6-20.2)	Sustained
Girls	4.8 (1.8 – 7.8)		5.9 (2.1 – 9.7)		16.6 (8.6-24.6)	
Fever	24.7 (18.2 – 31.2)		24.5 (17.8 – 31.2)		12.2 (5.6-18.8)	
Boys	27.8 (19.6 – 36.0)	Improved	21.9 (15.4 – 28.4)	Improved	11.8 (4.9-18.8)	Improved
Girls	21.5 (14.7 – 28.2)		27.3 (19.0 – 35.7)		12.6 (4.6-20.6)	
Measles	7.7 (3.1 – 12.3)		9.1 (3.8 – 14.5)		1.8 (0.0-3.7)	
Boys	8.2 (3.2 – 13.1)	Deteriorated	9.3 (3.7 – 14.9)	Deteriorated	0.8 (0.0-2.0)	Deteriorated
Girls	7.1 (2.6 – 11.7)		9.0 (3.4 – 14.9)		2.8 (0.0-5.7)	
Vitamin A Supplementation	92.7 (89.1 – 96.4)		83.4 (73.9 – 92.9)		86.0 (79.9-92.1)	
Boys	93.3 (89.5 -97.1)	Improved	82.6 (72.2 – 93.1)	Deteriorated	86.8 (81.6-92.1)	Improved
Girls	92.1 (88.0 – 96.2)		84.2 (75.1 – 93.4)		85.1 (77.5-92.7)	
Measles Vaccination	89.6 (86.3 – 92.9)		89.9 (85.2 – 94.6)		79.2 (71.4-86.9)	
Boys	89.3 (85.3 -93.3)	improved	88.3 (82.9 – 93.8)	Sustained	78.4 (71.0-85.8)	Sustained
Girls	90.0 (86.6 – 93.4)		91.6 (86.9 – 96.3)		79.8 (70.6-89.1)	
Polio Immunization	97.8 (96.3 – 99.3)		96.7 (94.9 – 98.4)		98.5 (92.9-98.0)	
Boys	97.3 (95.1 -99.5)	Sustained	94.5 (91.2 – 97.7)	sustained	96.1 (93.6-98.5)	Sustained
Girls	98.3 (97.0 – 99.7)		99.0 (98.1 – 99.9)		95.0 (91.7-98.2)	
Infant and Young Child Feeding (6-24 Months)						
Proportion still breastfeeding	36.4 (31.6 – 41.2)		42.8 (34.7 – 51.0)		48.2 (41.3-55.2)	
Boys	36.6 (28.4 – 44.9)	Deteriorated	45.5 (36.6 – 54.4)	Sustained	50.0 (40.4-59.6)	Deteriorated
Girls	36.1 (30.7 – 41.5)		40.0 (28.3 – 51.6)		46.6 (36.7-56.6)	
Continued breastfeeding up to 12 months	44.3 (33.2 – 55.3)	Deteriorated	47.4 (34.0 – 60.8)	Improved	64.2 (50.4-77.9)	Improved
Continued breastfeeding up to 24 months	6.7 (0.5 – 12.9)	imporved	10.4 (1.1 – 19.7)	Deteriorated	13.8 (3.8-23.9)	Improved
Proportion meeting recommended feeding frequencies	48.2 (42.1 – 54.2)		87.8 (77.7 – 97.9)		71.6 (65.7-77.6)	
Boys	47.7 (38.7 – 56.7)	Sustained	88.8 (79.8 – 97.8)	Sustained	73.4 (65.5-81.4)	Deteriorated
Girls	48.6 (40.7 – 56.6)		86.7 (74.8 – 98.5)		70.1 (62.1-78.0)	
Proportion who reported to have consumed ≥4 food groups	1.1 (0 – 2.6)		3.8 (93.8 – 98.5)		3.0 (0.8-5.2)	
Boys	0.5 (0 – 1.7)	Sustained	4.0 (1.3 – 6.7)	Improved	2.6 (0.0-5.4)	Deteriorated
Girls	1.7 (0 – 4.4)		3.5 (0 – 7.1)		3.3 (0.9-5.6)	
Maternal Nutrition and Immunization Status						
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	3.8(0.9 – 6.8)		7.0 (3.6 – 10.5)		4.8 (2.2-7.3)	
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	15.5 (8.4 – 22.5)	Deteriorated	20.6 (12.3 – 28.9)	Improved	16.7 (11.9-21.6)	Improved

Proportion of Women who received Tetanus immunization						
No dose	12.5 (9.0 – 16.0)	Improved	11.7 (8.4 – 14.9)	Improved	10.3 (6.3-14.2)	Improved
One dose	9.5 (5.8 – 13.2)		9.1 (5.7 – 12.4)		6.6 (4.3-8.8)	
Two doses	20.2 (12.0 – 28.4)		29.9 (22.5 – 37.3)		18.1 (12.4-23.8)	
Three doses	57.6 (45.9 – 69.3)		49.2 (40.7 – 57.7)		65.1 (56.7-73.5)	
Public Health Indicators						
Household with access to sanitation facilities	99.3 (98.0 – 100.0)	Improved	98.6 (93.4 – 100.0)	Improved	47.1 (44.5-49.7)	Sustained
Household with access to safe water	100 (100-100)	Improved	100.0 (100 – 100)	Improved	42.4 (25.6-59.1)	Sustained
Proportion who reported to have consumed <4 food groups	99.0 (98.0 -100.0)	Improved	1.1 (0.0 – 2.5)	Improved	52.8 (50.4-55.2)	Sustained
Household's Main Food Source- Purchase	99.6 (99.0 – 100.0)	Improved	94.5 (90.2 – 98.8)	Improved	98.3 (95.5-101.0)	Improved
Mean CSI	21.4	Sustained	25.1	Sustained	29.4	Sustained
OVERALL NUTRITION SITUATION	Critical		Critical		Serious	

Table 17: Summary of Key Nutrition Findings in Northeast Rural Livelihoods - Gu 2014

Livelihood/Indicator Indicator	East Golis/Karkaar Pastoral Clusters: 30 (N= 741 :Boys= 365 ;Girls= 376)		Sool Pastoral Clusters : 33 (N=: 670 Boys=; 335 Girls= 335)		Nugaal Valley Clusters: 35 (N= 643 :Boys= 356 ;Girls= 287)	
	Percent (CI)	Change from Deyr 2013	Percent (CI)	Change from Deyr 2013	Percent (CI)	Change from Deyr 2013
Child Nutrition Status						
Global Acute Malnutrition (WHZ<-2 or oedema)	15.8 (12.9=19.2)		12.0 (9.6-15.1)		7.9 (5.5 – 11.3)	
Boys	15.9 (12.6-19.9)	Deteriorated	13.8 (9.8-19.2)	Deteriorated	9.6 (6.2 – 14.4)	Improved
Girls	15.7 (11.5-21.1)		10.1 (7.5-13.6)		5.9 (3.7 – 9.4)	
Severe Acute Malnutrition (WHZ<-3 or oedema)	2.8 (1.7-4.7)		2.2 (1.3- 3.7)		0.3 (0.1 – 1.3)	
Boys	3.0=1.5-5.9)	Sustained	2.8 (1.4- 5.5)	Deteriorated	0.6 (0.3 – 2.3)	Improved
Girls	2.7 (1.3-5.3)		1.5 (0.7- 3.5)		0 (0.0 -0.0)	
Mean of Weight for Height Z Scores	- 0.87±1.08	Deteriorated			-0.39±1.12	Improved
Oedema			0.3		0.0	
Proportion with MUAC<12.5 cm or oedema)	5.4 (3.8-7.5)		1.5% (0.8- 2.7)		2.0 (1.1 – 3.7)	
Boys		Deteriorated		sustained		sustained
Girls	3.8 (1.9-7.4)		1.4 (0.6- 3.3)		1.7 (0.7 – 4.1)	
	6.9 (4.8-9.7)		1.5 (0.6- 3.6)		2.4 (1.2 – 4.9)	
Proportion with MUAC<11.5 cm or oedema	0.8 (0.3-2.0)		0.3 (0.1- 1.2)		1.5 (0.1 – 1.4)	
Boys	0.5 (0.1-2.2)	Sustained	0.3 (0.0- 2.2)	Sustained	0.6(0.1 – 2.4)	Improved
Girls	1.1 (0.3-3.5)		0.3 (0.0- 2.3)		0.3 (0.0 – 2.7)	
Stunting (HAZ<-2)	9.0 9 (6.2-13.0)		3.6 (2.2- 5.7)		3.1 (1.7 – 5.5)	
Boys	12.4 (8.3-18.3)	Sustained	5.7 (3.7- 8.7)	Sustained	4.2 (2.3 – 7.6)	Sustained
Girls	5.6 (3.4-9.1)		1.2 (0.4- 4.1)		1.7 (0.6 – 4.8)	
Severe Stunting (HAZ<-3)	1.2 (0.6-2.5)		0.1 (0.0- 1.1)		0.5 (0.1 – 1.5)	
Boys	1.6 (0.7-4.0)	Sustained	0.3 (0.0- 2.1)	Improved	0.8 (0.3 – 2.6)	Improved
Girls	0.8 (0.2-3.5)		0		0 (0.0 – 0.0)	
Underweight (WAZ<-2)	13.2 (10.6-16.3)		6.3 (4.3- 9.2)		3.9 (1.7-8.5)	
Boys	15.8 (12.6-19.5)	Improved	9.3 (6.1-14.1)	Sustained	4.8 (2.0 – 11.2)	Sustained
Girls	10.7 (7.6-14.7)		3.1 (1.6- 5.8)		2.8 (1.1 – 6.6)	
Death Rates						
Crude deaths, per 10,000 per day (retrospective for 90 days)	0.24 (0.09-0.58)	Sustained	0.06 (0.01-0.52)	Sustained	0.15 (0.06 – 0.04)	Sustained
Under five deaths, per 10,000 per day (retrospective for 90 days)	0.14 (0.02-1.06)	Sustained	0.15 (0.02 –1.09)	sustained	0 (0.00 – 0.00)	Improved

Morbidity Boys Girls	19.0 (12.7-25.9) 20.5 (13.1-28.0) 17.5(10.0-24.9)	Improved	19.6(16.75-22.84) 20.7(16.77-25.45) 18.3(14.39-23.07)	Improved	18.3 (10.2 – 26.4) 19.0 (9.4 – 28.6) 17.5 (9.3 – 25.6)	Improved
Diarrhoea Boys Girls	4.1 (2.0-6.3) 4.6 (1.7-7.5) 3.7 (1.6-5.8)	Improved	9.22 (7.21-11.71) 10.11(7.27-13.84) 8.26 (5.61-11.92)	Improved	5.4 (2.5 – 8.2) 5.5 (1.5 – 9.5) 5.2 (2.1 – 8.4)	Improved
Pneumonia Boys Girls	9.2 (5.2-13.2) 9.7 (4.6-14.9) 8.7 (4.7-12.8)	Improved	2.78 (1.73-4.39) 2.53 (1.24-4.91) 3.06 (1.56-5.73)	Sustained	0.6 (0.0 – 1.3) 1.1 (0 – 2.5) 0 (0.0-.0)	Improved
Fever Boys Girls	15.0 (8.7-21.3) 15.4 (9.0-21.8) 14.5 (7.2-21.8)	Improved	9.52 (7.47-12.03) 9.55 (6.80-13.21) 9.48 (6.63-13.32)	Improved	14.2 (7.5 – 20.9) 13.7 (6.6 – 20.9) 14.7 (6.9 – 22.6)	Improved
Measles Boys Girls	1.5 (0.6-3.4) 2.2 (0.6-3.7) 0.8 (-0.1-1.7)	Sustained	3.95 (2.67-5.78) 4.21 (2.46-7.01) 3.67 (2.00-6.49)	Deteriorated	3.8 (0.3 – 7.2) 5.2 (0.3 – 10.0) 2.1 (0.0– 4.3)	Deteriorated
Vitamin A Supplementation Boys Girls	75.3 (64.8-85.7) 77.3 (66.8-87.6) 73.3 (62.2-84.3)	Improved	84.6(81.65-87.21) 85.6(81.50-89.06) 83.4(78.91-87.25)	Improved	85.0 (78.6 – 91.4) 84.3 (77.6 – 91.0) 85.9 (78.7 – 93.0)	Sustained
Measles Vaccination Boys Girls	74.9 (64.5-85,3) 75.9 (65.5-86.4) 73.9 (62.6-85.2)	Improved	82.8(79.78-85.58) 83.7(79.36-87.31) 81.9(77.26-85.88)	Improved	83.0 (77.9 – 88.2) 80.9 (74.3 – 87.5) 86.7(81.4 – 92.0)	Improved
Polio Immunization Boys Girls	82.5 (73.2 – 91.9) 84.2 (75.1 – 93.3) 80.9 (70.6 – 91.2)	Deteriorated	92.8(90.56-94.59) 93.2(90.00-95.54) 92.3(88.78-94.89)	Sustained	93.6 (90.8 – 96.4) 92.7 (89.0 – 96.4) 94.6 (91.2 – 98.0)	Improved
Infant and Young Child Feeding (6-24 Months)						
Proportion still breastfeeding Boys Girls	53.1(46.8 – 59.4) 50.7 (43.3-58.1) 55.2 (47.1 – 63.0)	Sustained	37.6(31.68-43.91) 38.5(29.86-47.76) 36.8(28.65-45.64)	Deteriorated	36.3 (28.1 – 44.5) 36.0 (24.8 – 47.1) 37.0 (26.8 – 47.1)	Deteriorated
Continued breastfeeding up to 12 months	67.0 (55.1 – 78.9)	Sustained	53.3(40.00-66.33)	Improved	29.7 (15.7 – 43.7)	Deteriorated
Continued breastfeeding up to 24 months	15.3 (4.8 – 25.9)		2.50 (0.06-13.16)	Deteriorated	2.0 (0 – 6.0)	Deteriorated
Proportion meeting recommended feeding frequencies Boys Girls	80.8 (71.6 – 90.0) 79.3 (68.4 – 90.1) 82.1 (72.4 – 91.8)	Deteriorated	78.7(73.19-83.61) 77.8(69.46-84.88) 79.5(71.65-86.07)	Sustained	75.6 (63.8 – 87.3) 77.8 (64.9– 90.8) 39.6 (57.2 – 89.2)	Improved
Proportion who reported to have consumed ≥4 food groups Boys Girls	2.0 (0 – 4.2) 1.8 (0 – 4.4) 2.2 (0 – 5.6)	Sustained	0	Deteriorated	98.1 (95.9 – 100) 97.7(95.1 – 100.0) 98.8 (96.4- 100)	Deteriorated
Maternal Nutrition and Immunization Status						
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	8.9 (4.2 – 13.6)	Improved	2.61 (0.72-6.56)	Improved	2.7 (0 – 5.2)	Improved
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	28.4 (19.4 – 37.4)	Improved	10.4(6.10-16.43)	sustained	12.2 (3.2-21.2)	Sustained

Proportion of Women who received Tetanus immunization No dose One dose Two doses Three doses	30.0 (18.2-14.7) 9.1 (4.45-13.7) 19 (13.7-24.3) 42 .0 (31.4-52.6)	Deteriorated	7.84 (4.12-13.30) 20.92 (14.77-28.22) 42.48 (34.54-50.72) 28.76 (21.74-36.62)	Deteriorated	19.5 (12.1-27.0) 16.8 (10.6-23.0) 53.3 (44.1-62.4) 10.2 (6.0 – 14.4)	Deteriorated
Public Health Indicators						
Household with access to sanitation facilities	78.3 (66.3-90.4)	Improved	73.7(69.02-78.0)	Improved	N/A	N/A
Household with access to safe water	25.9 (10.3-41,4)	Deteriorated	15.8(12.42-19.9)	improved	N/A	N/A
Proportion who reported to have consumed <4 food groups	99.1 (98.4 – 99.9)	Sustained	0	Sustained	N/A	N/A
Household's Main Food Source- Purchase	100 (100 – 100)	Sustained	97.4(95.12-98.6)	Sustained	N/A	N/A
Mean CSI					N/A	N/A
OVERALL NUTRITION SITUATION	Critical		Serious		Alert	

Table 18: Summary of Key Nutrition Findings in Northeast Rural Livelihoods - Gu 2014

	Addun Pastoral		**Hawd Pastoral**		**Coastal**	
	Clusters :27		**Clusters :27**		**Clusters: 30**	
	(N=: 578 Boys=;309 Girls= 269)		**(N=: 670 Boys=; 335 Girls= 335)**		**(N= 709 :Boys= 370 ;Girls= 339)**	
Indicator	**Percent (CI)**	**Change from Deyr 2013**	**Percent (CI)**	**Change from Deyr 2013**	**Percent (CI)**	**Change from Deyr 2013**
Child Nutrition Status						
Global Acute Malnutrition (WHZ<-2 or oedema) Boys Girls	9.7 (6.1 – 15.1) 9.7 (5.7 – 15.9) 9.7 (5.2 – 17.3)	Sustained	17.3(13.2-22.4) 18.8(14.2-24.5) 15.8 (11.0-22.2)	Deteriorated	12.7 (9.7 – 16.4) 15.9 (11.9 – 21.1) 9.1 (6.4 – 13.0)	Sustained
Severe Acute Malnutrition (WHZ<-3 or oedema) Boys Girls	2.4 (1.3 – 4.6) 2.9 1.9	Deteriorated	4.6 (3.0-7.1) 5.4 (3.3-8.6) 3.9 (2.0-7.5)	Deteriorated	2.1 (1.3 – 3.5) 2.7 (1.5 – 4.9) 1.5 (0.6 – 3.5)	Deteriorated
Mean of Weight for Height Z Scores	-0.54±1.04	sustained	0.89±1.16	Deteriorated	-0.76±1.05	Sustained
Oedema	0.3		0.3		0.3	
Proportion with MUAC<12.5 cm or oedema) Boys Girls	4.1 (2.3 – 7.1) 4.5 (2.2 – 8.9) 3.7 (1.8 – 7.2)	Improved	12.8 (8.1-19.8) 13.2 (8.3-20.3) 12.4(7.1-20.9)	Deteriorated	3.2 (2.1 – 4.9) 2.7 (1.4 – 4.9) 3.8 (2.3 – 6.1)	Sustained
Proportion with MUAC<11.5 cm or oedema Boys Girls	0.5 (0.2 – 1.6) 0.6 (0.2 – 2.6) 0.4 (0.0 – 2.9)	improved	2.5(1.3-4.8) 2.6 ()1.2-5.9) 2.4 (1.0-5.5)	Deteriorated	0.6 (0.2 – 1.5) 0.5 (0.1 – 2.2) 0.6 (0.1 – 2.4)	Improved
Stunting (HAZ<-2) Boys Girls	7.2 (4.7 -10.9) 8.4 (5.0 – 13.7) 5.8 (3.4 -9.9)	improved	11.6 (8.0-16.6) 13.4 (8.8-19.9) 9.8 (6.4-14.8)	deteriorated	6.5 (4.5 – 9.3) 7.3 (4.8 – 10.9) 5.7 (3.6 – 8.8)	Improved
Severe Stunting (HAZ<-3) Boys Girls	1.7 (0.8 – 3.8) 1.6 (0.6 – 4.3) 1.8 (0.6 – 5.2)	Sustained	1.8 (0.9-3.5) 1.5 (0.4-5.5) 2.1 (1.0-4.1)	Sustained	0.8 (0.3 – 2.6) 1.4 (0.4 – 4.3) 0.3 (0.0 – 2.2)	Improved
Underweight (WAZ<-2) Boys Girls	8.9 (61. – 12.7) 9.9 (6.6 – 14.7) 7.7 (4.4-13.0)	Sustained	16.6 (13.0-21.1) 8.1 (13.0-21.1) 15.2(11.2-20.2)	Sustained	8.5 (7.3 (5.1 – 10.4) 11.1 (7.9 – 15.3) 5.6 (3.3 – 9.5)	Sustained
Death Rates						
Crude deaths, per 10,000 per day (retrospective for 90 days)	0.22 (0.08 -0.62)	sustained	0.45 (0.22-0.95)	Sustained	0.0	Improved

Under five deaths, per 10,000 per day (retrospective for 90 days)	0.32 (0.08 – 1.38)	Sustained	0.61 (0.23-1.61)	Sustained	0.0	Improved
Morbidity	31.0 (24.0 -38.0)		33.5 24.9-42.3)		19.4 (19.4-35.6)	
Boys	29.5 (22.1 – 36.8)	Improved	34.3 (24.4-44.2)	Deteriorated	25.5 (17.0 – 34.0)	Improved
Girls	32.7 (24.6 – 40.8)		32.8 (23.6-42.0)		29.8 (20.8 – 38.8)	
Diarrhoea	6.1 (2.3 – 9.8)		7.2 (4.7-9.7)		4.5 (2.4 – 6.7)	
Boys	6.0 (0.8 – 11.2)	Improved	7.0 (4.2-9.7)	Improved	3.9 (1.7 – 6.2)	Improved
Girls	6.1 (3.2 – 9.1)		7.3 (4.0-10.7)		5.2 (1.8 – 8.6)	
Pneumonia	12.5 (7.7 – 17.3)		14.1 (7.1-21.1)		6.4 (2.9 – 9.8)	
Boys	12.3 (7.3 – 17.4)	Sustained	15.8 (7.5-24.0)	Deteriorated	5.8 (3.0 – 8.6)	Deteriorated
Girls	12.7 (7.1 – 18.3)		12.4 (6.0-19.0)		7.0 (2.4 – 11.6)	
Fever	22.5 (16.6 – 28.3)		20.1 (14.9 – 25.3)		19.3 (13.3 – 25.4)	
Boys	21.2 (15.2 – 27.3)	Improved	19.0 (12.5- 25.5)	Deteriorated	17.8 (11.5 – 24.0)	Improved
Girls	24.0 (17.1 – 30.8)		21.3 (15.4 – 27.1)		21.0 (13.9 – 28.1)	
Measles	7.8 (2.7 – 12.8)		2.7 (1.0-4.5)		5.4 (2.3 – 8.4)	
Boys	7.9 (2.8 – 13.0)	Deteriorated	2.0 (0.8-0.3)	sustained	5.8 (2.3 – 9.3)	Sustained
Girls	7.6 (1.6 – 13.6)		3.5 (0.9-6.1)		4.9 (1.8 – 8.0)	
Vitamin A Supplementation	64.7 (52.6 – 76.8)		65.7 (54.5-76.9)		90.2 (86.4 – 94.0)	
Boys	66.6 (53.0 – 80.2)	Deteriorated	66.5 (55.7-77.4)	sustained	89.0 (51.5 – 94.0)	Improved
Girls	62.5 (50.0 – 75.0)		64.9 (54.5-76.9)		91.5 (87.3 – 95.7)	
Measles Vaccination	64.0 (52.3 – 75.7)		62.0 (50.5-73.0)		89.0 (85.8 – 92.2)	
Boys	64.7 (51.8 – 77.6)	Deteriorated	62.1 (5.6-50.5)	Sustained	87.4 (82.6 – 92.2)	Imrpoved
Girls	63.2 (50.6 – 75.8)		61.1 (50.0-73.0)		90.8 (87.0 – 94.6)	
Polio Immunization	72.2 (60.5 – 84.0)		92.3 (89.3-95.3)		94.4 (91.9 –96.8)	
Boys	73.3 (60.3 – 86.2)	Deteriorated	92.3 (89.2-95.3)	Sustained	92.8 (89.1 – 96.5)	Sustained
Girls	71.0 (58.8 – 83.2)		92.0(89.3-95.3)		96.1 (93.9 – 98.4)	
Infant and Young Child Feeding (6-24 Months)						
Proportion still breastfeeding	36.3 (31.0 – 42.3)		32.9 (30.0-40.0)		44.1 (38.3-49.9)	
Boys	40.0 (32.5 – 47.4)	Deteriorated	30.4 (19.7-41.2)	sustained	41.9 (33.8 – 50.0)	Sustained
Girls	33.6 (24.0 – 43.2)		35.4 (24.5-46.3)		46.5 (37.9 – 55.1)	
Continued breastfeeding up to 12 months	30.6 (16.8 – 44.3)	Deteriorated	28.2 (13.0-43.4)	Deteriorated	43.6 (31.0 – 56.1)	Improved
Continued breastfeeding up to 24 months	5.7 (0 – 13.7)	Improved	5.7 (0.3-11.9)	Deteriorated	0	Deteriorated
Proportion meeting recommended feeding frequencies	90.0 (84.7 – 95.2)		71.6 (62.3-81.0)		82.1 (75.0 – 89.3)	
Boys	83.5 (74.5 – 92.5)	Sustained	72.3 (60.0-85.0)	Deteriorated	85.8 (76.6 – 95.0)	Improved
Girls	95.6 (91.4 -99.7)		70.9 (61.8-80)		78.1 (67.6 – 88.5)	
Proportion who reported to have consumed ≥4 food groups	0.6 (0 – 2.2)		2.3 (-0.3-4.9)		6.8 (3.4 – 10.3)	
Boys	0.0	Deteriorated	3.1 (-1.2-7.5)	deteriorated	6.8 (2.2 – 11.4)	Sustained
Girls	1.8 (0 – 4.2)		1.5 (-1.5-4.7)		6.8 (1.4 – 12.3)	
Maternal Nutrition and Immunization Status						
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	10.4 (5.7 – 15.1)	Deteriorated	16.0 (8.0-24.2)	Deteriorated	2.0 (0 – 5.3)	Sustained
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	25.3 (17.9 – 32.7)	Deteriorated	32.0 (22.0-43.0)	Deteriorated	11.8 (5.8 – 17.9)	Deteriorated

Proportion of Women who received Tetanus immunization No dose One dose Two doses Three doses	32.8 (21.9 – 43.7) 17.8 (11.7 – 24.0) 27.5 (19.9 – 35.1) 21.7 (14.0 – 29.3)	Deteriorated	23.7 (17.1-30.3) 14.0 (8.8-19.2) 29.5 (22.2-36.9) 32.6 (24.8-40.4)	Deteriorated	15.2 (8.3 – 22.0) 9.0 (6.1 – 12.0) 37.5 (29.6 – 45.3) 38.1 (31.9 – 44.3)	Sustained
Public Health Indicators						
Household with access to sanitation facilities	68.8 (56.5 – 81.0	Sustained	77.3 (65.3-89.3)	Improved	75.3 (66.0 – 84.7)	Sustained
Household with access to safe water	30.9 (14.0 – 47.8)	Deteriorated	41.0 (21.0-61.0)	deteriorated	62.9 (45.4 – 80.5)	Improved
Proportion who reported to have consumed <4 food groups	96.6 (92.8 – 100.0)	Sustained	98.4	Sustained	99.7 (99.3 – 100.0)	Sustained
Household's Main Food Source- Purchase	89.1 (81.3 -96.8)	Deteriorated	94.3 (89.3 – 99.2)	Sustained	97.3 (95.5 – 99.1)	Sustained
Mean CSI	16.7		12.8			
OVERALL NUTRITION SITUATION	Alert		Critical		Serious	

Table 19: Summary of Key Nutrition Findings Northaest Rural Livelihoods: Nugal Valley, Sool Plateau and East Golis - Gu 2014

Livelihood/Indicator Indicator	**East Golis/Karkaar Pastoral** **Clusters: 30** **(N= 741 :Boys= 365 ;Girls= 376)**		**Sool Pastoral** **Clusters : 33** **(N=: 670 Boys=; 335 Girls= 335)**		**Nugaal Valley** **Clusters: 35** **(N= 643 :Boys= 356 ;Girls= 287)**	
	Percent (CI)	Change from Deyr 2013	Percent (CI)	Change from Deyr 2013	Percent (CI)	Change from Deyr 2013
Child Nutrition Status						
Global Acute Malnutrition (WHZ<-2 or oedema) Boys Girls	15.8 (12.9=19.2) 15.9 (12.6-19.9) 15.7 (11.5-21.1)	Deteriorated	12.0 (9.6-15.1) 13.8 (9.8-19.2) 10.1 (7.5-13.6)	Deteriorated	7.9 (5.5 – 11.3) 9.6 (6.2 – 14.4) 5.9 (3.7 – 9.4)	Improved
Severe Acute Malnutrition (WHZ<-3 or oedema) Boys Girls	2.8 (1.7-4.7) 3.0=1.5-5.9) 2.7 (1.3-5.3)	Sustained	2.2 (1.3- 3.7) 2.8 (1.4- 5.5) 1.5 (0.7- 3.5)	Deteriorated	0.3 (0.1 – 1.3) 0.6 (0.3 – 2.3) 0 (0.0 -0.0)	Improved
Mean of Weight for Height Z Scores	- 0.87±1.08	Deteriorated			-0.39±1.12	Improved
Oedema			0.3		0.0	
Proportion with MUAC<12.5 cm or oedema) Boys Girls	5.4 (3.8-7.5) 3.8 (1.9-7.4) 6.9 (4.8-9.7)	Deteriorated	1.5% (0.8- 2.7) 1.4 (0.6- 3.3) 1.5 (0.6- 3.6)	sustained	2.0 (1.1 – 3.7) 1.7 (0.7 – 4.1) 2.4 (1.2 – 4.9)	sustained
Proportion with MUAC<11.5 cm or oedema Boys Girls	0.8 (0.3-2.0) 0.5 (0.1-2.2) 1.1 (0.3-3.5)	Sustained	0.3 (0.1- 1.2) 0.3 (0.0- 2.2) 0.3 (0.0- 2.3)	Sustained	1.5 (0.1 – 1.4) 0.6(0.1 – 2.4) 0.3 (0.0 – 2.7)	Improved
Stunting (HAZ<-2) Boys Girls	9.0 9 (6.2-13.0) 12.4 (8.3-18.3) 5.6 (3.4-9.1)	Sustained	3.6 (2.2- 5.7) 5.7 (3.7- 8.7) 1.2 (0.4- 4.1)	Sustained	3.1 (1.7 – 5.5) 4.2 (2.3 – 7.6) 1.7 (0.6 – 4.8)	Sustained
Severe Stunting (HAZ<-3) Boys Girls	1.2 (0.6-2.5) 1.6 (0.7-4.0) 0.8 (0.2-3.5)	Sustained	0.1 (0.0- 1.1) 0.3 (0.0- 2.1) 0	Improved	0.5 (0.1 – 1.5) 0.8 (0.3 – 2.6) 0 (0.0 – 0.0)	Improved
Underweight (WAZ<-2) Boys Girls	13.2 (10.6-16.3) 15.8 (12.6-19.5) 10.7 (7.6-14.7)	Improved	6.3 (4.3- 9.2) 9.3 (6.1-14.1) 3.1 (1.6- 5.8)	Sustained	3.9 (1.7-8.5) 4.8 (2.0 – 11.2) 2.8 (1.1 – 6.6)	Sustained
Death Rates						
Crude deaths, per 10,000 per day (retrospective for 90 days)	0.24 (0.09-0.58)	Sustained	0.06 (0.01-0.52)	Sustained	0.15 (0.06 – 0.04)	Sustained
Under five deaths, per 10,000 per day (retrospective for 90 days)	0.14 (0.02-1.06)	Sustained	0.15 (0.02 –1.09)	sustained	0 (0.00 – 0.00)	Improved

Morbidity	19.0 (12.7-25.9)		19.6(16.75-22.84)		18.3 (10.2 – 26.4)	
Boys	20.5 (13.1-28.0)	Improved	20.7(16.77-25.45)	Improved	19.0 (9.4 – 28.6)	Improved
Girls	17.5(10.0-24.9)		18.3(14.39-23.07)		17.5 (9.3 – 25.6)	
Diarrhoea	4.1 (2.0-6.3)		9.22 (7.21-11.71)		5.4 (2.5 – 8.2)	
Boys	4.6 (1.7-7.5)	Improved	10.11(7.27-13.84)	Improved	5.5 (1.5 – 9.5)	Improved
Girls	3.7 (1.6-5.8)		8.26 (5.61-11.92)		5.2 (2.1 – 8.4)	
Pneumonia	9.2 (5.2-13.2)		2.78 (1.73-4.39)		0.6 (0.0 – 1.3)	
Boys	9.7 (4.6-14.9)	Improved	2.53 (1.24-4.91)	Sustained	1.1 (0 – 2.5)	Improved
Girls	8.7 (4.7-12.8)		3.06 (1.56-5.73)		0 (0.0-.0)	
Fever	15.0 (8.7-21.3)		9.52 (7.47-12.03)		14.2 (7.5 – 20.9)	
Boys	15.4 (9.0-21.8)	Improved	9.55 (6.80-13.21)	Improved	13.7 (6.6 – 20.9)	Improved
Girls	14.5 (7.2-21.8)		9.48 (6.63-13.32)		14.7 (6.9 – 22.6)	
Measles	1.5 (0.6-3.4)		3.95 (2.67-5.78)		3.8 (0.3 – 7.2)	
Boys	2.2 (0.6-3.7)	Sustained	4.21 (2.46-7.01)	Deteriorated	5.2 (0.3 – 10.0)	Deteriorated
Girls	0.8 (-0.1-1.7)		3.67 (2.00-6.49)		2.1 (0.0– 4.3)	
Vitamin A Supplementation	75.3 (64.8-85.7)		84.6(81.65-87.21)		85.0 (78.6 – 91.4)	
Boys	77.3 (66.8-87.6)	Improved	85.6(81.50-89.06)	Improved	84.3 (77.6 – 91.0)	Sustained
Girls	73.3 (62.2-84.3)		83.4(78.91-87.25)		85.9 (78.7 – 93.0)	
Measles Vaccination	74.9 (64.5-85,3)		82.8(79.78-85.58)		83.0 (77.9 – 88.2)	
Boys	75.9 (65.5-86.4)	Improved	83.7(79.36-87.31)	Improved	80.9 (74.3 – 87.5)	Improved
Girls	73.9 (62.6-85.2)		81.9(77.26-85.88)		86.7(81.4 – 92.0)	
Polio Immunization	82.5 (73.2 – 91.9)		92.8(90.56-94.59)		93.6 (90.8 – 96.4)	
Boys	84.2 (75.1 – 93.3)	Deteriorated	93.2(90.00-95.54)	Sustained	92.7 (89.0 – 96.4)	Improved
Girls	80.9 (70.6 – 91.2)		92.3(88.78-94.89)		94.6 (91.2 – 98.0)	
Infant and Young Child Feeding (6-24 Months)						
Proportion still breastfeeding	53.1(46.8 – 59.4)		37.6(31.68-43.91)		36.3 (28.1 – 44.5)	
Boys	50.7 (43.3-58.1)	Sustained	38.5(29.86-47.76)	Deteriorated	36.0 (24.8 – 47.1)	Deteriorated
Girls	55.2 (47.1 – 63.0)		36.8(28.65-45.64)		37.0 (26.8 – 47.1)	
Continued breastfeeding up to 12 months	67.0 (55.1 – 78.9)	Sustained	53.3(40.00-66.33)	Improved	29.7 (15.7 – 43.7)	Deteriorated
Continued breastfeeding up to 24 months	15.3 (4.8 – 25.9)		2.50 (0.06-13.16)	Deteriorated	2.0 (0 – 6.0)	Deteriorated
Proportion meeting recommended feeding frequencies	80.8 (71.6 – 90.0)		78.7(73.19-83.61)		75.6 (63.8 – 87.3)	
Boys	79.3 (68.4 – 90.1)	Deteriorated	77.8(69.46-84.88)	Sustained	77.8 (64.9– 90.8)	Improved
Girls	82.1 (72.4 – 91.8)		79.5(71.65-86.07)		39.6 (57.2 – 89.2)	
Proportion who reported to have consumed ≥4 food groups	2.0 (0 – 4.2)				98.1 (95.9 – 100)	
Boys	1.8 (0 – 4.4)	Sustained	0	Deteriorated	97.7(95.1 – 100.0)	Deteriorated
Girls	2.2 (0 – 5.6)				98.8 (96.4- 100)	
Maternal Nutrition and Immunization Status						
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	8.9 (4.2 – 13.6)	Improved	2.61 (0.72-6.56)	Improved	2.7 (0 – 5.2)	Improved
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	28.4 (19.4 – 37.4)	Improved	10.4(6.10-16.43)	sustained	12.2 (3.2-21.2)	Sustained
Proportion of Women who received Tetanus immunization	30.0 (18.2-14.7)		7.84 (4.12-13.30)		19.5 (12.1-27.0)	
No dose	9.1 (4.45-13.7)	Deteriorated	20.92 (14.77-28.22)	Deteriorated	16.8 (10.6-23.0)	Deteriorated
One dose	19 (13.7-24.3)		42.48 (34.54-50.72)		53.3 (44.1-62.4)	
Two doses	42 .0 (31.4-52.6)		28.76 (21.74-36.62)		10.2 (6.0 – 14.4)	
Three doses						
Public Health Indicators						

