

GENERAL OVERVIEW

- Findings from five nutrition assessments¹ conducted in South and Central Somalia in May 2007 indicate a continuing critical nutrition situation with ²Global Acute Malnutrition (GAM) levels above the emergency threshold of 15%. The retrospective Crude Mortality Rates (CMR) in these studies also indicate results above the alert threshold³ of 1 death/10,000 population /day. In all the assessments the younger children 6-29months were at much higher risk of acute malnutrition, than the older children, highlighting the strong association between high morbidity and poor care practices and malnutrition. Of most concern is the critical situation in Lower and Middle Shabelle Regions mainly as a result of cumulative effects of conflict, insecurity and concentrated displacement within the region which has led to stress on host communities over the last three months. These shocks are further compounded by the on-going acute watery diarrhea epidemic, losses from the last Deyr floods and three seasons of below normal cereal production.
 - Lower and Middle Shabelle Riverine Livelihood Zone:** GAM rate of 17.0% (CI: 13.4-20.5) and ⁴Severe Acute Malnutrition (SAM) rate of 4.8% (CI: 13.0 -16.7). CMR of 1.31 (0.8-1.83)
 - Lower and Middle Shabelle Agro Pastoral Livelihood Zone:** GAM rate of 17.3% (CI: 13.3-21.3) and SAM rate of 4.5% (CI: 2.5-6.6). CMR of 1.07 (0.69-1.45)
- In **Burhakaba District**, the latest assessment findings indicate results in line with previous assessments conducted in 2000 and from the routine nutrition sentinel site surveillance, again highlighting the chronic nature of the nutrition crisis in Somalia. The main underlying factors are reported to be high morbidity levels, poor access to health care services and poor child feeding practices in addition to the recent IDP influx, increases in prices of food and ongoing insecurity.
 - Burhakaba Agro Pastoral Livelihood Zone:** GAM rate of 15.6% (CI: 12.2 – 19.0) and SAM rate of 3.3% (CI: 1.7-4.9). CMR of 1.31 (CI: 0.86 – 1.77)
 - Burhakaba Pastoral Livelihood Zone:** GAM rate of 16.2% (CI: 12.1 – 20.2) and SAM rate of 3.9% (CI: 2.4 – 5.3). CMR of 1.88 (CI: 0.90 – 2.86)
- In **Galcayo Town IDPs** a deterioration in the nutrition situation has been reported from the most recent assessment conducted in 2004. This critical nutrition situation is linked to their vulnerability as IDPs, with poor access to food, income, health care and safe water further compounded by high morbidity.
 Assessment findings: (based on an exhaustive nutrition assessment): GAM rate of 21.9% and SAM rate of 2.2%. CMR of 1.54
- A sixth nutrition assessment conducted in the **North East Coastal Deeh**, also in May, indicates GAM results just below the emergency threshold of 14.9% (CI: 12.1 – 17.7) and SAM rate of 1.1% (CI: 0.2 – 1.9). CMR is stable at 0.62 (CI: 0.3 – 0.93).

Map 1. highlights the livelihood zones assessed.

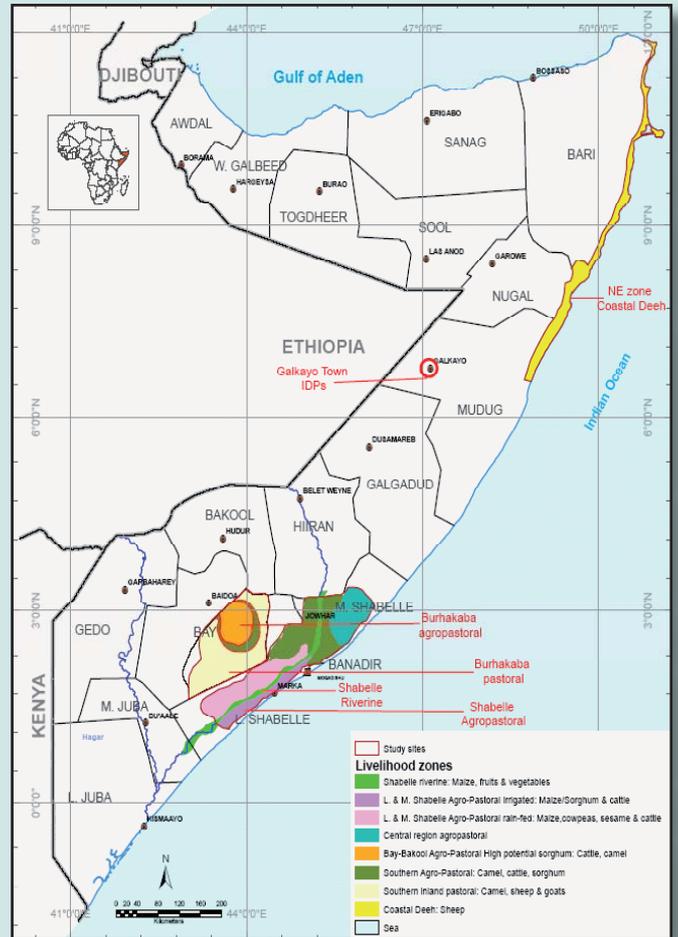
1 30 x 30 sampling of children aged 6 months measuring 65cm length-109.9cm height, and 30x30 households for mortality

