

SOUTHERN SOMALIA CRISIS DEEPENS

- The number of Somali people in a food security crisis is now estimated to be **2.85 million** (as of June 28th) due to the continuing impact of the previous crop failure, the ongoing conflict affecting trade flows and the severely restricted humanitarian access. This is exacerbated by latest prediction of at best 50% of normal production in the next harvest in August. The lack of cereal availability has led to soaring food prices in southern regions, in some places up to 300% higher than the same month in 2010. The food access crisis is compounded with the lack of food assistance, except in Mogadishu, to those most in need in southern regions - **1.75 million** – (61% of the total population in crisis) due to the continuing insecurity. The numbers in crisis is expected to rise again in August when the full analysis of the impact of the poor rainfall will be confirmed.
- This severe food access crisis is mostly affecting poor farmers who have no cereal stocks due to the previous crop failure and who cannot afford to buy the staple cereals. These soaring prices are also affecting the purchasing power of urban poor, IDP and severely affecting terms of trade for pastoralists as 1 goat now only provides 50kg of cereal compared to 220kg 1 year ago. The most affected families are being forced to flee for assistance in neighbouring countries such as in Ethiopia and Kenya or Mogadishu where active fighting continues.
- Malnutrition rates remain some of the highest in the world, with one in four children acutely malnourished from December surveys throughout in southern regions. FSNAU is currently conducting nutrition and mortality surveys throughout southern regions with results expected mid July.
- Cases of Acute Watery Diarrhoea (AWD) are being reported in southern Somalia and with large population displacement in search of food and assistance and the increased susceptibility of malnourished populations to disease, the risk of a large outbreak is of great concern (see health cluster update, page 5).
- Of great concern are the shocking results from nutrition assessments of Somali refugee children pouring into neighbouring countries of Ethiopia and Kenya, where up to 45% are estimated to be acutely malnourished and increased mortality is reported (Table 1).

Overview	1
Latest Nutrition Information	2
Latest Food Security Information	3
Nutrition Cluster Update, June 2011	4
Health Cluster Update, June 2011	5
Northeast IDPs Nutrition Situation	6
Northwest IDPs Nutrition Situation	10
Knowledge, Attitudes & Practices Study on Fish Consumption	12
Results of Plausibility Checks	14



A displaced child takes care of a new born sibling, FSNAU, Mogadishu, July'11



Internally displaced persons who have migrated to Mogadishu, seeking food and shelter at an abandoned building in the town, FSNAU June 2011

LATEST NUTRITION INFORMATION

Nutrition Situation in the South

Due to the deepening food security crisis in southern regions, the nutrition situation is likely to have deteriorated across all livelihoods since January 2011 when results showed that 1 in 4 were children acutely malnourished. At the time, 75% of all acutely malnourished children in Somalia, or 181,000 caseloads, resided in the South where, the food crisis is currently most acute. Representative nutrition surveys are currently ongoing across all the southern regions with results expected from mid to late of July 2011. However preliminary findings from urban, and IDP rapid mid upper arm circumference (MUAC) assessments conducted in June/ July 2011, among the 6-59 months old children indicate an alarming situation in many regions with deterioration confirmed in parts:

Juba Region: Of the 1,018 assessed children in newly arrived IDPs in Kismayo/Doble, 33% reported MUAC <12.5cm or oedema, and 14% MUAC <11.5cm or oedema. This indicates a likely **Very Critical** situation. In the older residing IDPs in Kismayo, the situation is likely **Very Critical**, with 19% of the 1,251 assessed children with MUAC <12.5cm or oedema, and 5% with MUAC <11.5cm or oedema

Gedo Region: Of the 662 assessed children in newly arrived IDPs in Bardera Town, 21.8% (18.7-25.1) reported MUAC <12.5cm or oedema, and 6.2% (4.5-8.4) MUAC <11.5cm or oedema. This indicates a likely **Very Critical** situation. 45.8% (41.9-49.7) of the assessed children were reportedly ill in the preceding two weeks.

Hiran region: In Beletweyne Town where a total of 220 children were assessed, 23.2% were reported with MUAC less than 12.5cm or oedema, and 5.9% with MUAC less than 11.5cm or oedema indicating a likely **Very Critical** situation. In Bullo-Burti urban center, a total of 220 children were assessed with 25.5% and 6.8% with MUAC less than 12.5cm and 11.5cm respectively, and/or oedema indicating a likely **Very Critical** situation. In Jalalaqsi urban center, a total of 220 children were assessed with 21.4% and 5.4% with MUAC less than 12.5cm and 11.5cm respectively, and/or oedema indicating a likely **Very Critical** situation. Morbidity, from a two weeks recall period, is also reportedly high, at 40%. Nutrition information from the health facility screening shows a high proportion of children (>20%) as acutely malnourished, with an increasing trend in the last three months.

Nutrition Situation in IDPs in the North

In May-June 2011, FSNAU and partners undertook a total of eight representative nutrition surveys in the IDP settlements in Puntland and Somaliland.

Table 1: Nutrition Situation in Neighbouring Districts/IDP camps in Kenya & Ethiopia (Source: UNICEF Kenya and UNHCR, April-May 2011)

Districts	% GAM(z-scores or oedema)	% SAM (z-scores or oedema)
Mandera West	32.60% [27.8-37.8]	8.50%[5.7-12.4]
Mandera Central	27.50%[23.2-32.2]	3.40%[2.3-4.9]
Mandera East / North	26.90%[21.6-33.1]	5.60%[3.6-8.7]
Wajir West /North	27.90%[24.5-31.6]	6.80%[4.9-9.5]
Wajir East	22.8%[19.0-27.2]	4.3%[2.8-6.6]
Wajir South	28.5%[24.4-33.0]	4.5%[2.7-7.4]
Garissa	16.2%[13.5-18.8]	3.2%[1.9-4.5]
Bokormayo IDP Camp (ETHIOPIA)	33.4%	11% *CDR: 0.78 *U5DR:2.26
Melkadida IDP Camp (ETHIOPIA)	33%	11% CDR:1.47 U5DR: 4.04

* CDR-Crude Death Rate

*U5DR Under 5 Death Rate



Child with mother preparing a meal in an IDP camp, FSNAU



Porridge is a common meal among Kismayo IDPs, FSNAU, July 2011

Puntland: Findings from nutrition surveys conducted in IDP settlements in Puntland indicate a **Very Critical** situation in Bossaso, GAM of **24.2%**, (20.9-28.3), Garowe, GAM of **20.5%**, (17.6 -24.0), Galkayo, GAM of **20.3%**, (16.1-25.2) and Margaga IDPs, GAM of **22.7%**, Qardho, GAM>23.2% (Pr=.90) and a deterioration since January 2011. (Table 2).

Somaliland: Hargeisa and Berbera IDPs are in a sustained **Serious** situation with a GAM of **10.9%** (8.1-14.5) and **14.5%** respectively. In Burao IDPs, the situation has deteriorated from **Serious** to **Critical** with GAM of **19.3%** (**14.9-24.7**) and SAM of **5.7%** (**4.2-7.7**). The table below provides a summary of the findings.

Surveys are currently ongoing across all rural livelihoods zones in Somaliland and Puntland to determine the nutrition situation. Findings will be shared by late July 2011.

LATEST FOOD SECURITY INFORMATION

The food security situation in Somalia continues to deteriorate due to very poor outlook for the *Gu* season harvest; soaring cereal prices; increased cost of living; limited social support due to overstretching; eroded purchasing power; reduced assets (livestock, cereal stocks); sustained civil insecurity and restricted humanitarian access. As a result, the number of population in food security crisis in June 2011 has reached about **2.85million**, which is a 19 percent increase from 2.4 million reported in January this year. The crisis is most severe in agricultural livelihoods of southern Somalia, which are experiencing two consecutive seasons of crop failure. The cereal output is expected to be low across most of the riverine and agro-pastoral areas in the South, including the major cereal producing regions of Lower Shabelle and Bay, which in a normal *Gu* season account for 75 percent of the total cereal production of southern Somalia. Therefore, cereal prices are likely to remain high in the face of shortfall in local production. Thus, high cost of living will continue to plunge purchasing power and limit access to food by market-dependent population, particularly urban and IDPs, as well as rural poor.

The situation is particularly acute in the South where the price escalation is highest due to volatile security situation, restricted trade and economic activities, harvest losses and limited access by the humanitarian community. These factors have also led to massive population movements in the south, to towns like Mogadishu and Kismayu. Additionally, a large number of people are crossing over the border to Ethiopia and Kenya in search of food and humanitarian assistance.

The *Gu* rains to some extent mitigated the impact of the drought in pastoral communities especially in the north west region as water stress eased and rangeland resources started to improve. As a consequence, water prices that reached the record highs during the *Jilaal* season declined after water trucking subsided in the country. However, pastoralists are still affected by food price inflation as well as reduced assets following

high off-take during the months of drought. As a result, the poor pastoralists are going to benefit little from the anticipated livestock price increases during the coming *Hajj* and Ramadan periods due to limited number of livestock assets to be sold for export.

Thus significant numbers of population in Somalia, will continue to face a crisis situation at least up to the end of the year. FSNAU and partners are currently undertaking a seasonal assessment, to obtain a more accurate picture of the extent of the crisis. The final estimates of the total number of people in need of humanitarian assistance will be released in August 2011.

NUTRITION CLUSTER UPDATE

As a result of the ongoing crisis in southern regions and assuming a deterioration in the situation, the Somali nutrition cluster has revised the caseloads estimates for acute malnutrition for the period June-December 2011, from 237,987 to 312,522 children aged under five years. The cluster partners aim to reach at least 60% of the affected population, ie a target of 181,913 children, with basic services in nutrition package (BSNP), mainly through the Common Humanitarian Fund (CHF).