Household with access to sanitation facilities	78.3 (66.3-90.4)	Improved	73.7(69.02-78.0)	Improved	N/A	N/A
Household with access to safe water	25.9 (10.3-41,4)	Deteriorated	15.8(12.42-19.9)	improved	N/A	N/A
Proportion who reported to have consumed <4 food groups	99.1 (98.4 – 99.9)	Sustained	0	Sustained	N/A	N/A
Household's Main Food Source- Purchase	100 (100 – 100)	Sustained	97.4(95.12-98.6)	Sustained	N/A	N/A
Mean CSI	N/A	N/A	N/A	N/A	N/A	N/A
OVERALL NUTRITION SITUATION	Critical		Serious		Alert	

Table 20: Summary of Key Nutrition Findings Northaest IDPs

	QARDHO IDPs Clusters : Exhaustive (N=417: Boys=199; Girls=218)	
Indicator	**Percent**	**Change from Deyr 2013**
Child Nutrition Status		
Global Acute Malnutrition (WHZ<-2 or oedema) Boys Girls	**12.2** **17.6** **7.3**	**Improved**
Severe Acute Malnutrition (WHZ<-3 or oedema) Boys Girls	**1.7** **2.5** **0.9**	**Improved**
Mean of Weight for Height Z Scores	**-0.83 ± 1.02**	**Improved**
Oedema	**0.0%**	
Proportion with MUAC<12.5 cm or oedema) Boys Girls	**5.7** **5.5** **6.0**	**Improved**
Proportion with MUAC<11.5 cm or oedema Boys Girls	**0.7** **1.0** **0.5**	**Improved**
Stunting (HAZ<-2) Boys Girls	**16.5** **22.0** **11.5**	**Improved**
Severe Stunting (HAZ<-3) Boys Girls	**4.1** **7.5** **0.9**	**Improved**
Underweight (WAZ<-2) Boys Girls	**18.7** **28.0** **10.1**	**Improved**
Death Rates		
Crude deaths, per 10,000 per day (retrospective for 90 days)	0.28 (0.12-0.66)	Sustained
Under five deaths, per 10,000 per day (retrospective for 90 days)	0.69 (0.24-2.02)	Sustained
Morbidity Boys Girls	52.4 55.5 49.5	Deteriorated
Diarrhoea Boys Girls	26.6 30.0 23.4	**Improved**
Pneumonia Boys Girls	27.8 30.5 25.2	Deteriorated
Fever Boys Girls	37.3 39.0 35.8	Deteriorated

Measles Boys Girls	9.8 11.0 8.7	Deteriorated
Vitamin A Supplementation Boys Girls	56.2 57.0 55.5	Deteriorated
Measles Vaccination Boys Girls	58.9 60.0 57.8	Deteriorated
Polio Immunization Boys Girls	87.8 88.0 87.6	Sustained
Infant and Young Child Feeding (6-24 Months)		
Proportion still breastfeeding Boys Girls	42.9 45.8 40.2	Sustained
Continued breastfeeding up to 12 months	84.0	Deteriorated
Continued breastfeeding up to 24 months	27.0	Deteriorated
Proportion meeting recommended feeding frequencies Boys Girls	74.5 81.9 66.7	Sustained
Proportion who reported to have consumed ≥4 food groups Boys Girls	6.9 6.5 7.3	Improved
Maternal Nutrition and Immunization Status		
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	9.3	Improved
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	27.1	Improved
Proportion of Women who received Tetanus immunization No dose One dose Two doses Three doses	 19.7 11.8 17.5 51.1	Deteriorated
Public Health Indicators		
Household with access to sanitation facilities	52.9	Deteriorated
Household with access to safe water	54.6	Deteriorated
Proportion who reported to have consumed >4 food groups	98.5	Sustained
Household's Main Food Source- Purchase	53.9	Sustained
Mean CSI	58.7	Sustained
OVERALL NUTRITION SITUATION		Serious

Table 21: Summary of Key Nutrition Findings in Northeast Urban

	Bari urban	**Nugal urban**	**Mudug urban**
	Clusters :30 **(N=: 576 Boys=; 304 Girls= 272)**	**Clusters :** **(N=621: Boys= 331; Girls= 290)**	**Clusters: 25** **(N= 604 :Boys= 304 ;Girls= 300)**
Indicator	**Percent (CI)**	**Percent (CI)**	**Percent (CI)**
Child Nutrition Status			
Global Acute Malnutrition (WHZ<-2 or oedema) Boys Girls	17.5 (13.8 – 22.1) 18.4 (14.2 – 23.6) 16.5 (12.4 – 21.8)	12.9 (9.6 – 17.1) 14.8 (9.9 – 21.5) 10.7 (7.8 – 14.5)	9.9 (7.5 – 13.1) 10.2 (7.7 – 13.4) 9.7 (6.0 – 15.2)
Severe Acute Malnutrition (WHZ<-3 or oedema) Boys Girls	4.0 (2.5 – 6.3) 4.6 (2.6 – 8.0) 3.3 (1.7 – 6.4)	3.2 (1.9 – 5.5) 4.5 (2.3 – 8.8) 1.7 (0.6 – 4.8)	2.2 (1.1 – 4.1) 2.0 (0.8 – 4.8) 2.3 (1.0 – 5.2)

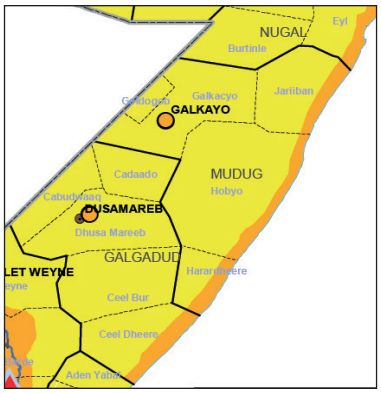
Mean of Weight for Height Z Scores	-1.05±1.02	-0.62±1.12	-0.69±1.03
Oedema	0.3	1.1	0.3
Proportion with MUAC<12.5 cm or oedema)	4.9 (3.5 – 6.9)	4.2 (2.8 – 6.1)	61. (3.9 – 9.5)
Boys	3.2 (1.8 – 5.8)	4.3 (2.5 – 7.5)	3.8 (1.8 – 7.9)
Girls	6.8 (4.3 – 10.6)	4.0 (2.2 – 7.1)	8.4 (5.4 – 13.0)
Proportion with MUAC<11.5 cm or oedema	1.2 (0.6 – 2.3)	2.6 (1.5 – 4.5)	2.6 (1.2 – 5.3)
Boys	0.6 (0.2 – 2.6)	2.9 (1.5 – 5.7)	2.2 (1.0 – 4.9)
Girls	1.8 (0.8 – 4.1)	2.3 (0.9 – 5.7)	2.9 (1.2 – 6.8)
Stunting (HAZ<-2)	7.5 (4.5 – 12.3)	9.0 (6.0 – 13.2)	11.5 (8.6 – 15.3)
Boys	8.6 (4.1 – 16.9)	7.8 (4.9 – 12.2)	11.7 (7.9 – 16.9)
Girls	6.4 (3.9 – 10.2)	10.4 (6.3 – 16.7)	11.4 (7.8 – 16.3)
Severe Stunting (HAZ<-3)	1.5 (0.6 – 4.2)	1.1 (0.5 – 2.5)	2.8 (1.9 – 4.1)
Boys	2.0 ((0.5 – 7.7)	1.2 (0.5 – 3.1)	3.2 (1.8 – 5.8)
Girls	1.1 (0.4 – 3.2)	1.0 (0.2 – 4.6)	2.3 (1.2 – 4.5)
Underweight (WAZ<-2)	13.5 (10.6 – 17.1)	8.5 (5.4 – 13.0)	11.4 (8.1 – 15.8)
Boys	13.4 (9.3 – 18.9)	8.2 (4.9 – 13.3)	11.7 (8.2 – 16.4)
Girls	13.6 (10.1 – 18.2)	8.8 (5.3 – 14.2)	11.1 (6.8 – 17.8)
Morbidity	18.2 (12.4 – 24.0	19.1(13.7 –24.5)	
Boys	19.2 (10.9 – 27.6)	16.0 (10.3-21.8)	N/A
Girls	17.1 (12.1 – 22.1)	22.6(15.7 -29.5)	
Diarrhoea	7.8 (4.5 – 11.1)	14.8(10.4 -19.2)	
Boys	7.0 (3.6 – 10.4)	12.2 (7.3 – 17.1)	N/A
Girls	8.7 (4.7 – 12.7)	17.8(11.6 –24.1)	
Pneumonia	6.0 (2.0 – 9.9)	1.1 (0.03 – 2.2)	
Boys	7.0 (0.5 – 13.5)	0.3 (0 – 0.9)	N/A
Girls	4.8 (2.1 – 7.6)	2.0 (0.2 – 3.9)	
Fever	4.1 (2.1 – 6.2)	5.4 (2.4 – 8.3)	
Boys	4.8 (2.4 – 7.1)	4.3 (0.7 – 7.8)	N/A
Girls	3.4 (0.8 – 6.1)	6.6 (3.2 – 10.0)	
Measles	1.6 (0.4 – 2.8)	0.16 (0 – 0.5)	
Boys	1.9 (0.2 – 3.6)	0.3 (0 – 0.9)	N/A
Girls	1.4 (0 – 2.9)	0 (0-0)	
OVERALL NUTRITION SITUATION	Critical	Serious	Alert

4.3: CENTRAL REGIONS

FSNAU conducted 7 nutrition surveys (2 urban areas,1 IDP and 4 Rural livelihoods) in Central regions of Somalia and assessed nutrition status of 3 151 children aged 6-59 month (1 602 boys and 1 549 girls) from 2 665 households. Integrated assessments (nutrition and food security) were conducted in two urban area, one IDP and two livelihoods but in the other two livelihoods nutrition situation was assessed through representative MUAC based surveys.

The food security situation has slightly deteriorated in central regions in the post-Gu 2014 when compared to post-Deyr 2013. In July 2014 a "snapshot in time" food security conditions indicate Crisis (IPC Phase 3) in the Coastal Deeh and Stressed (IPC Phase 2) in other livelihoods of the region as in the post-Deyr 2013. In the most likely scenario, the area classification is projected to remain the same in all livelihoods in August-December 2014 period. The population estimates in three, acute food insecurity phases (IPC phases 2, 3 and 4) will also remain unchanged from the situation in July 2014.

Map 10: Food Security Situation in Central Regions - Gu 2014



Urban areas of Central regions were classified in Stressed (IPC Phase 2) in the Post Gu 2014 (July) period. The projection for August-December 2014 remains the same. Internally Displaced Persons (IDPs) in Dhusamareb (Galgaduud region) were in Crisis (IPC Phase 3) in the Post Gu 2014 (July) period and are projected to remain in Crisis (IPC Phase 3) during August-December 2014.

For further details on analysis of the food security situation in Central regions, please see sections 4.1, 4.2 and 4.3.6 of the Food Security and Nutrition Analysis Post Gu 2014 Technical Series Report No VII. 56 at www.fsnau.org

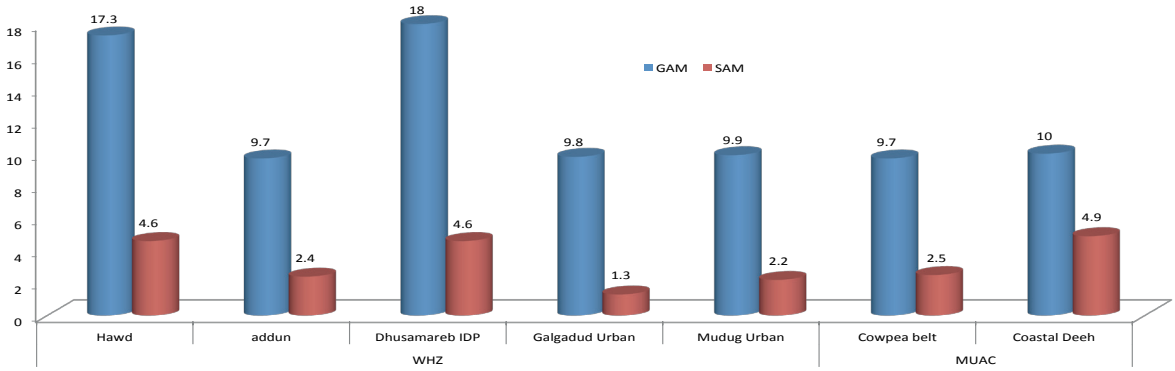
GU 2014 SURVEY RESULTS

The results of nutrition assessments done in Central Somalia are summarized in Tables 23- 25. Key highlights are discussed below:

Acute Malnutrition

Based on the WHZ comprehensive assessments conducted in South/Central regions, median GAM rate of 17.3 percent and SAM rate of 4.6 percent was observed (Figure 31). This is higher than the median GAM rate of 13.2 percent and the SAM rate of 2.4 percent observed in Deyr 2013. No significant gender differences were noted in the prevalence of acute malnutrition between boys and girls.

Figure 31: Prevalence of Acute malnutrition in Central Regions - Gu 2014



Levels of acute malnutrition from the 5 assessed population groups (1 IDP and 4 livelihoods) in Central regions show a deterioration. Dhusamareb IDPs show sustained **Critical** GAM prevalence since the last two seasons (Deyr 13/14 & Gu'2013), while Hawd livelihood shows deterioration from ***Serious*** phase in Deyr 13/14

to ***Critical*** phase in *Gu* 2014. Cowpea belt also deteriorated from ***Alert*** phase in *Deyr* 2013/14 to ***Serious*** phase, while Coastal Deeh sustained ***Serious*** phase since last three seasons though there is a slight increase of GAM during this season (*Gu* 2014) .On the other hand stable **Alert** GAM prevalence is recorded among Adun Pastoral livelihood for the last three seasons (*Gu* 2013, *Deyr* 2013/14 and *Gu* 2014)

- **Dhusamareb IDPs** settlements recorded a GAM rate of 18.2 percent and SAM rate of 4.6 percent indicating a ***Critical*** nutrition situation showing similar phase when compared with GAM rate of 16.0 percent recorded in Dery 2013/14 and slight improvement when compared to GAM of 21.4 percent recorded in Gu' 2013.
- **Addun** livelihood recorded a GAM rate of 9.7 percent and SAM rate of 2.4 percent indicating a sustained **Alert** nutrition situation since last three seasons where GAM rate of 8.9 percent and SAM of 1.6 percent were recorded in *Deyr* 2013/14 and GAM of 8.0 percent was reported in *Gu* 2014.
- **Hawd** pastoral livelihood recorded a GAM rate of 17.3 percent and SAM rate of 4.6 percent indicating a **Critical** nutrition situation which reflect a deterioration when compared with GAM rates of 13.2 percent recorded in *Deyr* 2013/14 & 10.6 reported in *Gu* 2013.
- **Cowpea and Coastal:** Representative MUAC assessments conducted in the Coastal Deeh & Cowpea Belt livelihoods recorded a GAM-MUAC (MUAC<12.5 cm) rate of 10.0 percent in Coastal Deeh and 9.7 in Cowpea and SAM-MUAC (MUAC <11.5 cm) of 4.9 and 2.5 percent in Coastal and Cowpea respectively both showing ***Serious*** nutrition situation which is deterioration from **Alert** to **serious** phase in Cowpea Belt but sustained situation of serious in Coastal Deeh.

Chronic Malnutrition-Stunting Underweight

Low prevalence levels of stunting (<20%) were seen in all the livelihoods surveyed in central regions (Table 23). Moderate levels of underweight prevalence (10 – 20%) were recorded among Dhusamareb and Hawd pastoral livelihood but in Addun low prevalence level of underweight (<10%) was observed.

Table 23: Distribution of Chronic malnutrition in Central Regions

Livelihood	STUNTING			UNDERWIEGHT		
	Gu 2014	Deyr 2013	Gu 2013	Gu 2014	Deyr 2013	Gu 2013
Dhusamreeb IDP's	12.2	8.4	11.6	17.9	12.0	17.4
Hawd Central	11.6	9.7	9.5	16.6	10.7	12.1
Addun Central	7.2	12.1	9.3	8.9	9.9	9.1

Mortality

The retrospective crude mortality death of 0.59 and under five death rates of 1.05 were observed in Cowpea Belt, while similar results of 0.66 crude death rate and 1.95 underfive death rates were seen in Costal Deeh; both are suggesting a **Serious** phase. The Crude and under five death rates in the other three livelihoods (Dhusamareb IDPs, Adun, and Hawd) are within the **Acceptable** levels of <0.5 and <1/10,000/day (Annex 6.6).

Morbidity

High morbidity levels (>30%,) were recorded among Dhusamareb IDPs, Hawd and Addun pastoral livelihoods, The morbidity in the other two livelihoods of Cowpea and Coastal deeh was <20 percent (Table 24).

Immunization

Low coverage of Vitamin A supplementation and measles vaccination (<70%) were reported in all the livelihoods assessed in Central regios. Coverage was around 40 percent in Dhusamareb IDPs, Cowpea and Coastal *Deeh* (Table 24 and 25).

Maternal malnutrition

High prevalence of maternal malnutrition among the pregnant and lactating women was recorded in all livelihoods with **very Critical** levels (>31.5%) with the exception of Addun pastoral livelihood which recorded **Critical** level (25.3%).

Dietary diversification

Household dietary diversity, measured as proportion of households consuming more than four food groups, is high (>90%). There is no significant change in household dietary diversity between *Deyr* 2013/14 and *Gu* 2014 though milk access and consumption has deteriorated in *Gu* 2014 season. Decreased milk access and consumption appears to be a key mitigating factor to malnutrition seen in these livelihoods.

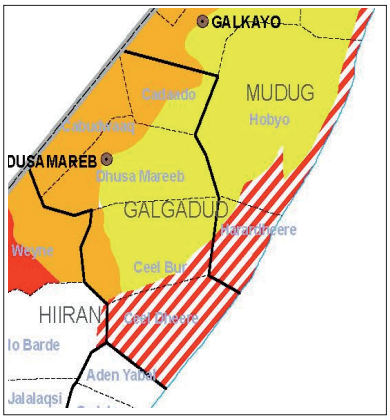
Infant and young child feeding in terms of continued breastfeeding for up to one year and 24 months, child dietary diversity and frequency of complementary feeding remain sub-optimal in all the assessed population groups. Majority of the assessed children were not breastfed for up to the recommended 24 months. The child dietary diversity was poor and ranges from 0.6 to 4.8.

Change in nutrition situation

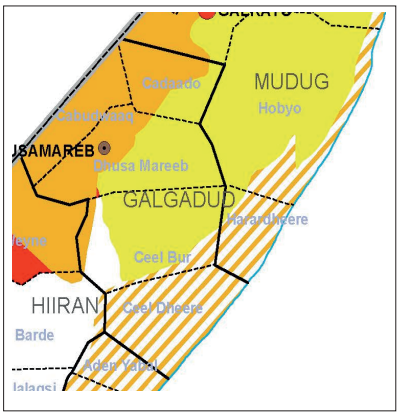
The maps below (Figure 32) show the trends of nutrition situation from *Gu* 2013 to *Gu* 2014. The nutrition situation among the urban, IDPs and Rural livelihoods in Central regions remains stable nutrition except for the Hawd livelihood zone which has deteriorated from **Serious** to **Critical**. The nutrition situation has largely been influenced by morbidity, disease prevalence, limited health care services and food insecurity and limited humanitarian interventions in general.

Figure 32: Progression of the Nutrition Situation *Gu* 2013 to *Gu* 2014 in Central Regions

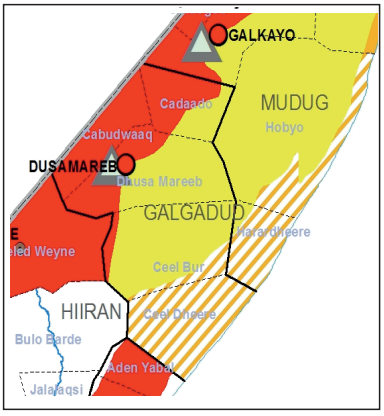
Nutrition Situation, Jul 2013



Nutrition Situation, Jan 2014



Nutrition Situation, Jul 2014



HOT SPOT FOR ACUTE MALNUTRITION IN CENTRAL SOMALIA

Dhusamareb IDPs and Hawd pastoral with >15%GAM are current hotspots along with Coastal and Cowpea which show **Serious** (MUAC) but are areas that do not have access to humanitarian interventions. These areas need to be closely monitored and timely response should be delivered for treating the current acutely malnourished children in order for further deterioration of the nutrition situation to be prevented.

OUTLOOK FOR AUG- OCT 2014

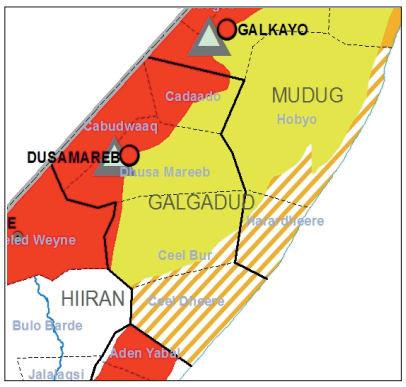
Sustained: Nutrition situation in Coastal Deeh, Cowpea belt and Addun, as well as the IDP settlements of Dhusamareb is expected to remain in the same phase as neither improvement nor deterioration is expected over next 3 months.

Improvement: Hawd livelihood is expected to improve based on seasonal trends and current HIS trends

The maps in figure 33 show current and projected nutrition situation across livelihoods in Central. The current **Stressed** food security situation in most livelihoods of central regions is projected to remain stable up to October 2014.

Figure 33: Nutrition Situation Outlook July to October 2014 in Central regions

Current Nutrition Situation - Jul 2014



Projected Nutrition Situation - Aug-Oct 2014

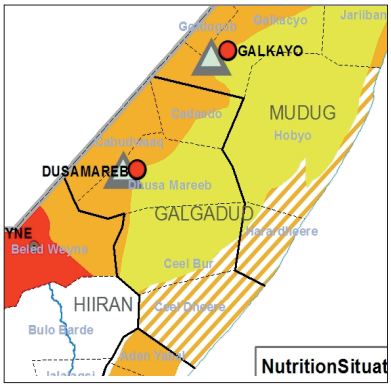


Table 24: Summary of Key Nutrition Findings in Central Rural Livelihoods and IDPs - Gu 2014

	Addun Pastoral		Hawd Pastoral		Dhusamareeb IDPs	
	Clusters :27 (N=: 578 Boys=;309 Girls= 269)		Clusters :27 (N=: 670 Boys=; 335 Girls= 335)		Clusters: Exhaustive (N= 329 :Boys= 170 ;Girls= 159)	
Indicator	**Percent (CI)**	**Change from *Deyr* 2013**	**Percent (CI)**	**Change from *Deyr* 2013**	**Percent (CI)**	**Change from *Deyr* 2013**
Child Nutrition Status						
Global Acute Malnutrition (WHZ<-2 or oedema)	9.7 (6.1 – 15.1)	Sustained	17.3(13.2-22.4)	Deteriorated	18.2 (14.4 – 22.8)	Sustained
Boys	9.7 (5.7 – 15.9)		18.8(14.2-24.5)		17.6 (12.7 – 24.1)	
Girls	9.7 (5.2 – 17.3)		15.8 (11.0-22.2)		18.9 (13.5 – 25.7)	
Severe Acute Malnutrition (WHZ<-3 or oedema)	2.4 (1.3 – 4.6)	Deteriorated	4.6 (3.0-7.1)	Deteriorated	4.6 (2.8 – 7.4)	Deteriorated
Boys	2.9		5.4 (3.3-8.6)		4.7 (2.4 – 9.0)	
Girls	1.9		3.9 (2.0-7.5)		4.4 (2.1 – 8.8)	
Mean of Weight for Height Z Scores	-0.54±1.04	sustained	0.89±1.16	Deteriorated	-0.92±1.13	Sustained
Oedema	0.3		0.3		0.3	
Proportion with MUAC<12.5 cm or oedema)	4.1 (2.3 – 7.1)	Improved	12.8 (8.1-19.8)	Deteriorated	6.3 (4.1 – 9.4)	Improved
Boys	4.5 (2.2 – 8.9)		13.2 (8.3-20.3)		6.4 (3.6 – 11.0)	
Girls	3.7 (1.8 – 7.2)		12.4(7.1-20.9)		6.2 (3.4 – 11.0)	
Proportion with MUAC<11.5 cm or oedema	0.5 (0.2 – 1.6)	improved	2.5(1.3-4.8)	Deteriorated	2.7 (1.4 – 5.0)	Sustained
Boys	0.6 (0.2 – 2.6)		2.6 ()1.2-5.9)		2.3 (0.9 – 5.8)	
Girls	0.4 (0.0 – 2.9)		2.4 (1.0-5.5)		3.1 (1.3 – 7.0)	
Stunting (HAZ<-2)	7.2 (4.7 -10.9)	improved	11.6 (8.0-16.6)	deteriorated	12.2 (9.1 – 16.1)	Deteriorated
Boys	8.4 (5.0 – 13.7)		13.4 (8.8-19.9)		15.3 (10.7 – 21.5)	
Girls	5.8 (3.4 -9.9)		9.8 (6.4-14.8)		8.8 (5.3 – 14.2)	
Severe Stunting (HAZ<-3)	1.7 (0.8 – 3.8)	Sustained	1.8 (0.9-3.5)	Sustained	2.4 (1.2 – 4.7)	Deteriorated
Boys	1.6 (0.6 – 4.3)		1.5 (0.4-5.5)		4.1 (2.0 – 8.3)	
Girls	1.8 (0.6 – 5.2)		2.1 (1.0-4.1)		0.6 (0.1 – 3.5)	
Underweight (WAZ<-2)	8.9 (61. – 12.7)	Sustained	16.6 (13.0-21.1)	Sustained	17.9 (14.2 – 22.4)	Sustained
Boys	9.9 (6.6 – 14.7)		8.1 (13.0-21.1)		21.8 (16.2 – 28.6)	
Girls	7.7 (4.4-13.0)		15.2(11.2-20.2)		13.8 (9.3 – 20.1)	
Death Rates						
Crude deaths, per 10,000 per day (retrospective for 90 days)	0.22 (0.08 -0.62)	sustained	0.45 (0.22-0.95)	Sustained	0.15 (0.04 – 0.55)	Sustained
Under five deaths, per 10,000 per day (retrospective for 90 days)	0.32 (0.08 – 1.38)	Sustained	0.61 (0.23-1.61)	Sustained	0.32 (0.06 – 1.79)	Sustained

Morbidity	31.0 (24.0 -38.0)		33.5 24.9-42.3)		30.1	
Boys	29.5 (22.1 – 36.8)	Improved	34.3 (24.4-44.2)	Deteriorated	27.6	Improved
Girls	32.7 (24.6 – 40.8)		32.8 (23.6-42.0)		32.7	
Diarrhoea	6.1 (2.3 – 9.8)		7.2 (4.7-9.7)		6.3	
Boys	6.0 (0.8 – 11.2)	Improved	7.0 (4.2-9.7)	Improved	6.3	Improved
Girls	6.1 (3.2 – 9.1)		7.3 (4.0-10.7)		6.2	
Pneumonia	12.5 (7.7 – 17.3)		14.1 (7.1-21.1)		8.0	
Boys	12.3 (7.3 – 17.4)	Sustained	15.8 (7.5-24.0)	Deteriorated	6.3	Sustained
Girls	12.7 (7.1 – 18.3)		12.4 (6.0-19.0)		9.9	
Fever	22.5 (16.6 – 28.3)		20.1 (14.9 – 25.3)		25.3	
Boys	21.2 (15.2 – 27.3)	Improved	19.0 (12.5- 25.5)	Deteriorated	23.6	Improved
Girls	24.0 (17.1 – 30.8)		21.3 (15.4 – 27.1)		27.2	
Measles	7.8 (2.7 – 12.8)		2.7 (1.0-4.5)		3.0	
Boys	7.9 (2.8 – 13.0)	Deteriorated	2.0 (0.8-0.3)	sustained	0.6	Sustained
Girls	7.6 (1.6 – 13.6)		3.5 (0.9-6.1)		4.6	
Vitamin A Supplementation	64.7 (52.6 – 76.8)		65.7 (54.5-76.9)		38.2	
Boys	66.6 (53.0 – 80.2)	Deteriorated	66.5 (55.7-77.4)	sustained	36.8	Improved
Girls	62.5 (50.0 – 75.0)		64.9 (54.5-76.9)		39.8	
Measles Vaccination	64.0 (52.3 – 75.7)		62.0 (50.5-73.0)		37.8	
Boys	64.7 (51.8 – 77.6)	Deteriorated	62.1 (5.6-50.5)	Sustained	36.2	Improved
Girls	63.2 (50.6 – 75.8)		61.1 (50.0-73.0)		39.5	
Polio Immunization	72.2 (60.5 – 84.0)		92.3 (89.3-95.3)		92.5	
Boys	73.3 (60.3 – 86.2)	Deteriorated	92.3 (89.2-95.3)	Sustained	93.6	Improved
Girls	71.0 (58.8 – 83.2)		92.0(89.3-95.3)		91.3	
Infant and Young Child Feeding (6-24 Months)						
Proportion still breastfeeding	36.3 (31.0 – 42.3)		32.9 (30.0-40.0)		38.4	
Boys	40.0 (32.5 – 47.4)	Deteriorated	30.4 (19.7-41.2)	sustained	42.0	Dteriorated
Girls	33.6 (24.0 – 43.2)		35.4 (24.5-46.3)		33.9	
Continued breastfeeding up to 12 months	30.6 (16.8 – 44.3)	Deteriorated	28.2 (13.0-43.4)	Deteriorated	25.0	Deteriorated
Continued breastfeeding up to 24 months	5.7 (0 – 13.7)	Improved	5.7 (0.3-11.9)	Deteriorated	10.0	Deteriorated
Proportion meeting recommended feeding frequencies	90.0 (84.7 – 95.2)		71.6 (62.3-81.0)		85.7	
Boys	83.5 (74.5 – 92.5)	Sustained	72.3 (60.0-85.0)	Deteriorated	86.0	Improved
Girls	95.6 (91.4 -99.7)		70.9 (61.8-80)		85.4	
Proportion who reported to have consumed ≥4 food groups	0.6 (0 – 2.2)		2.3 (-0.3-4.9)		4.8	
Boys	0.0	Deteriorated	3.1 (-1.2-7.5)	deteriorated	5.9	Deteriorated
Girls	1.8 (0 – 4.2)		1.5 (-1.5-4.7)		3.5	
Maternal Nutrition and Immunization Status						
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	10.4 (5.7 – 15.1)	Deteriorated	16.0 (8.0-24.2)	Deteriorated	17.8	Deteriorated
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	25.3 (17.9 – 32.7)	Deteriorated	32.0 (22.0-43.0)	Deteriorated	54.8	Deteriorated
Proportion of Women who received Tetanus immunization						
No dose	32.8 (21.9 – 43.7)	Deteriorated	23.7 (17.1-30.3)	Deteriorated	41.5	Deteriorated
One dose	17.8 (11.7 – 24.0)		14.0 (8.8-19.2)		11.5	
Two doses	27.5 (19.9 – 35.1)		29.5 (22.2-36.9)		18.1	
Three doses	21.7 (14.0 – 29.3)		32.6 (24.8-40.4)		28.7	
Public Health Indicators						
Household with access to sanitation facilities	68.8 (56.5 – 81.0	Sustained	77.3 (65.3-89.3)	Improved	91.6	Improved

Household with access to safe water	30.9 (14.0 – 47.8)	Deteriorated	41.0 (21.0-61.0)	deteriorated	98.1	Sustained
Proportion who reported to have consumed <4 food groups	96.6 (92.8 – 100.0)	Sustained	98.4	Sustained	100.0	Sustained
Household's Main Food Source- Purchase	89.1 (81.3 -96.8)	Deteriorated	94.3 (89.3 – 99.2)	Sustained	65.6	Deteriorated
Mean CSI	16.7		12.8		28.4	
OVERALL NUTRITION SITUATION	Alert		Critical		Critical	

Table 25: Summary of Key Nutrition Findings in Central Rural Livelihoods - Gu 2014

	Cowpea Belt		**Coastal Central**	
	Clusters :26 **(N=: 814 Boys=; 404 Girls= 410)**		**Clusters : 26** **(N= 760: Boys= 384; Girls= 376)**	
Indicator	**Percent (CI)**	**Change from Deyr 2013**	**Percent (CI)**	**Change from Deyr 2013**
Child Nutrition Status				
Oedema	0.6		1.6	
Proportion with MUAC<12.5 cm or oedema) Boys Girls	9.7 (7.9 – 11.9) 8.4 (61. – 11.5) 11.0 (8.3 – 14.4)	Deteriorated	10.0 (6.9 – 14.3) 9.1 (6.1 – 13.5) 10.9 (7.1 – 16.3)	Deteriorated
Proportion with MUAC<11.5 cm or oedema Boys Girls	2.5 (1.6 – 3.8) 1.7 (0.8 – 3.5) 3.2 (1.9 – 5.3)	Deteriorated	4.9 (2.8 – 8.4) 4.7 (2.5 – 8.5) 5.1 (2.6 – 9.7)	Deteriorated
Death Rates				
Crude deaths, per 10,000 per day (retrospective for 90 days)	0.59 (0.31-1.11)	Deteriorated	0.66	Deteriorated
Under five deaths, per 10,000 per day (retrospective for 90 days)	1.05 (0.44 – 2.50)	Deteriorated	1.93	Deteriorated
Morbidity Boys Girls	15.9 (10.9 – 20.9) 15.7 (10.2 – 21.2) 16.0 (10.6 – 21.5)	Deteriorated	14.7 (10.1 – 19.3) 14.9 (9.5 – 20.2) 14.5 (9.5 – 19.5)	Improved
Diarrhoea Boys Girls	2.2 (0 – 4.4) 2.2 (0 – 4.6) 2.2 (0 – 4.5)	Deteriorated	3.9 (1.1 – 6.8) 3.6 (0.7 – 6.5) 4.3 (0.6 – 7.9)	Deteriorated
Pneumonia Boys Girls	2.9 (0.6 – 5.2) 2.9 (0.8 – 5.0) 2.9 (0 – 5.9)	Deteriorated	5.2 (2.3 – 8.2) 5.9 (2.0 – 9.8) 4.5 (1.4 – 7.7)	Deteriorated
Fever Boys Girls	6.0 (3.8 – 8.2) 6.4 (3.4 – 9.3) 5.6 (2.8 – 8.4)	Deteriorated	6.7 (4.9 – 8.5) 6.4 (4.0 – 8.9) 7.0 (4.5 – 9.5))	Deteriorated
Measles Boys Girls	5.9 (3.5 – 8.2) 5.4 (2.5 – 8.3) 6.4 (3.4 – 9.3)	Deteriorated	2.2 (0.2 – 4.3) 1.8 (0.2 – 3.3) 2.6 (0 – 6.0)	Deteriorated
Vitamin A Supplementation Boys Girls	40.7 (26.0 – 55.4) 39.2 (24.4 – 53.9) 42.3 (27.2 – 57.3)	Improved	39.2 (29.1 – 49.2) 41.1 (30.8 – 51.4) 37.1 (26.5 – 47.7)	Sustained
Measles Vaccination Boys Girls	18.1 (10.7 – 25.5) 15.5 (8.5 – 22.6) 20.6 (12.6 – 28.7)	Improved	12.9 (4.5 – 21.4) 13.3 (5.7 – 20.9) 12.6 (2.9 – 22.3)	Deteriorated
Polio Immunization Boys Girls	43.2 (29.4 – 57.1) 41.9 (28.1 – 55.6) 44.6 (30.3 – 58.9)	Sustained	41.0 (31.7 – 50.2) 42.8 (33.3 – 52.4) 39.0 (29.1 – 49.0)	Deteriorated
Maternal Nutrition and Immunization Status				
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	32.0 (20.6 – 43.4)	Deteriorated	19.5 (11.1 – 27.8)	Improved
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	44.2 (33.5 – 54.9)	Deteriorated	32.0 (23.0 – 41.0)	Deteriorated
OVERALL NUTRITION SITUATION	Serious		Serious	