2 Global Acute Malnutrition i.e. % of assessed children with Weight for Height Z Scores < -2 or Oedema

3 Moren et al, 1995 / Sphere 2004 defines 1.0/10,000/00 as the alert threshold

4 Severe Acute Malnutrition i.e. % of assessed children with Weight for Height Z Scores < -3 or Oedema

Map 1: Nutrition Assessments Conducted in May 2007



Acute Watery Diarrhea (Ref: WHO Somalia AWD Updates)

- North West Zone:** Between March 22nd and June 16th, 2007, a total of 2060 cases of clinically diagnosed Acute Watery Diarrhea (AWD) including 30 related deaths, ⁵CFR: 1.47%, were reported from Togdheer, Awdal and Woqooyi Galbeed Regions of the North Western Zone. Overall, Togdheer region reported 51% of the cases (i.e. 1046) including 30% (i.e. 15) of the total related deaths. There are also indications of an increasing trend in the number of reported AWD cases in this area.
- South and Central Zone:** Between January 1st and June 8th 2007, a total of 36, 275 cases of AWD including 1,102 related deaths were reported in the South and Central Zone. This translates into a CFR of 3.04%. The AWD trend showed that the number of reported cases is decreasing in all the 10 regions.

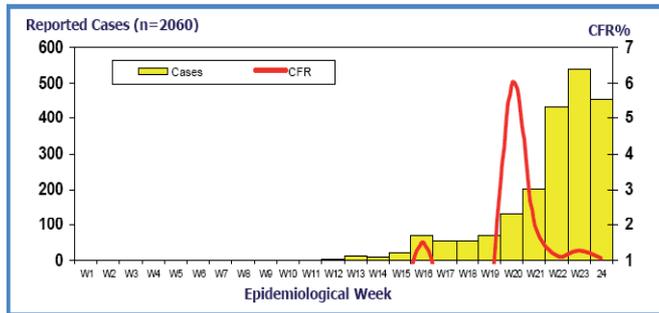
5 The Case Fatality Rate (CFR) refers to the number of deaths per 100 cases (WHO)

Acute Watery Diarrhea Update

Northwest (Ref: WHO Somalia AWD Update Somaliland)

Between March 22nd and June 16th 2007, a total of **2060** cases of clinically diagnosed AWD including 30 related deaths (CFR of **1.47%**) were reported from Togdheer, Awdal and Woqooyi Galbeed Regions of northwestern zone. In the last four epidemiological weeks (21-24), the trend showed an increase in the number of reported cases in all three regions. In the current week (epidemiological week 24), the reported cases decreased by 8% in comparison to the previous week (457 and 539 respectively). In comparison with the previous epidemiological weeks, the overall CFR continues to decrease from **5.26%** in epidemiological week 20 to **1.09%** in the current week. **Chart 1** provides a summary of reported cases and CFR.

Chart 1: Distribution of AWD Cases, northwest zone Jan 1- Jun 16, WHO



Overall, Togdheer region reported 51% (1046) cases including 30% (15) of the total related deaths. The trend shows a slight increase in the reported cases compared to the last epidemiological week. Although Awdal region reported only 11% (223) of the reported cases, it reported the highest CFR of 2.69%. *V. cholerae* serogroup 01, serotype *Inaba* was confirmed in 26 out of 62 samples collected from Hargeisa and Burao.

63% of the AWD cases are reported to have occurred in the 5yrs and above age group, including 53% of all reported deaths. Although 47% of the reported cases affected the under fives, the CFR was higher in this group (1.82% and 1.24% respectively).

South Central Zone (Ref: WHO Somalia AWD Update Highlights)

Between January 1st and June 8th 2007, a total of **36, 275 cases** of AWD including **1102 related deaths**, indicating a Case Fatality Rate of **3.04%**, were reported in the South and Central Zone. Nevertheless, in the epidemiological week 23 (June 2nd-8th), the reported cases decreased by 25%, in comparison to the previous week (724 and 1209 respectively). In comparison to the previous epidemiological weeks, the overall CFR also continued to decrease from **4.32%** in epidemiological week 14 to **0.83%** in the current week. The AWD trend showed a decrease in the reported number of cases in all 10 regions.