Details of the nutrition cluster funding and response are provided in this publication.

KNOWLEDGE, ATTITUDES & PRACTICES (KAP) STUDY ON FISH CONSUMPTION

Between 18th May to 25th June 2011, FSNAU conducted a KAP study on fish consumption in 25 locations in Somalia. The purpose of the study was to gain understanding on the common practices, attitudes, beliefs on fish consumption in Somalia, and the level of knowledge the community has on the nutritional and health benefits of fish consumption. This information will be used as a basis for developing relevant communication strategies promoting the consumption of fish in the country. The findings of the study indicate fish consumption as religiously and culturally acceptable, and associated with certain health benefits. Factors affecting its consumption are: availability, cost and general lack of knowledge on storage and preparation. There is also a concern of swallowing bones especially for younger children when consuming fish.

Details of this study are provided in this publication.

Table 2: Survey Findings In IDP Populations in the North (June 2011)

Population Assessed	Global Acute Malnutrition	Severe Acute Malnutrition	Retrospective Crude Death Rate (90 days)	Retrospective Under five Death Rate (90 days)	Estimated Nutrition Situation
Hargeisa IDPs	10.9% (8.1-14.5)	2.2% (1.0-5.0)	0.37 (0.19-0.73)	0.59 (0.22-1.55)	Serious , sustained from Deyr' 10/11
Burao IDPs	19.3% (14.9-24.7)	5.7% (4.2-7.7)	0.56 (0.30-0.91)	2.02 (1.21-3.34)	Critical , deterioration from Deyr' 10/11
Berbera IDPs (Exhaustive)	14.5%	3.0%	0.28 (0.15-0.54)	0.16 (0.03-0.88)	Serious , sustained from Deyr' 10/11
Garowe IDPs	20.5% (17.6-24.0)	1.8% (0.9-3.7)	0.61 (0.31-1.19)	1.39 (0.47-4.02)	Very Critical deterioration from Deyr' 10/11
Bossaso IDPs	24.2% (20.9-28.3)	4.7% (3.2-7.1)	0.89 (0.58-1.3)	2.23 (1.20-4.41)	Very Critical deterioration from Deyr' 10/11
Galkayo IDPs	20.3% (16.1-25.2)	4.4% (2.9-6.6)	0.89 (0.59-1.36)	1.01 (0.47-2.17)	Very Critical deterioration from Deyr' 10/11
Margaga IDPs	22.7%	2.9%	N/A	N/A	Very Critical
Qardho	>23.3% (Pr=0.90)	>8.2% (Pr=0.90)	N/A	N/A	Very Critical deterioration from Serious in Deyr' 10/11

NUTRITION CLUSTER UPDATE, JUNE 2011

Funding

- A total of 13 nutrition cluster partners (UNICEF, Oxfam Novib, DIAL, AFREC, WOCOA, JCC, APD, HARD, AMA, SORDES, COSV, INTESOS and CAFDARO), received funding through the Common Humanitarian Fund (CHF), the second standard allocation initiated in February 2011 and finalised in May/June 2011 totalling \$6,636.019 million dollars to provide emergency nutrition response in south central regions.
- A total of two nutrition cluster partners (SOYDA and Save the Children) received \$433,498.00 from CHF emergency reserve to provide nutrition services in Galgaduud and Afgooye targeting about 13,500 children under five years of age.
- During the Mid Year Review, three new projects were added in areas identified by the cluster to be gap areas.

Response

- The nutrition cluster, through 418 out patient therapeutic programme/stabilisation center (OTP/SC) and 512 targeted supplementary feeding programme (TSFP) nutrition service centres, reached 26,799 (87% of mid-year target) severe acutely malnourished (SAM) children and 110,582 (99% of mid-year target) moderate acutely malnourished (MAM) children. This was attained through expansion of existing services, establishment of new centres as well as establishment of temporary mobile/outreach services to the vulnerable populations across the country.
- With WFP, NGO and government partnership support there are currently 38 MCHNs in Somaliland and 34 MCHNs in Puntland providing blanket supplementary feeding to children 6-23 months and pregnant and lactating women. The number is expected to increase to 129 targeted MCHNs in the coming months.

Strategic Issues

- The cluster established strategic thematic sub-working groups in IYCF, capacity Development and micronutrients to address challenges and strengthen the capacity of partners to deliver quality nutrition services.
- UNICEF trained IYCF counsellors in Puntland, Somaliland, and Mogadishu as part of the IYCF training roll out.
- The nutrition cluster in close collaboration with UNICEF will be conducting a cluster members capacity mapping exercise, to ascertain capacity strengths and gaps of various partners and propose key capacity building actions for strengthen nutrition cluster
- The nutrition cluster is in the process of reviewing the Terms of Reference for the cluster to incorporate sector specific tasks and closer coordination with the health sector.
- Currently the cluster membership stands at 133

organisations, of which 79 are categorised as partners (either currently implementing a nutrition project or having had a nutrition project in partnership with a known technical partner in the last one year).

- Regular cluster coordination meetings are being conducted in Nairobi, Somaliland, Puntland, and Mogadishu. Field cluster coordination meetings have been established and are functional in south central regions of Galgaduud, Gedo, and Bakool. Efforts are underway to get field cluster meetings to start functioning in Hiran, Juba, lower Shabelle and Bay regions.

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A Young girl in an IDP camp in NE



Newly arrived IDPs in Waberi District, SOYDA, June 2011

HEALTH CLUSTER UPDATE, JUNE 2011

A holistic approach involving the health, nutrition and food security sectors remains crucial both in decision making and strategic response to the current health and nutrition crisis in the Somali population. The health cluster response to the following incidences during the month of June 2011 helped mitigate the likely **Very Critical** nutrition situation and death rates in the affected population groups.

Mogadishu:

Acute Watery Diarrhea (AWD)

- Overall, 3054 AWD/cholera cases including 2356 (77%) cases under the age of five with 110 related deaths have been reported from Banadir Hospital in Mogadishu. Children under the age of two bear the greatest burden of AWD accounting for 57% of all reported cases. Based on data collected, women and girls account for 46% of all AWD reported cases at the hospital.
- The Habeeb hospital cholera treatment centre in Heliwa district, Mogadishu reported 18 AWD admissions of which nine are under the age of five. Of these cases, 8 (44%) were women and girls.
- The SOS Hospital in Huruwaa district, Mogadishu, reported 79 AWD cases including 64 (81%) children under the age of five with two related deaths under the age of five. Of these cases 40% are women and girls.

Casualties

- From 1-19 June 2011, 973 casualties from weapon-related wounds were treated in the three hospitals in Mogadishu. Eight related deaths were reported.
- From 3 January - 31 May 2011, 5259 weapon-related injuries, including 1453 children under the age of five, with 52 related deaths, four of whom are under the age of five have been reported from these hospitals. The exact number of deaths on site are unknown.



Newly arrived IDP siblings in Mogadishu, FSNAU July 2011

Lower Shabelle region:

- 51 health facilities reported a total of 8313 consultations of whom 3986 (48%) are children younger than five. Women and girls accounted for 4587 (55%) of the consultations.

- About 1135 consultations were reported for influenza-like illness (ILI), 594 (52%) children under five years. Severe acute respiratory infections (SARI) accounted for 384 consultations of which 269 (70%) were children under five years. Malaria accounted for 227 cases including 85 (37%) children under five years. Around 128 (56%) were confirmed by rapid diagnostic test or microscopy. AWD accounted for 150 consultations including 93 (62%) children under five years. During the same period, 152 suspected measles cases were reported from the region - 100% increase in cases as compared to previous week. Around 42 suspected whooping cough cases were reported. The lack of access to conduct vaccination activities in the region continues to impact negatively on the health of children.

- The Merka Hospital cholera treatment centre reported 61 AWD cases including 38 (62%) children under the age of five. Of the cases 50% are women and girls.

Middle Shabelle Region

- Warsheikh MCH in Warsheikh district, reported six AWD cases including three children under the age of five and one related death. The AWD outbreak is considered under control. WHO awaits permission from local authorities to access the district to carry out interventions.

Lower and Middle Juba regions

- 16 health facilities reported 1920 consultations including 815 (42%) children under the age of five. Women and girls accounted for 1185 (62%) of all consultations. Influenza like illness (ILI) accounted for 273 consultations of which 204 (75%) were children under the age of five. Malaria accounted for 1351 cases including 431 (32%) children below the age of five. Only 8% of cases were confirmed by rapid diagnostic test or microscopy. AWD accounted for 237 cases including 178 (75%) children under the age of five. Jilib and Afmadow districts accounted for 45% of all the consultations.
- Baidoa Hospital in Bay region reported 70 AWD cases including 38 (54%) children under the age of five. Women and girls accounted for 59% of reported cases. The number of admissions at the cholera treatment unit remained stable in the last week, with 15 admissions including 11 children under the age of five examined at the facility during the reporting week. Of these 60% were women and girls.

Mudug Region

- The Haradere District Hospital, supported by CISP reported 66 AWD cases including 39 (59%) children under the age five with two related deaths (one under the age of five). Cases tend to increase compared to week 23. The cases were from Hobyo district where cholera has been confirmed. Hobyo MCH also supported by CISP reported 72 cases of AWD including (58%) children under the age of five and six deaths (five under the age of 5). Women and girls accounted for 60% of the reported cases.

Discussions geared to strengthening the links between the health and nutrition surveillance and information systems, are on-going between the health cluster and FSNAU.