Table 26: Summary of Key Nutrition Findings in Central Urban Areas - Gu 2014

	Galgaduud urban	Mudug urban
	Clusters :25 (N= 699; Boys=371; Girls=328)	Clusters: 25 (N= 604 :Boys= 304 ;Girls= 300)
Indicator	**Percent (CI)**	**Percent (CI)**
Child Nutrition Status		
Global Acute Malnutrition (WHZ<-2 or oedema)	9.9 (7.1-13.5)	9.9 (7.5 – 13.1)
Boys	9.7 (6.4-14.5)	10.2 (7.7 – 13.4)
Girls	10.1 (7.2-13.9)	9.7 (6.0 – 15.2)
Severe Acute Malnutrition (WHZ<-3 or oedema)	1.3(0.6- 2.7	2.2 (1.1 – 4.1)
Boys	1.6(0.6- 4.0)	2.0 (0.8 – 4.8)
Girls	0.9 (0.3- 2.9)	2.3 (1.0 – 5.2)
Mean of Weight for Height Z Scores	Mean ± SD =-0.53 ± 1.10	-0.69±1.03
Oedema	0.6%	0.3
Proportion with MUAC<12.5 cm or oedema)	4.1(2.4- 6.7)	6.1(3.9 – 9.5)
Boys	3.9(2.0- 7.5)	3.8 (1.8 – 7.9)
Girls	4.2 (2.1- 8.2))	8.4 (5.4 – 13.0)
Proportion with MUAC<11.5 cm or oedema	0.8(0.4- 1.8)	2.6 (1.2 – 5.3)
Boys	1.0 (0.4- 2.8)	2.2 (1.0 – 4.9)
Girls	0.6(0.1- 2.5))	2.9 (1.2 – 6.8)
Stunting (HAZ<-2)	8.5(5.9-12.1)	11.5 (8.6 – 15.3)
Boys	10.7(7.0-16.0)	11.7 (7.9 – 16.9)
Girls	5.9(4.0- 8.7)	11.4 (7.8 – 16.3)
Severe Stunting (HAZ<-3)	1.2 (0.6- 2.1)	2.8 (1.9 – 4.1)
Boys	1.1 (0. 4- 2.7)	3.2 (1.8 – 5.8)
Girls	1.2 (0.5 - 3.1)	2.3 (1.2 – 4.5)
Underweight (WAZ<-2)	10.4(7.9-13.4)	11.4 (8.1 – 15.8)
Boys	11.2(7.9-15.7)	11.7 (8.2 – 16.4)
Girls	9.4 (6.8-12.8)	11.1 (6.8 – 17.8)
Morbidity	10.64(3.56-17.7)	
Boys	10.2(2.59-17.8)	N/A
Girls	11.3(3.22-19.3)	
Diarrhoea	1.4(-0.41-3.21)	
Boys	0.49(-0.61-1.58)	N/A
Girls	2.65(-0.61-5.91)	
Pneumonia	1.12(-0.17-2.4)	
Boys	1.94(-0.26-4.15)	N/A
Girls	0.00(00-00)	
Fever	7.28(2.84-11.73)	
Boys	5.83(2.49-9.2)	N/A
Girls	9.27(2.22-16.3)	
Measles	2.8(-3.04-8.65)	
Boys	2.9(-3.15-8.98)	N/A
Girls	2.64(-2.92-8.22)	
OVERALL NUTRITION SITUATION	Alert	Alert

4.4 SOUTH REGIONS

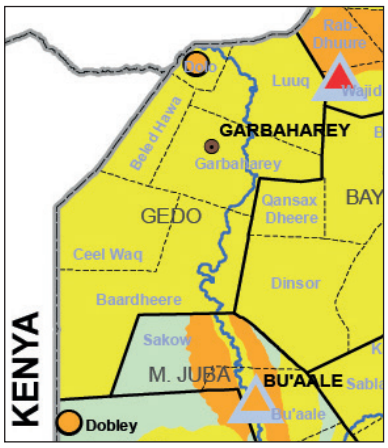
Nutrition status of 15 554 children (6-59 month) from 15 rural livelihoods and five IDPs were assessesd during the *Gu* 2014 surveys. Because of constraints in access, nutrition situation in agropastorals and riverine livelihoods of South Gedo and Juba and the Cowpea Belt were assessed through MUAC surveys.

4.4.1 GEDO REGION

In Post Gu 2014, FSNAU conducted seven nutrition surveys in Gedo region (4 comprehensive SMART survey-1 in Dolow IDPs and 3 in North Gedo rural livelihoods) and 3 rapid MUAC surveys. During the survey the nutrition status of 5 185 children aged 6-59 months from 2 908 household were assessed.

There are three types of livelihoods in Gedo: pastoral, agropastoral and riverine. The food security situation has deteriorated since Deyr 2013/2014 in Dawo Pastoral and Southern Agropastoral livelihoods, but remained stable in other rural livelihood zones (Gedo Agropastoral High Potential, Juba Pump Irrigated Riverine and Southern Inland Pastoral) of the region. In the Post Gu 2014 (July), the food security situation in all livelihoods of the region was classified as Stressed (IPC Phase 2). In the most likely scenario, the area classification is expected to remain the same in all livelihood zones during August-December 2014.

Map 11: Food Security Situation in Gedo Regions - Gu 2014



Urban areas in Gedo region were classified as Stressed (IPC Phase 2) in the Post Gu 2014 (July) period and are projected to remain Stressed during August-December 2014. Internally Displaced Persons (IDPs) in Dollo were in Crisis (IPC Phase 3) in the Post Gu 2014 (July) period and are projected to remain in Crisis during August-December 2014.

For further details on analysis of the food security situation in Gedo region, please see sections 4.1, 4.2 and 4.3.1 of the Food Security and Nutrition Analysis Post Gu 2014 Technical Series Report No VII. 56 at www.fsnau.org

Current Nutrition Situation Post *Gu* 2014

The results of post *Gu* 2014 assessment are shown in Table 27 and 28, and key highlights are summarized below:

NORTH GEDO REGION

Acute Malnutrition

A GAM rate of 20.7 and 19.3 percent and SAM rate of 1.0 and 3.1 percent respectively was recorded among North Gedo pastoral and riverine livelihood communities indicating a **Critical** nutrition situation which is a deterioration when compared with **Serious** levels (GAM rate of 14.1% and 13.6 %) recorded in *Deyr* 2013/14. When compared with *Gu* 2013, the **Critical** nutrition situation is sustained (GAM rate of 18.8 and 15.2 %). In Gedo Agro-pastoral communities **Serious** levels of GAM (14.9%) and **Acceptable** levels of SAM (1%) were recorded in *Gu* 2014 which suggest a **sustained Serious** situation since *Deyr* 2013/14 (12.1 % GAM), or an improvement compared to *Gu* 2013 (18.6% GAM).

Morbidity

In Gu 2014, high levels of morbidity were recorded among North Gedo Pastoral (39.8%), Agro-pastoral (40.1%) and Riverine livelihood (32.1%) communities. This indicates that at least two out of every five children was ill two weeks prior to the assessment.

Mortality

Gu 2014 results show **Acceptable** levels of CDR among Gedo Pastoral livelihood (0.5), which is an improvement since Deyr 2013/14 but sustained since *Gu* 2013. The Agro-pastoral and Riverine livelihood communities show sustained **Serious** levels of CDR (0.8 and 0.7 respectively) since Deyr 2013/14 and *Gu* 2013.

An improvement in U5DR to **Alert** levels were noted among Pastoral (0.9) and Riverine (0.9) livelihood in *Gu* 2014 compared to Deyr 2013/14, but it is a deterioration when compared to *Gu* 2013 (0.16 and 0.3 for Pastoral and Riverine respectively). However, **Serious** levels of U5DR was seen among the Agro-pastoral livelihood communities (0.8), which are sustained since *Deyr* 2013/14 or *Gu* 2014.

Chronic Malnutrition-Stunting

Gu 2014 results show sustained low levels of Stunting prevalence among Gedo pastoral (4.2%) and Agro-pastoral rural livelihoods (19.8%) since *Deyr* 2013/14 or *Gu* 2013. However moderate levels of stunting (21.4%) was noted among the Riverine communities in *Gu* 2014, which is a deterioration from low levels of stunting prevalence reported in *Deyr* 2013/14 or *Gu* 2014.

Underweight

Medium level of underweight prevalence was observed among North Gedo pastoral livelihood (10.2 %) which deteriorated in *Deyr* 2013/14 (8.3) and sustained since *Gu* 2013 (18.2). Medium prevalence of underweight (13.5%) was seen in Agro-pastoral livelihood, which is sustained since *Deyr* 2013/14 or *Gu* 2013 (16.4 %). Riverine communities show a medium levels of stunting prevalence (21.4 %) which is a deterioration since *Deyr* 2013/14 (10.4%) or *Gu* 2013 (16.4%)

Immunization

Low levels of Vitamin A supplementation and Measles vaccination coverage are recorded in North Gedo among the Pastoral, Agro-pastoral and Riverine communities (< 60%) which is far below the SPHERE recommended coverage of 95 percent. Polio immunization is also below 95 percent recommended by SPHERE.

Maternal Malnutrition

Very Critical levels of maternal malnutrition (>31.5 %) were noted among the pregnant and lactating women in North Gedo Pastoral, Agro-pastoral and Riverine livelihood communities

DOLLOW IDP

The comprehensive nutrition assessment conducted in Dolow IDPs indicates sustained **Critical** levels of acute malnutrition (GAM >15 since *Deyr* 2013/14 or *Gu* 2013 (Table 28).

Mortality

Gu 2014 results for Dolow IDPs show sustained Serious levels of CDR (0.7) since *Deyr* 2013/14 (0.76) or *Gu* 2013 (0.75).

Morbidity

The highest morbidity rate in Gedo region was recorded among the Dolow IDPs (43.3%) , which linked to low immunization rate because of limited health services available in the IDPs and poor access to safe water/ sanitation.

Chronic malnutrition – Stunting

Moderate levels of stunting (26.9%) was recorded among the children in Dolow IDPs in *Gu* 2014 which is sustained since *Deyr* 2013/14 (27.1%) and an improvement from high levels of stunting seen in *Gu* 2013 (37.1%).

Underweight

High levels of underweight prevalence (26.4%) was recorded in Dolow IDPs in *Gu* 2014 which is sustained since *Deyr* 2013/14 (28.5%) or *Gu* 2013 (30.4%).

Immunization

Dolow IDPs record a low levels of vitamin A supplementation (56.4%), and Measles vaccination (71.7%) though coverage for Polio immunization was high (94%).

Maternal malnutrition

Prevalence of **Serious** levels of maternal malnutrition (25.3%) was observed among pregnant/lactating women in Dolow IDPs.

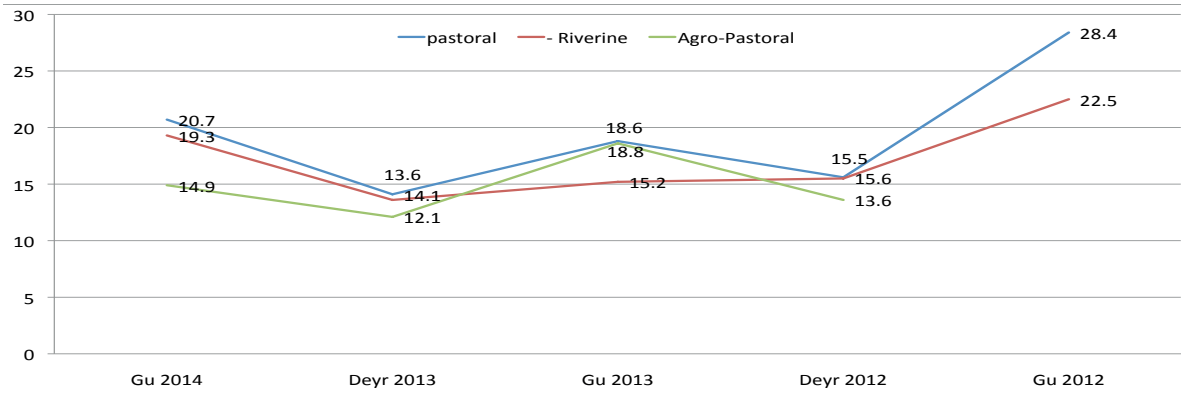
SOUTH GEDO

MUAC assessment conducted in South Gedo livelihood show **Very Critical** (>16.7%) levels prevalence of acute malnutrition as among the Gedo pastorals and the Riverine communities. When compared with *Deyr* 2013/14, pastoral areas show deterioration in nutrition situation from critical while Riverine communities are sustained as **Very Critical**. The Agro-pastoral livelihoods show Critical levels of malnutrition (15.6%) since Gu 2013, which is an improvement from very critical levels recorded in *Deyr* 2013/14 (Table 27).

GAM trend in North Gedo Region

The nutrition trend in Gedo region shows lower GAM prevalence during *Deyr* compared to Gu season in all the livelihoods. Highest GAM rate was recorded in *Gu* 2012 which indicated a **Critica**l nutrition situation among Pastoral (28%) and Riverine (22.5%) communities. Prevalence of acute malnutrition improved in all livelihoods to **Serious** levels till *Deyr* 2013/14 but reversal of this trend /increase in GAM is noted in *Gu* 2014 (Figure 34)

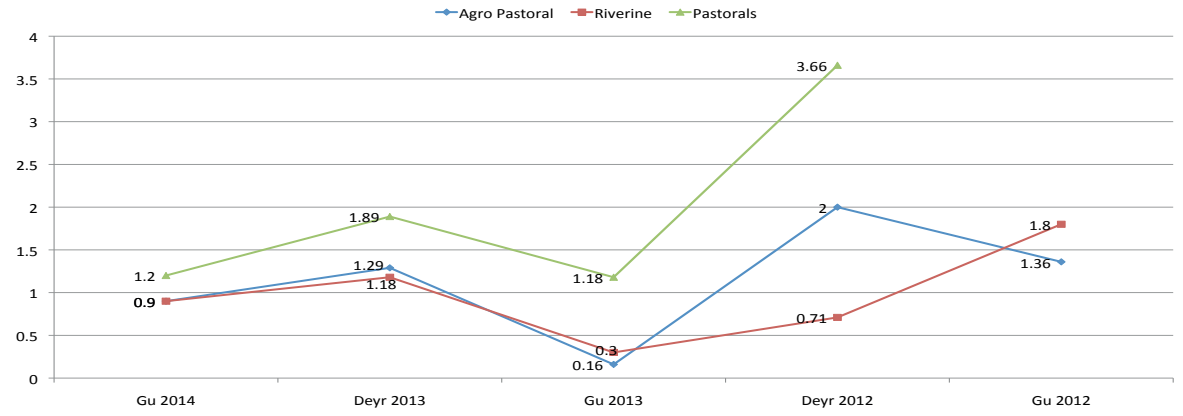
Figure 34: GAM (WHZ) Trends in Gedo Region- Gu 2014



Mortality

In *Gu* 2012, one year after the *Gu* 2011 famine, **Serious** levels of U5DR in Pastoral (1.36) and Riverine (1.8) communities were recorded; an increase in U5DR was noted during *Deyr* 2013 in all livelihoods in the North Gedo region. However in *Gu* 2014, improvement in the U5DR is noted in all the livelihoods due to ongoing humanitarian interventions in the region: SFP/OTP (Figure 35).

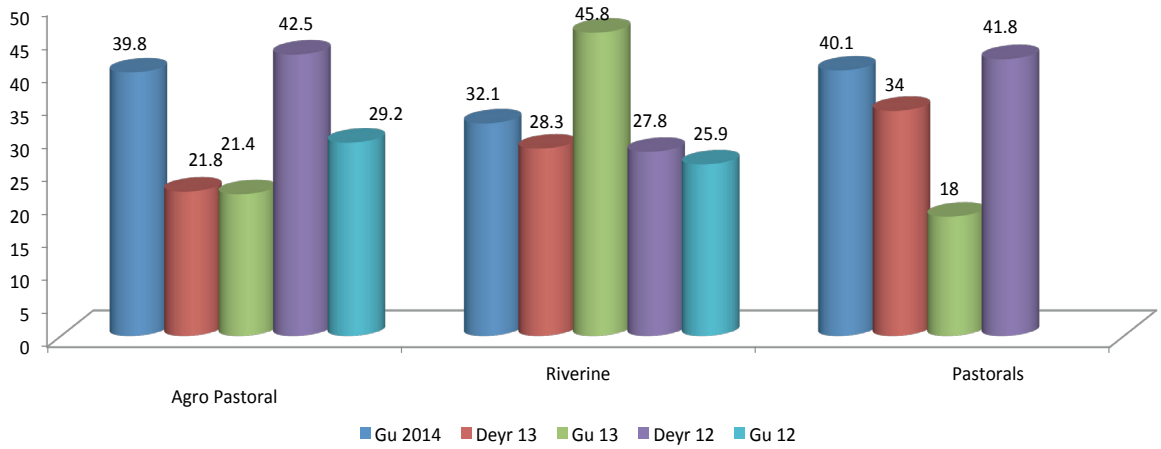
Figure 35: U5DR Trends in North Gedo Region - Gu 2014



Morbidity Trends

High morbidity rates are seen in all livelihoods in Gedo region since Gu 2012. Among Pastoral and Agropastral livelihoods, the current morbidity rate (approximately 40%) appears to be responsible for sustained high prevalence of acute malnutrition observed in the region. These highly persistent morbidity rates are mainly linked to limited availability of health services in the region and poor access to WASH. Additionally there are recurring disease outbreaks in the region, making Gedo region livelihood communities more vulnerable to malnutrition (Figure 36).

Figure 36: Trends in Morbidity in North Gedo Region

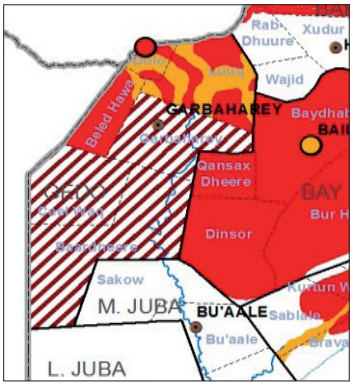


Change in Nutrition Situation

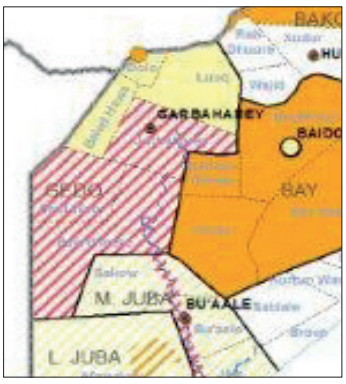
Figure 37 shows the change in nutrition situation from *Gu* 2013 to *Gu* 2014. Deterioration in the nutrition situation among the Gedo Pastoral and Riverine livelihoods from ***Serious*** to ***Critical*** levels has been noted during the last 12 months, while the Agro-pastoral livelihood communities show sustained ***Serious*** levels. The deterioration in nutrition situation Gedo Pastoral and Riverine is attributable to seasonal increase in morbidity prevalence, measles outbreak, and sub-optimal infant and young child feeding practices. Dolow IDP has shown sustained **Critical** levels of acute malnutrition for the last 12 months. The level of acute malnutrition in North Gedo has continuously deteriorated since *Deyr* 2013/14 as indicated in the progression (Figure 37).

Figure 37: Progression of the Nutrition Situation *Gu* 2013 to *Gu* 2014 in Gedo Region

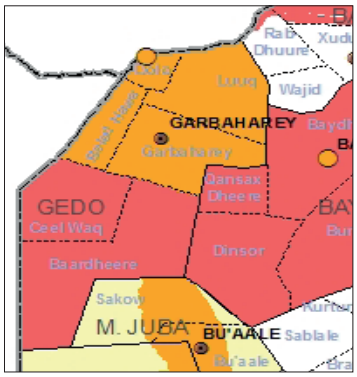
Nutrition Situation, Jul 2013



Nutrition Situation Jan 2014



Nutrition Situation, Jul 2014



CURRENT HOT SPOT FOR ACUTE MALNUTRITION IN GEDO REGION

South Gedo Livelihoods with GAM-MUAC of over 16 percent and North Gedo pastoral and Riverine livelihoods as well as Dolow IDPs with GAM-WFH over 15 percent are current host spots for acute malnutrition in Gedo Region.

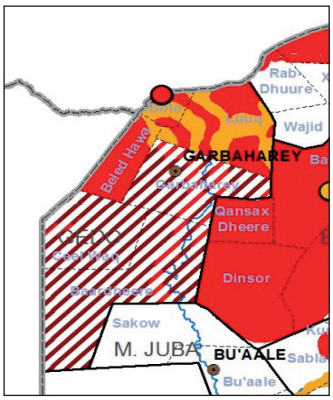
OUTLOOK FOR AUGUST- OCTOBER 2014

The **Critical** levels of acute malnutrition seen in the Gedo region are largely expected to be sustained in the coming three months with the exception of Gedo Agro-pastoral which is expected to deteriorate to **Critical** because of high morbidity rates, measles outbreak and food security factors like poor water and pasture, livestock outmigration and therefore lack of milk availability. Figure 38 shows current and projected nutrition situation across livelihoods in Gedo Region.

Figure 38: Nutrition Situation Outlook July 2014 to October 2014 in Gedo region

Current Nutrition Situation

July 2014



Projected Nutrition Situation

Aug – Oct 2014

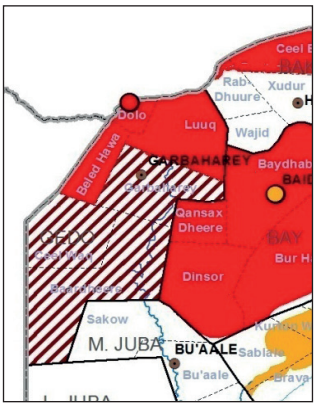


Table 27: Summary of Key Nutrition Findings Gedo Region - Gu 2014

	N GEDO AGROPASTORAL All=518: Boys=258: Girls=260			N GEDO RIVERINE All=776: Boys=401: Girls=375			N GEDO PASTORAL All=502: Boys=272: Girls=230		
Indicator	**n**	**Percent (CI)**	**Change from Deyr 2013**	**n**	**Percent (CI)**	**Change from Deyr 2013**	**n**	**Percent (CI)**	**Change from Deyr 2013**
Child Nutrition Status									
Global Acute Malnutrition (WHZ<-2 or oedema) Boys Girls	77 44 33	14.9%12.1-18.2) 17.7%(13-22.1) 12.7%(9.2-17.3)	Sustained	150 81 69	19.3(16.7-22.3) 20.2(16.6-24.4) 18.4(14.8-22.6)	Deteriorated	104 64 40	20.7 (17.4-24.5) 23.5 (18.9-28.9) 17.4 (13.0-22.8)	Deteriorated
Severe Acute Malnutrition (WHZ<-3 or oedema) Boys Girls	1 1 0	0.2(0-1.1) 0.4(0.1-2.2) 0	improved	24 14 10	3.1(2.1- 4.6) 3.5(2.1- 5.8) 2.7(1.5- 4.8)	sustained	5 3 2	1.0 (0.4- 2.3) 1.1 (0.4- 3.2) 0.9(0.2- 3.1)	improved
Mean of Weight for Height Z Scores		-0.95 ±1.03			-1.06±1.04			-0.98±1.11	
Oedema	0			0			0		
Global Acute Malnutrition (NCHS)	73	13.9(11.2-17.2)	sustained	150	19.2(16.6-22.1)	sustained	102	20.4 (17.1-24.1)	sustained
Severe Acute Malnutrition (NCHS)	0			16	2.1(1.3-3.3)	sustained	1	0.2 (0.0- 1.1)	sustained
Proportion with MUAC<12.5 cm or oedema) Boys Girls	108 60 48	20.3 (17.1-23.9 22.5((17.927.8) 18(13.9-23.1)	sustained	77 37 40	9.7(7.9-12.0) 9(6.6-12.2) 10.5(7.8-13.9)	sustained	106 63 43	21.1(17.8-24.9) 23.2 (18.5-28.5) 18.7 (14.2-24.2)	
Proportion with MUAC<11.5 cm or oedema Boys Girls	12 7 5	2.3 (1.3- 3.9) 2.6(1.3- 5.3) 1.9((0.8- 4.3)		18 8 10	2.3(1.4- 3.6) 2.0(1.0- 3.8) 2.6(1.4- 4.8)		18 11 7	3.6(2.3- 5.6) 4.0 (2.3- 7.1) 3.0 (1.5- 6.1)	sustained
Stunting (HAZ<-2) Boys Girls	101 51 51	19.8((16.6-23.5) 20.2((15.7-25.5) 19.5((15.1-24.8)	sustained	160 88 72	21.4 (18.7-24.5) 22.9 (19.0-27.4) 19.9 (16.1-24.3)	sustained	21 14 7	4.2 (2.8- 6.3) 5.1 (3.1- 8.5) 3.0% (1.5- 6.1)	sustained
Severe Stunting (HAZ<-3) Boys Girls	35 15 20	6.9(5.0- 9.4) 5.9(3.6- 9.6) 7.8 (5.1-11.8)	sustained	43 31 12	5.8 (4.3- 7.7) 8.1 (5.7-11.2) 3.3 (1.9- 5.7)	sustained	3 3 0	0.6 (0.2- 1.7) 1.1 (0.4- 3.2) 0.0 (0.0- 1.6)	sustained
Underweight (WAZ<-2) Boys Girls	72 40 32	13.5(10.9-16.7) 15.0(11.2-19.8) 12.1(8.7-16.5)		168 96 72	21.4 (18.7-24.4) 23.6(19.8-28.0) 18.9(15.3-23.2)	sustained	51 33 18	10.2 (7.8-13.1) 12.1 (8.8-16.5) 7.8(5.0-12.0)	sustained
Child Morbidity & Immunization									
Morbidity Boys Girls	214 97 117	40.15(30.4-49.9) 36.3(27-45.7) 44(32.4-55.6)	sustained	334 175 159	42.2(35.4-48.9) 42.7(34.7-50.6) 41.6(34.7-48.5)	sustained	202 103 99	39.8(30.4-49.3) 37.6(28.4-46.8) 42.5(30-55)	sustained

Diarrhoea	64	12(6.8-17.2)		95	12(8-16)		45	8.8(5-12.7)	
Boys	32	12(5.7-18.3)	sustained	56	13.7(9.4-18)	sustained	27	9.9(5.2-14.5)	sustained
Girls	32	12(6-18.1)		39	10.2(5.5-14.9)		18	7.7(2-13.5)	
Pneumonia	58	10.9(6-15.8)		89	11.2(6.9-15.6)		46	9.1(5.2-12.9)	
Boys	27	10.1(5-15.2)	sustained	51	12.4(7.3-17.6)	sustained	23	8.4(4.4-12.4)	sustained
Girls	31	11.7(5.9-17.4)		38	9.9(5.4-14.5)		23	9.9(4.8-14.9)	
Fever	137	25.7(17.8-33.6)		214	27(21.7-323-.3)		144	28.4(19.7-37.1)	
Boys	59	22.1(15.1-29.1)	sustained	103	25.1(18.4-31.8)	sustained	72	26.3(17.8-34.8)	sustained
Girls	78	29.3(19.8-38.9)		111	29.1(23.3-34.8)		72	30.9(20.1-41.7)	
Measles	0	0		1	0.1(-0.1-0.4)		0	0	
Boys	0	0	sustained	0	0	sustained	0	0	sustained
Girls	0	0		1	0.3(-0.3-0.8)		0	0	
Vitamin A Supplementation	191	35.8((19.5-52.2)		483	61(45.5-76.5)		264	52.1(34-70.1)	
Boys	99	37.1(20.3-53.9)	sustained	246	60(44-76)	sustained	134	48.9(30.2-67.6)	sustained
Girls	92	34.6(17.6-51.6)		237	62(46.1-78)		130	55.8(37.8-73.8)	
Measles Vaccination	224	42(26.9-57.2)		480	60.6(46.6-74.6)		263	51.9(35.6-68.2)	
Boys	116	43.4(27.1-59.8)	sustained	241	58.8(43.5-74)	sustained	132	48.2(32-64.4)	sustained
Girls	108	40.6(25.3-55.9)		239	62.6(49-76.2)		131	56.2(39.3-73.2)	
Polio Immunization	482	90.4(82.3-98.5)		746	94.2(91.2-97.2)		438	86.4(76.2-96.6)	
Boys	244	91.4(83.4-99.3)	sustained	385	93.9(90.2-97.6)	sustained	236	86.1(75.2-97.1)	sustained
Girls	238	89.5(79.9-99.1)		361	94.5(91.7-97.3)		202	86.7(77-96.4)	
Death Rates									
Crude deaths, per 10,000 per day (retrospective for 90 days)		0.78(0.46-1.32)	sustained		0.66(0.39-1.10)	sustained		0.54(0.30- o.97)	
Under five deaths, per 10,000 per day (retrospective for 90 days)		1.15(0.42-3.16)	sustained		0.86(0.3-2.45)	sustained		0.94(0.33-2.65)	sustained
Women Nutrition and Immunization Status									
Proportion of acutely malnourished non pregnant/lactating women (MUAC <18.5 cm)	1	0.3(-0.4-1.1)	sustained	0	0 sustained		1	0.5(-0.5-1.4)	sustained
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	21	7.3(3.4-11.2)	sustained	28	8.9(6-11.9)	sustained	18	8.2(3.8-12.6)	sustained
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	111	38.7(0-25.3-52.1)	sustained	162	51.8(43-60.5)	sustained	66	30(21.3-38.7)	sustained
OVERALL NUTRITION SITUATION		Serious			Critical			Critical	

Table 28: Summary of Key Nutrition Findings: Dolow IDPS Gedo Region - Gu 2014

Dolow IDPs (N=664; Boys=339; Girls=325)			
Indicator	**n**	**Percent**	**Change from Deyr 2013**
Child Nutrition Status			
Global Acute Malnutrition (WHZ<-2 or oedema)	125	18.8	
Boys	69	20.4	Sustained
Girls	56	17.2	
Severe Acute Malnutrition (WHZ<-3 or oedema)	27	4.1	
Boys	20	5.9	Sustained
Girls	7	2.2	
Mean of Weight for Height Z Scores	-1.08±1.05		
Oedema	4	0.6	
Proportion with MUAC<12.5 cm)	73	10.9	
Boys	43	12.5	Sustained
Girls	30	9.2	
Proportion with MUAC<11.5 cm)	14	2.1	
Boys	9	2.6	
Girls	5	1.5	
Stunting (HAZ<-2)	163	26.9	
Boys	92	30.2	Sustained
Girls	71	23.5	
Severe Stunting (HAZ<-3)	57	9.4	
Boys	32	10.5	Sustained
Girls	25	8.3	
Underweight (WAZ<-2)	174	26.4	
Boys	105	31.4	Sustained
Girls	69	21.2	
Death Rates			
Crude deaths, per 10,000 per day (retrospective for 90 days)	24	0.7	sustained
Under five deaths, per 10,000 per day (retrospective for 90 days)	9	1.24	sustained
Morbidity	302	43.3	
Boys	161	53.3	sustained
Girls	141	46.7	
Diarrhoea	83	11.9	
Boys	50	60.2	sustained
Girls	33	39.8	

Pneumonia Boys Girls	137 71 66	19.6 51.8 9.5	sustained
Fever Boys Girls	206 106 100	29.5 51.5 48.5	sustained
Measles Boys Girls	43 26 17	6.2 60.5 39.5	sustained
Vitamin A Supplementation Boys Girls	394 205 189	56.4 52 48	sustained
Measles Vaccination Boys Girls	501 265 236	71.7 52.9 47.1	sustained
Polio Immunization Boys Girls	660 341 319	94 51.7 48.3	sustained
Infant and Young Child Feeding (6-24 Months)			
Proportion still breastfeeding Boys Girls	135 75 60	19.4 55.6 44.4	sustained
Continued breastfeeding up to 12 months Boys Girls	100 51 49	14.4 51% 49	sustained
Continued breastfeeding up to 24 months Boys Girls	132 73 59	19 55.3 44.7	sustained
Proportion meeting recommended feeding frequencies	48	35.8	sustained
Proportion who reported to have consumed ≥4 food groups	12	1.5	
Women Nutrition and Immunization Status			
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	16	4.1	sustained
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	73	18.6	sustained
Proportion of Women who received Tetanus immunization No dose One dose Two doses Three doses	312 84 69 55 188	78.8 26.9 22.1 17.6 60.2	sustained
Public Health Indicators			
Household with access to sanitation facilities	196	47.8	sustained
Household with access to safe water	153	37.3	
Proportion who reported to have consumed <4 food groups	238	58	sustained
Household's Main Food Source- Purchase	208	50.7	
Mean CSI	212	48.3	sustained
OVERALL NUTRITION SITUATION	Critical		

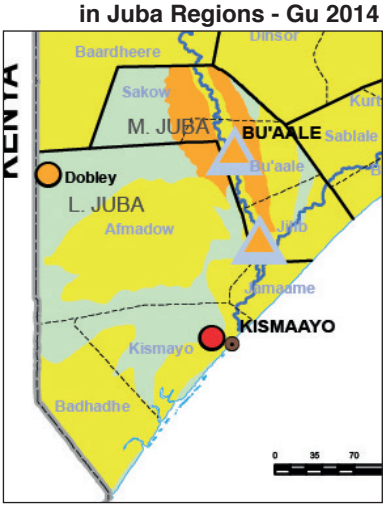
4.4.2: MIDDLE AND LOWER JUBA REGIONS

Three comprehensive SMART nutrition surveys were conducted in Juba region. These surveys assessed the nutrition status of 2 698 children aged 6-59 months old from 1 607 households.