Overall, Banadir region reported 41% (14, 703) of all the cases including 15% (170) of the total related deaths. However, the trend shows a sharp decrease in reported cases in the last epidemiological week. Although Bakool region reported only 2% (649) of the total reported cases, one of the highest CFR, 6.63%, was also reported in the region. No cases were reported from Bay region in the current week and the cholera treatment center (CTC) in Baidoa was closed on May 31st, 2007.

Further information on AWD can be obtained from WHO's Dr Hamman El Sakka on elsakkah@nbo.emro.who.int

SOUTHERN ZONE

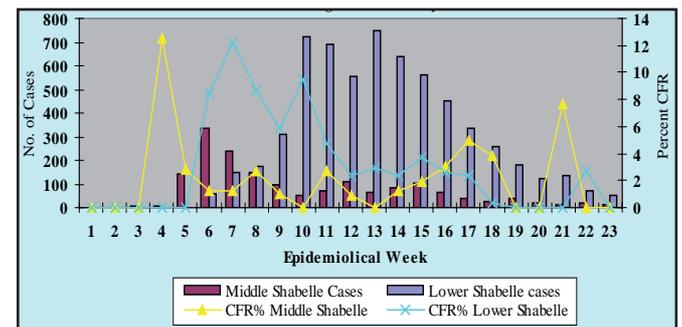
Shabelle Riverine & Agro-Pastorals Nutrition Assessment Findings

Lower and Middle Shabelle are amongst the most highly populated regions in Southern Somalia. Lower Shabelle hosts an estimated 815,158 persons in seven⁶ districts and Middle Shabelle 539,637 persons in five⁷ districts (UNDP 2005 population figures). The Riverine and Agro pastoral livelihood zones are the dominant livelihoods (See Map 1). According to the FSAU Post Gu'06 and Post Deyr'06/07 food security and livelihood analyses, Lower and Middle Shabelle were considered to be **Chronically Food Insecure**. Over the years, both regions have served as the food basket for Somalia with good cereals and fruits production from both rainfed and irrigated farming, however the long term impacts of the conflict have still left many vulnerable to shocks.

Since the Deyr'06/07 season, both regions have faced a series of shocks. The on-going conflict and insecurity in Mogadishu has resulted in an influx of displaced populations (IDP) estimated at 100,000 in April 2007 (UNHCR figures) into these regions. Added to this has been a deteriorating food security situation following three seasons of below normal cereal production, loss of food stocks from the Deyr'06/07 floods and sharp price increases which have negatively impacted on the livelihood systems.

Additionally, the outbreak of acute watery diarrhoea in the South and Central Somalia since January 2007 has affected both regions with 6211 cases reported in Lower Shabelle, translating into a **CFR of 4.06%**, and 1697 cases reported in the Middle Shabelle with a **CFR of 1.77%**. Case Fatality Rate was generally highest in both regions in the 8th epidemiological week, nevertheless a declining trend of reported cases has been observed, See Chart 2 (Source: WHO, AWD Update June 8th, 2007).

Chart 2: Acute watery Diarrhoea Cases and Case fatality rate in Lower and middle Shabelle Regions st January - 8th June 2007



In May 2007, FSAU in collaboration with UNICEF, WFP, COSV, INTERSOS, SRCS, TRG and SACOD conducted two nutrition assessments in the Agro pastoral and Riverine livelihoods zones of Lower and Middle Shabelle regions. Two stage cluster sampling methodology was used to select the study households. Main urban centres were excluded in the study to focus on rural livelihoods. Household related data, dietary, anthropometry, mortality and malaria data using Rapid Diagnostic Tests (RDTs) were collected. Both assessments were conducted concurrently.

⁶Kurtunwarey, Merka, Oroyoley, Afgooye, Brava, Sablale and Wanlaweyn
⁷Mahaday, Cadale, Jowhar, Balcad and Adenyabab

Table 1: Summary of Findings			
Indicator	No	%	95% CI
Global Acute Malnutrition (WHZ<-2 or oedema)	156	17.0	13.4 – 20.5
Severe Acute Malnutrition (WHZ<-3 or oedema)	45	4.8	3.0 – 6.7
Oedema	12	1.3	0.2 – 2.3
Children reported to have diarrhoea in 2 weeks prior to study	177	19.3	13.9 – 24.6
Children reported to have ARI within 2 weeks prior to study	163	17.7	11.2 – 24.3
Children with suspected malaria/febrile illness in 2 weeks prior to study	150	16.3	8.6 – 24.1
Suspected measles within one month prior to study	35	3.8	0.6 – 7.0
Children (9-59 months) immunised against measles (N=857)	226	26.4	14.0 – 38.7
Children who have ever received polio vaccine	814	88.5	86.4 – 90.5
Children supplemented with vitamin A in last 6 months	230	25.0	11.3 – 38.7
Households who consumed ≥4 food groups	443	96.9	95.0 – 98.2
Children 6-24 months who are breastfeeding (N=301)	199	66.1	60.0 – 72.3
Children introduced to other foods before 6 months	297	98.6	96.8 – 99.6
Under Five Mortality Rate (U5MR) as deaths/10,000/day	2.02		1.00 – 3.04
Crude Mortality Rate (CMR) as deaths/10,000/day	1.31		0.8 – 1.83