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NORTHEAST IDPS: BOSSASO, QARDHO, GAROWE, MARGAGA AND GALKAYO – JUNE 2011, ASSESMENT FINDINGS

The three major towns of Garowe, Bossaso and Galkayo in the Northeast regions continue to host to a large population of protracted and new internally displaced persons (IDPs) fleeing from conflict, economic and livelihood crisis in the central and southern parts of Somalia as well as those in transit to overseas from Ethiopia. Lack of an established livelihood support system for IDPs, harsh climatic seasons, together with their limited access to basic needs and services such as food, clothing, shelter, water, sanitation, health and housing continue to predispose them to high levels of acute malnutrition, ill health and food insecurity. The FSNAU Post Deyr '10/11 integrated analysis indicated *Critical* nutrition situations in Bossaso and Galkayo IDPs and *Serious* nutrition among Garowe and Qardho IDPs. In the Gu '10, integrated analysis indicated a *Very Critical* nutrition situation among the Bossaso IDPs and a *Serious* situation among the Galkayo and Garowe IDPs.

Between 27th May and 10th June 2011, FSNAU in collaboration with UNICEF and the Ministry of Health conducted three comprehensive nutrition assessments in Galkayo, Bossaso and Garowe IDP settlements. A two stage Probability Proportionate to Size (PPS) cluster sampling methodology was employed in each of the three internally displaced populations. In addition small sample cluster (SSC) surveys were conducted among Qardho IDPs (for the second time) and Margaga IDPs (for the first time in several years). These assessments were conducted to monitor the levels of acute malnutrition among the IDPs in Northeast zone in order to inform on appropriate interventions for these vulnerable populations.

Bossaso: A total of 611 children aged 6-59 months from 376 households in 28 randomly selected clusters were assessed among the IDP population of Bossaso. The results show a GAM rate of **24.4%** (20.9-28.3) and SAM rate of **4.7%** (3.2 - 7.1), including five (0.8%) oedema cases among the Bossaso IDPs. The mean weight-for-height Z score was -1.17 ± 1.10 indicating a poorer wasting distribution in comparison to the reference standards (Table 3). More boys (27.5%) than girls (21.3%) were acutely malnourished but the difference was not statistically different. This indicates a *Very Critical* nutrition situation, and a significant deterioration ($p < .05$) from the *Critical* situation reported in the December 2010 assessment where a GAM rate of 15.6% (12.7-19.1) and SAM rate of 2.8% (1.6 - 4.8) were recorded. The results are similar to the Gu '10 levels when a GAM rate of $>26\%$ ($Pr=.90$) and SAM rate of $>3.3\%$ ($Pr=0.90$) were recorded in June 2010 indicating a seasonal trend with consistent *Very Critical* rates observed in the Gu.

During the time of the assessment there was reduced access to casual labour at Bossaso port, out-migration of the better off escaping the high temperatures, and reduced fishing activities because of the high tides and winds at the sea. The reduced income, high cereal prices and the suspension of the general food distributions significantly contributed to the *very critical* nutrition situation. However, the targeted food distributions



Children in an IDP Camp in Bossaso

for the acutely malnourished and other nutrition and health services by the humanitarian organizations in the area have played a crucial mitigating role.

Garowe: A total of 604 children aged 6-59 months from 377 households in 15 randomly selected delimited sections were assessed among the IDP population of Garowe, in which the use of a digital pen for recording interview responses was also piloted. The results of the Garowe nutrition assessment show a GAM rate of **20.5%** (17.5- 24.0) and a SAM rate of **1.8%** (0.9- 3.7), indicating two (0.3%) oedema cases and indicating a *Very Critical* nutrition situation. A substantially higher proportion of boys (24.4%), than girls (16.6%) were acutely malnourished ($Pr > 87.5\%$). The results show a significant deterioration from the *Serious* levels reported in December 2010 with GAM and SAM rates of 13.3 % (11.0-15.9) and 2.5 % (1.6-3.9) respectively. Even then, a significantly higher number of boys (16.6%), than girls (10.3%) were acutely malnourished ($Pr > 87.5\%$); this finding therefore needs further investigation. These are the worst rates recorded among Garowe IDP group, which have previously reported stable *Serious* levels in three consecutive seasons. In June 2010, a small sample cluster survey (33x6) recorded the GAM rate of $> 11.5\%$ ($Pr=.90$) and SAM rate of $> 3\%$ ($Pr=.90$) using the Center for Disease Control (CDC) probability calculator.

Galkayo: A total of 612 children aged 6-59 months from 393 households in 28 randomly selected clusters were assessed among the IDP population of Galkayo. The results for the Galkayo IDP assessment recorded a GAM rate of **20.3%** (16.1-25.2) and a SAM rate of **4.4%** (2.9-6.6) including three (0.5%) oedema cases, indicating a *Very Critical* nutrition situation (Table 3). Again, the proportion of boys (24.1%) who were acutely malnourished was higher than that of girls (16.8%), but the difference was not statistically significant ($p > 0.05$). These findings show a steady deterioration from the *Critical* levels of 16.3% (13.2-20.0) and 2.9% (1.8-4.5) for GAM and SAM rates respectively reported in December 2010, and from *Serious* levels recorded in the small sample cluster survey (33x6) in June 2010 with estimated GAM rate and SAM rates of $> 11.3\%$ and $> 1.2\%$ ($Pr=.90$) respectively.

The retrospective crude and under five death rates of **0.89** (0.58-1.37) and **2.23** (1.20-4.11) among Bossaso IDPs; **0.61** (0.31-1.19) and **1.39** (0.47-4.02) among Garowe IDPs; and