LOWER AND MIDDLE JUBA REGIONS

In July 2014, the riverine and agropastoral livelihoods of both regions were classified as Stressed (IPC Phase 2), with the exception of sorghum-producing agropastoral livelihood, which remained in Crisis (IPC Phase 3) as in the post-Deyr 2013/2014. The situation remained stable since the post-Deyr 2013/14 in pastoral livelihoods, with Southeast Pastoral (cattle pastoralists) in Stressed (IPC Phase 2) and Southern Inland Pastoral (camel pastoralists) in Minimal (IPC Phase 1) acute food insecurity phases. In the most likely scenario, the area classifications remain the same for all the livelihoods in the projection period (August-December 2014).

Map 12: Food Security Situation in Juba Regions - Gu 2014



Kismay town in Lower Juba region was in Crisis (IPC Phase 3) in the Post Gu 2014 (July) period and is projected to remain in Crisis during August-December 2014. Internally Displaced Persons (IDPs) in Kismayo (Lower Juba) were in Emergency (IPC Phase 4) in the Post *Gu* 2014 (July) period and are projected to improved in relative terms to Crisis (IPC Phase 3) during August-December 2014.

For further details on analysis of the food security situation in Lower and Middle Juba regions, please see sections 4.1, 4.2 and 4.3.2 of the Food Security and Nutrition Analysis Post Gu 2014 Technical Series Report No VII. 56 at www.fsnau.org

Current Nutrition Situation Post *Gu*' 2014

The results of *Gu* 2014 assessment are shown in Table 29 and 30 and key highlights are summarized below:

Acute Malnutrition

DHOBLEY IDPs

The comprehensive nutrition assessment conducted in Dhobley IDPs record **Critical** levels of GAM (>15%), which are **Sustained Critical** since *Deyr* 2013/14 or Gu'13.

Serious levels of SAM prevalence (>2.4%) were also recorded in Dhobley IDPs in *Gu* 2014, an improvement since *Deyr* 2013/14 or *Gu* 2013 (Annex 6.3).

Mortality

In *Gu* 2012, ***Alert*** levels of CDR (0.5)and U5MR(0.9) were seen in Dhobley IDPs, which hab been sustained since Deyr 2013/14, this is an improvement from **Critical** levels in *Gu* 2013 (CDR=1.53, U5DR=1.96) (Annex 6.6).

Morbidity

Morbidity rate of 24.4 percent was recorded among Dhobley IDPs, which can be attributed to low coverage with Vitamin A supplementation and measles vaccination due to limited availability of health services in the Dhobley IDPs.

Chronic malnutrition- stunting

Sustained low levels of Stunting prevalence were seen among the under five children in Dobley IDPs (10.3%) since *Deyr* 2013/14 or *Gu* 2013 (Annex 6.7).

Underweight

In *Gu* 2014 a medium prevalence of underweight was seen in Dobley IDPs (12.3%), which has been sustained since *Deyr* 2013/14 or *Gu* 2013 (Annex 6.7).

Maternal malnutrition

Serious levels of maternal malnutrition (21.3%) were recorded in *Gu* 2014 This however was an improvement compared to *Deyr* 2013/14 or *Gu* 2013 (Annex 6.9).

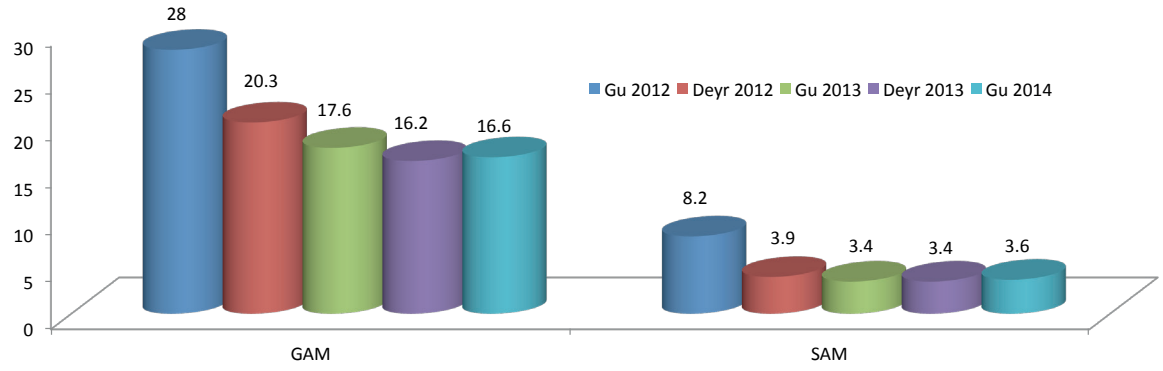
KISMAYO IDPS AND KISMAYO URBAN

In *Gu* 2014, the comprehensive nutrition assessment conducted in Kismayo IDPs recorded **Critical** levels of GAM (>15%), indicating that the nutrition situation in Kismayo IDPs is sustained as **Critical** since *Deyr* 2013/14 or *Gu* 2013. Critical GAM prevalence associated CDR >1 percent indicates the presence of humanitarian emergency situation among the Kismayo IDPs.

Trends in Acute Malnutrition in Kismayo IDPs

The nutrition trend in Kismayo IDPs shows a gradual decrease in GAM rates (28 % to 16.6%) from *Gu* 2012 to *Gu* 2014 (Figure 39). Gradual decrease in prevalance of SAM was aso noted from 8.2 percent in *Gu* 2012 to 3.6 in *Gu* 2014. This shows a sustained nutrition situation even though the GAM rates have decreased and the overall nutrition situation has remained at **Critical** levels. These high **Critical** levels of malnutrition are mainly attributed to sub-optimum feeding and care practices and recurrent disease outbreaks of mainly diarrhea and measles in Kismayo IDPs.

Figure 39: Trends in GAM and SAM among Kismayo IDPs



The **Serious** levels of SAM (>2.4%) recorded in *Gu* 2014 are suggestive of sustained **Serious** levels of SAM noted since *Deyr* 2013/14 or *Gu* 2013.

However in *Gu* 2014 Kismayo urban recorded **Serious** levels of GAM (>10%) and SAM (>2.4%), which is an improvement compared to *Gu* 2013 (GAM= 19.2 and SAM=5.2 (Annex 6.9).

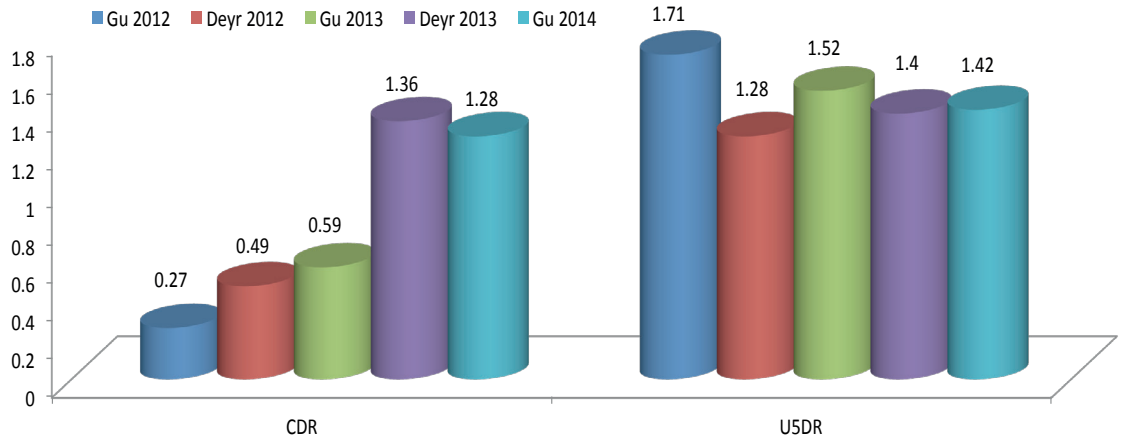
Mortality

Critical levels of CDR (1.3) were recorded among Kismayo IDPs which have been sustained since *Deyr* 2013/14 (1.4), although it is an improvement compared to *Gu* 2013 (0.6). In Kismayo IDPs **Serious** levels of U5DR (1.4) seen in *Gu* 2014, are sustained since Deyr 2013/14, or *Gu* 2013.

Mortality Trends among Kismayo IDPs

The mortality trend (Figure 40) seen in Kismayo IDPs shows a gradual increase of in CDR (from 0.27 in *Gu* 2012 to 1.28 in *Gu* 2014) suggestive of deteriorating nutrition situation in Kismayo IDPs. These highly persistent morbidity rates are mainly linked to limited availability of health services and low access to health facilities, and as well as recurrent disease outbreak in Kismayo IDPs. Serious levels of U5DR are sustained since *Gu* 2012.

Figure 40: CDR and U5DR Trends among Kismayo IDPs



Morbidity

High morbidity levels of 41.4 and 33.3 percent were seen among the children who are sick two weeks prior to the assessment, in Kismayo IDP and Kismayo urban respectively in *Gu* 2014. These figures show that there are limited health services available in both the Kismayo IDPs and Kismayo town.

Chronic malnutrition- stunting

High levels of stunting prevalence (39.9%)were recorded among the children in Kismayo IDPs in *Gu* 2014 which are sustained in *Deyr* 2013/14 (30.7%) and is an improvement from very high levels seen in *Gu* 2013 (40.1%). Low levels of stunting (19.9%) were seen in Kismayo urban, which is an improvement from very high levels seen in *Gu* 2013 (39.2%).

Underweight

A high prevalence of underweight was seen in Kismayo IDPs (32.9%) which is sustained since *Deyr* 2013/14 or *Gu* 2013. However a medium prevalence of underweight was recorded in Kismayo urban (17.2%), which is an improvement compared to *Gu* 2014 (40.3%).

Maternal malnutrition

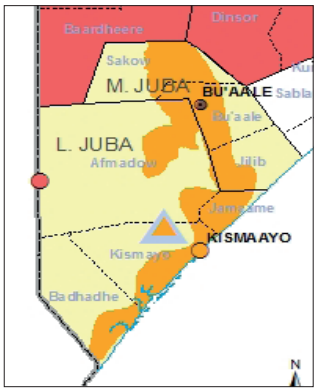
Dhobley IDP: **Serious** levels of maternal malnutrition (21.3%) were recorded in Gu 2014, which were however, an improvement compared to *Deyr* 2013/2014 or *Gu* 2013. **Serious** levels (22.8%) were also seen in Kismayo IDPs, which is also sustained **Serious** levels in *Deyr* 2013/14 or *Gu* 2014.

Change in Nutrition Situation

The maps below show the progression in the nutrition situation from *Gu* 2013 to *Gu* 2014 (Figure 41). The nutrition situation in the Dhobley and Kismayo IDP for the last twelve months (*Gu* 2013 to *Gu* 2014) is sustained as **Critical**, since *Deyr* 2013/14 or *Gu* 2013. The nutrition situation has largely been influenced by seasonal morbidity and deteriorating food security.

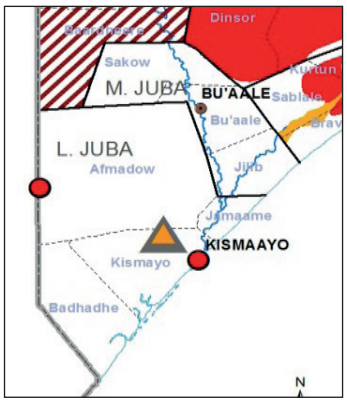
Figure 41: Progression of the Nutrition Situation *Gu* 2013 to *Gu* 2014 in Juba regions

Nutrition Situation Jul 2013



Nutrition Situation Jan 2014

Nutrition Situation Jul 2014



HOT SPOT FOR ACUTE MALNUTRITION IN JUBA SOMALIA

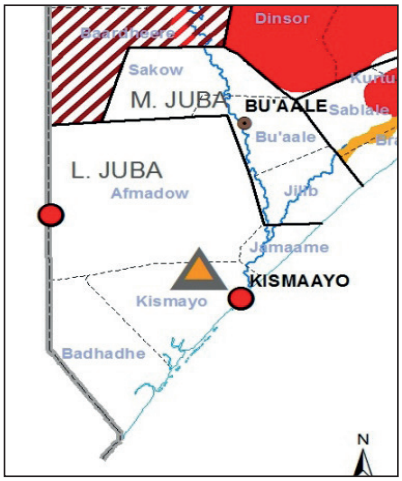
Dhobley and Kismayo IDPs with GAM rates exceeding 15 percent are the current hotspots for acute malnutrition in the Juba region. Furthermore, a humanitarian emergency situation currently exists among Kismayo IDPs as GAM > 15 percent is accompanied by CDR>1 percent.

OUTLOOK FOR AUGUST TO OCTOBER 2014

The nutrition situation in Juba region is largely expected to remain **Stable** in the coming three months. The maps below show the current and projected nutrition situation in Juba IDPs. It is projected that the nutrition situation will remain stable though **Critical** up to October 2014.

Figure 42: Projection of the Nutrition Situation July 2014 to October 2014 in Juba regions

Current Nutrition situation Jul 2014



Projected Nutrition situation Aug- Oct 2014

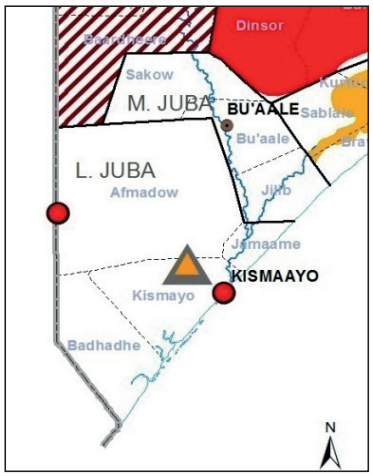


Table 29: Nutrition Findings in Juba Region IDPs - Gu 2014

	Kismayo IDPs			Dhobley IDPS		
	(N= 907; Boys=441; Girls=466)			(N=776; Boys=388; Girls=388)		
Indicator	**n**	**Percent (CI)**	**Change from Deyr 2013**	**n**	**Percent**	**Change from Deyr 2013**
Child Nutrition Status						
Global Acute Malnutrition (WHZ<-2 or oedema) Boys Girls	151 86 65	16.6(13.0-21.0) 19.5(15.0-24.9) 13.9(9.7-19.7)	Sustained	128 68 60	16.5 17.5 15.5	Sustained
Severe Acute Malnutrition (WHZ<-3 or oedema) Boys Girls	33 19 14	3.6(2.4-5.4) 4.3(2.5-7.5) 3.0(1.7-5.4)	Sustained	31 19 12	4.0 4.9 3.1	Sustained
Mean of Weight for Height Z Scores	Mean ± -0.75±1.18			-0.91±1.12		
Oedema	6	0.7%		1	0.1	
Proportion with MUAC<12.5 cm) Boys Girls	184 86 98	20.1(16.7-24.0) 19.2(15.0-24.3) 20.9(16.5-25.9)	Sustained	89 31 58	11.3 7.9 14.8	Sustained
Proportion with MUAC<11.5 cm) Boys Girls	47 23 24	5.1(3.7-7.1) 5.1(3.3-8.0) 5.1(2.9-8.8)	Sustained	26 10 16	3.3 2.5 4.1	Sustained
Stunting (HAZ<-2) Boys Girls	341 185 156	39.8(34.7-45.2) 45.0(37.9-52.3) 35.1(29.8-40.7)	Sustained	76 39 37	10.3 10.6 9.9	Sustained
Severe Stunting (HAZ<-3) Boys Girls	164 95 69	19.2(15.2-23.8) 23.1(17.1-30.4) 15.1(11.8-20.2)	Sustained	14 8 6	1.9 2.2 1.6	Sustained
Underweight (WAZ<-2) Boys Girls	293 165 128	32.8(27.4-38.9) 38.2(30.9-46.1) 27.8(21.9-34.7)	Sustained	95 47 48	12.3 12.2 12.5	Sustained
Death Rates						
Crude deaths, per 10,000 per day (retrospective for 90 days)	45	1.28	Sustained	14	0.46	Sustained
Under five deaths, per 10,000 per day (retrospective for 90 days)	12	1.42	Sustained	8	0.95	Sustained
Morbidity Boys Girls	378 201 177	41.22(32.15-50.29) 44.97(34.71-55.22) 37.66(28.75-46.56)	Sustained	193 106 87	24.4 27 22	Sustained
Diarrhoea Boys Girls	195 94 101	21.26(15.92-26.61) 21.03(15.35-26.71) 21.5(15.5-27.5)	Sustained	72 36 36	9.1 9.1 9.1	Sustained
Pneumonia Boys Girls	143 80 63	15.6(10.97-20.22) 17.89(12.32-23.5) 13.4(8.7-18.12)	Sustained	100 54 46	12.7 13.7 11.6	Sustained
Fever Boys Girls	230 119 111	25.1(18.57-31.59) 26.6(19.2-34.1) 23.6(17.03-30.2)	Sustained	209 116 93	26.5 29.4 23.5	Sustained
Measles Boys Girls	101 58 43	11.01(6.23-15.8) 12.9(6.6-19.32) 9.2(5.03-13.27)	Sustained	40 22 18	5.1 5.6 4.5	Sustained
Vitamin A Supplementation Boys Girls	219 106 113	61.8(50.6-73.11) 48.4(50.34-72.92) 52.63(48.1-76.11)	Sustained	NA	NA	N/A
Measles Vaccination Boys Girls	183 95 88	51.7(40.46-62.92) 55.2(43.2-67.24) 48.4(34.5-62.2)	Sustained	NA	NA	N/A
Polio Immunization Boys Girls	263 131 132	74.3(64.4-84.2) 76.2(67.0-85.3) 72.5(59.8-85.3)	Sustained	NA	NA	N/A
Women Nutrition and Immunization Status						
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	27	5.5(0.0-12.3)	Sustained	42	12.2	Sustained
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	154	22.8(6.8-38.8)	Sustained	73	21.3	Sustained
Proportion of Women who received Tetanus immunization No dose One dose Two doses Three doses	 52 13 36 37	 37.6 9.4 26.1 26.8	Sustained	 151 103 224 61	 28 19.1 41.6 11.3	Sustained

Infant and Young Child Feeding (6-24 Months)						
Proportion still breastfeeding Boys Girls	118 56 62	33.33(19.9-46.7) 32.6(18.6-46.5) 34.1(19.9-48.17)	Sustained	NA	NA	N/A
Continued breastfeeding up to 12 months Boys Girls	56 23 33	77.8(61.34-94.21) 76.8(54.4-98.9) 78.6(62.2-94.9)	Sustained	NA	NA	N/A
Continued breastfeeding up to 24 months Boys Girls	117 56 61	62.2(51.34-73.12) 61.5(48.9-74.14) 62.9(51.3-74.5)	Sustained	NA	NA	N/A
Public Health Indicators						
Household with access to sanitation facilities	101	90.2 (77.8-102.6)	Sustained	232	44.4	Sustained
Household with access to safe water	37	34.9 (15.1-54.7)	Sustained	522	100	Sustained
Proportion who reported to have consumed <4 food groups	332	73.3 (68.4-78.2)	Sustained	253	48.5	Sustained
Household's Main Food Source- Purchase	101	83.6 (76.0-91.2)	Sustained	439	84.1	Sustained
Mean CSI	453	0.97	Sustained	522	9.2	Sustained
OVERALL NUTRITION SITUATION	Critical			Critical		

Table 30: Summary of Key Nutrition Findings: Kismayo Urban - Gu 2014

Kismayo Urban (N=1013; Boys=494; Girls=519)			
Indicator	**n**	**Percent (CI)**	**Change from Deyr 2013**
Child Nutrition Status			
Global Acute Malnutrition (WHZ<-2 or oedema) Boys Girls	126 77 49	12.4(9.9-15.5) 15.6(12.1-19.9) 9.4(7.3-12.2)	Sustained
Severe Acute Malnutrition (WHZ<-3 or oedema) Boys Girls	32 17 15	3.2(2.2-4.6) 3.4(2.0-5.9) 2.9(1.7-4.9)	Sustained
Mean of Weight for Height Z Scores	-0.61±1.18		
Oedema	4	0.4	
Proportion with MUAC<12.5 cm) Boys Girls	92 39 53	8.9(6.5-12.1) 7.7(5.3-11.2) 10(7.1-13.8)	Sustained
Proportion with MUAC<11.5 cm) Boys Girls	16 6 10	1.5 (0.9-2.7) 1.2(0.6-2.5) 1.9(0.8-4.1)	Sustained
Stunting (HAZ<-2) Boys Girls	198 119 79	19.9(16.1-24.3) 24.8(20-30.3) 15.3(11.8-19.7)	Sustained
Severe Stunting (HAZ<-3) Boys Girls	52 34 18	5.2(3.5-7.7) 7.1(4.6-10.7) 3.5(2.1-5.7)	Sustained
Underweight (WAZ<-2) Boys Girls	176 106 70	17.2(13.8-21.1) 21.2(16.7-26.6) 13.3(10.6-16.6)	Sustained
Death Rates			
Crude deaths, per 10,000 per day (retrospective for 90 days)	20	0.55	Sustained
Under five deaths, per 10,000 per day (retrospective for 90 days)	8	0.82	Sustained
Morbidity Boys Girls	346 161 185	33.3(30.9-35.7) 31.8 (28.4-35.2) 34.8 (31-38.5)	Sustained
Diarrhoea Boys Girls	164 80 84	15.8 (13.8- 17.7) 15.8 (13.5- 18.1) 15.8 (12.6- 19.1)	Sustained
Pneumonia Boys Girls	93 46 47	8.9 (7.6-10.3) 9.1 (6.8-11.3) 8.9 (6.5-11.1)	Sustained
Fever Boys Girls	67 26 41	6.4 (4.9-7.9) 5.1 (3.4-6.8) 7.7 (5.3-10)	Sustained
Measles Boys Girls	24 11 13	2.3 (1.2-3.3) 2.1 (0.8-3.4) 2.4(0.8- 4.0)	Sustained
Public Health Indicators			
Proportion who reported to have consumed <4 food groups	11	2.4 (0.4-4.4)	Sustained
Mean CSI	422	60.8	Sustained
OVERALL NUTRITION SITUATION	Serious		

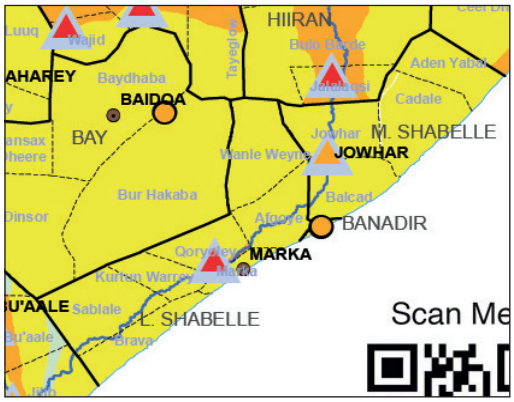
4.4.3: MIDDLE AND LOWER SHABELLE REGIONS

Shabelle constitutes Lower and Middle Shabelle and is one of the main agriculture regions in Somalia. Farming in this area is mainly rainfed and also dependent on flood and irrigation. Demographically, Lower Shabelle accounts for 18.5 percent of the Somali population and is the most populous of the two regions with an estimated population of 850 651 and 80 percent dwelling in the rural areas; whereas, Middle Shabelle has an estimated population of 514 901. In these areas the rural livelihoods depend on both agriculture and pastoralism and comprise of riverine (pure farmers) and agropastoralists. Civil insecurity continues to be a challenge impacting negatively on the livelihoods and contributing to a high number of internally displaced persons (IDPs). The riverine is also vulnerable to floods that usually occur during the *Gu* and *Deyr*.

In *Gu* 2014, FSNAU conducted 4 assessments in the region including Shabelle and Banadir (Lower[1] and Middle Shabelle in Shabelles, Mogadishu IDPs and urban assessments in Banadir). In these assessments a total of 140 clusters were covered in which nutrition status of 2659 children (6-59 months) from 1868 households were assessed.

The food security situation has deteriorated in the post *Gu* 2014 in parts of Lower Shabelle region, particularly in Qoryole and Merka districts, but remained relatively stable since the beginning of 2014 in other rural areas of the region. In July 2014, parts of riverine of Lower Shabelle (Qoryole and Merka) as well as Lower & Middle Shabelle Agropastoral (rain-fed) livelihoods were identified in Crisis (IPC Phase 3), while other areas remained Stressed (IPC Phase 2). In the projection period (August-December 2014), the area classification remains unchanged both in Lower Shabelle and Middle Shabelle regions.

Map 13: Food Security Situation in Shabelle Regions - Gu 2014



Urban areas of Lower Shabelle (Marka) were classified in Crisis (IPC Phase 3) in the Post *Gu* 2014 (July) period; those in Middle Shabelle region were classified as Stressed (IPC Phase 2). The projection for August-December 2014 remains unchanged. Internally Displaced Persons (IDPs) in Baidoa (Bay region) were in Crisis (IPC Phase 3) in the Post *Gu* 2014 (July) period and are projected to remain in Crisis (IPC Phase 3) during August-December 2014.

For further details on analysis of the food security situation in Lower Shabelle and Middle Shabelle regions, please see sections 4.1, 4.2 and 4.3.4 of the Food Security and Nutrition Analysis Post Gu 2014 Technical Series Report No VII. 56 at www.fsnau.org

***Gu* 2014 Results:**

The results of nutrition assessment done in Shabelle and Banadir region are summarized in Table 31 and 32 and key highlights are discussed below:

Lower and Middle Shabelle

After several consecutive seasons of not being able to conduct WHZ assessments in the Shabelles due to access difficulty, in *Gu* 2014, with assistance from partners, an assessment conducted in Middle and Lower Shabelle revealed mixed picture of nutrition situation in this agriculture zone of Somalia. Among the Agro pastoral group of Shabelles, **Critical l**evels of GAM (18.8%) and SAM (5.4%) were recorded in *Gu* 2014 and **Serious** GAM prevelance (11.2%) and SAM (2.5%) were reported in the Riverine area.

Results by region indicate **Critical** nutrition situation in Lower Shabelle (17.2% GAM, 5.5 % SAM) and **Serious** in Middle Shabelle (13.5% GAM and 2.5% SAM).

1 Qoryole and Merka were excluded from the sampling list due to inaccessibility

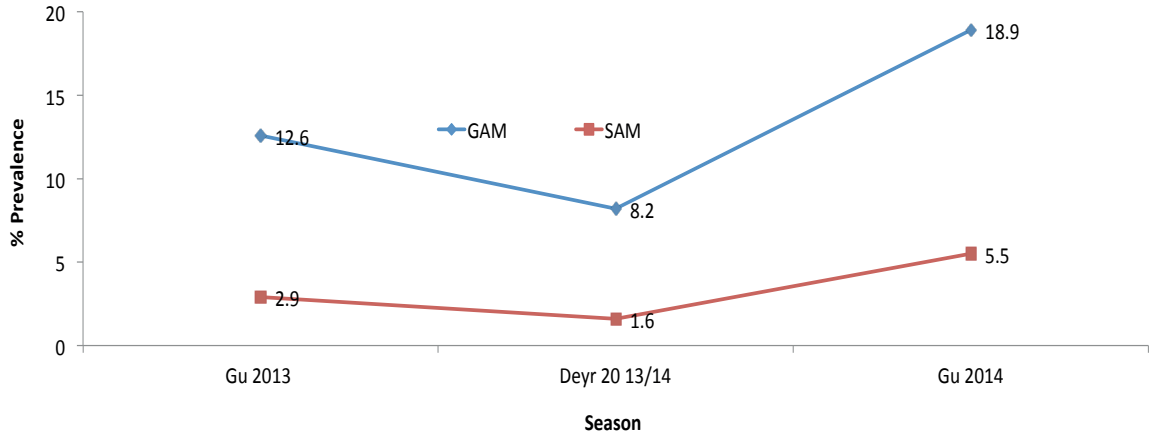
Comparison by MUAC, a good indicator of mortality risk, show deterioration in the last 6 months from **Serious** to **Critical** among the Agropastrorals and improvement for the Riverine group from **Serious** to **Alert** (MUAC<12.5) and **Critical** to **Serious** (MUAC< 11.5).

Mogadishu IDPs:

In the period between Jan and May 2014, Mogadishu IDP settlement showed an evolving humanitarian emergency situation with extremely high levels of acute malnutrition and mortality rates. *Gu* 2014 assessment recorded a GAM rate of 18.9 percent and SAM rate of 5.5 percent indicating **Critical** nutrition situation which reflect deterioration when compared with GAM rates of 8.2 percent recorded in *Deyr* 2013 and 12.6 percent recorded in *Gu* 2013. The SAM rates are also nearly double the levels observed during the same time last year and more than triple the rates observed six months ago.

The trend below (Figure 43) shows changes in the nutrition situation among Mogadishu IDPs in the last 12 months.

Figure 43: Acute Malnutrition Trends among Mogadishu IDPs

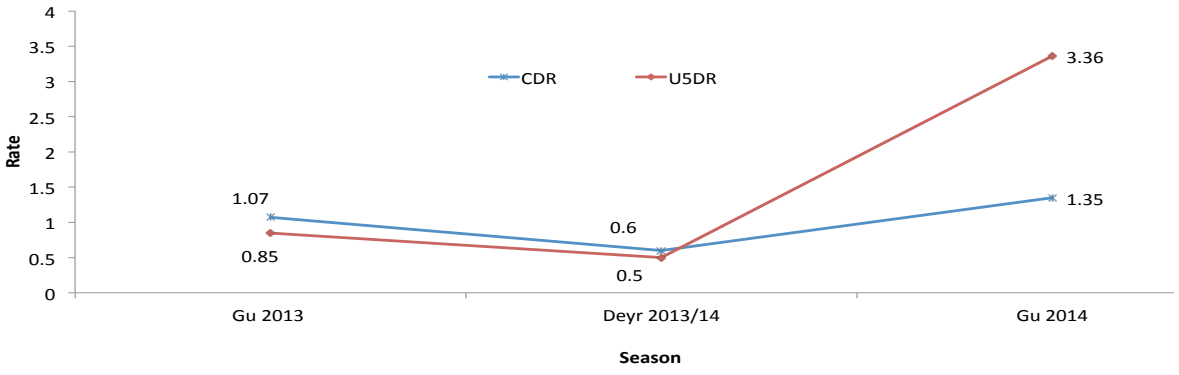


Mogadishu Urban: Among the urban population, a GAM rate of 10.1 percent and a SAM rate of 1.4 percent with 0.3 percent oedema cases were observed. This indicates a **Serious** nutrition situation, showing deterioration from **Alert** levels (GAM rate of 8.6 percent) recorded in *Gu* 2013.

Mortality

Mogadishu IDPs: This season (*Gu* 2014) recorded a higher CDR and Under five death rate at 1.35/10 000/day and 3.36/10 000/day respectively placing both indicators at **Emergency** levels compared to *Deyr* 2013/14 (CDR at 0.6/10 000/day and Under-fives deaths at 0.5 /10,000/day). Compared to *Gu* 2013, mortality rates were higher indicating increased vulnerability of the population due to Acute watery diarrhoea (AWD) outbreak. Mortality trends for the 12 month period are shown in Figure 44.

Figure 44: Mortality Trends among Mogadishu IDPs



In Middle Shabelle, assessment revealed **Serious** levels of mortality for both CDR (0.64/10 000 per day) and U5DR (1.12/10 000 per day) while in Lower Shabelle **Serious** levels for CDR (0.59/10 000 per day) and alert for U5DR 0.72/10 000 per day were reported.

Morbidity

Morbidity levels in the Mogadishu IDPs have increased about five percentage points in the last 6 months; 43.2 percent in *Gu* 2014 compared to 37.3 percent in *Deyr* 2013/14 and marginal increase since *Gu* 2013 (39%). In Mogadishu urban, morbidity levels were 18 percent in *Gu* 2014; this is an improvement from *Gu* 2013 which was 29.4 percent.

Shabelle Agro pastoral: Significant increase in morbidity levels was recorded in *Gu* 2014 (37%) compared to *Deyr* 2013/14 (19.5%). In Shabelle Riverine there was a slight decrease in morbidity levels to 31.5 percent in *Gu* 2014 from 35.4 percent recorded in *Deyr* 2013/14. Morbidity of 48.9 percent in Lower Shabelle implied that one in every two children suffered from one of the common childhood diseases while in Middle Shabelle a prevalence of 28 percent was reported.

Chronic Malnutrition Stunting and underweight

In *Gu* 2014, the assessment conducted both in Lower and Middle Shabelle show **Low** prevalence of stunting and **Medium** levels of underweight prevalence. In Lower Shabelle stunting was 13.4 percent and underweight 19.6 percent while in Middle Shabelle stunting and underweight was 15 and 16.5 percent respectively. Analysis by livelihood also indicates similar patterns; **Low** levels of stunting and **medium** levels of underweight in the Agro pastoral and Riverine areas.

Among the displaced group in Mogadishu, *Gu* 2014 assessment recorded stunting rate of 16 percent (low prevalence) and 23 percent for underweight (high prevalence). Levels of Stunting prevalence have reduced while underweight have increased compared to *Deyr* 2013/14 assessments which reported 20 and 16.6 percent prevalence respectively (Annex 6.7).

In Mogadishu Urban, low levels of stunting and underweight prevalence were recorded (8.3 % and 8.9 % respectively). Since *Gu* 2013 sustained stunting levels have been noted while Underweight prevalence have shown some improvement from **medium** to **low**.

Immunization

Among the displaced in Mogadishu IDP camp, the reported coverage for vitamin A supplementation and Measles vaccination (61.2 and 70.8 per cent respectively) showed marginal improvement compared to Deyr 2013/14 and *Gu* 2013 but still fall below 95 percent threshhold (SPHERE recommended coverage) [Annex 6.8].

Vitamin A supplementation and Measles vaccination coverage among Shabelle Agro pastorals was extremely low (<20 percent) and compared to *Deyr* 2013/14 indicate significant drop in immunization coverage. In Shabelle Riverine there was also a significant decline in the reported coverage of vitamin A supplementation and Measles vaccination compared to *Deyr* 2013/14.

Maternal Malnutrition

Deterioration in maternal malnutrition (MUAC <23cm) was noted among the Mogadishu IDPs from acceptable levels in *Deyr* 2013/14 (1.0%) to serious levels in *Gu* 2014 (20%). This may be linked to limited interventions to tackle maternal malnutrition.

Change in nutrition situation

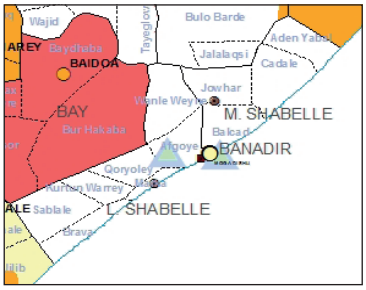
The nutrition situation has deteriorated to **critical** from alert levels in Mogadishu IDPs; this has been influenced by outbreak of diseases such as measles and AWD and reduced humanitarian intervention. Deterioration was also reported in the Mogadishu urban assessment with aggravating factors linked to poor health environment.

In the Shabelles, the nutrition situation showed deteriorating trend as a result of the failed *Gu* 2014 rains. This was evidenced in Shabelle agro pastoral where nutrition situation deteriorated from **serious** in *Deyr*'13/14 to **critical** in *Gu* 2014 according to MUAC indicator. Shabelle riverine showed marginal improvement during the same period.

Figure 45: Progression of the Nutrition Situation *Gu* 2013 to *Gu* 2014 in Shabelle regions

Nutrition Situation

Jul 2013

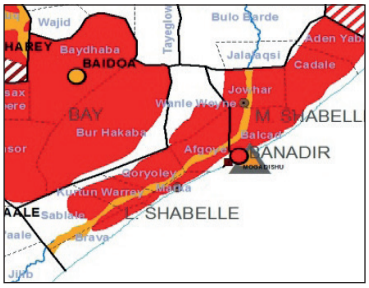


Nutrition Situation

Jan 2014

Nutrition Situation

Jul 2014



Overall nutrition has remained precarious in Shabelles with Lower Shabelle and the Agropasorals being the most affected. However, the situation is projected to likely improve in Shabelle Agropastoral from critical to serious. The area is likely to benefit from Deyr rain forecast, however health related factors such as immunization continue to act as bottlenecks in addition to the sporadic insecurity that impede all humanitarian interventions.