Lower and Middle Shabelle - Riverine Nutrition Assessment

A total of 919 children aged 6 – 59 months were assessed from 459 households. Mortality data was collected from 916 households. Preliminary results indicate **GAM** rates of **17.0%** (CI: 13.4 – 20.5) and **SAM** rates of **4.8%** (CI: 3.0 – 6.7). The results indicate a critical nutrition situation (WHO classification). Although direct comparison with previous nutrition estimates of acute malnutrition for the Shabelle riverine livelihood is not possible, given no such studies have been conducted in the past, integrated analysis of the nutrition situation indicates deterioration in the nutrition situation from other routine nutrition data collected from sentinel sites and health centres.

Mortality data indicates a crude mortality rate (CMR) of **1.31** (CI:



A woman drawing water for household use from a water catchment

0.8 – 1.83) and an under five mortality rate (U5MR) of **2.02** (CI: 1.0 – 3.04) per 10,000/day both indicating an alert situation. The acute watery diarrhoea (AWD) outbreak significantly contributed to the high mortality rates reported. AWD was the main cause of death reported for about 64.2% of the under five deaths and 46.0% for the overall mortality. Similarly, the proportion of children that had reportedly suffered from diarrhoea in the two weeks prior to the study was high (19.3%). This raises great concern as the disease further predisposes the children to poor nutrition.

Poor sanitation and hygiene was reported in the study area with a significant proportion (75.1%) of the households using open pits, a designated area or the bush for human waste disposal. The main source of drinking water (41.9% households) is unprotected wells/catchments (see figure 1) and the river (35.3%). These open water sources coupled with high vulnerability to flooding and the poor sanitation situation, predisposes the households to diarrhoeal diseases.

There was a significant difference in the nutrition status of children

aged 6-29 months and those 30-59 months. The younger children were two (RR=2.01) times more likely to be malnourished than their older counterparts, this again highlights the importance of disease as a precursor to acute malnutrition, given the higher susceptibility of younger children.

The proportion of children who had suffered from one or more communicable childhood diseases in the two weeks prior to the assessment was 36.6%. About 4% of suspected measles cases were reported in the area and were closely associated with the low measles vaccination coverage of 26.4%. Similarly, Vitamin A supplementation was low (25%) with a more optimistic polio vaccination coverage at 88.5%. All the immunization coverage was far below the Sphere 2004 recommended coverage of 95%.

Majority (92.4%) of the surveyed households were resident with about 12% hosting some internally displaced persons. This reportedly led to increased food sharing and expenditure in these households. As a coping mechanism, the host households were reported to be borrowing money, taking up loans, selling animals/crops, working longer hours and relying on gifts from friends or relatives. 7.6% of the assessed households were IDPs with nearly all being recent arrivals from Mogadishu due to civil insecurity. These additional stresses are also likely to have contributed to the critical situation.

Lower and Middle Shabelle - Agro Pastoral Nutrition Assessment

A total of 919 children aged 6 – 59 months from 457 households were assessed. Mortality data was collected from 919 households. As shown on table 2, **GAM** rate of **17.3%** (CI: 13.3 – 21.3) and **SAM** rate of **4.5%** (CI: 2.5 – 6.6) were reported. The results indicate a critical nutrition situation (WHO classification). Similarly to the Riverine assessment, there are no previous such studies to allow for a direct comparison, however, when compared to the typical estimates of the nutrition situation for the Shabelle Agro Pastoral livelihood zone, based on sentinel sites, health centre data and rapid MUAC assessments, the results indicate a deterioration in the nutrition situation.