Table 3. Summary of Key Findings for Northeast IDPs Assessments

Indicator	Bossaso IDPs 28 Clusters (N=611)		Garowe IDPs 15 Strata (N=604)		Galkayo IDPs 28 Clusters (N=612)	
	N	% (95% CI)	N	% (95% CI)	N	% (95% CI)
Total number of households assessed for children	376	100	377	100	393	100
Household Head	320	85.8 (81.1-90.5)	293	77.7 (73.5-81.9)	338	86 (82.7-89.3)
Male Headed	53	14.2 (9.5-18.9)	84	22.3 (18.1-26.5)	55	14 (10.7-17.3)
Female Headed						
Total number of children assessed:	611	100	604	100	612	100
Child malnutrition						
Global Acute Malnutrition (WHO 2006)	149	24.4 (20.9-28.3)	124	20.5 (17.5- 24.0)	124	20.3 (16.1-25.2)
Boys	84	27.5 (22.4-33.2)	75	24.4 (19.2-30.3)	70	24.1 (18.3-31.1)
Girls	65	21.3 (16.6-26.9)	49	16.6 (13.4-20.3)	54	16.8 (12.4-22.3)
Mean WHZ (WHO, 2006)		-1.17±1.10		-1.18±0.98		-1.13±1.02
Severe Acute Malnutrition (WHO 2006)	29	4.7 (3.2- 7.1)	11	1.8 (0.9- 3.7)	27	4.4 (2.9- 6.6)
Boys	15	4.9 (2.8- 8.5)	6	1.9 (0.7- 5.2)	14	4.8 (2.8- 8.2)
Girls	14	4.6 (2.7- 7.7)	5	1.7 (0.6- 4.5)	13	4.0 (2.4- 6.8)
Oedema	5	0.8 (0.0-1.8)	2	0.3 (0.0-1.0)	3	0.5
Global Acute Malnutrition (NCHS)	139	22.7 (19.2-26.7)	113	18.7 (15.9-21.9)	121	19.8 (15.4-25.1)
Severe Acute Malnutrition (NCHS)	11	11.8 (0.9- 3.7)	4	0.7 (0.2- 2.3)	11	1.8 (1.0- 3.2)
Global Acute Malnutrition (WHM<80% or oedema - NCHS)	83	13.6 (10.4-16.8)	71	11.8 (8.2-15.3)	63	10.3 (7.6-13.0)
Severe Acute Malnutrition (WHM<70% or oedema - NCHS)	5	0.8 (0.0-1.8)	2	0.3 (0.0-1.0)	4	0.7 (0.0-1.3)
Global Acute Malnutrition by MUAC (<12.5 cm or oedema)	67	11.0 (8.1-14.6)	90	14.9 (12.4-17.7)	99	16.2 (12.5-20.6)
Boys	32	10.5 (7.0-15.3)	47	15.3 (10.4-21.8)	38	13.1 (9.7-17.4)
Girls	35	11.5 (8.2-15.8)	43	14.5 (11.1-18.8)	61	18.9 (13.9-25.3)
Severe Acute Malnutrition by MUAC (<11.5 cm or oedema)	12	2.0 (1.0- 3.9)	28	4.6 (3.1- 6.9)	10	1.6 (0.9- 3.0)
Proportion of children Stunted (HAZ<-2)	253	41.4 (34.8-48.4)	213	35.3 (29.5-41.5)	168	27.5 (22.2-33.4)
Boys	131	42.8 (35.6-50.3)	109	35.4 (28.6-42.9)	97	33.4 (26.0-41.8)
Girls	122	40.0 (32.3-48.3)	104	35.1 (28.5-42.4)	71	22.0 (16.7-28.5)
Proportion of children Underweight (WAZ<-2)	248	40.9 (35.3-46.8)	187	31.1 (26.2-36.3)	203	33.3 (28.2-38.9)
Boys	137	44.9 (37.1-53.0)	100	32.6 (26.4-39.4)	113	39.1 (32.1-46.6)
Girls	111	36.9 (31.1-43.0)	87	29.5 (21.4-39.1)	90	28.1 (22.7-34.2)
Mortality Rates						
Crude Death Rate (deaths/10,000/day)	0.89	0.58-1. 37	0.61	0.31-1. 19	0.89	0.59-1. 36
Under five Death Rate (deaths/10,000/day)	2.23	1.20-4.11	1.39	0.47-4.02	1.01	0.47-2.17
Child Morbidity						
Children reported ill in the previous 2 weeks	329	53.8 (44.2-63.4)	272	45.0 (41.0-49.1)	302	49.3 (42.5-56.2)
Children reported with diarrhoea in 2 weeks prior to assessment	155	25.4 (17.7-33.1)	140	23.2 (20.3-26.1)	162	26.5 (20.2-32.7)
Children reported with Pneumonia in 2 weeks prior to assessment	254	41.6 (33.8-49.3)	54	8.9 (6.6-11.2)	139	22.7 (17.3-28.1)
Children reported with febrile illness in 2 weeks prior to assessment	118	19.3 (12.9-25.8)	195	32.3 (27.7-36.9)	213	34.8 (30.0-39.6)
Children reported with suspected measles within one month prior to assessment	43	7.0 (3.3-10.8)	39	6.5 (4.4 -8.5)	38	6.2 (3.2-9.2)
Child Immunization status						
Children (6-59 months) reported immunised against measles	543	88.9 (84.9-92.8)	488	80.8 (77.2-84.4)	530	86.6 (83.4-89.8)
Children who reported to have received vitamin A suppl in last 6 months	568	93 (90.0-96.0)	498	82.5 (79.5-85.4)	535	87.4 (84.1-90.7)
Children who have ever received polio vaccine						
No doses	23	3.8 (1.4-6.2)	69	11.4 (9.1-13.8)	62	10.1 (7.1-13.1)
One dose	50	8.2 (3.9-12.4)	145	24.0 (20.6-27.4)	55	9.0 (6.0-12.0)
Two doses	71	11.6 (7.7-15.6)	138	22.8 (20.4-25.3)	116	19.0 (15.0-23.0)
Three or more	467	76.4 (68.5-84.4)	252	41.7 (38.7-44.7)	379	62.0 (56.0-68.0)
Infant and young child feeding						
		N=272		N=234		N=299
Proportion still breastfeeding	151	55.5 (46.3-64.8)	94	40.2 (34.1-46.2)	139	46.5 (40.2-52.8)
Proportion meeting recommended feeding frequencies	122	44.9 (33.6-56.1)	69	29.5 (24.9-34.0)	93	31.1 (21.7-40.5)
Proportion who reported to have consumed ≥4 food groups	12	4.4 (0.0-8.9)	6	2.6 (1.0-4.2)	23	7.7 (3.8-11. 7)
Maternal Health and Nutrition						
		N=351		N=382		N=386
Total women who are acutely malnourished	37	10.5 (5.4-15.7)	57	14.9 (11.1-18.8)	46	26.1 (17.4-34.9)
Pregnant & lactating women acutely malnourished (MUAC<23.0 cm)	35	20.2 (13.5-27.0)	51	27.1 (20.8-33.4)	46	11.9 (7.9-16.0)
Non pregnant/lactating acutely malnourished (MUAC≤18.5 cm)	2	1.1 (0.0-2.8)	6	3.1 (0.0-6.4)	0	0.0
Women who reported to have received tetanus immunization						
No dose	39	11.2 (7.8-14.6)	89	23.3 (18.3-28.3)	24	6.2 (3.3-9.2)
One dose	17	4.9 (1.1-8.6)	88	23.0 (19.1-27.0)	41	10.6 (6.3-15.0)
Two doses	49	14.0 (8.1-19.9)	124	32.5 (28.0-36.9)	104	27.0 (19.2-34.9)
Three doses	244	69.9 (61.3-78.5)	81	21.2 (17.2-25.2)	216	56.1 (45.4-66.8)
Household Access to Essential Indicators						
		N=376		N=377		N=393
Reported Households consumed ≤3 food groups	71	18.9 (11.6-26.2)	46	12.2 (9.0-15.4)	11	2.8 (0.5-5.1)
Access to mosquito Net	60	17.1 (10.3-23.9)	77	20.7 (14.8-26.6)	204	51.9 (45.8-60.0)
Access to safe/protected drinking water	261	69.4 (52.1-86.7)	202	53.6 (48.7-58.4)	391	99.5 (98.8-100.2)
Access to latrine	287	76.3 (62.7-90.0)	229	60.7 (54.4-67.1)	386	98.3 (96.3-100.2)

0.89 (0.59-1.36) and **1.01** (0.47-2.17) among Galkayo IDPs are all within *Acceptable* levels apart from the elevated under five death rates among Bossaso IDPs that were *Serious* according to WHO classification. The reported deaths were suspected to have mainly been caused by diarrhoea.

Women of reproductive age also recorded high levels of acute malnutrition assessed using MUAC (Table 1). This population group is vulnerable to malnutrition and more likely to fall short of the nutrient requirements for their physiological status, a subsequent risk to the unborn and breastfed child.

A high proportion of children reportedly suffered from one or more communicable diseases during the two weeks prior to the assessment with 53.8%, 45.0%, and 49.3% reported ill among the assessed Bossaso, Garowe and Galkayo IDP populations, respectively. High incidences of 25.4%, 23.2% and 26.5% of child diarrhea was reported in the two weeks prior to the assessment among the Bossaso, Garowe and Galkayo IDP populations, as are the incidences of pneumonia (41.6%, 8.9%, and 22.7%) and febrile illness (19.3%; 32.3%; and 34.8%) respectively.

The cases of suspected measles ranged from 6.2% in Galkayo to 7.0% in Bossaso and are of significant health concern. Morbidity, especially increased diarrhea is normally closely associated with acute malnutrition as observed in Bossaso and Galkayo IDPs where children reported to have suffered from diarrhea within the two weeks prior to the assessment are 1.44 (1.05-1.97) and 2.14 (1.62-2.84) times respectively as likely to be acutely malnourished than those who are well.

According to the Sphere (2004) standards, vaccination coverage for measles, as well as polio and vitamin A supplementation, should be above 95%, however, for the three IDP populations assessed, immunization status for measles and polio, and vitamin A supplementation status by recall are relatively high (80-93%), but below the threshold. As shown in Table 1, reported tetanus vaccination among the women of reproductive age was also high ranging from 77% to 94% among the Garowe and Galkayo IDP populations respectively.

Poor child feeding deprives children of essential quality nutrients also required in adequate quantity for optimal growth and development, thereby exposing them to malnutrition and increased risks to morbidity. Infant and young child feeding practices remain sub-optimal among the three IDP populations of Bossaso, Garowe and Galkayo, with the proportion of children 6-24 months still breastfeeding at 55.5%, 40.2% and 46.5% respectively. Only 44.9%, 29.5% and 31.1% respectively are meeting the minimum recommended complementary feeding frequencies. In addition, only 4.4%, 2.6% and 7.7% of the assessed children in Bossaso, Garowe and Galkayo respectively, were consuming a diversified diet comprised of four or more food groups.

Dietary diversity and household access to food and basic services remain the major challenges for most displaced populations. Among the three assessed IDP populations, 18.9% in Bossaso and 12.2% Garowe IDP populations consumed poorly diversified diets, comprising of three or fewer food groups, mainly obtained through purchase. Among the Galkayo IDPs however, more than 97% of the assessed households reportedly consumed diversified diets (four or more food groups) in a 24-hour recall preceding the assessment day.

In the context of rural versus urban population, a relatively higher proportion of the assessed households among the IDP settlements have access to sanitation facilities, with 76.3%, 60.7% and 98.3% of the assessed households in the Bossaso, Garowe and Galkayo IDP settlements respectively reporting access to some type of toilet. Similarly, 69.4%, 53.6% and 99.5% of the households in Bossaso, Garowe and Galkayo respectively reported having access to safe drinking water, which remains unsatisfactory. This may mask the water stress situation as witnessed by water trucking as the main source of water following the effects of drought in the region. Households' access to mosquito nets, was however, low in some populations with only 17.1% and 20.7% respectively of the assessed households in Bossaso and Garowe having mosquito nets, with a slightly higher proportion (51.9%) of IDP households in Galkayo. (Table 3).

Findings from the surveys conducted among the Margaga (exhaustive survey) and Qardho (small sample cluster survey) IDPs in June 2011, indicate GAM and SAM rates of rates of **22.7%** and **2.9%** in Margaga and a GAM rate of **>23.8%** (Pr=0.90) with a SAM rate of **>8.2%** (Pr=0.90) in Qardho (Table 2).

The rates depict a **Very Critical** nutrition situation in Margaga IDPs centers, and because this is the first nutrition assessment on this recently displaced population, there is no data for comparison. The nutrition situation among the Qardho IDPs is also **Very Critical** and consistent with rates observed among a similar population in Bossaso. The rates in Qardho also show a significant deterioration from the *Serious* situation reported in December 2010 when small sample cluster survey results recorded a GAM rate of **>10.6%** (Pr=0.90) and a SAM rate of **>2.7%** (Pr=0.90).

Overall, the nutrition situation is **Very Critical** among all the five IDP populations of Bossaso, Garowe, Qardho, and Galkayo in which repeat surveys were conducted and is showing significant deteriorations from either *Serious* or *Critical* levels reported six months ago, as well as among the new Margaga IDP population. The reasons for the deteriorations are multiple and are associated with climate, food security and health related factors. The reliance of the IDPs on humanitarian assistance that has been insufficient and limited to a small proportion of targeted vulnerable households and on the irregular casual labour for income to buy food and other none food items makes them susceptible to food insecurity and malnutrition. The situation is exacerbated by the high food prices and poor food access resulting from the effects of drought in the region and inability of the host communities to provide social support.