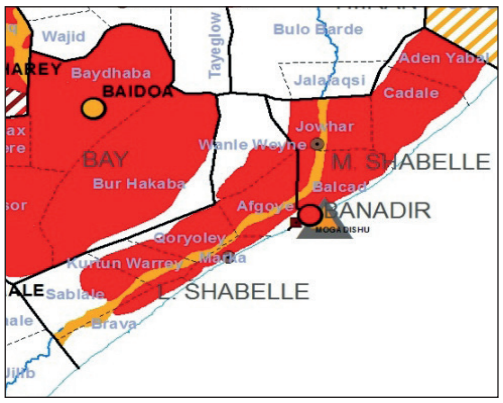
Hot Spot Malnutrition in Banadir and Shabelles

Mogadishu IDPs and Shabelle Agro pastoral with GAM rate > 15 percent are the current hot spots for acute malnutrition and at increased risk of further deterioration.

Figure 46: Nutrition situation Outlook August to October 2014 in Shabelle regions

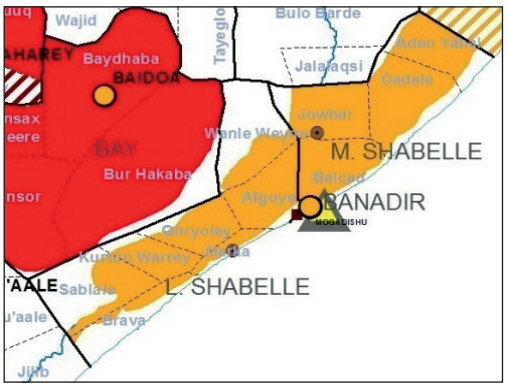
Current Nutrition situation

Jul 2014



Projected Nutrition situation

Aug- Oct 2014



For the August-October 2014, the nutrition situation in Shabelle and Banadir is projected to either remain stable or improve**.** Shabelle Riverine is projected to sustain in **serious** phase. With projected *Deyr* rains improved food supplies at the household level is anticipated but this can only help to reduce deterioration hence sustained serious phase. Whereas improvement is projected from **critical to serious** in Shabelle Agro pastoral. Mogadishu IDP and Urban are expected to improve due to intensified humanitarian activities.

Table 31: Summary of Key Nutrition Findings in Banadir region - Gu 2014

	Mogadishu IDPS		Mogadishu Urban	
	Clusters :40 (N=614; Boys=320; Girls=294)		Clusters :40 (N=808:Boys=399;Girls=409)	
Indicator	**Percent (CI)**	**Change from Deyr 2013**	**n**	**Percent (CI)**
Child Nutrition Status				
Global Acute Malnutrition (WHZ<-2 or oedema)	18.9% (14.7-23.9)		79	10.1%(7.9-12.8)
Boys	21.3%(16.1-27.4)	Deteriorated	49	12.6%(9.3-16.8)
Girls	16.3%(11.8-22.1)		30	7.6%(5.5-10.4)
Severe Acute Malnutrition (WHZ<-3 or oedema)	5.5%(3.5-8.6)	Deteriorated	11	1.4%(0.8-2.3)
Boys	6.9%(4.4-10.6)		8	2.1%(1.1-3.8)
Girls	4.1%(2.0-8.20		3	0.8%(0.2-2.3)
Mean of Weight for Height Z Scores	-0.96±1.15	Deteriorated	-0.54±1.14	
Oedema	0.3%	Improved	N=2	02%
Proportion with MUAC<12.5 cm)	14%(10.8-17.9)		77	9.5%(6.6-13.5)
Boys	12.4%(8.7-17.2)	deteriorated	38	9.5%(6-14.9)
Girls	15.8%(11.3-21.6)		39	9.5%(6.4-13.9)
Proportion with MUAC<11.5 cm)	3.3%(2.1-5.1)		17	2.1%(1.3-3.5)
Boys	3.2%(1.7-6.0)	deteriorated	9	2.3%(1.3-4.6)
Girls	3.3%(1.9-5.7)		8	2%(0.9-4)
Stunting (HAZ<-2)	16%(11.7-21.7)		66	8.3%(6.1-11.2)
Boys	19.8%(13.9-27.3)	Improved	42	10.6%(7.5-14.8)
Girls	11.9%(7.6-18.2)		24	6%(3.6-9.6)
Severe Stunting (HAZ<-3)	4.4%(2.8-6.9)		8	1%(0.5-2.1)
Boys	4.8%(2.7-8.4)	deteriorated	5	1.3%(0.5-3)
Girls	4%(2.3-6.8)		3	0.7%(0.2-2.3)
Underweight (WAZ<-2)	23%(17.9-28.9)		71	8.9%(6.9-11.5)
Boys	26.1%(20.2-33)	deteriorated	52	13.2%(10.17.2)
Girls	19.6%(14.1-26.7)		19	4.7%(3-7.4)
Death Rates				
Crude deaths, per 10,000 per day (retrospective for 90 days)	1.35/10,000/day	Deteriorated	N/A	
Under five deaths, per 10,000 per day (retrospective for 90 days)	3.36/10,000/day	Deteriorated	N/A	
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	7.6%(-6.5-21.75)	Deteriorated		N/A
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	20%(-4.9-44.6)	Deteriorated		N/A
Morbidity	43.2%(35.9-50.4)	Deteriorated	144	18%(13.0-23.0)
Boys	42.8%(34.1-51.5)		72	18.2%(13-23.3)
Girls	43.6%(36.1-51.2)		72	17.8%(11.5-24.2)
Diarrhoea	15.1%(10.6-19.6)	Deteriorated	46	5.7%(3.1-8.3)
Boys	16.8%(10.8-22.7)		20	5%(2.6-7.4)
Girls	13.1%(8.7-17.4)		26	6.4%(3.2-9.6)
Pneumonia	15.8%(10.5-21.2)		51	6.3%(3.2-9.5)
Boys	15.3%(10.1-20.6)	Deteriorated	22	5.5%(2.5-8.6)
Girls	16.2%(9.3-23.2)		29	7.1%(2.9-11.4)
Fever	37.1%(31.3-42.9)	Deteriorated	27	3.4%(1.4-5.3)
Boys	37.6%(30.3-44.8)		14	3.5%(1.5-5.5)
Girls	36.3%(30.6-42)		13	3.2%(0.7-5.8)
Measles	6.5%(3.1-9.9)	Deteriorated	7	0.9%(0.2-1.6)
Boys	8.4%(4.4-12.4)		4	1%(-0.2-2.2)
Girls	4.1%(0.9-7.4)		3	0.7%(-0.1-1.6)

Vitamin A Supplementation Boys Girls	61.2%(41.5-80.9) 66.7%(44.2-89.9) 67.1%(46.8-87.4)	Improved	N/A	N/A
Measles Vaccination Boys Girls	70.8%(54.4-87.1) 74.3%(56.9-91.7) 71.2%(52.1-90.1)	Improved	N/A	N/A
Polio Immunization Boys Girls	80.4%(71.4-89.4) 89.4%(82.0-96.9) 89.3%(79.5-99.2)	Improved	N/A	N/A
Infant and Young Child Feeding (6-24 Months)				
Proportion still breastfeeding Boys Girls	45.1%(38.4-51.8) 47.1%(28.5-65.6) 40.3%(22.0-58.6)	Deteriorated	N/A	N/A
Continued breastfeeding up to 12 months Boys Girls	27.5%(26.1-28.9) 28.6%(5.3-31.8) 26.9(-7.2-61.1)	Deteriorated	N/A	N/A
Continued breastfeeding up to 24 months Boys Girls	52.2%(36.9-67.4) 59.5%(35.6-83.3) 47.3%(23.6-71)	Improved	N/A	N/A
Proportion meeting recommended feeding frequencies				
Proportion who reported to have consumed ≥4 food groups	5.5	improved	N/A	N/A
Women Nutrition and Immunization Status				
Proportion of Women who received Tetanus immunization No dose One dose Two doses Three doses	79.2%(69.9-88.5) 20.8%(11.5-30.1) 19.8%(12.8-26.9) 34.5%(27.2-41.8) 24.9%(16.3-33.5)	Improved	N/A	N/A
Public Health Indicators				
Household with access to sanitation facilities	N/A	N/A	N/A	N/A
Household with access to safe water	N/A	N/A	N/A	N/A
Proportion who reported to have consumed <4 food groups	5.2	Deteriorated	N/A	N/A
Mean CSI	62.6	Deteriorated	N/A	29.5
OVERALL NUTRITION SITUATION	Critical		Serious	

Table 32: Summary of the key Finding in Shabelle Agro pastoral and Shabelle Riverine - Gu 2014

	Shabelle Agro Pastoral		Shabelle Riverine		
	Clusters :34 (N=707:Boys=350;Girls=357)		Clusters :26 (N=743:Boys=386;Girls=357)		
Indicator	**Percent (CI)**	**Change from Deyr 2013**	**n**	**Percent (CI)**	**Change from Deyr 2013**
Child Nutrition Status					
Global Acute Malnutrition (WHZ<-2 or oedema)	18.8(15.0-23.4)		83	11.2 (8.0-15.3)	
Boys	20.3 (15.1-26.7)	Deteriorated	54	14.0(9.6-19.9)	N/A
Girls	17.4(13.1-22.6)		29	8.1(5.3-12.2)	
Severe Acute Malnutrition (WHZ<-3 or oedema)	5.4(3.3-8.5)		19	2.6 (1.3-5.1)	
Boys	5.4(3.3-8.9)	Deteriorated	15	3.9(1.6-9.0)	N/A
Girls	5.3(2.9-9.)		4	1.1(0.3-3.6)	
Mean of Weight for Height Z Scores	-0.97±1.15	N/A		-0.56±1.13	N/A
Oedema	N=0	N/A		0.0	N/A
Mortality					N/A
CDR	0.72(0.45-1.15)	Deteriorated		0.53(0.30-0.92)	Improved
U5 DR	0.84(0.40-1.73)	Improved		1.07(0.50-2.26)	Deteriorated
Stunting	10.3(7.5-14)		147	19.5(14.6-25.4)	
Boys	15.6(11.4-20.9)	N/A	112	28.4(21.8-36)	N/A
Girls	5.2(2.7-9.7)		35	9.7(5.4-17)	
Severe Stunting	2.1(1-4.3)		25	3.3(1.7-6.4)	
Boys	3.3(1.4-7.9)	N/A	23	5.8(2.8-11.8)	N/A
Girls	0.8(0.2-3.5)		2	0.6(0.1-4)	
Underweight	19.9(15.5-25.2)		118	15.6(11.6-20.7)	
Boys	25.8(19.4-33.6)	N/A	83	21.2(15.2-28.7)	N/A
Girls	14.2(9.7-20.3)		35	9.6(5.9-15.3)	
MUAC <125mm	7.7(5.3-10.8) 7 (3.8-12.5)			7(3.8-12.5)	
Boys		Improved		6.6(3.4-12.4)	Improved
Girls	7.5(4.3-12.6)			7.4(3.4-15.3)	
MUAC <115mm	1.6(0.8-3.4)			1.3(0.5-3.4)	
Boys	0.8(0.3-2.6)	Improved		1.5(0.5-4.4)	Improved
Girls	2.4(1.1-5.5)			1.1(0.3-4.2	
Morbidity	37(26.6-47.4)			31.5(20.2-42.8)	
Boys	36.7(26.1-47.4)	deteriorated		33.3(19.347.3)	
Girls	37.3(26-48.6)			29.5(20.2-38.8)	
Diarrhoea	15.3(4.3-26.3)			16.9(13.1-20.6)	
Boys	15.7(4.4-27)	deteriorated		14.6(3.3-26)	deteriorated
girls	14.9(4.1-25.7)			19.3(4.6-33.6)	
Pneumonia	6.7(-1.4-14.7)			7.2(-1.8-16.3)	
Boys	6.9(-1.4-15.2)	Improved		5.8(-2.1-13.7)	Improved
Girls	6.5(-1.4-14.3)			8.8(-1.7-19.3)	
Fever	14.9(4-25.7)			14.8(3-26.5)	
Boys	15.5(4.3-26.7)	deteriorated		12.6(2-23.3)	Improved
Girls	14.3(3.8-24.8)			17.1(3.5-30.7)	
Measles	0.1(-0.1-0.4)			0.7(-0.7-2)	
Boys	0	Improved		0.8(-0.8-2.3)	Improved
Girls	0.3(-0.3-0.8)			0.6(-0.6-1.7)	
Vitamin A vaccine	12(1.9-22.2)			3.4(-3.4-10.3)	
Boys	12.7(2.1-23.3)	deteriorated		3(-2.8-8.8)	deteriorated
Girls	11.4(1.5-21.2)			3.9(-4.1-11.8)	
Measles vaccine	2.6(-2.8-8)			1.1(-1.1-3.2)	
Boys	2.5(-2.7-7.6)	deteriorated		1(-1.1-3.1)	deteriorated
Girls	2.7(-2.9-8.3)			1.1(-1.1-3.4)	
OVERALL NUTRITION SITUATION	Critical		Serious		

Table 33: Summary of the key Finding in Middle and Lower Shabelle Regions, Gu 2014

	M. Shabelle Clusters :30 (N= 594; Boys=297; Girls=297)		L.Shabelle Clusters :30 (N=669:Boys=343;Girls=326)	
Indicator	n	% (CI)	n	% (CI)
Child Nutrition Status				
Global Acute Malnutrition (WHZ<-2 or oedema)	80	13.5(10.1-17.7)	115	17.2(13.7-21.3)
Boys	47	15.8(11.2-21.9)	64	18.7(14.4-23.8)
Girls	33	11.1(7.8-15.6)	51	15.6(11.4-21.2)
Severe Acute Malnutrition (WHZ<-3 or oedema)	15	2.5(1.4-4.5)	37	5.5(3.5-8.7)
Boys	8	2.7(1.3-5.5)	21	6.1(3.7-10.0)
Girls	7	2.4(0.9-5.8)	16	4.9(2.7-8.8)
Mean of Weight for Height Z Scores	-0.74 ± 1.13		-0.89 ±1.16 -	
Oedema	N=0	0.0%	N=6	1.0%
Mortality				
CDR		0.64(0.40-1.00)		0.59(0.35-0.99)
U5 DR		1.12(0.53-2.27)		0.72(0.25-2.01)
Stunting	91	15(11.1-19.9)	91	13.4(9.7-18.1)
Boys	71	23.1(17.6-29.6)	68	19.5(13.9-26.7)
Girls	20	6.7(3.6-12.2)	23	6.9(4.1-11.5)
Severe Stunting	11	1.8(0.8-4.1)	20	2.9(1.7-5.1)
Boys	10	3.2(1.3-7.7)	17	4.9(2.6-9.1)
Girls	1	0.3(0-2.5)	3	0.9(0.2-3.9)
Underweight	100	16.5(12.9-20.9)	134	19.6(15.5-24.6)
Boys	71	23.3(17.4-30.4)	87	24.9(18.5-32.7)
Girls	29	9.7(6.2-14.7)	47	14.1(9.9-19.7)
MUAC <125mm	57	9.3(6.3-13.6)	29	4.2(2.6-6.8)
Boys	28	9.1(5.4-14.9)	14	4(2-7.7)
Girls	29	9.6(5.8-15.4)	15	4.5(2.4-8.3
MUAC <115mm	13	2.1(1.1-4.1)	4	0.6(0.2-1.9)
Boys	5	1.6(0.7-3.7)	1	0.3(0-2.2)
Girls	8	2.6(1.2-6)	3	0.9(0.2-4)
Morbidity	175	28.7(21.2-36.1)	282	48.9(36.1-61.6)
Boys	76	24.7(17.1-32.2)	164	54.5(41.2-67.7)
Girls	99	32.8(24.2-41.3)	118	42.8(29.8-55.7)
Diarrhoea	58	9.5(4.4-14.6)	163	23.8(8.6-39)
Boys	30	9.7(3.8-15.7)	79	22.5(7.5-37.5)
girls	28	9.3(4.4-14.2)	84	25.1(9.3-40.9)
Pneumonia	36	5.9(1.4-10.4)	61	8.9(-0.8-18.6)
Boys	18	5.8(0.7-11)	31	8.8(-0.9-18.5)
Girls	18	6(1.6-10.3)	30	9(-0.9-18.8)
Fever	81	13.3(7.419.2)	113	16.5(3.4-29.5)
Boys	38	12.3(5.8-18.9)	57	16.2(3.4-29.3)
Girls	43	14.2(7.8-20.6)	56	16.7(3.5-29.9)
Measles			6	0.9(-0.9-2.7)
Boys			3	0.9(-0.9-2.6)
Girls			3	0.9(-0.9-2.7)
Vitamin A vaccine	14	2.3(-1.1-5.7)	89	13(1.5-24.5)
Boys	5	1.6(-1.7-4.9)	46	13.1(1.4-24.8)
Girls	9	3(-0.7-6.6)	43	12.8(1.4-24.3)
Measles vaccine	4	0.7(-0.1-1.4)	19	2.8(-2.9-8.5)
Boys	1	0.3(-0.3-1)	9	2.6(-2.7-7.8)
Girls	3	1(-0.1-2.1)	10	3(-3.1-9.1)
OVERALL NUTRITION SITUATION	Serious		Critical	

4.4.4: HIRAN REGION

Hiran region comprises of three main livelihood groups: the Pastoral (South Inland and Hawd Pastoral) covering Mataban and Mahas districts; and the Agro-pastoral and Riverine livelihood systems, both of which cut across Beletwyene, Buloburti and Jalalaqsi districts. Like many other areas in the South Central, civil insecurity besides affecting people's livelihoods has impeded humanitarian activities and therefore continues to impact negatively on health indicators. In Hiran region, during the *Gu* 2014 FSNAU conducted two assessments; covering Beletweyne and Mataban districts. In Beletewyne, only villages located in the North Eastern part of the district (excluding Beleteywne town) were accessible. In these assessments a total of 140 clusters were covered in which 1 359 children (6-59 months) from 872 households were assessed.

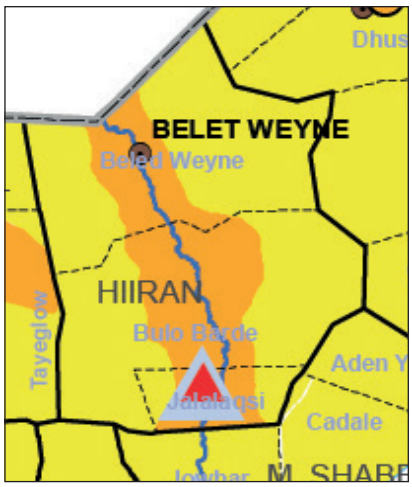
Food Security Situation Post Gu 2014

Food security situation of rural livelihoods of Hiran region deteriorated in the post-Gu 2014 compared to the post-Deyr 2013/2014 period. In July 2014, agropastoral and riverine livelihoods of the region were classified in Crisis (IPC Phase 3). In the most likely scenario, the food security situation of agropastoral and riverine livelihoods is likely to improve to Stressed (IPC Phase 2) between August-December 2014 although some portion of the population will remain in Crisis (IPC Phase 3). Pastoral livelihoods are projected to remain Stressed (IPC Phase 2).

Buluburte town was classified as Emergency (IPC Phase 4), Jalalaqsi town as Crisis (IPC Phase 3) and Beletweyne town as Stressed (IPC Phase 2) in the Post Gu 2014 (July) period; the projection for August-December 2014 remains unchanged.

For further details on analysis of the food security situation in Hiran region, please see sections 4.1, 4.2 and 4.3.5 of the Food Security and Nutrition Analysis Post Gu 2014 Technical Series Report No VII. 56 at www.fsnau.org

Map 14: Food Security Situation in Hiran Region - Gu 2014



***Gu* 2014 Results:**

The results of nutrition assessment done in Hiran region are summarized in Table 34 and key highlights are discussed below:

Nutrition situation

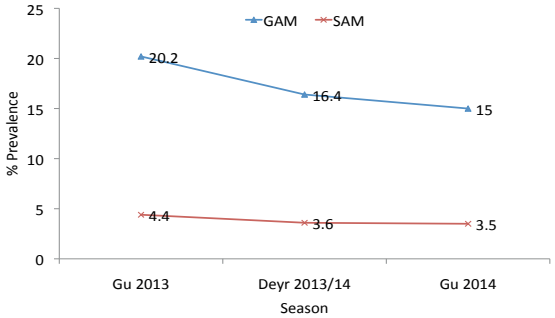
For the last twelve months, Gu 2013 to Gu 2014, **Critical** nutrition situation among the Hiran rural livelihoods has been sustained in Beletweyne while worsening trends have been observed in Matabaan.

Acute malnutrition

Beletywene

With a sustained **critical** nutrition situation in Beletywene for three consecutive seasons (Figure 47), *Gu* 2014 recorded a GAM prevalence of 15% and SAM of 3.5% showing a paltry 1.4 percentage points change in GAM prevalence since *Deyr* 2013/14 (GAM of 16.4% and SAM 3.6%) and 5.2 percentage points change compared to *Gu* 2013 (GAM 20.2% and SAM 4.4%). This shows one in every seven children in Beletwyene are acutely malnourished, a situation strongly linked to high morbidity burden ([1]r= 0.70) as discussed later in the text.

Figure 47: Acute Malnutrition Trends in Beletweyne

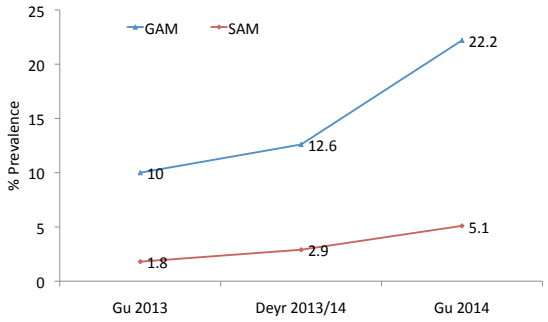


1 Strong positive correlation between morbidity and acute malnutrition: Pearson's correlation coefficient, r=0.7

Mataban

In Matabaan district, deterioration has been noted since *Gu* 2013 as illustrated in figure 48. According to *Gu* 2014 assessment, GAM of 22.2 percent and a SAM of 5.1 percent were recorded indicating a **Critical** nutrition situation, salient deterioration from **Serious** nutrition situation reported in both *Deyr* 2013/14 and *Gu* 2013. Severe acute malnutrition has nearly doubled in the last six months and increased threefold since *Gu* 2013 while GAM prevalence has increased by 8 percentage points since *Deyr* 2013/14 and doubled compared to same period last year.

Figure 48: Acute Malnutrition in Mataban



In pure Pastoral communities, milk is an integral component in the diet and therefore play a vital role in the nutritional wellbeing of the under-five children. In addition to morbidity burden, the deterioration observed in Matabaan is likely attributable to reduced milk availability at household level resulting from poor performance of *Gu* rains. Civil insecurity has also played a key role, hampering humanitarian intervention programmes such as provision of targeted feeding and health services.

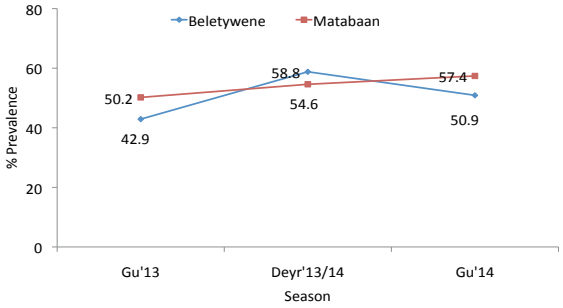
Mortality

In Beledweyne, **Acceptable** levels of mortality were recorded for CDR (0.25/10 000 per day) and U5DR (0.14/10 000 per day) indicating improvement from critical levels recorded in *Deyr* 2013/14. Acceptable levels of U5DR 0.16/10 000 per day was reported in Matabaan, showing improvement in the last 6 months (since Deyr 2013/14) while the CDR went from acceptable to alert at 0.7/10 000 per day.

Morbidity

High morbidity was observed both in Beletweyne (50.9%) and Matabaan (57.4%) districts (Figure 49). This illustrates that 1 out of every 2 children among the assessed population had suffered from at least one of the common childhood illnesses during the two week period prior to the assessment. High disease trends as illustrated in figure 50 are typical of the area meaning that health services are a key challenge hence diseases are a major aggravating factor of acute malnutrition among children (6-59 months) in Hiran region.

Figure 49: Morbidity Trends in Beletweyne and Mataban Districts



Stunting and Underweight

According to Gu 2014 assessment, Beletweyne reported **high** prevalence of underweight (24.8%) indicating an improvement from *Deyr* 2013/14, whereas underweight prevalence was **very high** (30.9%). **Moderate** stunting prevalence (23.5%) was reported showing improvement from *Deyr* 2013/ 2014 (35.1%).

In Matabaan, the stunting prevalence of 9.9 percent (**low**) was reported showing no significant change since *Deyr* 2013/14 (10.4%) and *Gu* 2013 (8.2%). Underweight prevalence has shown sustained **moderate** prevalence in the three consecutive seasons (10.9% in *Gu* 2013, 10.2 in *Deyr* 2013/14 and 16.7% in *Gu* 2014) an indication that chronic malnutrition is not a major public health problem in Hiran.

Immunization

As illustrated in table 34, reported Vitamin A supplementation, polio and measles immunization all fell below 70 percent, far below the recommended thresholds (SPHERE standards 95%) in both Beledweyne and Matabaan assessments indicating a critical situation. This is mainly attributable to reduced humanitarian presence resulting from recurrent civil insecurity in the area.

Maternal malnutrition

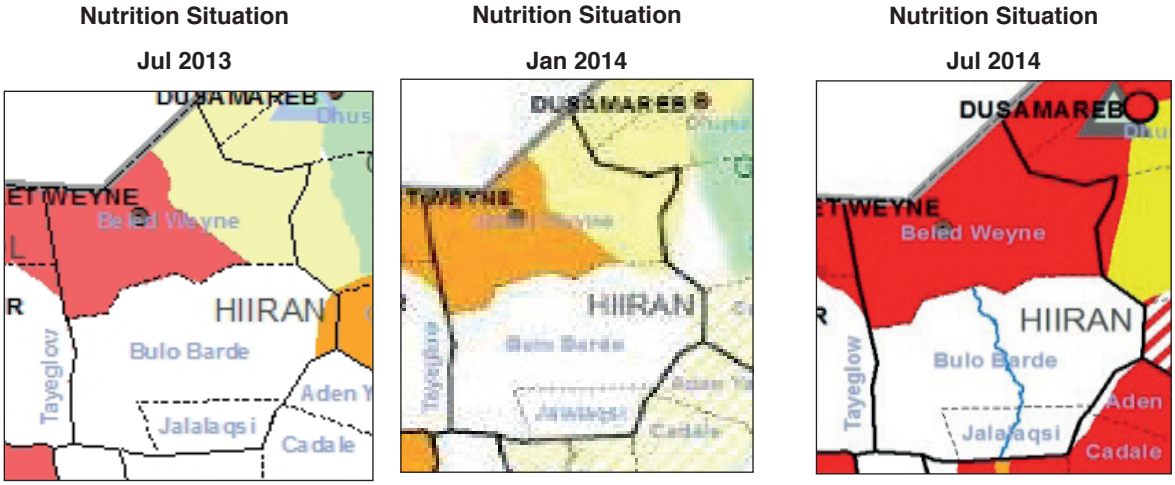
Beledweyne: Prevalence of maternal malnutrition among pregnant and lactating women (MUAC <23cm) deteriorated from **acceptable** levels in *Deyr* 2013/14 to **serious** in *Gu* 2014 at 18.7 percent.

In Matabaan, the situation improved from **serious** in the *Deyr* 2013/14 to **acceptable** levels in *Gu* 2014.

Change in nutrition situation

The nutrition situation has deteriorated to **Critical** from **Serious** levels in Matabaan in the last 12 months (Figure 50) while **Critical** nutrition has been sustained in Beletwyene over the same period. The key aggravating factors have been high morbidity burden and reduced milk availability at the household level as a result of the failed *Gu* 2014 rains. Improvement is hinged on *Deyr* rains, however health related factors such as poor immunization coverage continue to be bottlenecks and the situation is compounded by the perennial civil insecurity in the area.

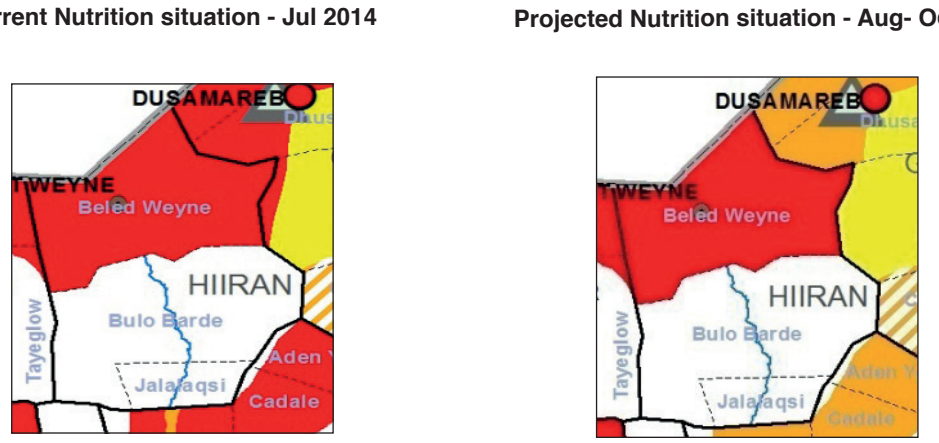
Figure 50: Progression of the Nutrition Situation *Gu* 2013 to *Gu* 2014 in Hiran region



Hot Spot Malnutrition in Banadir and Shabelles

Both assessments done in Mataban and Beleteywne districts reported GAM rates above 15 percent hence Hiran Region is a hot spot for acute malnutrition and at increased risk of further deterioration. Like many other regions in South Central acute malnutrition is a major public health concern in Hiran.

Figure 51: Nutrition situation Outlook August to October 2014 in Hiran region



For August - Octber 2014, the nutrition situation is projected to remain stable (Figure 51). With projected *Deyr* rains, improved food supplies at the household level is anticipated but this can only help to reduce deterioration hence sustained **Critical** phase in Beletywene and Matabaan Districts.

Table 34: Summary of the key Finding in Beletweyne and Mataban districts of Hiran region - Gu 2014

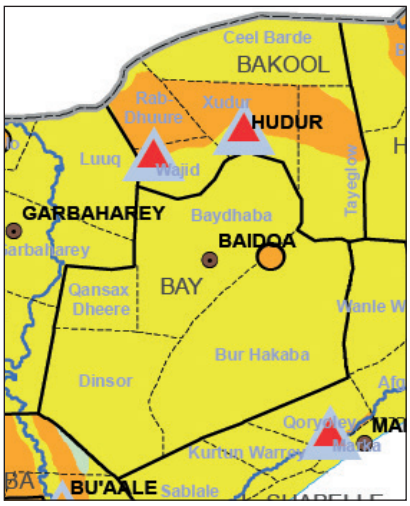
	Beledhweyne		Mataban	
	Clusters : (N= 746; Boys=385; Girls=361)		Clusters : (N=613:Boys=299;Girls=314)	
Indicator	**Percent (CI)**	**Change from Deyr 2013**	**Percent (CI)**	**Change from Deyr 2013**
Child Nutrition Status				
Global Acute Malnutrition (WHZ<-2 or oedema)	15.0(11.8-18.9)		22.2(17.9-27.1)	
Boys	15.1(10.9-20.5)	Improved	26.4(20.5-33.3)	Deteriorated
Girls	15.0(11.5-19.3)		18.2(13.4-24.1)	
Severe Acute Malnutrition (WHZ<-3 or oedema)	3.5(2.4-5.1)		5.1(3.4-7.5)	
Boys	3.4(1.9-5.8)	Improved	6(3.6-10)	Deteriorated
Girls	3.6(2.1-6.2)		4.1(2.4-7)	
Mean of Weight for Height Z Scores	-0.96 ± 1.05	Improved	-1.04 ±1.13	Deteriorated
Oedema	0.3%	Deteriorated	1.0%	Deteriorated
CDR	0.25(0.11-0.55)	Improved	0.70(0.44-1.10)	Deteriorated
U5DR	0.14(0.02-1.07)	Improved	0.16(0.02-1.23)	Improved
MUAC<125mm	9.4(7-12.5)		7.7(5.4-11)	
Boys	7(4.6-10.6)	Improved	6.3(3.8-10.3)	deteriorated
Girls	12(8.2-17.1)		9.1(6.1-13.4)	
MUAC<115mm	1.4(0.8-2.6)		1.8(0.9-3.6)	
Boys	0.5(0.1-2.1)	Improved	1(0.3-3.1)	deteriorated
Girls	2.4(1.2-5)		2.5(1.1-5.5)	
Morbidity	50.9(37.9-64)		57.4(43.6-71.2)	
Boys	50.6(36.8-64.4)	Improved	55.5(41.3-69.7)	deteriorated
Girls	51.2(37.5-65)		59.2(45-73.4)	
Diarrhoea	24.7(10.5-39)		24(12.8-35.1)	
Boys	24.1(10-38.1)	Improved	22.6(11.7-33.5)	Improved
Girls	25.5(10.5-40.4)		25.2(13.3-37.2)	
Pneumonia	34.9(19.6-50.2)		24.9(14.4-35.4)	
Boys	35.1(19.7-50.5)	deteriorated	23.3(13.2-33.3)	deteriorated
Girls	34.7(18.4-51)		26.5(15.2-37.8)	
Fever	42.4(30.2-54.7)		31.2(23.3-39)	
Boys	42.4(29.4-55.3)	Improved	33.6(23.8-43.3)	deteriorated
Girls	42.5(29.7-55.4)		29(21.2-36.9)	
Measles	0.1(-0.1-0.4)		0.8(-0.3-1.6)	
Boys	0.3(-0.3-0.8)	Improved	1.3(-0.3-1.4)	Sustained
Girls	0		0.3(-0.3-1)	
Polio Vaccine	67.6(52.1-83)		61.7(48.2-75.2)	
Boys	67.9(52.4-83.5)	Improved	65.4(51.8-79.1)	deteriorated
Girls	67.2(51.1-83.3)		58.3(43.8-72.7)	
Vitamin A vaccine	38.2(22-54.3)		41.6(27.6-55.6)	
Boys	38.3(22.2-54.4)	Improved	45.8(30.8-60.9)	Improved
Girls	37.9(20.9-55)		37.7(23.9-51.5)	
Measles Vaccine	10.9(3.9-18)		34.7(21.9-47.5)	
Boys	11.8(4.5-19.1)	deteriorated	38.9(24.9-52.9)	Improved
Girls	10(2.3-17.8		30.8(18.2-43.5)	
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	9.5(-2.1-21.1)	deteriorated	0.8(-0.9-2.4)	Improved
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	18.7(3.4-34)	deteriorated	6.2(-4.7-17.1)	Improved
OVERALL NUTRITION SITUATION	Critical		Critical	

4.4.5: BAY AND BAKOOL REGIONS

FSNAU conducted three nutrition surveys (IDP and two rural livelihoods) in Bay and Bakool regions (South West) of Somalia. Nutrition status of 2 136, children aged 6-59 month old (1 067 boys and 1 069 girls) from 1 411 households was assessed. Comprehensive assessments (nutrition and food security) were conducted in Baidoa IDP, but in two rural livelihoods, nutrition situation was assessed using a short anthropometric questionnaire.