The crude mortality rate of **1.07** (CI: 0.69 – 1.45) and the under

Table 2: Summary of Findings			
Indicator	No	%	95% CI
Global Acute Malnutrition (WHZ<-2 or oedema)	159	17.3	13.3 – 21.3
Severe Acute Malnutrition (WHZ<-3 or oedema)	42	4.5	2.5 – 6.6
Oedema	5	0.5	0.1 – 1.0
Children reported to have diarrhoea in 2 weeks prior to study	219	23.8	16.4 – 31.2
Children reported to have ARI within 2 weeks prior to study	169	18.4	10.7 – 26.0
Children with suspected malaria/febrile illness in 2 weeks prior to study	157	17.1	9.0 – 25.2
Suspected measles within one month prior to study	33	3.4	1.6 – 5.6
Children (9-59 months) immunised against measles (N=867)	268	30.9	20.7 – 41.0
Children who have ever received polio vaccine	871	94.8	93.2 – 96.1
Children supplemented with vitamin A in last 6 months	296	32.2	21.3 – 43.1
Households who consumed ≥4 food groups	420	91.5	88.7 – 93.8
Children 6-24 months who are breastfeeding (N=283)	181	63.9	56.6 – 71.3
Children introduced to other foods before 6 months	272	96.1	93.1 – 98.0
Under Five Mortality Rate (U5MR) as deaths/10,000/day	1.38		0.61 – 2.15
Crude Mortality Rate (CMR) as deaths/10,000/day	1.07		0.69 – 1.45

five mortality rate of **1.38** (0.61 – 2.15), are also of concern and indicating an alert situation. Similar to the Riverine assessment, AWD was the main cause of death reported. Access to good sanitation facilities is limited with the majority (74%) using the bush, a designated area or open pit. This coupled with the use of unprotected wells, water catchments or the river as the main source of drinking water predisposes the households to diarrhoeal diseases.

Although a higher proportion (18.6%) of children aged 6-29

months were malnourished compared to the children aged 30-59 months (16.4%), the difference was not significant and again is likely to be linked to the susceptibility of the younger child to disease, especially diarrhoea in this case. The proportion of children who had suffered from one or more communicable childhood diseases during the two weeks prior to the assessment was 42.6%. As indicated on table 2, the prevalence of diarrhoea, ARI, suspected malaria and measles were all high. Disease is one of the basic causes of malnutrition and hence the high morbidity negatively impacts on the children's nutrition status. Nearly all the households were residents with about 11% hosting some recently displaced persons mainly from Mogadishu due to civil insecurity. Some of the impacts of these IDPs presence in the households included increased expenditure on food (46.9%), and sharing of food (42.9%). Similar to the Riverine households, these households were coping by borrowing, taking loans, relying on gifts or working long hours again causing stress on the host families to meet their needs. The coverage of measles immunisation and Vitamin A supplementation remained far below the SPHERE recommendation of 95% at 30.9% and 32.2% respectively. Polio vaccination coverage was good, at 95%.

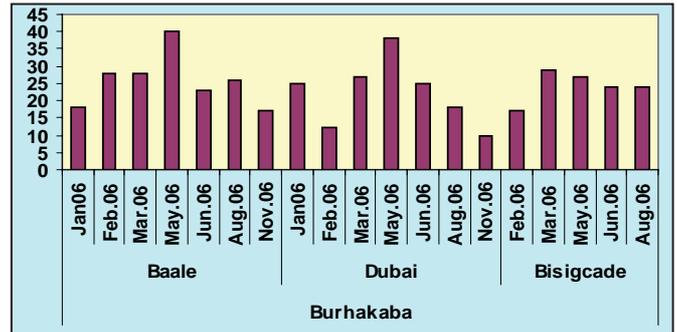
Conclusion & Recommendations from both assessments

The deteriorating food security situation, poor access to safe water for consumption, poor health care services and poor sanitation in Lower and Middle Shabelle serve as underlying causes of malnutrition. This partly accounts for the quick deterioration in the nutrition situation following the recent shocks in the region. Ongoing humanitarian assistance includes provision of health services by COSV, SRCS and INTERSOS in collaboration with WHO and UNICEF. WFP and CARE undertake food aid related activities. UNICEF supports water and sanitation activities. Considering that the performance of the Gu'07 season rains is expected to be below normal, the food security situation could further deteriorate. The sanitation and health situation is also dire hence the need to step up the ongoing interventions. With the Riverine livelihood zone being highly prone to floods, there is an urgent need to address the water and sanitation needs of the population.

Burhakaba Pastoral and Agro – Pastoral Nutrition Assessments Findings

Burhakaba is the largest district amongst the five districts of Bay region in Southern Somalia. It is located between Baidoa to the west, Wanlaweyn to the east, Dinsor to the southwest, Jalalaqsi to the northeast and Qoryoley to the south. The district has an estimated population of 128,393 (UNDP 2005). The main livelihoods in the district are Southern Inland Pastoral (camel, sheep and goats) and the Agro-Pastoral (camel cattle and sorghum). According to FSAU Post Deyr '06/07 analysis the food security situation in Burhakaba district indicated improvement from the **Acute Food and Livelihood Crisis** in Gu'06 to the current classification of **Chronically Food Insecure** following two consecutive good rainy seasons and the subsequent bumper harvests. Due to the security limitations, a comprehensive nutrition assessment in the district has not been done in the recent years. However, the nutrition assessments conducted in Burhakaba Town in August 1999 recorded a very critical **GAM** rate of **28.0%** and **SAM** rate of **6%** while the district nutrition assessment carried out in August 2000 recorded a similar nutrition situation with a **GAM** rate of **22.2%** and **SAM** rate of **4.1%**. Nutrition data from the three sentinel sites established in 2006 by FSAU to monitor the nutrition situation in the district have often recorded a fluctuating trend of malnutrition pointing to the precarious nutrition situation in the district (See Chart 3).