Interventions to improve and stabilize food access and provision of health services are crucial in addressing limited food and in tackling the high morbidity levels, thereby mitigating the high levels of acute malnutrition. Continued and concerted efforts are thus needed to rehabilitate acutely malnourished children and prevent further deterioration.

Table 4. Summary of Key Findings for Northeast IDP Assessments

Indicator	Margaga IDPs Exhaustive (N=207)		Qardho IDPs 33 Clusters (N=211)	
	N	%	N	% (95% CI)
Total number of households assessed for children	119	100	103	100
Household Head				
Male Headed	111	87.4	86	83.5 (76.2-90.8)
Female Headed	16	12.6	17	16.5 (9.2-23.8)
Total number of children assessed:	207	100	211	100
Child malnutrition				
Global Acute Malnutrition (WHO 2006)	47	22.7	61	>23.8 (Pr=0.90)
Boys	33	30.3	35	31.3 (22.3-41.9)
Girls	14	14.3	26	26.3 (16.9-38.5)
Mean WHZ (WHO, 2006)		-1.22±1.06		-1.38±1.19
Severe Acute Malnutrition (WHO 2006)	6	2.9	24	>8.2 (Pr=0.90)
Boys	4	3.7	14	12.5 (7.3-20.5)
Girls	2	2.0	10	10.1 (4.6-20.7)
Oedema	0	0.0	2	0.9
Global Acute Malnutrition (NCHS)	44	21.3	63	>25.0 (Pr=0.90)
Severe Acute Malnutrition (NCHS)	3	1.4	8	>2.3 (Pr=0.90)
Global Acute Malnutrition (WHM<80% or oedema - NCHS)	20	9.7	45	>17.0 (Pr=0.90)
Severe Acute Malnutrition (WHM<70% or oedema - NCHS)	0	0.0	2	>0.4 (Pr=0.90)
Global Acute Malnutrition by MUAC (<12.5 cm or oedema)	9	4.3	49	>19.8 (Pr=0.90)
Boys	4	3.7	27	24.1 (17.8-31.8)
Girls	5	5.1	22	22.2 (15.5-30.9)
Severe Acute Malnutrition by MUAC (<11.5 cm or oedema)	1	0.5	14	>4.4 (Pr=0.90)
Proportion of children Stunted (HAZ<-2)	16	7.7	61	>24.5 (Pr=0.90)
Boys	6	5.5	39	34.8 (27.3-43.2)
Girls	10	10.2	22	22.2 (13.4-34.5)
Proportion of children Underweight (WAZ<-2)	74	15.0	74	>30.6 (Pr=0.90)
Boys	45	17.4	45	40.5 (31.6-50.2)
Girls	29	29.6	29	29.6 (20.2-41.0)
Child Morbidity				
Children reported ill in the previous 2 weeks	143	69.1	81	38.4 (29.0-47.8)
Children reported with diarrhoea in 2 weeks prior to assessment	55	26.6	58	27.5 (19.3-35.7)
Children reported with Pneumonia in 2 weeks prior to assessment	33	15.9	61	28.9 (19.6-38.2)
Children reported with febrile illness in 2 weeks prior to assessment	117	56.5	69	32.7 (24.2-41.2)
Children reported with suspected measles within one month prior to assessment	17	8.2	16	7.6 (2.3-12.9)
Child Immunization status				
Children (6-59 months) reported immunised against measles	179	86.5	145	70.0 (858.6-81.5)
Children who reported to have received vitamin A suppl in last 6 months	185	89.4	169	80.1 (70.0-90.2)
Children who have ever received polio vaccine				
No doses	5	2.4	43	20.4 (10.0-30.7)
One dose	13	6.3	99	46.9 (32.5-61.3)
Two doses	69	33.3	24	11.4 (5.1-17.7)
Three or more	120	58.0	45	21.3 (12.9-29.7)
Infant and young child feeding				
		N=65		N=80
Proportion still breastfeeding	41	63.1	47	58.8 (48.5-69.0)
Proportion meeting recommended feeding frequencies	46	70.8	53	66.3 (55.6-76.9)
Proportion who reported to have consumed ≥4 food groups	3	4.6	3	3.8 (-0.5-8.0)
Maternal Health and Nutrition				
		N=102		N=98
Total women who are acutely malnourished	6	5.9	18	18.4 (10.9-25.9)
Pregnant & lactating women acutely malnourished (MUAC<23.0 cm)	6	13.0	18	24.0 (14.9-33.1)
Non pregnant/lactating acutely malnourished (MUAC≤18.5 cm)	0	0.0	0	0.0
Women who reported to have received tetanus immunization				
No dose	44	43.1	19	19.4 (11.1-27.6)
One dose	11	11.2	11	11.2 (4.1-18.3)
Two doses	37	36.3	25	25.5 (16.1-34.9)
Three doses	10	9.8	43	43.9 (34.1-53.7)
Household Access to Essential Indicators				
Reported Households consumed ≤3 food groups	4	3.4	21	20.4 (10.4-30.4)
Access to mosquito Net	87	73.1	42	42.9 (30.9-54.8)
Access to safe/protected drinking water	117	98.3	63	61.2 (47.9-74.4)
Access to latrine	52	44.1	101	98.1 (95.4-100.0)

NORTHWEST IDPS: HARGEISA, BURAO AND BERBERA MAY 2011, ASSESSMENT FINDINGS

Protracted IDPs/returnees population from the civil insecurity in Somalia are concentrated in the three main Somaliland towns of Hargeisa, Burao and Berbera. Insufficient and unreliable livelihood activities, limited social support and poor shelter have made this population group most vulnerable to food insecurity and undernutrition with global acute malnutrition rates ranging between *Serious* and *Very Critical* levels over the last five years. The poor nutrition situation among the internally displaced population has been attributable to high morbidity rates, poor child feeding and care practices and reduced access to adequate nutritious foods due to high food prices coupled with limited income earning opportunities. There is therefore a need for sustained monitoring of the nutrition situation so as to provide necessary data that will guide on the appropriate response.

In May 2011, FSNAU and MoH conducted three nutrition assessments among 677, 765 and 662 children aged 6-59 months in Hargeisa, Burao and Berbera protracted IDPs/returnees respectively using Probability Proportionate to Size (PPS) sampling technique. The objective of the assessments was to monitor the nutrition situation of this vulnerable population as part of FSNAU's seasonal surveillance activities.

Hargeisa: The global acute malnutrition (GAM WHZ<-2 or oedema) and severe acute malnutrition (SAM WHZ<-3 or oedema) rates were **10.9%** (8.1-14.5) and **2.2%** (1.0-5.0) among the Hargeisa IDPs including one oedema case (0.2%), indicating a sustained *Serious* nutrition situation in comparison to the findings from a similar assessment in November 2010 which reported a GAM rate of 10.8% (8.9-

13.0) and a SAM rate of 1.5% (0.8-2.8). Similarly, the crude and under five death rates of **0.37** (0.19-0.73) and **0.59** (0.44-2.04) respectively, are both indicating a sustained *Acceptable* situation according to WHO reference standards since November 2010. More boys (11.9%) than girls (9.9%) were acutely malnourished but the difference was not statistically significant ($P>.05$) (Table 5).

Burao: In Burao a GAM (WHZ<-2 Z score or oedema) rate of **19.1%** (14.6-24.5) and a SAM (<-3 or oedema) rate of **5.6%** (4.1-7.7) including 9 oedema (1.2%) cases were reported indicating a *Critical* nutrition situation and deterioration from *Serious* level reported in November 2010 when a GAM rate of 12.1% (8.8-15.4) and SAM rate of 1.7% (0.8-3.4) were recorded. The current malnutrition levels are similar to the levels recorded in *Gu* '10, illustrating seasonal changes in levels of acute malnutrition that peak in the post *Gu* season and improve in the *Deyr* season. More boys (21.8%) than girls (16.2%) were acutely malnourished but the difference was not statistically significant ($P>.05$). The crude and under five death rates were **0.56** (0.30-0.91) and **2.02** (1.21-3.34) respectively, indicating an *acceptable* situation for crude death rate but *alert* for under five year death rate according to WHO classification.

Berbera: In Berbera the GAM and SAM rates were **14.5%** and **3.0%** respectively were recorded also indicating a sustained *Serious* nutrition situation since Deyr'10/11 when a GAM rate of 14.2% (10.9-18.3) and a SAM rate of **2.2%** (1.2-4.1) were reported. The 90 days retrospective crude and under five death rates were estimated at **0.28** (0.15-0.54) and **0.31** (0.09-1.35) deaths/10,000/day respectively indicating a sustained *Acceptable* levels of mortality among Berbera IDP population since November 2010. More boys (17%) than girls (12.2 %) were acutely malnourished but the difference was not statistically significant ($P>.05$). Table 5 shows a summary of the findings of the Hargeisa, Burao and Berbera IDP assessments.



Child's MUAC measurement being taken in Hargeisa, IDP Settlement- May, 2011

High morbidity levels, an important risk to malnutrition persists among the three IDP populations with more than a quarter of the assessed children reportedly ill during the two weeks (one month for suspected measles) recall period (Table 5). The proportion of assessed children who were reportedly immunized against measles and polio and those who received vitamin A supplementation was high at more than 80% each but only polio immunization status met the recommended 95% coverage (SPHERE 2004). Child feeding practices remain poor in the three IDP settlements with poor dietary diversity, early cessation of breastfeeding and low feeding frequency evidenced as shown on Table 5.