In the post-Gu 2014, food security situation remained relatively stable in rural livelihoods of Bay region, but it has deteriorated in Bakool region since the post-Deyr 2013/2014. In July 2014, most rural livelihoods zones of both regions were identified in Stressed (IPC Phase 2) acute food insecurity conditions, except parts of agropastoral livelihood of Bakool region, which was identified in Crisis (IPC Phase 3). In the most likely scenario, the area classification is projected to be Stressed (IPC Phase 3) for all rural livelihoods of Bay and Bakool regions between August to December 2014.

Map 15: Food Security Situation in Bay Bakool Regions - Gu 2014



Urban areas of Bakool (Hudur and Wajid) were classified in Emergency (IPC Phase 4) in the Post Gu 2014 (July) period; those in Bay region were classified as Stressed (IPC Phase 2). The projection for August-December 2014 remains the same. Internally Displaced Persons (IDPs) in Baidoa (Bay region) were in Crisis (IPC Phase 3) in the Post Gu 2014 (July) period and are projected to remain in Crisis (IPC Phase 3) during August-December 2014.

For further details on analysis of the food security situation in Bay and Bakool regions, please see sections 4.1, 4.2 and 4.3.3 of the Food Security and Nutrition Analysis Post Gu 2014 Technical Series Report No VII. 56 at www.fsnau.org

GU 2014 SURVEY RESULTS

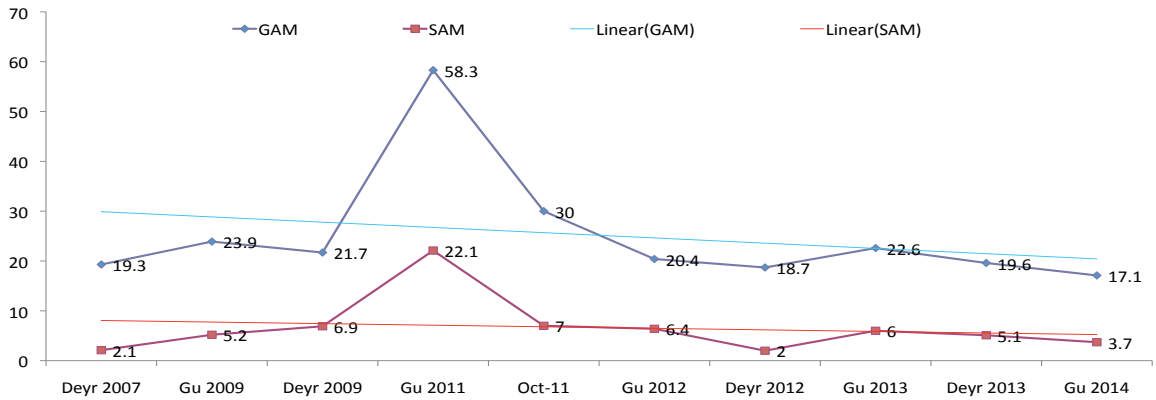
The results of nutrition assessments done in Bay and Bakool region are summarized in table 37.

Key highlights are discussed below:

Acute Malnutrition

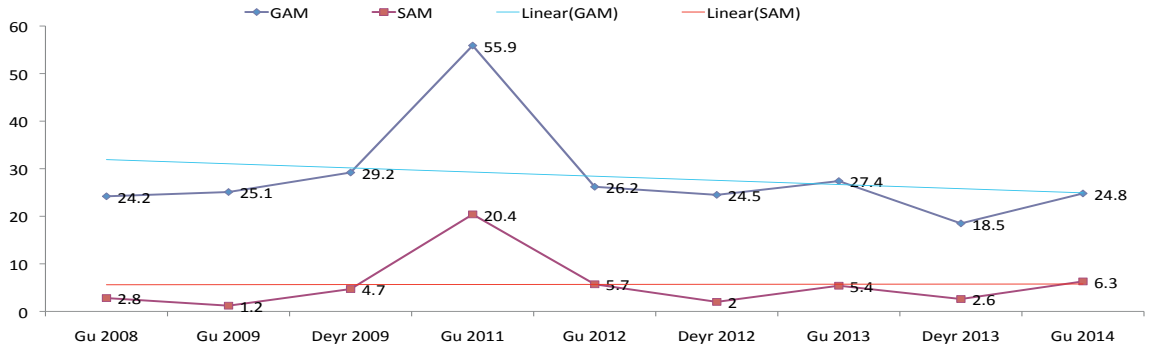
The results of post Gu 2014 Nutrition assessment in Bay agro-pastoral show an improvement in prevalence of both GAM and SAM (Figure 52). Even though current GAM levels are **Critical** (17.1 %) it is lower than 19.6 percent recorded in Deyr 2013/14 or 22.6 percent recorded in Gu 2013. SAM prevalence shows marked improvement from **Critical** levels noted in Deyr 2013 (5.1%) to **Serious** levels (3.7%).

Figure 52: Trends in Acute Malnutrition in Bay Agro-Pastoral, Somalia



In contrast reverse situation is noted among Bakool Pastorals which show increase in both GAM and SAM prevalence since Deyr 2013 (Figure 53). Current SAM prevalence of 6.3 percent is the highest reported since famine. The deterioration recorded especially in Bakool pastoral livelihoods is attributed to multiple factors that include: high reported morbidity levels (25 percent), outbreaks of measles, population displacement resulted from insecurity, declining humanitarian access and low milk access as a result of livestock out-migration to Ethiopia. Out-migration of livestock results in families spliting leaving women and young children with limited or no milk access.

Figure 53: Trends in Acute Malnutrition in Bakool Pastoral, Somalia



More boys than girls were acutely malnourished but the difference was not statistically significant . Baidoa IDP settlement recorded a GAM rate of 12.9 percent and SAM rate of 2.4 percent indicating a **Serious** nutrition situation which is an improvement when compared with GAM rate of 15.8 percent and SAM rate of 3.4 percent recorded in *Gu* 2013 but a stable situation when compared with GAM rate of 14.3 percent in *Deyr* 2013/14. Reduction in SAM levels were also noted from serious levels in *Deyr* 2013/14 and *Gu* 2013 to Alert levels recorded in *Gu* 2014 at 2.4 percent. The improvement is linked to continued humanitarian support in these settlements.

Income sources among Baidoa IDPs

Table 35: Nutrition situation and mortality among choldren under 5 yrs in Bay and Bakool regions of Somalia

Population assessed	GAM -WHO/ UNICEF	SAM – FSNAU	CDR-Sphere	U5DR -Sphere	Stunted-WHO/ UNICEF	Underweight-WHO/UNICEF	Morbidity	Maternal malnutrition
Bay Agro-pastoral	17.1	3.7	0.5	1.0	38.1	32.4	25	24.9
Bakool pastoral	24.8	6.3	0.4	0.8	3	14.7	25.9	22.9
Baidoa IDPs	12.9	2.4	0.7	0.8	41.5	31.6	32.3	23.4
Color Code used	Critical		Acceptable	Alert	Serious			
	15-30 %		0.5	<1	30-39.9- high	> 30% -very high		
	Serious	Serious		Acceptable	Critical	Medium		
	10-14.9 %	2.5-4		<1	>40 %-very high	10-19.9%-medium		

Mortality

The Crude and under five death rates in the three assessed population groups in Bay and Bakool regions are within the **Acceptable and Alert** WHO/UNICEF levels of <0.5 and <1/10 000/day. This also reflects stable mortality levels since *Gu* 2013.(Annexe 11). However there was a slight deterioration in Baidoa IDPs CDR differed from Acceptable/Alert levels recorded in *Deyr* 2013/14 and *Gu* 2013 to Serious. No association between Critical/serious levels of GAM prevalent in these areas with mortality rate was observed.

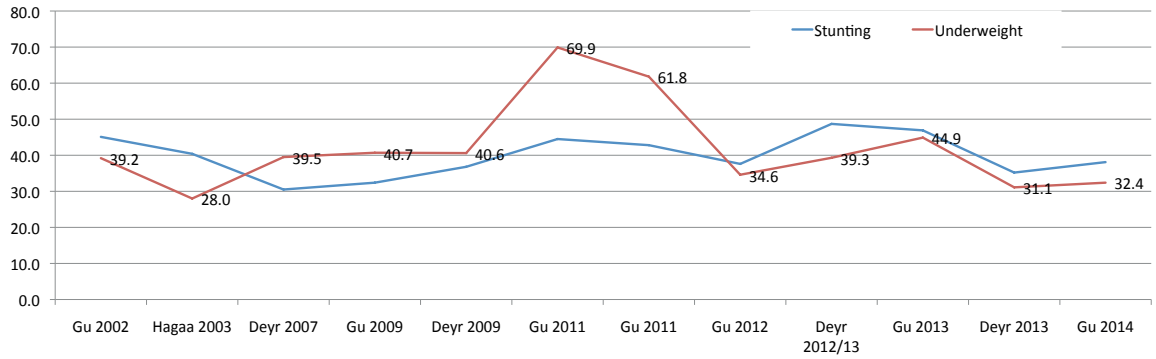
Morbidity

High morbidity that persists in Baidoa IDPs (32.9%), 25.9 percent in Bay Agro-pastoral and 25.6 percent in Bakool Pastoral and are likely key aggravating factors for high prevalence of acute malnutrition observed in these livelihoods. Similar high levels (>25%) of morbidity were also observed in Deyr 2012 and *Gu* 2013 assessments, though a declining morbidity levels in Baidoa IDPs compared from 46.6 percent in *Gu* 2013 and 44.4 percent in *Deyr* 2013/14 were noted, suggesting no improvement in *Gu* 2014.

Chronic Malnutrition-Stunting

Prevalence of stunting was high in Bay Agro Pastoral (30-39.9%), though a decreasing trend is noted when compared with Deyr 2013/14 or even *Gu* 2013 when very high prevalence of stunting was recorded (≥40%). Low prevalence of stunting was recorded in Bakool Pastorals, a trend which is stable since Deyr 2012. Very high (>40%) prevalence of stunting was recorded among Baidoa IDPs, indicating deterioration when compared with high prevalence of stunting recorded in *Deyr* 13/14 and *Gu* 2013 (Annex 6.7)

Figure 54: Bay Region Stunting and Underweight Trends 2002-2014



Underweight (Acute & Chronic Malnutrition)

Very high prevalence of underweight (>30%) is recorded in Bay Agro pastoral *Gu* 2014, though declining trend from *Gu* 2013 were observed. Medium prevalence rate of 14.7 percent underweight was recorded in Bakool pastoral livelihood, indicating stable trends when compared to *Gu* 2013 and Deyr 2013/14. Among Baidoa IDPs, very high prevalence of underweight (≥ 30) was recorded in *Gu* 2014 when compared to *Deyr* 2013 and *Gu* 2013 (Annex 6.7).

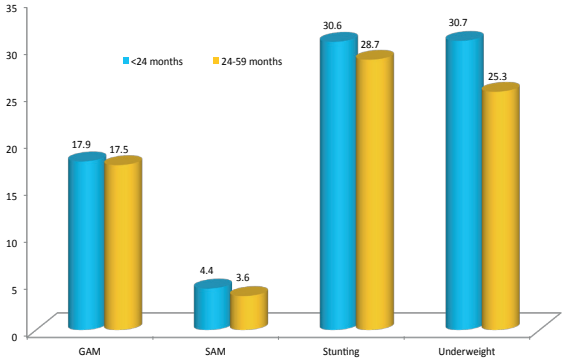
Immunization

The reported coverage with Vitamin A supplementation, measles vaccination and Polio immunization by recall in the Bay Agro-pastoral has always been low <20 percent and far below the Sphere recommended coverage of 95 percent and *Gu* 2014 was no exception (Annex 6.8). Vitamin A and measles coverage in Baidoa IDP settlement was also low (approx. 50 %). More children in *Gu* 2014 reported receiving Vitamin A supplementation (51.9%) and measles vaccination(40%)among the Baidoa IDPs which is an improvement in and compared to *Gu* 2013 (17.8% and 20 % respectively). Bakool pastoral was the only region where coverage with Polio immunization was >75 percent. The *measles* immunization status for measles and vitamin A supplementation is relatively low (<40%) in *Gu* 2014, indicating declining coverage in measles vaccination status compared to 80 percent in *Gu* 2013.

Age and Malnutrition

Age disaggregated data show that higher proportion of children below two years) were found to be stunted and underweight as compared to those 24-59 months (Figure 55). This difference was however not statistically significant P<0.05. This highlights the importance of tackling chronic and acute malnutrition during the 'window of opportunity' (i.e. from pregnancy through two years of age) rather than treating malnutrition once it has occurred.

Figure 55: Comparison of Nutrition Status of children <24 months with 24-59 months



Maternal Malnutrition

Critical levels of maternal malnutrition were recorded in the three livelihoods surveyed: Baidoa (23.4%), Bay Agro pastoral (22.9%) and Bakool pastoral at (24.9%) [Annex 6.9]. This is of concern since maternal malnutrition levels show a significant correlation with stunting and wasting in children surveyed.

Dietary diversification

More than 80 percent of the households reported consuming more than four food groups suggesting good dietary diversity. There has been no significant change in household dietary diversity between *Deyr* 2013/14 and *Gu* 2014 seasons. This shows that contrary to popular belief, acute malnutrition does not only occur in food insecure populations. In the population surveyed it was not an issue of food access, but of caring practices , access to safe water/sanitation and disease.

Infant and young child feeding in terms of continued breastfeeding for up to one year and 24 months, child dietary diversity and frequency of complementary feeding remain sub-optimal among the assessed Baidoa IDP population. Majority (>70%) of the assessed children were not breastfed for up to the recommended 24 months; dietary diversity was poor where only 13.8 percent were reportedly consuming food from four or more food groups while as many as 51 percent of children in Baidoa IDPs were not given complementary food as per the recommended frequency.

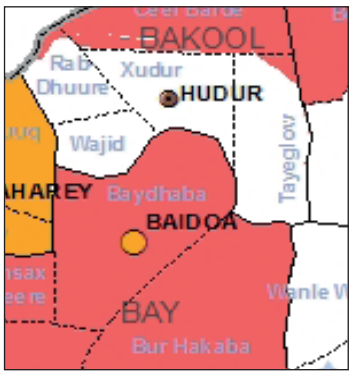
Change in nutrition situation

The maps below show the change in nutrition situation from *Gu* 2013 to *Gu* 2014. ***Critical to Very Critical* levels** are observed among the IDPs and Rural livelihoods in Bay and Bakool regions for the last twelve months (*Gu* 2013 to *Gu* 2014) . The nutrition situation has largely been influenced by displacement associated with civil insecurity, limited milk access due to outmigration of livestock to Ethiopia (Bakool pastoralists), low access to humanitarian assistance, low coverage of health programs (Vitamin A and Measles vaccination) and high morbidity; coupled with chronic underlying risk factors such as poor access to safe water and sanitation facilities. An increase in the number of IDPs in the Baidoa IDP settlements has also been observed, with the new arrivals mainly coming from the rural areas of Bakool and Bay, where they have escaped the civil conflict Though improvement recorded in Baidoa IDPs compared to *Gu* 2013 is attributable to continued humanitarian support e.g feeding programs in Baidoa town; cash distribution; improved referrals and reduction of AWD outbreaks. Overall, the level of acute malnutrition in Bay and Bakool region has shown sustained critical levels since *Gu* 2013 as indicated in the trend chart below (Figure 56).

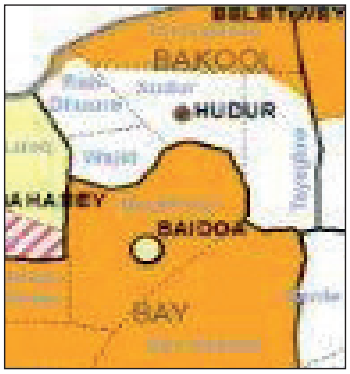
Poor Household sanitation & living conditions- Baidoa IDPs

Figure 56: Progression of the Nutrition Situation *Gu* 2013 to *Gu* 2014 in Bay Bakool Regions

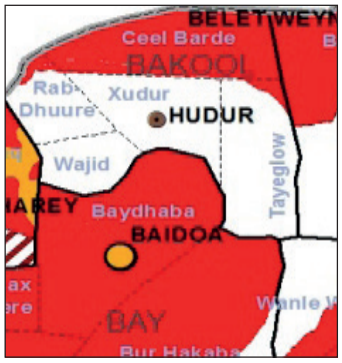
Nutrition Situation Jul 2013



Nutrition Situation Jan 2014



Nutrition Situation Jul 2014



CURRENT HOT SPOT FOR ACUTE MALNUTRITION IN BAY AND BAKOOL REGION

Bakool Pastoral is the current hotspot for acute malnutrition (GAM >15% as well as SAM >5%)

Bay Agro-pastoral with **Critical** GAM level (>15%) **and serious levels of** SAM (3.7%) also has high prevalence of stunting (>30-39.9) and very high prevalence of underweight (>30 %).

Baidoa IDPs with **Very Critical** levels of prevalence of GAM-MUAC< 12.5 (16.9 %) as well as SAM-MUAC (3.5%) has very high prevalence of chronic malnutrition (41.5% stunting) and underweight (31.6 %).

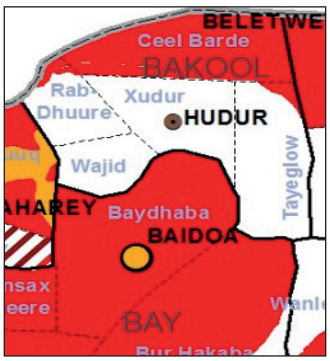
These hotspots requiring immediate interventions to both treat the acutely malnourished children and prevent further deterioration of the nutrition situation.

OUTLOOK FOR JULY TO OCTOBER 2014

Nutrition situation is projected to be sustained as **Critical** phase in Bay and Bakool livelihoods due to high morbidity levels, measles outbreaks in some parts in Bakool agro-pastorlists, prevailing insecurity and declining access for humanitarian health and nutrition assistance. The current stressed food security situation in Bay bakool regions is similarly projected to remain in a stressed phase in both regions. The maps below show current and projected nutrition situation for the region.

Figure 57: Nutrition Situation Outlook July to October 2014 in Bay and Bakool

Current Nutrition situation - Jul 2014



Projected Nutrition situation - Aug-Oct 2014

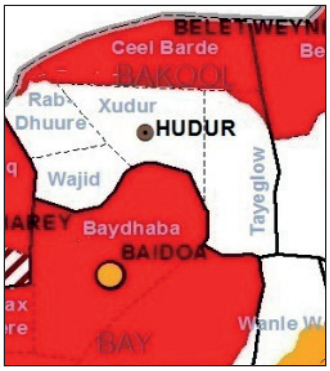


Table 36: Summary of Key Nutrition Findings Bay Bakool - Gu 2014

	Baidoa IDPS		Bay Agro-pastoral		Bakool Pastoral	
	Clusters : 30 (N=674; Boys=333; Girls=341)		Clusters : 33 (N=922:Boys=462: Girls=460)		Clusters : 33 (N=540;Boys=272;Girls=268)	
Indicator	**% (CI)**	**Change from Deyr 2013**	**% (CI)**	**Change from Deyr 2013**	**% (CI)**	**Change from Deyr 2013**
Child Nutrition Status						
Global Acute Malnutrition (WHZ<-2 or oedema)	**12.9** (10.1-16.4)		**17.1** (12.9-22.4)		**24.8** (21.4-28.5)	
Boys	15.6 (11.8-20.4)	Improved	20.1 (13.8-28.5	improved	29.0 (23.7-35.0)	Deteriorated
Girls	10.3 (6.5-15.8)		14.1 (10.8-18.3		20.5 (16.9-24.7)	
Severe Acute Malnutrition (WHZ<-3 or oedema)	2.4 (1.5- 3.8)		3.7 (2.3- 5.9)		6.3 (4.5-8.7)	
Boys	3 (1.7- 5.3)	Improved	4.5(2.6-8)	Improved	8.1(5.4-11.9)	Deteriorated
Girls	1.8 (0.6- 5.0)		2.8(1.7-4.7)		4.5(2.6-7.7)	
Mean of Weight for Height Z Scores	-0.81±1.06	Deteriorated	-0.81±1.13	Improved	-1.26±1.10	Improved
Oedema	0.3	Improved	0.3	Improved	0.6	Deteriorated
Proportion with MUAC<12.5 cm	16.9 (13.3-21.2)		15.4(12.9-18.4)		9.9(7.7-12.7)	
Boys	15.7 (11.8-20.6)	Deteriorated	15.1(11.9-18.9)	Deteriorated	8.7 (5.9-12.6)	Improved
Girls	17.9 (13.3-23.8)		15.8(12.3-20)		11.2 (8-15.4)	
Proportion with MUAC<11.5 cm	3.5 (2.3- 5.3)		3(2.1-4.2)		2.3 (1.4-4)	
Boys	3.3 (2.0- 5.4)	Improved	3.3(2-5.7)	Deteriorated	2.5 (1.2-5.1)	Deteriorated
Girls	3.7 (1.9- 6.9)		2.6(1.5-4.5)		2.2 (1-4.6)	
Stunting (HAZ<-2)	41.5 (35.7-47.6)		38.1(31.8-44.8)		3 (1.8-4.7)	
Boys	42.3 (34.9-50.1)	Deteriorated	44.3(37.8-51.1)	Deteriorated	5.5 (3.4-8.9)	Improved
Girls	40.8 (33.6-48.4)		31.6(24.6-39.6)		0.4(0.1-2.1)	
Severe Stunting (HAZ<-3)	20.4 (15.7-26.0)		16.1(12.1-21)		0.2(0-1)	
Boys	20.5 (15.6-26.5)	Deteriorated	20.3(15-27)	Deteriorated	0.4(0.1-2.1)	Improved
Girls	20.2 (14.4-27.7)		11.6(8.1-16.5)		0(0-1.4)	
Underweight (WAZ<-2)	31.6 (27.1-36.5)		32.4(25.3-40.4)		14.7 (12-17.9)	
Boys	35.4 (29.0-42.3)	Deteriorated	38.3(29.3-48.3)	Deteriorated	19.7 (15.4-24.8)	Improved
Girls	28.1 (22.7-34.2)		26.2(20.2-33.4)		9.7 (6.8-13.8)	
Death Rates						
Crude deaths, per 10,000 per day (retrospective for 90 days)	0.69 (0.44-1.1)	Deteriorated	0.49 (0.27-0.89)	Deteriorated	0.38 (0.20-0.71)	Deteriorated
Under five deaths, per 10,000 per day (retrospective for 90 days)	0.76 (0.35-1.64)	Improved	0.95 (0.42-2.13)	Deteriorated	0.78 (0.29-2.07)	Deteriorated
Morbidity	32.3(24.1-40.5)		25.9(19.9-31.9)		25(18.5-31.6)	
Boys	31.9(23.7-40.2)	Improved	24.9(18.2-31.6)	Deteriorated	23.5(15.9-31)	Improved
Girls	32.7(23.9-41.4)		26.9(20.3-33.6)		26.6(19.1-34.1)	
Diarrhoea	18.1(12.9-23.4)		11.3(7.9-14.8)		13.5(9.2-17.9)	
Boys	18.3(12.8-23.8)	Deteriorated	9.8(5.7-14)	Deteriorated	13(7.8-18.2)	Improved
Girls	18(11.7-24.2)		12.8(8.9-16.7)		14(8.3-19.7)	
Pneumonia	6.5(3-10)		3.4(2-4.8)		5.4(3-7.8)	
Boys	6(2.2-10)	Improved	3.1(1.7-4.5)	Improved	5.8(2.7-8.9)	Improved
Girls	6.9(3.4-10.5)		3.6(1.5-5.7)		5(1.8-8.3)	
Fever	22.8(16.5-29)		14.1(10.2-17.9)		11.9 (8.4-15.4)	
Boys	24.5(17.4-31.5)	N/A	14(9.6-18.4)	N/A	9.4 (5-13.8)	N/A
Girls	21.1(14.6-27.6)		14.1(9.8-18.4)		14.4 (9.7-19.1)	
Measles	2.5(0.5-4.5)		0.3(-0.2-0.8)		0.2(-0.19-0.55)	
Boys	3(0.1-5.8)	Deteriorated	0.4(-0.4-1.3)	Improved	0.4(-0.37-1.1)	N/A
Girls	2(0.4-3.6)		0.2(-0.2-0.6)			

Vitamin A Supplementation	51.9 (41.1-62.7)		8.6 (2.8-14.3)		35.7 (27.5-43.9)	
Boys	50.4(39.0-61.9)	Improved	8.4 (1.8-14.9)	Deteriorated	31(22.4-39.7)	Deteriorated
Girls	53.3(42.0-64.6)		8.8 (3-14.5)		40.3 (31.1-49.5)	
Measles Vaccination	40.4(29.4-51.5)		5.7 (2.3-9.2)		26.5 (19.8-33.2)	
Boys	39.8(27.9-51.6)	Deteriorated	6.3 (2-10.5)	Deteriorated	22.7 (16.4-29)	Improved
Girls	41.0(29.5-52.6)		5.1 (1.5-8.8)		30.2 (21.6-38.7)	
Polio Immunization	84.9(79.1-90.7)		34.9(24.1-45.7)		71.5 (64-79.1)	
Boys	84(76.7-91.3)	Deteriorated	34.7 (23.6-45.8)	Improved	71.1(62.7-79.5)	Deteriorated
Girls	85.8(79.8-91.7)		35 (23.5-46.6)		71.9(63.4-80.5)	
Infant and Young Child Feeding (6-24 Months)						
Proportion still breastfeeding	26.5(23.2-29.7)					
Boys	26.4(21.7-31.1)	Deteriorated	N/A		N/A	N/A
Girls	26.5(21.9-31.1)					
Continued breastfeeding up to 12 months	77.3 (65.8-88.7)					
Boys	74.2 (58.9-89.4)	Deteriorated	N/A		N/A	N/A
Girls	80 (66.2-93.8)					
Continued breastfeeding up to 24 months	30 (16.8-43.1)					
Boys	21.9 (9.7-34.1)	Improved	N/A		N/A	N/A
Girls	36.8(17.8-55.9)					
Proportion meeting recommended feeding frequencies	48.6 (42.5-54.8)					
Boys	48.3 (38.9-57.6)	Deteriorated	N/A		N/A	N/A
Girls	48.9 (41.3-56.6)					
Proportion who reported to have consumed ≥4 food groups	13.8 9(6.6-21.0)					
Boys	14.8 (5.0-24.5)	Improved	N/A		N/A	N/A
Girls	12.9 (3.2-22.6)					
Women Nutrition and Immunization Status			N/A		N/A	
Proportion of acutely malnourished pregnant and lactating women (MUAC<21.0)	5.9(2.7-14.6)	Deteriorated	3.3(-2.9-9.5)	Deteriorated	6.5 (2.5-10.5)	Deteriorated
Proportion of acutely malnourished pregnant and lactating women (MUAC<23.0)	23.4(9-38)	Deteriorated	22.9(7.8-37.9)	Deteriorated	24.9 (17.4-32.5)	Deteriorated
Proportion of Women who received Tetanus immunization						
No dose	18.7(14.2-23.2)					
One dose	13.2(9.2-17.1)	Improved	N/A		N/A	N/A
Two doses	26.1(19-33.2)					
Three doses	42(34.3-49.7)					
Public Health Indicators						
Household with access to sanitation facilities	83.4(72.3-94.6)	Improved	N/A		N/A	N/A
Household with access to safe water n=290	43.4(29.8-57.0)	Improved	N/A		N/A	N/A
Proportion who reported to have consumed <4 food groups	19.2(10.8-27.6)	Improved	N/A		N/A	N/A
Household's Main Food Source- Purchase	81.3 (73.8-88.6)	Deteriorated	N/A		N/A	N/A
Mean CSI	13.9	Sustained	N/A		N/A	
OVERALL NUTRITION SITUATION	Serious		Critical		Critical	

5. GENDER

5.1 GENDER DIFFERENCES IN PREVALENCE OF MALNUTRITION IN CHILDREN UNDER 5 YRS IN SOMALIA

It is common knowledge that Somalia, unlike many countries in the world, has suffered a protracted humanitarian crisis in the last two decades. According to the UNDP 2012 gender brief, Somalia has a gender inequality index of 0.776 again (with a maximum of 1 denoting complete inequality), placing it at the fourth highest position globally.[1] This suggests that girls and women in Somalia face profound challenges, amongst them being limited access to health services. Importantly child mortality and maternal mortality rates in Somalia are amongst the highest in the globe[2]. This withstanding, FSNAU continues to collect sex disaggregated data in order to inform targeted humanitarian response, and in so doing, complements efforts geared towards realizing gender equality. Besides, by providing evidence based information, planners and humanitarian actors are able to develop policies and interventions that are not based on assumptions or stereotypes but on the reality on the ground.

Like other seasonal assessments in Somalia, the Gu 2014 assessments collected and analyzed information on key indicators of nutrition, and explored the gender differences there in, in the prevalence of malnutrition in under-five children. The under five children were grouped into two major grouping; 6 to 23 months and 24 to 59 months. The core indicators for nutrition that were probed against the underlying gender differences included GAM, SAM, morbidity, stunting and underweight. GAM /SAM indicate the presence and degree of humanitarian emergencies for children <5, whilst stunting and underweight suggests the underlying vulnerability associated with food insecurity, socio-economic status and poverty in the longer term.

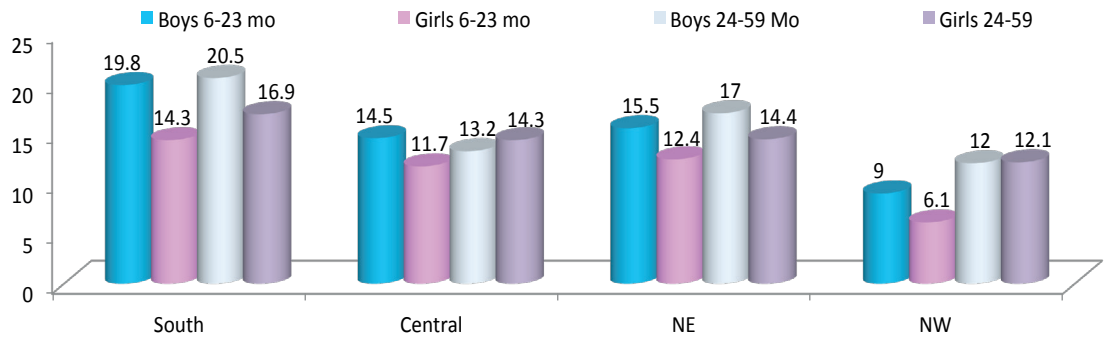
RESULTS:

Summary of gender disaggregated information on nutrition situation is given in Annex 6.11 and key highlights are discussed below.

GLOBAL ACUTE MALNUTRITION (GAM)

The prevalence of GAM was higher in boys of both age cohort (6-23 months and 24-59 months) compared to girls in South and North East regions (Figure 58). This difference was statistically significance. In Central and North West regions, boys aged 6-23 months exhibited higher GAM prevalence compared to girls whilst girls aged 24-59 months registered higher GAM compared to boys of same age. These findings were only statistically significant in North West regions among children aged 6-23 months. Furthermore, the likelihood of boys to continue showing high GAM compared to girls is almost double, especially in the South and North East regions (this is per the risk reduction ratio percentage).

Figure 58: Gender differences in GAM Prevalence in different regions

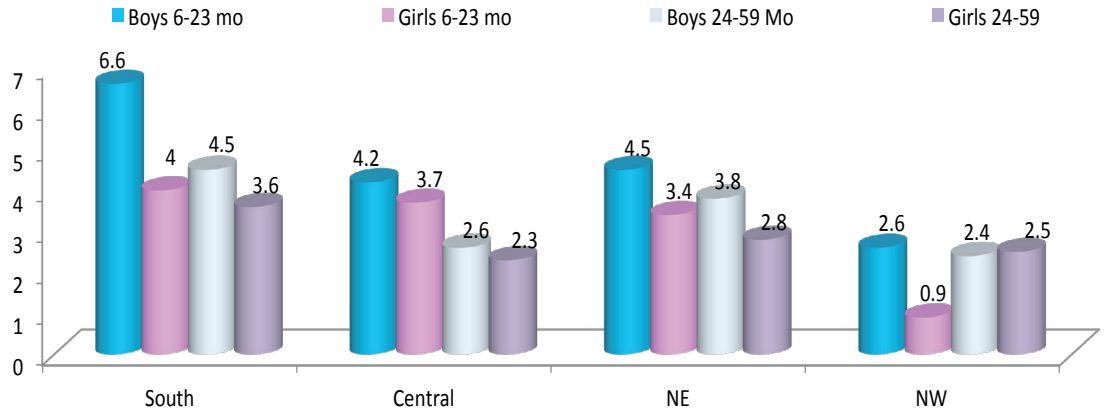


1 United Nations Development Programme (2012). Somalia Human Development Report 2012: Empowering Youth for Peace and Development, p. xviii.
2 http://www.unicef.org/infobycountry/somalia_statistics.html

SEVERE ACUTE MALNUTRITION (SAM)

SAM was observed to be high in boys aged 6-23 and 24-59 months compared to girls (of same age) in South, Central and North East regions (Figure 59), however, this difference is only statistically significance among children aged 6-23 months in the Southern regions. In the Northwest regions, girls aged 24-59 months had higher SAM compared to boys. However among children aged 6-23 months, boys recorded higher SAM compared to girls. This finding was statistically significant. Notably, in the Northwest regions according to the risk reduction ratio percentage, the likelihood of boys continuing to show higher SAM compared to girls is almost double.

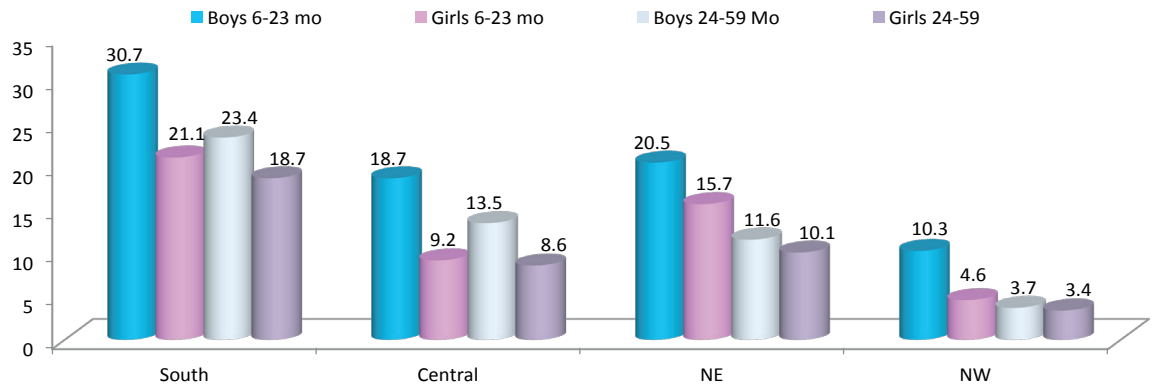
Figure 59: Gender differences in SAM Prevalence in different regions



STUNTING/CHRONIC MALNUTRITION

Just like the results of Deyr 2013/2014 seasonal assessment, in this Gu 2014 assessment the prevalence of stunting was seen more in boys compared to girls (of both age cohorts) across all regions (Figure 60). A sustained high stunting prevalence was observed in boys compared to girls. In the Southern regions, high prevalence of stunting (30.7 % median) was observed in 6-23 month boys compared to medium levels of stunting prevalence (21.1 % median) seen in girls. Similarly, in children aged 24-59 months boys recorded high stunting (23.4% median) compared to the mediums levels of stunting prevalence (18.7%) observed in girls. The differences in stunting prevalence were statistically significant in South and Central among all children aged both 6-23 and 24-59 months. In North East and North West the results were statistically significance only among children aged 6-23 months.