Chart 3: Distribution of Acutely Malnourished Children in the sentinel Sites in Burhakaba District



FSAU and partners⁸ conducted two nutrition assessments in Burhakaba district in May 2007 based on dominant livelihood zones; Agro-pastoral and Pastoral (See map 1). Using a 30 by 30 cluster sampling methodology, a sample of 912 children aged 6- 59 months and/or less than 110cm were assessed from Agro Pastoral and 904 from the Pastoral Livelihoods respectively.

Findings from the two assessments indicate a critical nutrition situation with Agro-Pastoral livelihood recording a relatively lower rate with a **GAM** rate of **15.6%** (12.2 – 19.0) and a **SAM** rate of **3.3%** (1.7 – 4.9) while the Pastoral livelihood recorded a **GAM** rate of **16.2%** (12.1 – 20.2) and **SAM** rate of **3.9%** (2.4 – 5.3). However as the confidence interval ranges overlap between the two assessments there is **no statistically significant difference between the nutrition situations in the two livelihood zones**. However, in the past nutrition assessments were conducted based on administrative boundaries, therefore it is not feasible to compare the results with the previous assessments. The crude mortality rate for both assessments was above **1.30**, indicating an alert situation. The reportedly main causes of death were diarrhoea, malaria and ARI. A summary of findings is provided in table 3 below.

Indicator	Agro Pastoral		Pastoral	
	N	% (CI)	N	% (CI)
Total number of households surveyed	458	100	437	100
Mean household size	6.0	SD=2.1	5.8	SD=2.0
Total number of children assessed	912	100	904	100
Global Acute Malnutrition (WHZ<-2 or oedema)	142	15.6(12.2 – 19.0)	146	16.2(12.1 – 20.2)
Severe Acute Malnutrition (WHZ<-3 or oedema)	30	3.3(1.7-4.9)	29	3.9(2.4 – 5.3)
Oedema	3	0.3	2	0.2
Children reported with diarrhoea in 2 weeks prior to assessment	122	13.4(11.3 – 15.8)	140	15.5(13.2 – 18.0)
Children reported with ARI within two weeks prior to assessment	156	17.1(14.7 – 9.7)	170	18.8(16.4 – 21.6)
Children reported with a febrile illness in 2 weeks prior to assessment	167	18.3(19.9-21.0)	154	17.0(14.7 – 19.7)
Suspected measles within one month prior to assessment	48	5.8(4.3 – 7.6)	38	4.5(3.2 – 6.2)
Children (9-59 months) immunised against measles	413 (N=832)	48.8(45.4 – 2.2)	297 (N=846)	35.1(31.9 – 38.4)
Children who have ever received polio vaccine	577	63.3(60.0 – 66.4)	586	64.8(61.6 – 67.9)
Children supplemented with Vitamin A in the last 6 months	229	25.1(22.4 – 8.1)	157	17.4(15.0 – 20.0)
Children aged 6-24 months who are breastfeeding	192 (N=358)	53.6(48.3-58.9)	189 (N=319)	59.2(53.6-64.7)
Children (6-24 months) introduced to other foods before 6 months	283	73.5(68.5 – 77.9)	257	80.6(75.7 – 84.7)
Proportion of households who consumed ≥4 food groups	386	84.3(80.5 – 87.4)	385	88.1(84.6 – 90.9)
Under five Death Rate (U5DR) as deaths/10,000/day	1.84 (0.56-3.13)		2.81 (1.39-4.24)	
Crude Death Rate (CDR) as deaths/10,000/day	1.31 (0.86-1.77)		1.88 (0.90-2.86)	

The reported morbidity in the two weeks prior to the assessment was high in both livelihood zones. Overall, about 37.7% and 35.8% of the children from Agro-Pastoral and Pastoral livelihood zones, respectively, were reported to have suffered from one or more of the communicable diseases during the two weeks prior to the assessment. ARI and suspected malaria recorded the highest prevalence of reported diseases as shown in the table. Morbidity was significantly associated with malnutrition particularly for Pastoral livelihood (p<0.05).

The high morbidity may partly be explained by limited health

8 WVI, Green Hope, SARD, BOCD and MOH

facilities in the district which make them inaccessible to the majority of the rural population. Inaccessibility of health facilities explains why the majority of the households with sick children two weeks prior to the assessment did not seek any formal health assistance.