Among the Hargeisa IDP, 80.2%, 95% and 81.8% of the assessed children had received measles vaccination, one or more polio immunization doses and vitamin A supplements respectively. Similar levels were reported in Burao (72.9%, 95.6% and 81.9%) and Berbera (85.9%, 95.9% and 87.3%) respectively. The high immunization and vitamin A supplementation status is due to the regular CHDs spearheaded by UNICEF and partners.

Table 5. Summary of Key Findings for Northwest IDPs Assessments

Indicator	Hargeisa IDPs 30 Clusters (N=677)		Burao IDPs 28 Clusters (N=652)		Berbera IDPs Exhaustive (N=662)	
	n	% (95% CI)	N	% (95% CI)	n	% (95% CI)
Total number of households assessed for children	452	100	512	100	476	100
Household Head						
Male Headed	376	82.3 (77.6-87.0)	420	82.0 (78.4-85.7)	399	83.8
Female Headed	80	17.7(13.0-22.4)	92	17.9 (14.3-21.6)	77	16.2
Total number of children assessed:	677	100	765	100	662	100
Child malnutrition						
Global Acute Malnutrition (WHO 2006)	74	10.9 (8.1-14.5)	146	19.1 (14.6-24.5)	96	14.5
Boys	42	11.9 (8.7 – 16.0)	86	21.8 (16.0-29.0)	54	17.0
Girls	32	9.9 (6.4 - 15.0)	60	16.2 (12.3-21.2)	42	12.2
Mean WHZ (WHO, 2006)	-0.57	±1.17	0.89	±1.21	-0.74	±1.18
Severe Acute Malnutrition (WHO 2006)	15	2.2 (1.0-5.0)	43	5.6(4.1- 7.7)	20	3.0
Boys	7	2.0 (0.8-4.9)	26	6.6 (4.2-10.1)	15	4.7
Girls	8	2.5 (1.0-6.3)	17	4.6 (2.7- 7.8)	5	1.4
Oedema	1	0.1 (0.0 – 0.4)	9	1.2 (0.1-2.3)	5	0.5
Global Acute Malnutrition (NCHS)	67	9.9 (7.5-12.9)	149	19.5 (15.2-24.7)	96	14.5
Severe Acute Malnutrition (NCHS)	7	0.8 (0.3-2.7)	20	2.6 (1.6- 4.2)	14	2.1
Global Acute Malnutrition (WHM<80% or oedema - NCHS)	40	5.9 (3.4-8.4)	84	10.9 (7.5-14.4)	51	7.7
Severe Acute Malnutrition (WHM<70% or oedema - NCHS)	1	0.1 (0.0 – 0.4)-	2	0.3 (0.0-0.6)	4	0.6
Global Acute Malnutrition by MUAC (<12.5 cm or oedema)	43	6.4 (4.3-9.3)	62	8.1(5.5-11.9)	39	5.9
Boys	17	4.8 (2.8-8.1)	31	7.8 (5.0-12.2)	17	5.4
Girls	26	8.0 (5.3-12.1)	31	8.4 (5.1-13.5)	22	6.4
Severe Acute Malnutrition by MUAC (<11.5 cm or oedema)	11	1.6 (0.8-3.3)	19	2.5(1.4- 4.5)	15	2.3
Proportion of children Stunted (HAZ<-2)	107	15.8 (9.0-15.4)	97	12.7(8.5-18.4)	40	6.0
Boys	62	17.5 (9.3-17.1)	66	16.7 (10.9-24.7)	27	8.5
Girls	45	13.9 (7.8-15.0)	31	8.4 (5.1-13.4)	13	3.8
Proportion of children Underweight (WAZ<-2)	91	13.5(10.6-17.0)	128	16.9 (12.4-22.6)	74	11.2
Boys	51	14.4 (11.0-18.7)	83	21.2 (15.8-27.9)	42	13.4
Girls	40	12.4 (8.6- 17.6)	45	12.3(8.2-18.1)	32	9.3
Mortality Rates						
Crude Death Rate (deaths/10,000/day)	0.37	0.19-0. 73	0.56	0.30-0.91	0.28	0.15-0.54
Under five Death Rate (deaths/10,000/day)	0.59	0.22-1.55	2.02	1.21-3.34	0.31	0.09-1.13
Child Morbidity						
Children reported ill in the previous 2 weeks	171	25.3 (20.5-30.0)	238	31.1(25.2-37.1)	226	34.1
Children reported with diarrhoea in 2 weeks prior to assessment	75	11.1 (7.9-14.3)	119	15.6(11.6-19.5)	78	11.8
Children reported with ARI in 2 weeks prior to assessment	67	9.9 (7.3-12.5)	80	10.5(7.7-13.2)	40	6.0
Children reported with febrile illness in 2 weeks prior to assessment	66	9.7 (6.8-12.7)	109	14.2(10.1-18.4)	173	26.2
Children reported with suspected measles within one month prior to assessment	19	2.8 (0.6 -5.0)	13	1.6(0.7-2.7)	8	1.2
Child Immunization status						
Children (6-59 months) reported immunised against measles	543	80.2 (76.5-83.7)	558	72.9 (61.4-84.5)	568	85.9
Children who reported to have received vitamin A suppl in last 6 months	554	81.8 (78.0-85.7)	627	81.9 (75.9-87.9)	578	87.3
Children who have ever received polio vaccine						
No doses	34	5.0 (2.6-7.4)	34	4.4 (2.4-6.5)	27	4.1
One dose	59	8.7 (4.1-13.3)	100	13.1 (8.3-17.9)	47	7.1
Two doses	141	20.8 (15.2-26.5)	181	23.7 (16.5-30.9)	141	21.3
Three or more	443	65.4 (56.1-74.8)	450	58.8 (48.1-69.6)	447	67.5
Infant and young child feeding						
		N=274		N=316		N=249
Proportion still breastfeeding	137	50.0 (43.9-56.1)	158	50.0 (44.3-55.7)	147	59.0
Proportion meeting recommended feeding frequencies	151	55.1 (46.6-63.6)	141	47.3(39.1-55.5)	139	55.8
Proportion who reported to have consumed ≥4 food groups	19	6.9 (1.6-12.3)	24	7.6 (2.4-12.8)	74	29.7
Maternal Health and Nutrition						
		N=446		N= 489		N=376
Total women who are acutely malnourished	30	6.9 (3.3-10.5)	20	4.1 (1.7-6.4)	21	4.6
Pregnant & lactating women acutely malnourished (MUAC<23.0 cm)	28	13.7(7.1-20.5)	19	7.2 (2.8-11.6)	20	9.4
Non pregnant/lactating acutely malnourished (MUAC≤18.5 cm)	2	0.9 (0-2.1)	1	0.4 (0.0-1.4)	3	1.4
Women who reported to have received tetanus immunization						
No dose	68	15.2 (10.3-19.6)	88	17.6(13.6-21.7)	33	7.2
One dose	76	17.0 (12.3-21.8)	65	13.0 (9.1-16.9)	74	16.1
Two doses	136	30.5 (22.8-38.2)	203	40.7 (34.5-46.9)	149	32.3
Three doses	166	37.3 (29.1-45.3)	143	28.7 (23.8-33.6)	205	44.5
Household Access to Essential Indicators						
		N=452		N=512		N=476
Reported Households consumed ≤3 food groups	46	10.2 (5.1-15.2)	68	13.3(7.4-19.2)	103	21.6
Access to mosquito Net	72	15.9(10.7-21.1)	189	74.4 (53.1-95.6)	135	28.4
Access to safe/protected drinking water	346	76.5 (61.9-91.2)	373	72.9 (56.3-89.3)	469	98.5
Access to latrine	363	80.3 (72.5-88.1)	387	75.6 (68.3-82.8)	103	21.6

Overall, the findings indicate a sustained **Serious** nutrition situation among the IDP populations in Hargeisa and Berbera IDP settlements since *Deyr* '10/11 and a deterioration from *Serious* levels in *Deyr* '10/11 to **Critical** levels among Burao IDP population. The deterioration of the nutrition situation among the Burao IDP population to similar levels last recorded in *Gu* '10 is linked to the seasonal factors that affect income earning opportunities and food access. It is important to point out that Burao IDPs generally display seasonal changes with the levels of acute malnutrition peaking in the post *Gu* season and improving in the *Deyr* season – this is linked to seasonal changes in labour opportunities from livestock trade. The livestock export to Saudi Arabia during Islamic pilgrimage season (*Hajj*) in *Deyr* seasons creates opportunities for casual labour (porters, loaders) in addition to increased income from animal and animal product sales. The income generated from these activities is used to purchase both food and non-food items, hence the improvement in the nutrition

situation in the *Deyr* seasons. In the *Gu* seasons, as in the current case, income earning opportunities have diminished and this affects food access resulting in high levels of acute malnutrition. Humanitarian interventions in the form of targeted feeding programs by humanitarian organizations in addition to outreach feeding programmes by MoH, have helped mitigate the poor nutrition situation among the IDP population.

There is a need for continued support to the displaced population in terms of targeted food supplementation, income-generating activities, health education, shelter improvement and continued immunization programs and other development interventions are needed to improve the health and nutrition situation of the vulnerable returnee/IDP population in Somaliland. Intervention programs designed to cushion the population from the seasonality factors negatively affecting the health and nutrition wellbeing of the displaced persons should be considered.