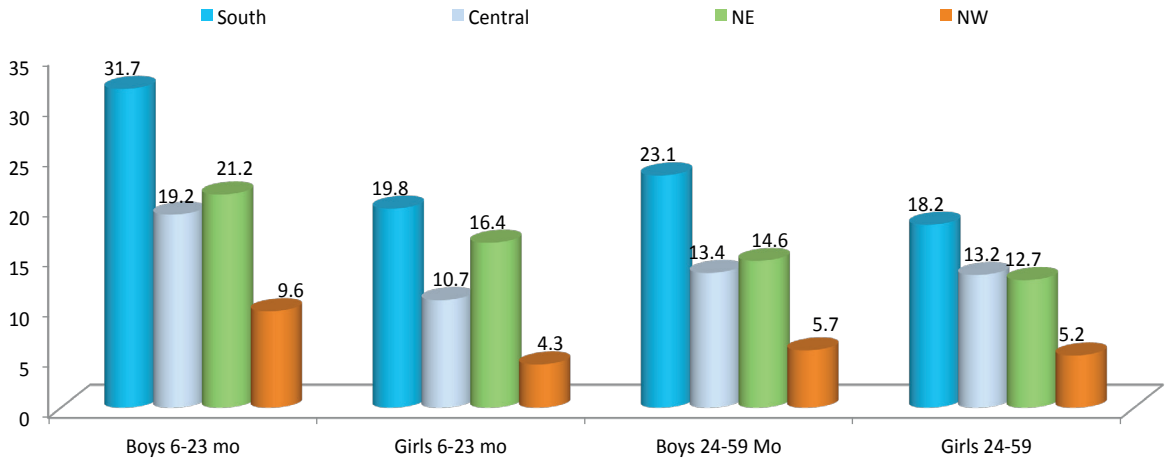
Figure 60: Gender differences in Prevalence of Stunting in different regions



UNDER WEIGHT

Underweight results of this season(GU 14) compared to the previous season(Deyr 2013/14) show a sustained underweight prevalence among boys aged 6-23 and 24-59 months compared to girls in all regions (Figure 61). The difference is statistically significant in children of both age groups (6-23 and 24-59 months) in the South whereas in the Central, Northeast and Northwest regions the difference is only statistically significant among children aged 6-23 months.

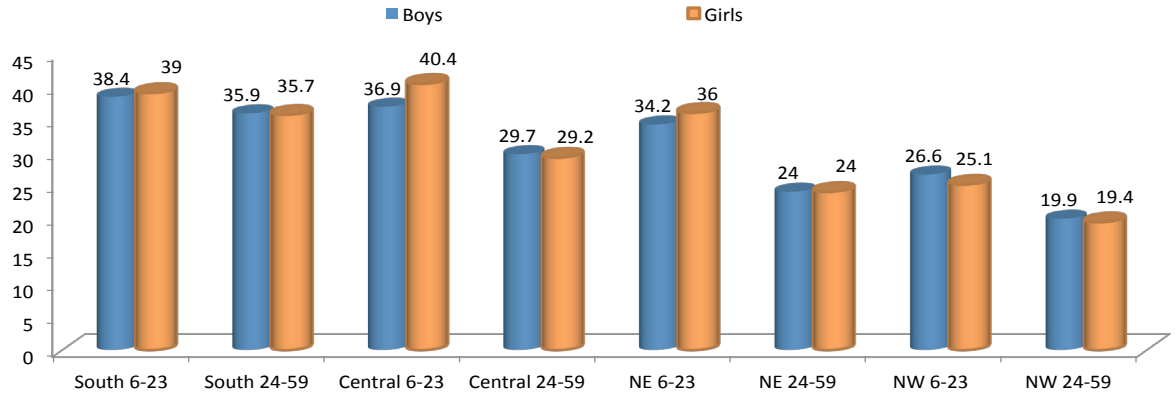
Figure 61: Gender differences in Underweight Prevalence in different regions



MORBIDITY

Gu 2014 results indicate higher morbidity in boys of both age cohorts in the Northwest regions (Figure 62). However, girls aged 6-23 months had slight higher morbidity compared to boys of same age in South, Central and North East regions. However morbidity was observed high in 24-59 months old boys compared to girls in the South and Central regions only. These differences were not statistically significant, however, as results were only statistically significant in the Northeast among children aged 24-59 months where equal number of girls and boys were reportedly morbid.

Figure 62: Gender differences in Prevalence of Morbidity in different regions



CONCLUSION

Documented literature confirms Somalia is a drought prone country that is characterised by deplorable food insecurity. Besides the country has very limited supply of quality health services, safe drinking water and safe sanitation facilities. In this Gu 2014 assessment, just like the Deyr 2013/2014 assessment, regardless of gender nutritional differences in boys and girl, prevalence of acute malnutrition (GAM & SAM), stunting and underweight was highest in south Somalia followed by Northeast while lowest levels are seen in in Northwest. Besides, it was observed that boys under 5 years in Somalia are more likely to be malnourished compared to girls. This is a phenomenon that can be explained by the Somalia patriarchal system (and perhaps sex preferences) that sees close attachment of boys to their fathers. A culture that is likely portrayed by fathers spending most of their time with their under five sons, and perhaps going with them to markets/ herding. And as a result, potentially making boys miss regular meals. On the other hand, girls by virtue of being at home with mothers, and most likely accompanying them in the kitchen, could mean they get chance to eat regularly and as result show improved nutrition. However, more in depth research/studies is needed to reconfirm these nutritional gender differences.

6. APPENDICES

6.1 Areas Accessed for Nutrition Assessments during *Gu* 2014

Details of Post *Gu* 2014 Nutrition Assessment			
Rural livelihood	Urban livelihood	IDPs	Total
SOUTH			
Bakool Pastoral	Mogadishu Town	Mogadishu IDPs	
Bay Agropastoral-	Kismayo town	Kismayo IDPs	
N Gedo Pastoral		Dhobley IDPs	
N Gedo Riverine		Baidoa IDPs	
N Gedo Agro pastoral		Dolow IDPs	
S Gedo Pastoral-MUAC			
S Gedo Agropastoral-MUAC			**19**
S Gedo Riverine-MUAC			
Hiran pastoral-Mataban District			
Beletweyne district			
Shabelle Agro pastoral			
Shabelle Riverine			
12	**2**	**5**	
CENTRAL			
Coastal Deeh	Mudug Urban	Dusamareb IDPs	
Cow pea Belt	Galgadud		
Hawd Pastoral			**7**
Addun Pastoral			
4	**2**	**1**	
NORTH EAST			
Sool Plateau	Bari Region Urban	Bossaso	
East Golis/Kakaar Pastoral	Nugal Region	Qardho	
Nugal Valley Pastoral		Garowe	**10**
Coastal Deeh		Galkayo	
4	**2**	**4**	
NORTHWEST			
Agropastoral LZ (Togdheer) NW	Sanaag Region Urban	Hargeisa IDPs	
West Golis /Guban Pastoral LZ	Awdal Region	Burao	
Sool Plateau	Woq Galbeed Region	Berbera IDPs	**14**
East Golis/Kakaar Pastoral	Togdheer Region		
Nugal Valley Pastoral	Sool Region Urban		
NW Hawd			
6	**5**	**3**	
26	**11**	**13**	**50**

*Three Additional Nutrition Surveys were conducted in Juba but survey results were discarded due to poor data quality.

6.2 Details of Population Groups Surveyed

Region/Livelihood	# Clusters	# HH	# Children	# Boys	# Girls	# PLW
Bakool Pastoral	35	367	540	272	268	293
Bay Agropastoral-	33	597	922	462	460	463
North Gedo Pastoral	28	336	502	272	230	132
North Gedo Riverine	30	334	776	401	375	220
North Gedo Agro pastoral	28	314	518	258	260	111
South Gedo Pastoral-MUAC	Exhaustive	580	1100	544	556	~
South Gedo Agropastoral-MUAC	Exhaustive	634	1100	546	554	~
South Gedo Riverine-MUAC	Exhaustive	624	1100	544	556	~
Hiran pastoral-Mataban District	30	378	613	299	314	129
Hiran Agro pastoral & Riverine-Beletweyne	30	494	746	385	361	337
Shabelle Agropastoral	34	435	707	350	357	273
Shabelle Riverine	26	316	555	292	363	383
Mogadishu Town	40	602	783	389	394	250
Kismayo town	35	565	1013	494	519	27
Mogadishu IDPs	40	515	614	320	294	369
Kismayo IDPs	30	520	907	441	466	154
Dhobley IDPs	Exhaustive	522	776	388	388	73
Baidoa IDPs	30	447	674	333	341	287
Dolow IDPs	Exhaustive	410	664	339	325	73
Coastal Deeh	26	760	760	384	376	328
Cow pea Belt	26	814	814	404	410	287
Hawd Pastoral	27	427	670	335	335	381
Addun Pastoral	27	367	578	309	269	134
Mudug Urban	25	525	604	304	300	~
Galgadud	25	407	699	371	328	~
Dusamareb IDPs	Exhaustive	297	329	170	159	73
Sool Plateau	32	385	681	355	326	153
East Golis/Gebbi Valley	30	499	741	365	376	123
Nugal Valley Pastoral	30	335	643	356	287	147
Coastal Deeh	30	473	709	370	339	144
Bari Region Urban	30	499	576	304	272	~
Nugal Region	26	529	621	331	290	~
Bossaso	28	545	764	374	390	77
Qardho	Exhaustive	293	417	199	218	129
Garowe	27	559	859	437	422	232
Galkayo	28	507	849	432	417	157
Agropastoral LZ (Togdheer) NW	28	259	491	240	251	247
West Golis /Guban Pastoral LZ	35	202	545	278	267	173
Sool Plateau	32	385	681	355	326	153
East Golis/Kakaar Pastoral	28	284	501	256	245	112
Nugal Valley Pastoral	35	335	643	356	287	147
NW Hawd	30	270	553	277	276	288
Sanaag Region Urban	25	554	506	236	270	~
Awdal Region Urban	25	533	531	267	264	~
Woq Galbeed Region	25	224	347	177	170	~
Togdheer Region Urban	25	245	495	249	246	~
Sool Region Urban	25	327	564	280	284	~
Hargeisa IDPs	30	339	666	337	329	348
Burao	32	353	667	342	325	260
Berbera IDPs	28	304	641	311	330	311
Total	**1 269**	**21 166**	**33 755**	**17 090**	**16 765**	**7 978**

6.3 Nutrition Situation in Somalia

Livelihood Zone/ Population assessed	GAM	SAM	CDR	U5DR	Stunted	Underweight
Livelihood Zone						
BayAgrop	17.1	3.7	0.5	1.0	38.1	32.4
BakoolPast	24.8	6.3	0.4	0.8	3.0	14.7
North Gedo pastoral	20.7	1.0	0.5	0.9	4.2	10.2
North Gedo Agro-pastoral	14.9	0.2	0.8	1.2	19.8	13.5
North Gedo Riverine	19.3	3.1	0.7	0.9	21.4	21.4
Beletweyne District	15.0	3.5	0.3	0.1	23.5	24.8
Mataban District	22.2	5.1	0.7	0.2	9.9	16.7
Shabelle Riverine	11.2	2.6	0.5	1.1	19.5	15.6
Shabelle Agropastoral	18.8	5.4	0.7	0.8	10.3	19.9
Lower Shabelle	17.2	5.5	0.6	0.7	13.4	19.6
Middle Shabelle	13.5	2.5	0.6	1.1	15.0	16.5
EGolis (NE)	15.8	2.8	0.2	0.1	9.1	13.2
Nugal Valley	7.9	0.3	0.2	0.0	3.1	3.9
Sool plateau	12.0	2.2	0.1	0.2	3.6	6.3
Coastal Deeh	12.7	2.1	0.0	0.0	6.5	8.5
Hawd Central	17.3	4.6	0.5	0.6	11.6	16.6
Addun Central	9.7	2.4	0.2	0.3	7.2	8.9
NW Agropastoral	10.4	2.6	0.1	0.0	2.8	5.8
WGolis/Guban	15.8	3.0	0.1	0.0	7.1	9.4
EGolis (NW)	9.0	0.4	0.1	0.6	1.6	4.3
Nugal Valley	7.9	0.3	0.2	0.0	3.1	3.9
Sool plateau	12.0	2.2	0.1	0.0	3.6	6.3
Hawd NW	7.6	0.0	0.1	0.0	2.1	1.2
Median	14.9	2.6	0.3	0.3	7.2	13.2
IDPs						
Baidoa IDPs	12.9	2.4	0.7	0.8	41.5	31.6
Mogadishu IDPs	18.9	5.5	1.4	3.4	16.0	23.0
Dolow IDPs	18.8	4.1	0.7	1.2	26.9	26.4
Dobley IDPs	16.5	4.0	0.5	1.0	10.3	12.3
Kismayo IDPs	16.6	3.6	1.3	1.4	39.8	32.8
Dhusamreeb IDP's	18.0	4.6	0.2	0.3	12.2	17.9
Bossaso IDPs	13.2	2.9	0.3	0.4	22.8	22.6
Qardho IDPs	12.2	1.7	0.3	0.7	16.5	18.7
Garowe IDPs	21.0	4.4	0.1	0.1	22.3	25.1
Galkayo IDP's	16.5	2.5	0.1	0.4	15.3	17.8
Hargeisa IDPs	8.1	0.3	0.7	0.7	4.1	7.4
Burao IDPs	12.4	1.8	0.2	0.3	2.1	2.7
Berbera IDPs	10.0	1.7	0.3	0.2	2.2	5.6
Median	16.5	2.9	0.3	0.7	16.0	18.7
URBAN						
Mogadishu urban	10.1	1.4	~	~	8.3	8.9
Kismayo Town	12.4	3.2	0.6	0.8	19.9	17.2
Sool Region Urban	11.3	1.1	~	~	2.1	5.0
Togdheer Region Urban	8.1	1.4	~	~	3.4	4.8
W/Galbeed Region Urban	8.6	2.0	~	~	1.7	4.3
Sanag Region Urban	5.5	0.4	~	~	5.5	3.9
Awdal Urban	6.6	0.8	~	~	14.4	9.0
Galgaduud Urban	9.8	1.3	~	~	8.8	10.4
Muduug Urban	9.9	2.2	~	~	11.5	11.4
Bari Urban	17.5	4.0	~	~	7.5	13.5
Nugaal Urban	12.9	3.2	~	~	9.0	8.5
Galgudud	9.8	1.3			8.8	10.4
Median	=					
MUAC						
South Gedo Pastoral (MUAC)	16.9	1.9	~	~	~	~
South Gedo Agropastoral (MUAC)	15.6	2.2	~	~	~	~
South Gedo Riverine (MUAC)	17.7	3.4	~	~	~	~
Coastal deeh Central (MUAC)	10.0	4.9	~	~	~	~
Cowpea Belt (MUAC)	9.7	2.5	~	~	~	~

6.4: Change in GAM and SAM since Gu 2013 and Gu 2014

	GAM			SAM		
	Gu 2014	Deyr 2013	Gu 2013	Gu 2014	Deyr 2013	Gu 2013
	LIVELIHOOD ZONES					
	SOUTH CENTRAL					
Bay Agropastorals	17.1	19.6	22.6	3.7	5.1	6.0
Bakool Pastorals	24.8	18.5	27.4	6.3	2.6	5.4
North Gedo Pastoral	20.7	14.1	18.8	1.0	1.4	5.0
North Gedo Agro-pastoral	14.9	12.1	18.6	0.2	1.9	5.0
North Gedo Riverine	19.3	13.6	15.2	3.1	2.5	2.7
Beletweyne District	15.0	16.4	20.2	3.5	3.6	4.4
Mataban District	22.2	12.6	10.0	5.1	2.9	1.8
Lower Shabelle	17.2	~	~	5.5	~	~
Middle Shabelle	13.5	~	~	2.5	~	~
Shabelle Riverine	11.2	9.5	~	2.5	3.1	~
Shabelle Agropastoral	18.8	8.0	~	1.6	1.9	~
MEDIAN	17.2	13.6	18.8	3.1	2.6	5.0
	NORTH EAST					
Hawd Central	17.3	13.2	10.6	4.6	2.4	2.1
Addun Central	9.7	8.9	8.0	2.4	1.6	1.0
E Golis (NE)	15.8	10.5	16.7	2.8	2.1	3.6
Nugal Valley	7.9	14.5	11.3	0.3	2.3	1.3
Sool plateau	12.0	8.6	10.8	2.2	0.5	1.5
Coastal Deeh NE	12.7	11.8	10.8	2.1	1.2	1.7
MEDIAN	12.4	11.2	10.8	2.3	1.9	1.6
	NORTH WEST					
Agropastoral LZ (Togdheer) NW	10.4	~	9.4	2.6	~	0.7
West Golis /Guban Pastoral LZ	15.8	~	14.9	3.0	~	2.0
Sool Plateau	12.0	8.6	10.8	2.2	0.5	1.5
East Golis/Gebi valley	9.0	14.5	14.4	0.4	2.3	1.7
Nugal Valley Pastoral	7.9	14.5	11.3	0.3	2.3	1.3
NW Hawd	7.6	~	14.4	0.0	~	1.7
MEDIAN	9.7	14.5	12.9	1.3	2.3	1.6
	IDPs					
	SOUTH CENTRAL					
Baidoa IDPs	12.9	14.3	15.8	2.4	2.5	3.4
Kismayo IDP	16.6	16.2	17.6	3.6	3.4	3.4
Mogadishu IDPs	18.9	8.2	12.6	5.5	1.6	2.9
Dolow IDPs	18.8	19.7	16.4	4.1	4.8	3.3
Dobley IDPs	16.5	15.8	20.3	4.0	4.1	6.4
Dhusamreeb IDP's	18.2	16.0	21.4	4.6	4.2	3.1
MEDIAN	17.4	15.9	17.0	4.1	3.8	3.4
	NORTH EAST					
Bossaso IDPs	13.2	13.5	17.3	2.9	2.8	3.8
Qardho IDPs	12.2	18.5	14.9	1.7	4.9	2.8
Garowe IDPs	21.0	15.8	19.2	4.4	4.1	5.8
Galkayo IDP's	16.5	15.0	19.4	2.5	2.9	2.5
MEDIAN	14.9	15.4	18.3	2.7	3.5	3.3
	NORTH WEST					
Hargeisa IDPs	8.1	10.6	18.2	0.3	1.9	2.5
Burao IDPs	12.4	10.0	14.2	1.8	1.0	2.6
Berbera IDPs	10.0	16.1	10.8	1.7	3.6	2.0
MEDIAN	10.0	10.6	14.2	1.7	1.9	2.5
	URBAN					
	SOUTH CENTRAL					
Mogadishu urban	10.1	~	8.6	1.4	~	1.3
Kismayo Town	12.4	~	19.2	3.2	~	5.2
Galgadud	9.9	~	7.7	1.3	~	0.9
MEDIAN	10.1		8.6	1.4		1.3
	NORTH EAST					
Bari Urban	17.5		21.2	4.0		5.7
Mudug	9.9			2.2		
Nugal urban	**12.9**		10.3	3.2		1.4
	NORTH WEST					
Sanaag Region Urban	5.5	~	12.7	0.4	~	3.1
Awdal Region Urban	6.6	~	9.8	0.8	~	0.9
Woq Galbeed Region Urban	8.6	~	7.7	2.0	~	0.9
Togdheer Region Urban	8.1	~	11.5	1.4	~	0.7
Sool Region Urban	11.3	~	3.6	1.1	~	0.0
MEDIAN	8.1	~	9.8	1.1	~	0.9
MUAC	SOUTH CENTRAL					
South gedo pastoral MUAC	16.9	16.6	15.9	1.9	2.0	0.1
South gedo Agropastoral MUAC	15.6	17.1	14.4	2.2	3.8	1.6
South gedo riverine MUAC	17.7	17.8	17.0	3.4	3.4	1.9
Coastal Deeh	10.0	7.8	9.7	4.9	1.5	2.0
Cow pea Belt	9.7	6.5	8.6	2.5	1.2	1.2
MEDIAN	15.6	16.6	14.4	2.5	2.0	1.6
Color Code used	Acceptable	Alert	Serious	Critical	Very critical	
Color code-GAM (WHO/UNICEF)	<5 %	5-9.9 %	10-14.9 %	15-30 %	>30	
Color Code-SAM (FSNAU)	<1%	1.1-2.4%	2.5-4	4-5.6	>5.6	

6.5: Change in MUAC Gu 2013 to Gu 2014

Region/Livelihood	MUAC<12.5 GU 2014	MUAC<12.5 Deyr 2013/14	MUAC<12.5 Gu 2013	MUAC<11.5 GU 2014	MUAC<11.5 Deyr 2013/14	MUAC<11.5 Gu 2013
	LIVELIHOOD ZONES					
	SOUTH CENTRAL					
Bakool Pastoral	9.9	10.1	8.6	2.3	1.9	1.5
Bay Agropastoral-	15.4	12.5	13.3	3	2.2	2.2
N Gedo Pastoral	21.1	5.6	3.6	3.6	1.1	0.3
N Gedo Riverine	9.7	3.3	4.2	2.3	0.9	0.3
N Gedo Agro pastoral	20.3	1.5	2.9	2.3	0.4	0.4
Juba pastoral	~	9.6	7.1	~	1.6	0.5
Juba Agropastoral	~	14.4	10.4	~	2.8	1.9
Juba Riverine	~	18.7	10.9	~	2.4	1.5
Hiran pastoral-Mataban District	7.7	3.8	5.8	1.8	0.5	1.2
Hiran Agro pastoral & Riverine-Beletweyne	9.4	12	6	1.4	2.6	7
Shabelle Agro pastoral	7.7	8	~	1.6	1.9	~
Shabelle Riverine	7	9.5	~	1.3	3.1	~
Lower Shabelle	4.2	~		0.6	~	~
Middle shabelle	9.3	~		2.1	~	
	NORTH EAST					
Hawd Pastoral	12.8	7.1	4.9	2.5	0.6	1.6
Addun Pastoral	4.1	6.7	3.8	0.5	0.9	0.3
Nugal Valley Pastoral	2	1.9	2.4	0.5	0.5	0.4
Coastal Deeh	3.2	3.8	1.4	0.6	0.9	0.4
Sool Plateau	1.5	1.8	2.6	0.3	0.2	0.6
East Golis(N.E)	5.4	2.6	4.1	0.8	0.7	1.3
	NORTH WEST					
Agropastoral LZ (Togdheer) NW	2	2.4	1.8	0.2	0.2	0.0
West Golis /Guban Pastoral LZ	3.5	5.3	6.2	0.7	1.3	0.6
East Golis/Kakaar Pastoral	3.7	2.2	4.1	0.6	0.5	0.3
Nugal Valley Pastoral	2	1.9	2.4	0.5	0.5	0.4
NW Hawd	0.7	3.7	1.7	0.2	0.9	0.0
	IDPS					
	SOUTH CENTRAL					
Mogadishu IDPs	14	9.2	8	3.3	2.9	1.9
Kismayo IDPs	20.1	12.8	9.1	5.1	2.4	1.2
Dhobley IDPs	11.3	12.2	10.8	3.3	9.8	3.8
Baidoa IDPs	16.9	12.7	10	3.5	4	1.2
Dolow IDPs	10.9	10.4	11.4	2.1	3.4	1.4
Dusamareb IDPs	6.3	13.3	9.7	2.7	2.7	3.6
	NORTH EAST					
Bossaso IDPS	6.6	8.1	10.6	1	2	2
Qardho IDPS	5.7	12.9	4.1	0.7	3.9	1.5
Garowe IDPS	8.3	11.5	11.6	1.5	2.9	2.9
Galkayo IDPS	2.1	7.5	6.9	0.2	2.9	0.6
	NORTH WEST					
Hargeisa IDPs	4.8	4.6	7.3	1	0.9	2.6
Burao	1.6	3.1	3.1	0.3	0.6	0.1
Berbera IDPs	1.4	7.2	2.5	0.3	2.3	0.6
	URBAN					
	SOUTH CENTRAL					
Mogadishu Town	9.5	~	7.9	2.1	~	1.9
Kismayo town	8.9	~	10.2	1.5	~	1.9
Galgadud	4.1	~	~	0.8	~	~
	NORTH EAST					
Bari Region Urban	4.9	~	~	1.2	~	~
Mudug	6.1			2.6		
Nugal Region	4.2	~	2.4	2.6	~	0.4
	NORTH WEST					
Sanaag Region Urban	4.3	-	-	0.8	-	-
Awdal Region Urban	3.5	-	-	1.1	-	-
Woq Galbeed Region	1.1	-	-	0.3	-	-
Togdheer Region	3.4	-	-	1.4	-	-
Sool Region Urban	2.9	-	-	0.2	-	-
	MUAC					
	SOUTH CENTRAL					
Coastal Deeh	9.7	7.8	~	2.5	1.5	~
Cow pea Belt	10	6.5	8.6	4.9	1.2	1.2
S Gedo Pastoral	16.9	16.6	3.6	1.9	2	0.3
S Gedo Agropastoral-MUAC	15.6	17.8	14.4	2.2	3.8	1.6
S Gedo Riverine-MUAC	17.7	17.1	17	3.4	3.4	1.9

6.6: Change in CDR and U5DR Gu 2013 to Gu 2014

	CDR	CDR	CDR	U5DR	U5DR	U5DR
Region/Livelihood	**GU 2014**	**Deyr 2013/14**	**Gu 2013**	**GU 2014**	**Deyr 2013/14**	**Gu 2013**
	LIVELIHOOD ZONES					
	SOUTH CENTRAL					
Bakool Pastoral	0.4	0.2	0.27	0.8	0.7	0.14
Bay Agropastoral-	0.5	0.2	0.29	1	0.6	0.44
N Gedo Pastoral	0.5	0.76	0.4	0.9	1.29	0.16
N Gedo Riverine	0.7	0.79	0.6	0.9	1.18	0.3
N Gedo Agro pastoral	0.8	0.9	0.89	1.2	1.89	1.18
Hiran pastoral-Mataban District	0.7	0.2	0.72	0.2	0.2	1.7
Hiran Agro pastoral & Riverine-Beletweyne	0.3	1.7	0.23	0.1	2.72	0.37
Shabelle Agro pastoral	0.7	0.5	N/A	0.8	1.59	N/A
Shabelle Riverine	0.5	1.01	N/A	1.1	1.87	N/A
Lower Shabelle	0.6	N/A	N/A	0.7	N/A	N/A
Middle shabelle	0.6	N/A	N/A	1.1	N/A	N/A
	NORTH EAST					
East Golis(N.E	0.24	0.33	0.28	0.14	0.85	0.53
Nugal Valley Pastoral	0.15	0.13	0.03	0	0.29	0
Sool Plateau	0.06	N/A	N/A	0	N/A	N/A
Coastal Deeh	0	0.04	0.11	0	0.29	0.36
Hawd Pastoral	0.45	0.26	0.26	0.61	0.33	0.43
Addun Pastoral	0.22	0.25	0.36	0.32	0.94	0.95
	NORTH WEST					
Agropastoral LZ (Togdheer) NW	0.14	NA	0.18	0.42	NA	0.37
West Golis /Guban Pastoral LZ	0.14	NA	0.07	0.00	NA	0.15
Sool Plateau	0.06	0.19	0.04	0.00	0.30	0
East Golis/Gebi	0.07	NA	0.16	0.61	NA	0.41
Nugal Valley Pastoral	0.15	0.13	0.13	0	0.29	0
NW Hawd	0.14	NA	0.26	0	NA	0.43
	IDPs					
	SOUTH CENTRAL					
Mogadishu IDPs	1.4	0.6	1.07	3.4	0.5	0.85
Kismayo IDPs	1.28	1.3	0.59	1.42	0.4	1.52
Dhobley IDPs	0.46	0.4	1.53	0.95	0.4	1.96
Baidoa IDPs	0.7	0.4	0.11	0.8	0.97	0.81
Dolow IDPs	0.7	0.77	0.75	1.24	1.29	0.87
Dusamareb IDPs	0.15	0.08	0.35	0.32	0.8	0
	NORTH EAST					
Bossaso	0.32	0.13	0.18	0.4	0.29	0.35
Qardho	0.28	0.36	0.26	0.69	0.87	0.28
Garowe	0.1	0.23	0.16	0.12	0.28	0.26
Galkayo	0.09	0.29	0.22	0.36	0.41	0.23
	NORTH WEST					
Hargeisa IDPs	0.14	0.21	0.23	0.68	0.55	0.57
Burao	0.12	0.19	0.17	0.32	0.35	0.61
Berbera IDPs	0.18	0.22	0.28	0.32	0.41	0.77

6.7: Change in Stunting, Under Weight and Maternal MUAC Gu 2013 to Gu 2014

	Stunting			Underweight			Maternal		
Region/Livelihood	GU 2014	Deyr 2013/14	Gu 2013	GU 2014	Deyr 2013/14	Gu 2013	GU 2014	Deyr 2013/14	Gu 2013
	LIVELIHOOD ZONES								
	SOUTH CENTRAL								
Bakool Pastoral	3.0	8.3	8.9	14.7	15.1	13.6	24.9	10.4	11.3
Bay Agropastoral-	38.1	35.2	46.9	32.4	31.4	44.9	22.9	17.1	14.4
N Gedo Pastoral	4.2	13.0	16.3	10.2	8.3	18.2	30	15.1	19.3
N Gedo Riverine	21.4	17.5	11.8	21.4	11.4	15.8	51.8	22.7	24.9
N Gedo Agro pastoral	19.8	15.5	18.1	13.5	10.4	16.4	38.6	21.1	24.8
Hiran pastoral-Mataban District	9.9	10.4	8.2	16.7	10.2	10.9	6.2	15.7	32.5
Hiran Agro pastoral & Riverine-Beletweyne	23.5	35.1	7.5	24.8	30.9	19.1	18.7	5.8	12.7
Shabelle Agro pastoral	10.3			19.9			16.1		
Shabelle Riverine	19.1			16.0			26.6		
Lower Shabelle	13.4			19.6			19.2		
Middle shabelle	15.0			16.5			19.4		
	NORTH EAST								
East Golis N.E	9.00	9.3	9.7	13.2	9.2	15.1	28.4	31.5	23.9
Nugal Valley Pastoral	3.1	1.6	2.0	3.6	2.6	2.5	12.2	13.8	14.8
Coastal Deeh	6.5	12.9	14.7	8.5	10.4	11.2	11.8	7.1	18.6
Hawd Pastoral	11.0	10.5	9.5	8.9	10.7	12.1	32	26.8	16.5
Addun Pastoral	7.2	12.1	9.3	16.6	9.9	9.1	25.3	10.3	6.6
Sool Plateau	3.6	2.0	5.0	6.3	2.9	6.2	10.5	11.2	13
	NORTH WEST								
Agropastoral LZ (Togdheer) NW	2.8		1.8	5.8		4.9	2.4		13
West Golis /Guban Pastoral LZ	7.1		6.4	9.4		15.6	15.6		16.3
Sool Plateau	3.6	2.0	5.0	6.3	2.9	6.2	10.5	11.2	13
East Golis/Gebi	1.6		5.2	4.3		6.7	9.09		4
Nugal Valley Pastoral	3.1	1.6	2.0	3.9	2.6	2.5	12.2	13.8	14.8
NW Hawd	2.1		2.5	1.2		5.7	1		0.8
	IDPS								
	SOUTH CENTRAL								
Mogadishu IDPs	16.0	20.0	22.1	23.0	16.6	19.0	20	1	3.6
Kismayo IDPs	39.8	30.7	40.1	32.8	30.1	41.7	22.8	23.6	44.4
Dhobley IDPs	10.3	14.9	14.2	12.3	14.5	15.9	21.3	24.1	26.6
Baidoa IDPs	41.5	33.0	39.2	31.6	25.3	24.3	23.4	7.7	6
Dolow IDPs	26.9	27.1	33.6	26.4	28.5	33.6	18.6	25.3	7.3
Dusamareb IDPs	12.2	8.4	11.6	17.9	12.0	17.4	54.8	38.2	22.4
	NORTH EAST								
Bossaso IDPs	25.8	29.5	30.0	22.6	26.2	29.9	16.7	19.9	17.1
Qardho IDPS	16.5	30.9	22.9	18.7	27.0	21.8	27.1	31.7	17.7
Garowe IDPS	22.3	21.4	14.1	25.6	23.1	19.7	15.5	10.9	10.9
Galkayo IDPS	15.3	19.6	27.7	17.8	20.6	28.1	20.6	24.9	28.8
	NORTH WEST								
Hargeisa IDPs	4.1	7.1	8.2	7.4	8.6	12.3	4	8	1.5
Burao	2.1	2.8	2.6	2.7	3.7	5.4	6	5.7	4.2
Berbera IDPs	2.2	6.1	2.4	5.6	12.0	6.1	0.9	1.1	6.3
	URBAN								
	SOUTH CENTRAL								
Mogadishu Town	8.3		10.6	8.9		10.1			
Kismayo town	19.9		39.2	17.2		40.4			
Galgadud	8.5		2.6	10.4		4.9			
Mudug Urban	11.5			11.4					
	NORTH EAST								
Bari Region Urban	~	~	~	~	~	~	~	~	~
Nugal Region	9.0		4.3	8.5		6.3			
	NORTH WEST								
Sanaag Region Urban	5.5	~	3.7	3.9	~	8.2		~	~
Awdal Region Urban	14.4	~	14.1	9.0	~	14.0		~	~
Woq Galbeed Region	1.7	~	2.6	4.3	~	4.9		~	~
Togdheer Region Urban	3.4	~	0.9	4.8	~	3.5		~	~
Sool Region Urban	2.1	~	1.2	5.0	~	3.0		~	~