The coverage of the health programmes; Vitamin A supplementation, measles vaccination and polio immunization, were far below the recommended coverage of 95% (Sphere 2004) as shown in the table. Dietary diversity was good with the majority (>84%) of the households in the two livelihoods, reportedly consuming four or more food groups in the twenty four hours prior to the assessment. This has a positive impact on the nutrition situation and a reflection of improved food security as reported in the FSAU Post Deyr'06 assessment. Purchase and 'own' food production were the main food sources and majority of the assessed households reported the main source of income being the sale of either crop/crop-products or animals/animal-products.

Over half of the children aged 6–24 months (59.2% from Pastoral and 53.6% from Agro-Pastoral livelihood) were reportedly still breastfeeding at the time of assessments with over 73% of the children assessed in the two assessment having been introduced to foods other than breast milk before the recommended age of 6 months. This is an indication of sub-optimal childcare practices. The essential role played by breast milk was evidenced in the assessment, particularly in Pastoral livelihood where malnutrition was significantly related with breastfeeding with the children who were not breastfeeding at the time of the assessment being about 0.69 times more likely to be malnourished than those breastfeeding ($p=0.01$). Malnutrition equally affected the younger (6-29 months) and older children (30-59 months) with no statistical difference between the two categories ($p>0.05$).

The critical nutrition situation can be attributed to the high morbidity and poor child feeding practices, especially breastfeeding, which were both significantly related with malnutrition ($p<0.05$). A further contributing factor is the outbreak of AWD in most part of southern Somalia. WHO reported 535 cases of AWD with CFR of 9.5% in Burhakaba district from January to 18th May 2007. The peak period for AWD in the district was in the month of April. AWD has negative impact on nutritional status and especially having occurred a few weeks before the assessment may have exacerbated the nutrition situation as well as the mortality rates.

In the assessment, 5.5% and 7.6% of the assessed households from Pastoral and Agro-Pastoral livelihoods, respectively, were reported to be hosting 1-10 IDPs, who were mainly from Mogadishu. The fact that IDPs are more often vulnerable to malnutrition and the increased pressure on the host families may have also contributed to the critical nutrition situation.

The assessment team recommends rehabilitation of acutely malnourished children, increased access to health services, improved water and environmental sanitation in order to reduce risk of communicable diseases and health and nutrition education to boost child care practices. The lack of humanitarian actors on the ground in this area is apparent, however, due to the insecurity concerns. Ongoing monitoring of the nutrition situation through the nutrition sentinel site surveillance will continue.

CENTRAL ZONE

Galcayo IDPs Nutrition Assessment Findings

Galcayo Town IDP Camp is located at the periphery of Galcayo Town and hosts approximately 2382 IDPs. The IDPs have mainly originated from the South and Central Somalia, Zone V of Ethiopia and the northwest zone⁹.

The Galcayo IDPs are considered a vulnerable group due to their limited access to food, income and basic services such as health care. The July 2006 nutrition assessment conducted by FSAU in collaboration with the MOH and SRCS in Galcayo Town IDP Camp indicated a critical nutrition situation¹⁰, where a GAM of 17.7% was reported. This was mainly attributed to high morbidity levels (mainly diarrhoeal diseases, malaria and ARI), limited access to health services¹¹; and consumption of a poor diet associated with IDPs poor access to food and income.

In May 2007, UNICEF in collaboration with FSAU/MOH and SRCS conducted an exhaustive nutrition assessment in the camp to determine the levels and underlying causes of acute malnutrition and the retrospective mortality rates. A total of 762 children from 441 households, aged 6-59 months and measuring 65cm to 110 cm were assessed. Findings indicate the majority of the current IDP households to have originated from Southern Somalia (86.8%). About 14.1% have recently arrived into the camps since February 1st, 2007. The IDPs main reasons for migration into Galcayo IDP camp are: security related issues (71.0%), job opportunities (21.3%) and food shortage (6.3%).

Assessment findings indicate **GAM** rates of **21.9%** and **SAM** rates of **2.2%** in the Galcayo Town IDP camps. This is interpreted as a very critical nutrition situation (WHO classification) and illustrates a slight deterioration from the previous assessment. The 90 day retrospective Crude Mortality Rate estimated at **1.54** is also highlighting a concern as it above the alert threshold. The proportion of reported incidence of childhood illness in the preceding two weeks to the assessment (1 month for Measles) was 50.1%. Reported illness comprised of diarrhoea (25.6%), ARI (23.8%) and febrile illness (31.9%). A summary of findings is presented in Table 4.