A KNOWLEDGE, ATTITUDES AND PRACTICES (KAP) STUDY OF FISH CONSUMPTION IN SOMALIA

Since the collapse of the centralized government in Somalia in 1991, the country's 3,330 km coastline, the longest in Africa, remains one of the country's most untapped resource. Some of the main reasons contributing to this include poor infrastructure (transport networks and storage facilities), which has restricted access to fish for a significant proportion of the population, the effects of seasonality on fish supply and the general lack of familiarity with fish among the population that are largely meat consumers. However, while traditional tastes and lack of consumer knowledge on fish consumption, have confined the market to certain coastal areas, the shortage of meat experienced particularly during the recurring droughts has diverted some demand towards fish, especially among low income groups like internally displaced people (IDP) and the poorer households residing near coastal areas where fish is readily available. The FAO Somalia Fisheries sector currently implements two major fisheries projects funded by the Spanish government and the World Bank. These projects mainly target the coastal communities in northeastern Somalia. One of the key activities under these projects is the promotion of fish consumption in the population to promote the overall nutrition, health and well being of the population whilst also providing economic opportunities to the communities. Fish is a good source of protein, vitamins and minerals in the diet. Encouraging the consumption of fish in the community, will not only help to improve the overall nutrition and health of the population that rely largely on meat as the main source of protein in the diet, but will also encourage economic growth in the population.

Between 18th May to 25th June 2011, FSNAU conducted a KAP study on fish consumption in 25 locations in Somalia. In these sites, data was collected from both the rural and

urban communities residing in both coastal, non-coastal and riverine areas. The main purpose of the study was to gain a full understanding on the common practices, attitudes, beliefs on fish consumption in Somalia, and on the level of knowledge the community has on the nutritive and health benefits of fish consumption. This information will be used as a basis for developing relevant communication strategies promoting the consumption of fish in the country. In addition the information will supplement baseline fisheries livelihood data that is currently being collected in Somalia, in order to design appropriate interventions in the fisheries sector. Focus Group Discussions (FGDs) and Key Informant Interviews (KIs) were the main data collection techniques used in the study. Other qualitative methods of collecting data also applied in the context of triangulation were case studies,



Men returning from the sea with fish, FSNAU Bossaso, 2010



Dried salted shark fish *Xanid*, on sale in Huddur, FSNAU 2011

informal observations and proportional piling. A total of twelve teams, each team consisting of one supervisor (FSNAU field staff), one moderator and one enumerator conducted the data collection activities. The trainings on data collection techniques and methodologies for the teams were conducted in Hargeisa and Garowe towns.

Main Findings

The overall results indicate that majority of the population in the coastal and riverine areas of the country consume fish, where fresh fish is generally more readily accessible. In the inland regions, such as Gedo, Bay and Bakool regions, fish consumption was not popular and the main type of fish found is canned tuna which is more expensive and less popular than meat. The main types of fish consumed among the coastal populations in Awdal, Sanaag, Bari, Nugal, Shabelles and Juba regions are tuna, mackerel, bonito tuna, emperor, grouper, saw shark, snapper, lobster, shrimps and sea turtle (Qubo). Among the riverine population, the main types of fish consumed are various species of catfish, tilapia, muilldae and electric fish. In addition to canned tuna fish is also popularly consumed by both populations that access fresh fish and those that do not.

Fish is culturally acceptable and considered 'Halaal', it is associated with health benefits to the consumer. The main benefits of fish consumption as reported in the study include good mental growth, improved growth of bones and teeth, provides the consumer with vitamins and minerals, helps in the formation of blood cells (both red and white), improves the body's immunity to disease and infection, increases sexual activity especially among men among and treats various diseases and ailments. The main factors affecting the consumption of fish and the main type of fish consumed include availability, which is a key factor. Fish is not always readily available in the market places and the community also lack the skills and equipment to fish especially in the riverine areas. Although they may also need to be motivated to fish, as they are culturally not inclined to do so and would prefer to eat meat, what they are used to consuming. Cost is another factor affecting fish consumption, fish is relatively expensive in comparison to meat, this is because less households consume fish compared to meat, the quantity of fish one gets is less

compared to meat for the same amount of money, the cost of fresh fish is higher than the canned or dried fish. Other factors affecting the consumption of fish include taste and smell, the known health benefits, and lack of appropriate storage and preservation and preparation techniques. In areas where fish is readily available, households will, on average, consume fish at least once to twice a week.

The type of fish preferred did not differ much among the different gender and social groups, and was mainly influenced by the availability and cost. Poorer households are not able to readily access fish because of the cost. The cost of fish is influenced by the dry seasons when the supply of fish goes down resulting in increased prices of fish. People of different age groups consume fish, although it is not very commonly consumed in children below 24 months as it is believed it will cause them to have stomach cramps. In addition, during the hot season consumption of fish is low because it is believed that consuming fish at this time will lead to diarrhoea and intestinal problems. The consumption of fish is also associated with treating ailments such as malaria, bronchitis, sexual impotence (increases sexual ability in men), backaches, asthma, typhoid fever, eye problems, constipation, anaemia, night blindness, malnutrition, goitre, memory loss, common cold and whooping cough. Fish is mainly prepared by frying and roasting, and is mainly consumed with canjero, rice, spaghetti and bread as an accompaniment and can be consumed as part of any meal of the day i.e. breakfast, lunch or dinner. The storage of fresh fish remains a challenge, and as reported by majority of the informants interviewed this would be one of the key factors in improving the consumption of fish.

Conclusions and Recommendations

In conclusion, the consumption of fish is religiously and culturally acceptable and is associated with certain health benefits. The main reasons for low consumption are the availability, cost and general lack of knowledge on storage and preparation of fish. There is also a concern of swallowing bones especially for younger children when consuming fish, therefore most households sometimes opt to purchase the canned tuna fish with no bones. It is important for the community to be made more aware of the benefits of fish consumption, in addition they should be taught fishing techniques and preservation and preparation methods. The frequency of consumption of fish as a regular part of a meal should be encouraged. It would be important to train health workers as part of the advocacy strategy through campaigns or health clinics. In addition, it will be essential to educate the community on fishing techniques, to improve the supply of fish, fish preservation and storage to improve the availability, these will consequently also assist in reducing the cost. The provision of cold storage facilities will also improve the preservation of fish and ensure that even those away from the fish sources (sea or river) are able to consume fresh fish. Promoting fish consumption is extremely crucial, as it is readily available and is a good source of proteins, vitamin A and minerals all that promote the good health and nutritional status of individuals.