6.8: Change in Immunization Gu 2013 to Gu 2014

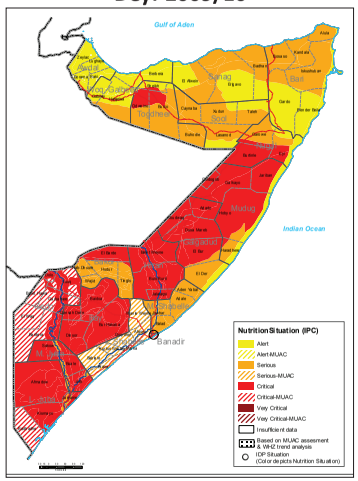
	Vit A Supplementation			Measles			Polio		
Region/Livelihood	GU 2014	Deyr 2013/14	Gu 2013	GU 2014	Deyr 2013/14	Gu 2013	GU 2014	Deyr 2013/14	Gu 2013
	LIVELIHOODS								
	SOUTH CENTRAL								
Bakool Pastoral	35.7	59.5	37.3	26.5	23.5	82	71.5	92.2	89
Bay Agropastoral-	8.6	13.9	1.7	5.7	7.2	0.7	34.9	24.8	21.8
N Gedo Pastoral	52.1	84.8	86.8	51.9	81.2	83.8	86.4	94.4	94.4
N Gedo Riverine	61	81.5	69.4	60.6	78.8	68.7	94.2	94.2	94.2
N Gedo Agro pastoral	35.8	83.8	79.6	42	81.2	79.6	90.4	95.9	93.7
Hiran pastoral-Mataban District	41.6	17.6	5.7	34.7	16.3	0.6	61.7	62.4	77.7
Hiran Agro pastoral & Riverine-Beletweyne	38.2	18	39.3	10.9	27.9	38.7	67.6	65	50.5
Shabelle Agro pastoral	12	68.2	~	2.6	22.5	~	55.3	79.3	~
Shabelle Riverine	3.4	51.6	~	1.1	14	~	48.7	71.4	~
Lower Shabelle	13	~	~	2.8	~	~	55.7	~	~
Middle shabelle	2.3	~	~	0.7	~	~	46.9	~	~
	NORTH EAST								
Coastal Deeh	90.2	79.4	70	89	71.6	68.6	94.4	91.7	83.3
Hawd Pastoral	65.7	64.6	61.1	66.5	66.3	60.8	64.9	90.7	84.3
Addun Pastoral	64.7	73	75.7	64	70.8	77.3	72.2	79.9	19
East Golis/Kakaar Pastoral	75.3	63.8	75.8	74.9	53	72.1	~	88.2	86.4
Nugal Valley Pastoral	85	85	66	83	75.5	62.8	93.6	71.3	93.1
Sool Plateau	84.63	76.5	90.6	82.87	71.1	82.6	92.83	94.9	92.4
	NORTH WEST								
Agropastoral LZ (Togdheer) NW	77.3	~	53.7	72.8	~	63.9	90	~	87.7
West Golis /Guban Pastoral LZ	65.3	~	78.5	56.2	~	87.8	82.87	~	97.3
Sool Plateau	84.6	76.5	90.6	82.9	71.1	82.6	92.83	94.9	92.4
East Golis/Kakaar Pastoral	80.8	85.0	83.2	79.81	75.5	78.7	94.95	71.3	92.6
Nugal Valley Pastoral	85.0	85	66.0	83.0	75.5	62.8	93.6	71.3	93.1
NW Hawd	80.7	~	61.5	92.9	~	82.9	50.2	~	92.1
	IDPS								
	SOUTH CENTRAL								
Mogadishu IDPs	61.2	41.8	60.7	70.8	48.5	48.1	80.4	67.4	72.2
Kismayo IDPs	61.8	~	3.0	51.7	~	5.7	74.3	~	66.7
Dhobley IDPs	~	~	~	~	~	~	~	~	~
Baidoa IDPs	51.9	36.9	17.8	40.4	41.5	20.7	84.9	91.5	82.2
Dolow IDPs	56.4	~	71.2	71.7	~	86.4	94	~	97.3
Dusamareb IDPs	38.2	29.2	32.6	37.8	33.3	26	92.5	83.5	71.3
	NORTH EAST								
Bossaso IDP	86.0	79.1	85.3	79.2	79.9	79.7	98.5	~	96.9
Qardho IDP	56.2	85.9	87.7	58.9	85.9	70.8	87.8	~	94.2
Garowe IDP	92.7	62.9	76.1	89.6	57.8	68.9	97.8	~	89.6
Galkayo IDP	83.4	91.6	69.7	89.9	89.7	82.5	96.7	~	85.9
	NORTH WEST								
Hargeisa IDPs	66.6	58.3	60.0	64.8	52.6	58.8	68.6	88.0	90.9
Burao	92.4	86.6	94.6	91.2	75.4	96.0	72.7	78.0	96.7
Berbera IDPs	71.8	63.8	71.9	68.6	54.4	64.7	72.7	80.5	97.9

6.9: Maternal Malnutrition Trends Deyr 2012/13 to Gu 2014

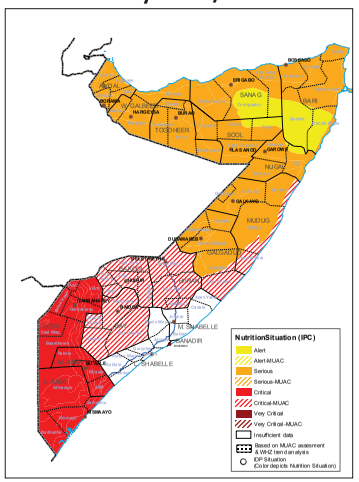
Region/Livelihood	Pregnant/Lactating Women (MUAC<23.0)			
	Gu2014	Deyr 2013	Gu 2013	Deyr 2012
Bay Agropastoral	22.9	17.1	14.4	23.1
Bakool Pastoral	24.9	10.4	11.3	28.8
Baidoa IDPs	23.4	7.7	6	24.2
Mogadishu IDPs	20.0	15.7	32.5	9.7
Beletweyne District	18.7	1	3.6	20
Mataban District	6.2	15.7	32.5	33.6
N Gedo pastoral	30.0	15.1	19.3	26.2
N Gedo Agro-pastoral	38.7	21.1	24.8	11.6
N Gedo Riverine	51.8	22.7	24.6	30.1
Dolow IDPs	18.6	25.3	7.3	46
Dobley IDPs	21.3	24.1	26.6	11.9
Kismayo IDPs	22.8	23.6	44.4	15.7
Addun Central	25.3	N/A	6.6	22
Hawd Central	32.0	26.8	16.5	19.4
Dhusamreeb IDPs	54.8	38.2	22.4	43
E Golis (NE)	28.4	31.5	23.9	30.7
Coastal Deeh	11.8	7.1	18.6	15
Nugal Valley	12.2	13.8	14.8	6.5
Bossaso IDPs	16.7	19.9	17.1	23.9
Qardho IDPs	27.1	N/A	17.7	43.9
Garowe IDPs	15.5	10.9	10.9	15.7
Galkayo IDPs	20.6	24.9	28.8	19
Sool plateau	10.5	11.2	13	13.8
Hargeisa IDPs	4.4	8	1.5	4.4
Burao IDPs	6.0	5.7	4.2	0.9
Berbera IDPs	0.9	1.1	6.3	5.1

6.10 Progression of Estimated Nutrition Situation *Deyr* 2009/10 - *Gu* 2014

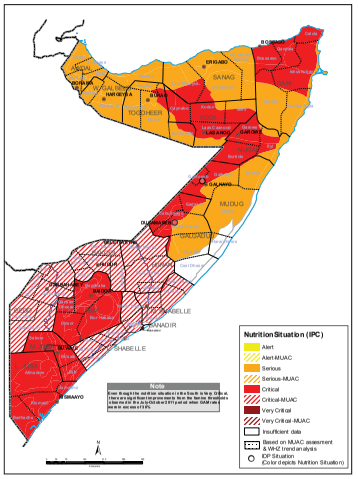
Deyr 2009/10



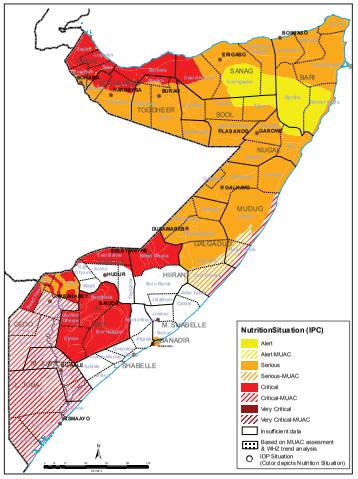
Deyr 2010/11



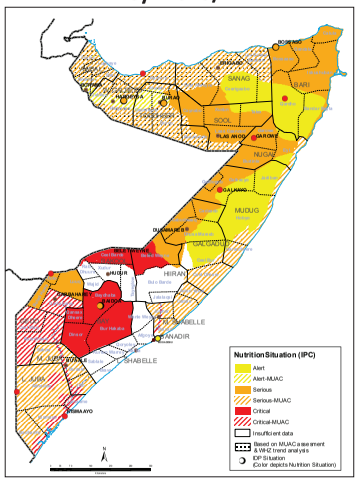
Deyr 2011/12



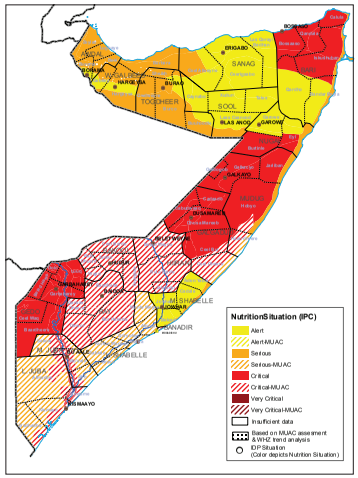
Deyr 2012/13



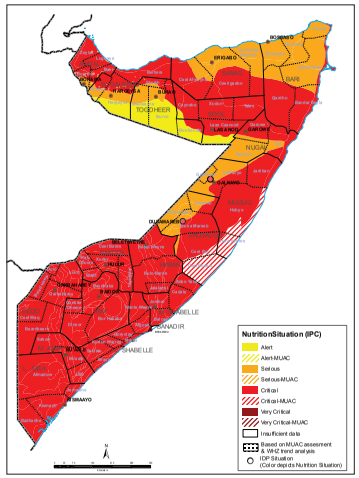
Deyr 2013/14



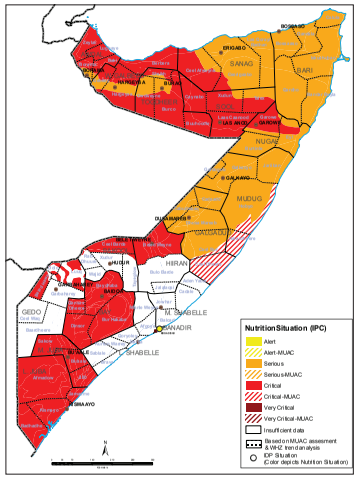
Gu 2010



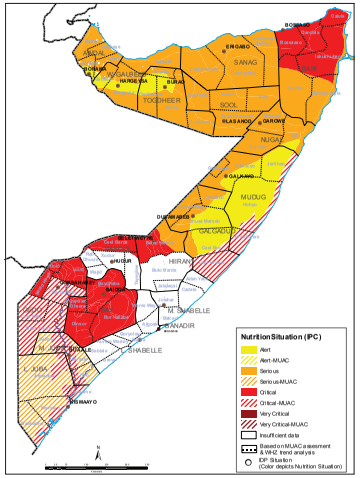
Gu 2011



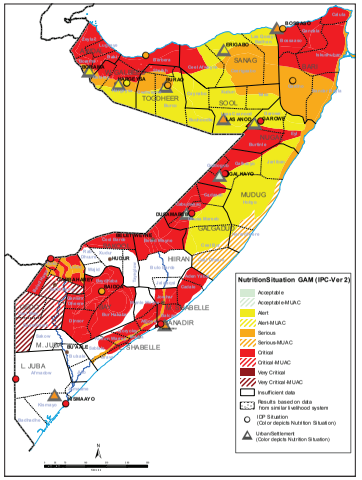
Gu 2012



Gu 2013



Gu 2014



6.11 Nutrition Indicators by Gender and Region Gu 2014

		SOUTH		CENTRAL		NORTH EAST		NORTHWEST		OVERALL	
Indicator	Age	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
GAM	6 to 23	19.8*	14.3*	14.5	11.7	15.5*	12.4*	9.0*	6.1*	15.4*	11.4*
	24-59	20.5*	16.9*	13.2	14.3	17*	14.4*	12	12.1	16.5*	14.6*
	Overall	20.3*	15.9*	13.6	13.4	16.5*	13.7*	11	10	16.1*	13.4*
SAM	6 to 23	6.6*	4*	4.2	3.7	4.5	3.4	2.6*	0.9*	4.8*	3.0*
	24-59	4.5	3.6	2.6	2.3	3.8	2.8	2.4	2.5	3.5*	2.9*
	Overall	5.3*	3.7*	3.1	2.8	4	3	2.5	1.9	4.0*	3.0*
GAM-MUAC	6 to 23	0.7*	0*	20.6	24.7	49.2	53.1	7.5*	5.0*	16.5	16.2
	24-59	0.6*	0*	12	14.7	44	47	6.5*	4.3*	14.4	14.5
	Overall	0.7*	0*	14.8	18.1	45.8	49.2	6.8*	4.5*	15.1	15.1
SAM-MUAC	6 to 23	18.5	18.5	17.1	20.7	16.7	20	5.3	4.7	14.5	15.3
	24-59	14.8	15	11.4	13.9	19.3	19.2	2.3	2.4	12	12.3
	Overall	16.2	16.4	13.2	16.2	18.4	19.5	3.4	3.2	12.9	13.4
Underweight	6 to 23	31.7*	19.8*	19.2*	10.7*	21.2*	16.4*	9.6*	4.3*	22.1*	14*
	24-59	23.1*	18.2*	13.4	13.2	14.6	12.7	5.7	5.2	15.*	12.5*
	Overall	26.4	18.8*	15.3	12.3	16.9*	14*	7.0*	4.9*	17.5*	13.1*
Stunting	6 to 23	30.7*	21.1*	18.7*	9.2*	20.5*	15.7*	10.3*	4.6*	21.7*	14.3*
	24-59	23.4*	18.7*	13.5*	8.6*	11.6	10.1	3.7	3.4	13.7*	11.1*
	Overall	26.1	19.6	15.2*	8.8*	14.8*	12.1*	5.9*	3.8*	16.6*	12.2*
Morbidity	6 to 23	38.4	39	36.9	40.4	34.2	36	26.6	25.1	34.1	34.6
	24-59	35.9	35.7	29.7	29.2	24	24	19.9	19.4	27.7	27.4
	Overall	36.9	37	32	33	27.6	28.2	22.2	21.4	30	30
	** Chi- square test(with 95% confidence interval) showed statistical significant difference (P<0.05)										

6.12: Caseload Gu 2013 to *Deyr* 2013/14 (Based on prevalence)

Region	GAM caseload			SAM caseload		
	Gu 2014 GAM	GU 2013 (GAM)	Deyr 2013 (GAM)	Gu 2014 SAM	GU 2013 SAM	Deyr 2013 SAM
Lower Shabelle	29250	21150	21150	8350	4200	6120
Banadir	24100	18200	15250	5300	3400	2550
Bay	21250	28050	24350	4600	7450	6350
Galgadud / Mudug	16750	10700	13950	4300	1450	2500
Middle Shabelle	13900	12850	13250	2550	2550	3780
W Galbeed	15400	14450	16700	2100	1700	4250
Lower Juba (Hoose)	12850	13350	13250	2150	3200	4250
Gedo	12600	12050	14750	700	3150	5250
Hiran	11200	11450	10150	2600	2400	2250
Bakool	11100	14350	10000	2400	3700	2100
Bari	9000	8200	6950	1750	1400	950
Toghdeer	8800	8300	9550	1500	1000	2450
Middle Juba -(Dheexe)	8000	8300	8200	1350	2000	2600
Awdal	6700	6350	7250	1150	700	1900
Sanaag	5950	5600	6450	1050	650	1650
Sool	3200	3100	3600	550	350	900
IDP Northeast & Central	3300	3950	3100	650	750	650
Nugal	2900	2650	2250	550	400	300
Northwest IDP	2050	3050	2550	250	500	450
Total	**218300**	**206100**	**202700**	**43850**	**40950**	**51250**

6.13 CORE OUTCOME INDICATORS

Nutrition Classification	Phase 1-Minimal	Phase 2: Stressed	Phase 3-Crisis	Phase 4 - Emergency	Phase 5 -Famine
	Acceptable	Alert	Serious	Critical	Very Critical
Global Acute Malnutrition (GAM) *(R) =3 IPC 2*	<5%	5- <10 %	10 to<15% or >usual and increasing	15-30% Or >usual and increasing	>30%
Mean **Weight-for-Height** Z (WHZ) scores *(R=3)*	>-0.40	-0.40 to -0.69; Stable/Usual	-0.70 to -0.99; >usual/increasing	<-1.00; >usual/increasing	
Severe Acute Malnutrition (SAM) (WHZ and oedema) *(R=3)*	<1	1.1-2.4	2.5-4	4-5.6	>5.6
Crude death rate (CDR)/ 10,000/day *(R=3)*	<0.5	<0.5	0.5 to <1	1 to <2	>2
Under five death rate (U5DR)/10,000/day *(R=3)*	≤1	≤1	1 to 1.9	2 to 3.9	>4
Mid Upper Arm Circumference (MUAC) Children: (% <12.5cm): *Ref: (R=3)—FSNAU*	<5 %	5--7.4 % with increase from seasonal trends	7.5- 10.6	10.7-16.7 % or significant increase from seasonal trends	>16.7%
MUAC<11.5cm *(R=3)-FSNAU*	< 1 %	1-1.6 %	1.7-2.4 %	2.5-4 %	>4%
Morbidity Patterns: Proportion of children reported ill in 2wks prior to survey *(R=3)* Health facility morbidity trends (R=1) /WHO surveillance (R=1) FSNAU	Very low proportion reportedly sick	Low & stable proportion of reportedly sick based on seasonal trends	Low proportion reportedly sick, from previous months but increasing in >2 months based on seasonal trends	High levels and stable numbers in >2 months based on seasonal trends	High with significant Increase in numbers of sick children, based on seasonal trends
Disease Outbreaks: (seasonally adjusted). Frequency of reported outbreaks of AWD & suspected malaria & measles, , whooping cough & severe ARI-FSNAU	Normal levels, & seasonal trends, Review data in relevant context	-AWD 1 case -Measles 1 case -Malaria–doubling of cases in 2 weeks in hyper endemic areas Suspected whooping cough/ARI -5 cases in the same community same week	Outbreak not contained and/or in non endemic area – limited access to treatment: CFR for AWD >2% rural CFR for AWD >1% urban AWD – duration exceed >6 wks		
Measles immunization/ **Vitamin A Supplementation** Coverage:1 dose in last 6 months	>95% >95%	80-94.9% 80-94.9%	<80% <80%		
HIS[1] Trends of Acutely Malnourished Children *HIS, (R=1)*	V. low (<5%) proportion in the preceding 3mths relative to ≥2yr seasonal trends	Low proportion (5 to <10%) and stable trend in the preceding 3mths relative to ≥2yr seasonal trends	Moderate (10 to <15%) and stable or low (5 to <10%) but increasing proportion in the preceding 3mths relative to ≥2yr seasonal trends	High (≥ 15%) and stable proportion in the preceding 3mths relative to ≥2yr seasonal trends	High (≥ 15%) and increasing proportion in the preceding 3mths relative to ≥2yr seasonal trends
Sentinel[2] Site Trends: levels of children identified as acutely malnourished(WHZ), *FSNAU' (R=2)*	Very low (<5%) and stable levels	Low levels (5 to <10%) and one round indicating increase, seasonally adjusted	Low (5 to < 10%) & increasing or moderate (10 to <15%) levels based on two rounds (seasonally adjusted)	High levels (≥ 15%) of malnourished children and stable (seasonally adjusted	High levels (≥ 15%) and increasing with increasing trend (seasonally adjusted)
Adult MUAC - Pregnant and Lactating (%<23.0cm-FSNAU	<10.4	10.6-16.7	16.8-23.3	23.4-31.4	≥ 31.5
HH Dietary Diversity (% consuming<4fdgps) FSNAU	<5%	5 – 9.9%	10-24.9%	25 – 49.9%	>50%
Breastfeeding (BF) Practices *I. Exclusive BF for 6mths* *ii).Continued BF at 1 yr* *iii)Continued BF at 2yr*	≥90% ≥90% ≥90%	50-89% 50-89% 50-89%	12-49% 12-49% 12-49%	0-11% 0-11% 0-11%	
Complementary feeding in addition to breastfeeding i. -Introduction of complementary food at 6 months of age: % introduced ii. -Meeting minimum recommended feeding frequency iii. -Dietary Diversity score	≥95% ≥95% ≥95%	80-94% 80-94% 80-94%	60-79% 80-94% 80-94%	0-59% 0-59% 0-59%	
Access to Water	usually adequate (> 15 litres ppp day), stable-100%	borderline adequate (15 litres ppp day); unstable	7.5-15 litres ppp day, accessed via asset stripping	< 7.5 litres ppp day (human usage only)	< 4 litres ppp day (human usage only)

Affected pop with **access to health services** -formal/ informal	Should not be necessary	Access to humanitarian interventions for most vulnerable	Reduced access to humanitarian support for most vulnerable	Limited access to humanitarian support for majority	Negligible or no access
Selective **Feeding Programs** Available: Coverage of TFP /SFP & referral systems(Sphere 04); -Admissions trends *(R=1)*	Should not be necessary	Access for most vulnerable	None available		
Food Security Situation- current IPC status	Minimal	Stressed	Crisis	Emergency	Famine Humanitarian Catastrophe
Civil Insecurity	Prevailing structural peace	Unstable disrupted tension	Limited spread, low intensity	Widespread, high intensity	widespread, high intensity confl ict
Livelihood Assets	generally sustainable utilization	stressed and unsustainable utilization	accelerated and critical depletion or loss of access	near complete & irreversible depletion or loss of access	effectively complete loss; collapse
Coping		insurance strategies"	crisis strategies"; CSI > than reference; increasing	"distress strategies"; CSI signifi cantly > than reference	
3 MONTH NUTRITION SITUATION **OUTLOOK**	*Convergence of evidence on immediate Causes/Driving factors vis-à-vis Projected trend in 3 months time* *No change: Stable; Uncertain:* *Potential to deteriorate* *Potential to improve:*				

INDICATOR	Level 1 Low chronic food insecurity	Level 2 Moderate Chronic Food Insecurity	Level 3 High Chronic Food Insecurity	Level 4 Very High Chronic Food Insecurity
	Low Prevalence	Medium Prevalence	High Prevalence	Very High Prevalence
Stunting	<20%	20-30%	30-40%	>40%
BMI <18.5	<10%	10-20%	20-40%	>40%
FCS	<10%HH	10-20% HH	20-40% HH	>40%HH
HDD<4 food groups	<10%HH	10-20% HH	20-40% HH	>40%HH
Water<15 litres ppp/day	<10%HH	10-20% HH	20-40% HH	>40%HH

	Low	Medium	High	Very HIgh
Stunting: WHO	<20 %	20-29.9%	30-39.9%	➢ 40 %
Underweight: WHO	<10 %	10-19.9%	20-29.9%	> 30 %

Reliability scores for each indicator used in the classification		
Indicator	**Reliability Score (3=high, 2=medium, 1=low)**	**Remarks**
GAM among children 6-59 months	3	- Representative nutrition surveys that pass quality check - Surveys should be from the current season; if not RS should be less
MUAC <125 mm among children 6-59 months	3	Representative data from surveys or rapid assessments
Sentinel Site Data	2	Guidance to be provided on what type of sentinel site data can be included
HMIS Data	1	Guidance to be provided on what type of HMIS data can be included
Screening (purposive)	1	Guidance to be provided on what type of screening data can be included
Programme Data	1	

(Footnotes)

1 Health Information System, data source – health facilities

2 Data source, over 120 sentinel sites in different livelihoods in South Central Somalia

6.14 A: List of institutions which participated in the Nutrition Vetting in Gu 2014 Mogadishu Nutrition Technical Vetting

1. MoH
2. Gedo-RMO
3. Bay-RMO
4. Banadir Hospital
5. QRC
6. CISP
7. MARLO
8. ACF
9. CAFDARO
10. Aid Vision
11. WOCCA
12. ANPPCAN
13. SCI
14. ZAMZAM
15. VAA

6.14 B: List of institutions which participated in the Nutrition Vetting in Gu 2014 Nairobi Nutrition Technical Vetting

1. SNS Nutrition Consortium
2. International Medical Corps
3. Concern World wide
4. Action Against Hunger
5. ICRC
6. Juba Foundation
7. UNICEF Somalia
8. Somalia resilience programme
9. Cisp
10. RRP
11. HDC
12. WFP
13. Mercy-USA
14. CAFDARO
15. TROCAIRE
16. FSC-WFP
17. MOH
18. HIRDA
19. UNOCHA
20. FEWSNET
21. CEDA
22. EPHCO
23. HIMILO

6.15: Time frame for the *Gu* 2014 survey

Date	Time plan for Gu Surveys- Activity		
	Northwest	Northeast and Central	South
April 1 –10	Development of Overall *Gu* Assessment & Analysis Plans		
April 1 1 –20	Review of *Gu* Assessment Instruments (Nutrition questionnaires)		
April 21 – 25	Finalization of *Gu* Field Instruments & Sampling for IDPs assessments		
April 22 - 30	SMART training (assessment methodology)--Partners and staff training for capacity building-supervisors-shabelle & Banadir, Juba, Gedo/NW/NE		
May 12- 18	IDPs survey team training for Somaliland	IDPs survey team training for Puntland and Central Somalia	Survey team training for Mogadishu; Kismayo Dhobley /Dolow/ and Baidoa IDPs
May 19-3	Data collection fieldwork for the Somaliland	Data collection fieldwork for the Puntland and Central Somalia IDPs	Data collection fieldwork for the Mogadishu; Kismayo/ Dhobley/ Dolow and Baidoa IDPs surveys
June 3- 13	Data Entry & Analysis for IDP; Draft Report for Nutrition Update. Preparation for Urban and Rural Rural		
		Survey team training and data collection for Bay IDPs, Bay Agropastoral & Huddur Urban	
June 15	Travel to field for urban assessment		
June 16-21	Survey team training for Urban Livelihoods- in Galbeed, Sanaag, Sool, Togdheer and Awdal	Survey team training for Urban and rural Livelihoods-based assessments in Hawd Addun, Coastal and Cowpea belt, Mudug and Galgadud urban	Survey team training for Kismayo town, Bulo-Burde and Huddur surveys
June 22- July 1	Data collection fieldwork for Livelihoods- in Hawd Addun, Coastal and Cowpea belt, Mudug and Galgadud urban	Data collection fieldwork for Galbeed, Sanaag, Sool, Togdheer and Awdal	Data collection fieldwork for Kismayo town, Bulo-Burde and Huddur surveys
July 2- 7	Survey team training for rural Livelihoods-based assessments in NWAgropastoral, West Golis, Hawd, Nugal Valley, Sool Plateau and East Golsi	Survey team training for rural Livelihoods-based assessments in EGolis, Nugal Valley, Sool Plateau, Coastal (Bari), and Nugal, Bari urban.	Survey team training for rural Livelihoods- Bay Agropastoral, North Gedo, Bakool pastoral, Bakool agropastoral, Shabelle (Riverine, agropastoral & Adale),Hiran, Matabaan, Juba and South Gedo
July 8- 22	Data collection fieldwork for rural Livelihoods- in NW Agro-pastoral, West Golis, Hawd, Nugal Valley, Sool Plateau and East Golsi	Data collection fieldwork for rural Livelihoods- in EGolis, Nugal Valley, Sool Plateau, Coastal (Bari), and Nugal, Bari urban.	Data collection fieldwork for rural Livelihoods- Bay Agro-pastoral, North Gedo, Bakool pastoral, Bakool agropastoral, Shabelle (Riverine, agropastoral & Adale), Hiran, Matabaan,Juba and S Gedo
23 Jul- 2 Aug	Finalize data entry, cleaning and Analysis		
Aug 3	Team to reach Hargeisa for IPC training		
Aug 4- 7	IPC Training		
Aug 7	Technical Manager travel to Hargeisa		
Aug 9-17	All Team Meeting - *Gu* '14 Analysis (Hargeisa):Sector and regional presentations; All Team Meeting-Management & Admin ; Finalization of Results		
Aug 17	Nutrition team to travel back to duty station		
Aug 18-21	Preparation of Presentations & Executive Summary for Nutrition Vetting		
Aug 21	Vetting of Nutrition Results with Partners in Mogadishu—Chaired by MOH		
Aug 25	Vetting of Nutrition Results with Partners in Nairobi		
Aug 31	Presentation of Results to Federal Govt in Mogadishu		
2nd Sept	Press Release on Outcome of Post *Gu*		
3-10 Sept	Regional Presentations		
Sep 3- 30	Detailed Analysis & Write-up of Technical Series Report		
Sept 30	Public Release of Nutrition Technical Report		

6.16: GLOSSARY OF TERMS

Anthropometry The technique that deals with the measurements of the size, height, weight, and proportions of the human body.

Baseline data Baseline data represent the situation before or at the beginning of a program or intervention. Survey data may be compared to baseline data if defined criteria for comparison are met (e.g., similar methods and coverage)

Bias Anything other than sampling error which causes the survey result to differ from the actual population prevalence or rate.

Chronic Malnutrition Chronic malnutrition is an indicator of nutritional status over time. Chronically malnourished children are shorter (stunted) than their comparable age group.

Cluster Sampling Cluster sampling requires the division of the population into smaller geographical units, e.g. villages or neighbourhoods. In a first step, survey organizers select a defined number of units among all geographical units. In a second and sometimes third step, households are selected within the units using simple random sampling, systematic random sampling, or the modified EPI method.

Confidence interval When sampling is used, any figure derived from the data is an estimate of the actual value and is subject to sampling errors, i.e., there is a risk that the result obtained is not exactly equal to the actual value. The estimated prevalence coming out of a sample is therefore accompanied by a confidence interval, a range of values within which the actual value of the entire population is likely to be included. This value is generally 95 percent in nutrition and mortality surveys. This means that we can be 95 percent confident that the true prevalence lies within the given range.

Crude mortality rate (CMR) Mortality rate from all causes of death for a population (Number of deaths during a specified period /number of persons at risk of dying during that period) X time period.

Cut-off points The point on a nutritional index used to classify or screen individuals' anthropometric status.

Design Effect (DE) Cluster sampling results in greater statistical variance (see definition below) than simple random sampling because health outcomes tend to be more similar within than between geographical units (see cluster sampling). To compensate for the resulting loss in precision, the sample size calculated for simple random sampling must be multiplied by a factor called "design effect"; A measure of how evenly or unevenly the outcome (for example wasting, stunting, or mortality) is distributed in the population being sampled.

Global Acute Malnutrition (GAM) GAM includes all children suffering from moderate and severe acute malnutrition; percent of children under 5 who have low weight-for-height measured by -2 z-scores and with or without oedema.

Growth Monitoring Observation of a child growth over time by periodic assessment of his/her weight-for-height or weight-for-age.

Household A group of persons who live together and eat from the same pot (i.e. the HEA definition)
Kwashiorkor Sign of severe malnutrition characterized by bilateral oedema.

Malnutrition State in which the physical function of an individual is impaired to the point where he or she can no longer maintain adequate bodily performance process such as growth, pregnancy, lactation, physical work, and resisting and recovering from disease.

Morbidity A condition related to a disease or illness.

Oedema An accumulation of excessive extra cellular fluid in the body; a distinguishing characteristic of kwashiorkor when bilateral. All children with nutritional oedema are classified as severely malnourished.

Outcome Wasting and mortality are examples of outcomes measured in surveys.

Prevalence Proportion of a population with a disease or condition of interest at a designated time.

P-value If you want to know whether there is a significant difference between two survey estimates, frequently a statistical test is applied and a P value calculated. The P value is the probability that the two estimates differ by chance or sampling error.

Recall period A defined period in the past used to calculate estimated mortality and/or morbidity rates.

Reference Population The NCHS (1977) and WHO (2006) reference values are based on two large surveys of healthy children, whose measurements represent an international reference for deriving an individual's anthropometric status.

Sample A subset of the total population that should be selected at random to *Gu*arantee a representation of the total population.

Sample size The size of the sample calculated based on objectives of the survey and statistical considerations.

Sampling error Sampling error is the degree to which a sample might differ from the whole target population, e.g., how well it represents a target population or total population. Sampling error can be quantified (e.g., in a confidence interval).

Sampling frame The list of all the ultimate sampling units from which the sample is selected.

Sampling interval The sampling interval is the total number of sampling units in the population divided by the desired sample size.

Sampling unit The unit that is selected during the process of sampling; depending on the sampling process the sampling unit can be a person, household, cluster, district, etc.

Severe Acute Malnutrition (SAM) SAM includes all children suffering from severe malnutrition; percent of children under 5 who have low weight-for-height measured by -3 z-scores and with or without oedema.

Simple Random Sampling The process in which each sampling unit is selected at random one at a time from a list of all the sampling units in the population.

Stunting (chronic malnutrition) Growth failure in a child that occurs over a slow cumulative process as a result of inadequate nutrition and/or repeated infections; stunted children are short for their age and may look younger than their actual age; it is not possible to reverse stunting; measured by the height-for-age index.

Systematic Random Sampling (SRS) A methodology which selects a sampling unit at random, then selects every n^{th} household thereafter, where 'n' equals the sampling interval.

Underweight Percentage of children under the age of five with weight-for-age below -2SD from median weight-for-age of reference population.

Urban town/center (based on UNDP definition/Pre-War definition): The regional capital and all the district capitals. *These urban areas had most of the social amenities such as schools, mosques, district hospitals, markets, etc. Moreover, there was a greater prospect of the visible presence of some sort of local government or administrative structures in the regional and district capitals.*

Wasting (1) Growth failure as a result of recent rapid weight loss or failure to gain weight; wasted children are extremely thin; readily reversible once condition improve; wasting is measured by the weight-for-height index.

Wasting (2) Percentage of children under the age of five suffering from moderate or severe wasting (below minus two standard deviations from median weight-for-height of reference population). Wasting differs from acute malnutrition because it does not take into consideration the presence/absence of oedema.

Z-score Score expressed as a deviation from the mean value in terms of standard deviation units; the term is used in analyzing continuous variables such as heights and weights of a sample.

The Information Management Process

Gathering & processing

- FSNAU has a unique network of 32 specialists all over Somalia, who assess the nutrition and food security situation regularly and 120 enumerators throughout the country, who provide a rich source of information to ensure a good coverage of data.
- Nutrition data is processed and analyzed using the Statistical Package for Social Sciences (SPSS), EPInfo/ENA and STATA software for meta-analysis.
- FSNAU developed the Integrated Phase Classification (IPC), a set of protocols for consolidating and summarizing situational analysis. The mapping tool provides a common classification system for food security that draws from the strengths of existing classification systems and integrates them with supporting tools for analysis and communication of food insecurity.
- Food security information is gathered through rapid assessments as well as monthly monitoring of market prices, climate, crop and livestock situations.
- Baseline livelihood analysis is conducted using an expanded Household Economy Approach (HEA).
- The Integrated Database System (IDS), an online repository on FSNAU's official website www.fsnau.org, provides a web-based user interface for data query, data import and export facilities from and into MS Excel, graphing, spreadsheet management and edit functions.

Validation of Analysis

- Quality control of nutrition data is done using the automated plausibility checks function in ENA software. The parameters tested include; missing/flagged data, age distribution, kurtosis, digit preference, skewness and overall sex ratio.
- Quality control of food security data is done through exploratory and trend analysis of the different variables including checks for completeness/missing data, market price consistency, seasonal and pattern trends, ground truthing and triangulation of data with staff and other partner agencies, and secondary data such as satelitte imagery, international market prices, FSNAU baseline data, etc.
- Before the launch of the biannual seasonal assessment results (Gu and *Deyr*), two separate day-long vetting meetings are held comprising of major technical organizations and agencies in Somalia's Food Security and Nutrition clusters. The team critically reviews the analysis presented by FSNAU and challenges the overall analysis where necessary. This is an opportunity to share the detailed analysis, which is often not possible during shorter presentations or in the briefs.

Products and Dissemination

- A broad range of FSNAU information products include, monthly, quarterly and biannual reports on food and livelihood insecurity, markets, climate and nutrition, which are distributed both in print and digital formats including PowerPoint presentations and downloadable file available on the FSNAU site.
- Feedback meetings with key audiences enable us to evaluate the effectiveness of our information products. We constantly refine our information to make sure it is easily understandable to our different audiences.
- FSNAU has also developed a three year integrated communication strategy to ensure that its information products are made available in ways appropriate to different audiences including, donors, aid and development agencies, the media, Somalia authorities and the general public.

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