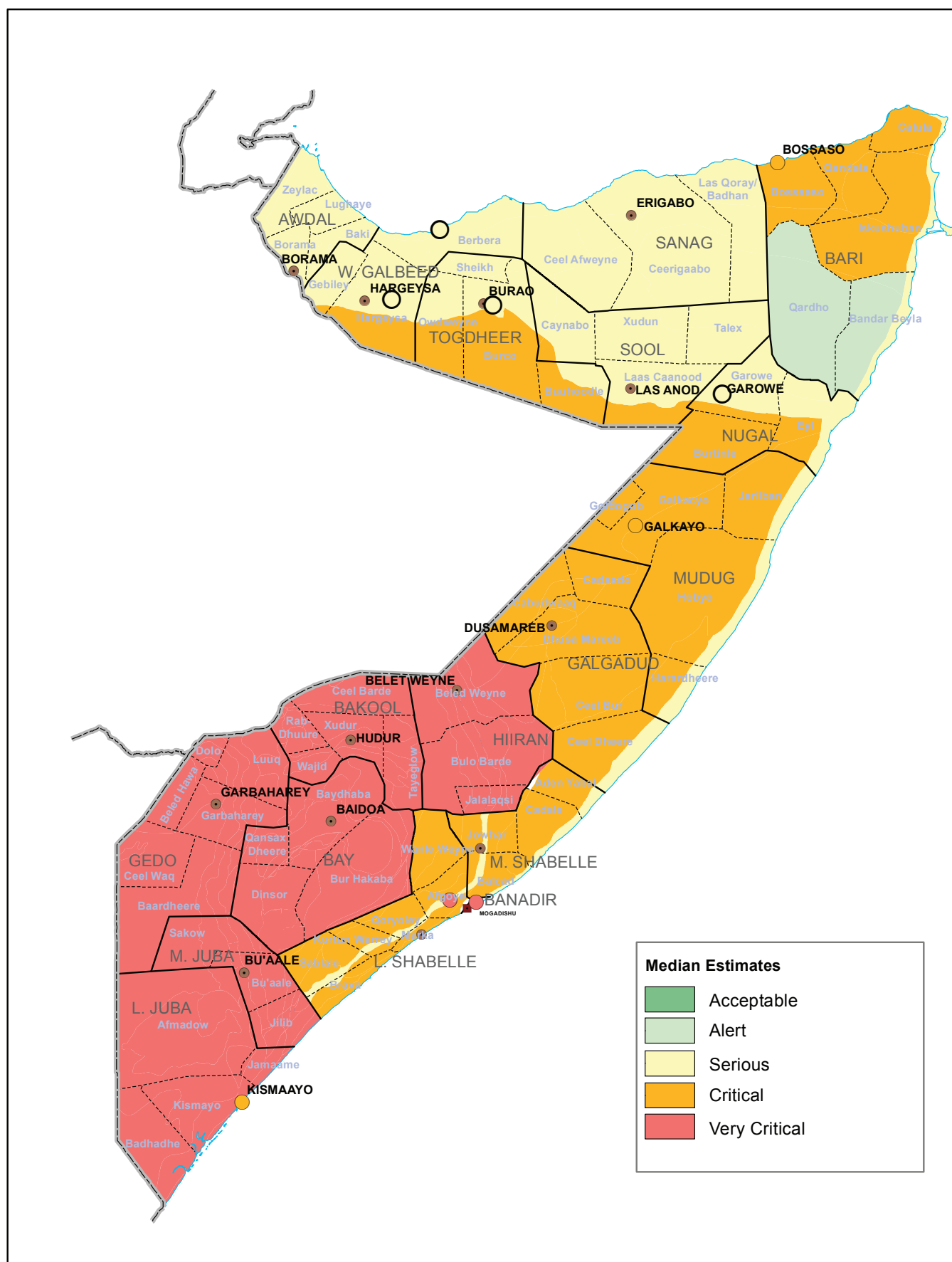
RESULTS OF PLAUSIBILITY CHECKS

Location		Criteria	Missing/ Flagged data	Overall sex ratio	Overall age distribution	Digit Preference score-weight	Digit Preference score-Height	SD WHZ	Skewness WHZ	Kurtosis WHZ	Poisson Distribution
Northeast IDPs											
Bossaso IDPs	June-11	Category	Good	Good	Poor	Good	Poor	Good	Good	Good	Good
		Score	0	0	4	0	4	0	0	0	0
Garowe IDPs	June-11	Category	Good	Good	Unacceptable	Good	Acceptable	Good	Good	Good	Good
		Score	0	0	10	0	2	0	0	0	0
Galkayo IDPs	June-11	Category	Good	Good	Unacceptable	Good	Acceptable	Good	Good	Good	Poor
		Score	0	0	10	0	2	0	0	0	3
Margaga IDPs	June-11	Category	Good	Good	Acceptable	Acceptable	Acceptable	Good	Good	Good	Good
		Score	0	0	2	2	2	0	0	0	0
Qardho	June-11	Category	Good	Good	Acceptable	Good	Acceptable	Acceptable	Good	Good	Good
		Score	0	0	2	0	2	2	0	0	0
Northwest IDPs											
Hargeisa IDPs	May-11	Category	Good	Good	Poor	Good	Acceptable	Acceptable	Good	Good	Good
		Score	0	0	4	0	2	2	0	0	1
Burao IDPs	May-11	Category	Good	Good	Good	Good	Acceptable	Acceptable	Good	Good	Unacceptable
		Score	0	0	0	0	2	2	0	0	5
Berbera IDPs	May-11	Category	Good	Good	Acceptable	Acceptable	Acceptable	Acceptable	Good	Good	Good
		Score	0	0	2	2	2	2	0	0	0

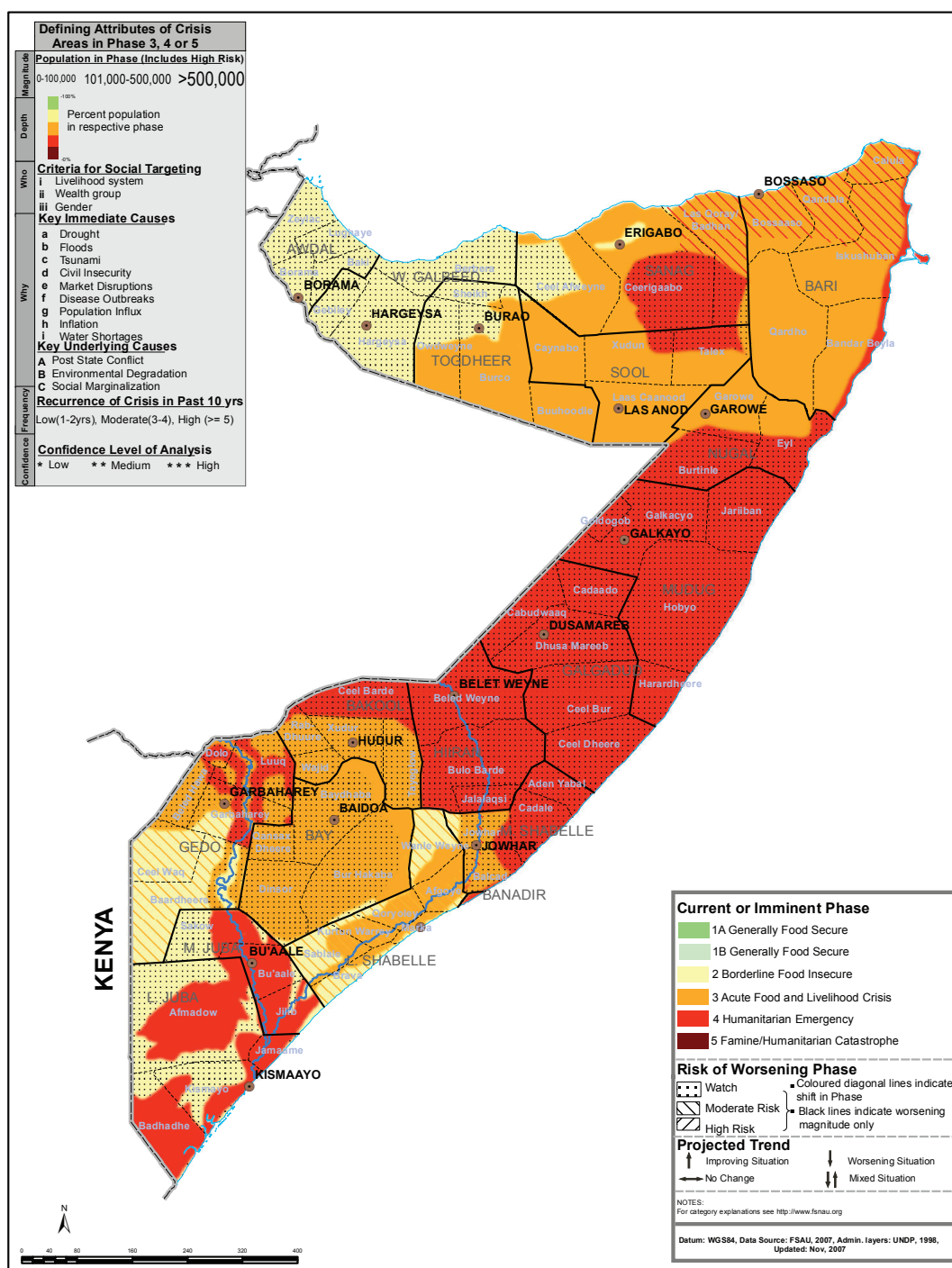
Guidance for use of the Plausibility checks

- Digit preference DP for weight and height:** Indicates how accurately children were weighed and when done correctly there shouldn't be any digit preference. This normally occurs when enumerators round to the nearest cm/kg or half cm/kg. The signs; +, ++, +++ indicate if there was any DP for a number and if it was, mild, moderate or severe, respectively. Digit Preference scores for weight and height are graded as; (0-5 good, 5-10 acceptable, 10-20 poor and > 20 unacceptable)
- Standard Deviation (SD) of WHZ:** Indicates whether there was a substantial random error in measurements. In a normal distribution the SD is equal to +1, but should lie between 0.8 and 1.2 Z score. SD increases as the proportion of erroneous results in the data set increases.
- Skewness of WHZ:** This is a measure of degree of asymmetry of the data around the mean. A normal distribution is symmetrical and has zero skewness and should lie between +1 or -1. Positive skewness indicates a long right tail and negative skewness indicates a long left tail.
- Kurtosis of WHZ:** This demonstrates the relative peakedness or flatness compared to a normal distribution. The normal distribution has zero kurtosis and surveys should lie between +1 and -1. Positive kurtosis indicates a peaked distribution while negative indicates a flat one.
- Percent of flag:** Flags are measurements that are highly unlikely to occur in nature and are therefore highlighted by the software. These incoherent measurements should be corrected or discarded prior to analysis, 0% flags is ideal but should be less than 2-3% of children measured.
- Age distribution:** This allows for a view of the representativeness of the sample, and should be similar to the distribution within the population. Age bias is of particular concern for anthropometry. As younger aged (6-29) children are more likely to be acutely malnourished than the older age group (30-59), this means under representation of the younger age group may give a lower prevalence than the actual one and vice versa. The age ratio allows a view of this relationship and should fall between 0.78 and 1.18 with an ideal falling around 1.0.
- Sex ratio:** Allows a view of the representativeness of the sample and should be similar to the distribution within the population. This should not vary too much from the expected sex ratio and should fall between 0.8 and 1.2.
- Poisson Distribution:** Test if cases are randomly distributed or aggregated over the clusters by calculation of the Index of Dispersion (ID) and comparison with the Poisson distribution.
- The Index of Dispersion (ID)** indicates the degree to which the cases are aggregated into certain clusters (the degree to which there are pockets). If the ID is less than 1 and $p < 0.05$ it indicates that the cases are UNIFORMLY distributed among the clusters. If the p value is higher than 0.05 the cases appear to be randomly distributed among the clusters, if p is less than 0.05 the cases are aggregated into certain cluster (there appear to be pockets of cases).

SOMALIA ESTIMATED NUTRITION SITUATION - APRIL 2011



SOMALIA INTEGRATED FOOD SECURITY PHASE CLASSIFICATION- JUNE 2011



Recent and forthcoming publications and releases

FSNAU Food Security Nutrition Brief, June 2011

FSNAU Press Release, June 2011

FSNAU/FEWSNET Climate Data Update, May 2011

FSNAU/FEWSNET Market Data Update, May 2011

Nutrition Update, May-June 2011

FSNAU Technical Series Report Nutrition Situation, February 2011

FSNAU Technical Series Report, Post Deyr 2010/11 Analysis, March 2011

NOTE: The above publications and releases are available on the FSNAU website: www.fsnaui.org