Indicator	No	%
Children Assessed	762	100
Boys	374	49.1
Girls	388	50.9
Global Acute Malnutrition (WHZ<-2 or oedema)	167	21.9
Severe Acute Malnutrition (WHZ<-3 or oedema)	17	2.2
Oedema	5	0.7
Children reported with an illness in the 2 weeks prior to study	382	50.1
Children reported to have diarrhoea in 2 weeks prior to study	195	25.6
Children reported to have ARI within 2 weeks prior to study	181	23.8
Children with suspected malaria/febrile illness in 2 weeks prior to study	243	31.9
Suspected measles within one month prior to study (N=)	29	4.0
Children (9-59 months) immunized against measles (N= 712)	68	9.3
Children supplemented with vitamin A in last 6 months	35	4.6
Households who consumed ≥ 4 food groups (N=448)	428	95.6
Children 6-24 months who are breastfeeding (N=297)	127	43.3
Children introduced to other foods at the age of 6 months (N= 295)	28	9.5
Under five Mortality Rate (U5MR) as deaths/10,000/ day	3.30	
Crude Mortality Rate (CMR) as deaths/10,000/ day	1.54	

Qualitative data indicates overcrowding in the camps, high levels of acute watery diarrhoea and poor environmental sanitation with children's faecal matter disposed of within the camp. This is associated with a lack of pit latrines for faecal matter disposal. Additionally, there is lack of clean portable water. The main source of drinking water for the Galcayo Town IDPs is a pipeline

⁹ FSAU Nutrition Update July 2006

¹⁰ Global acute malnutrition rate (WHZ < -2 or oedema) of 17.7% in Galcayo Town

¹¹ The MSF managed TFC in Galcayo town was closed in June 2006 following a challenges with the local authorities



Children at a dumping site next to camp

from the borehole, with some sources reporting that the water produced is deemed to be highly metallic and unsuitable for human consumption, predisposing the users to kidney stones among other infections (Source of Info: Galcayo Hospital). The IDPs generally have very limited access to income opportunities, which mainly comprise of working in animal slaughter houses and construction related work on casual basis. Additionally, there are limited humanitarian interventions currently targeted at Galcayo IDPs. A few of the IDPs travel about 2 km away to the health facilities in Galcayo Town for health care. Subsequently, coverage of health services including immunization is extremely low with measles at 7.7% and Vitamin A supplementation at 9.3%.

Analysis of findings indicates high morbidity levels coupled with limited access to health care services as a major cause of acute malnutrition in Galcayo IDPs. The lack of facilities for the rehabilitation of severely malnourished cases is of great concern. The poor measles vaccination immunization coverage of 9.3% is way below the Sphere 2004 minimum recommendation of 95% and predisposes the IDP and Galcayo Town community to the risk of an epidemic. The Vitamin A supplementation coverage of 4.6% is also very low (Sphere 2004 recommends a minimum of 95%) and could have contributed to the increased susceptibility of the assessed children to diseases due to poor immunity. The poor environmental sanitation is also a potential risk to food and water contamination that could result in the high incidences of acute water diarrhoea and may have contributed to the high levels of acute malnutrition.

Child feeding practices are poor with only about 9.5% of children aged 6-24 months reported to have been introduced to complementary feeding at the recommended age of six months, while only 43.3% of these children were breastfeeding at the time of the assessment in spite of the recommended practice for persistence of breastfeeding through to 24 months. Poor infant and child feeding practices are predisposing factors to disease and infections and may contribute to malnutrition. Further analysis indicates that children aged 6-29 months (51.0%) were 2 times more likely to be malnourished than their older (49.0%) counterparts (p<0.05 and RR=1.95). This again highlights the strong association of morbidity and care practices to the critical nutrition situation in this population.

Household dietary diversity was high with 95.6% of households reported to have consumed food from four or more food groups in the preceding 24 hours to the assessment. The most commonly consumed foods comprised of cereal: 94.4%, oil 98.9%, milk, 85.7% and meat/offal, 43.4%. This may have been mitigated the nutrition situation in the older age groups (30-59 months). Life saving interventions such as rehabilitation services for the

severely malnourished cases are crucial in the short and medium term and are recommended by the assessment team. Poor sanitation is of major concern and community mobilization to construct and utilize traditional latrines, increased access to safe portable water and health care services in the short and medium term are a priority to minimize contamination of food and water and reduce exposure to disease. Efforts to enhance security in the South are greatly encouraged, this being the main reason for the out-migration of IDPs into Galcayo Town.

NORTH EAST ZONE

Coastal Deeh Nutrition Assessment Findings

The Coastal-Deeh livelihood zone cuts across Bari, Nugal and Mudug Regions of northeast zone, spreading over five districts of Dangoroyo, Eyl, Jariban, Bender Beyla and Iskushuban. Fishing is the dominant livelihood system in this zone. Following the FSAU 2006/07 Post Deyr analysis, the NEZ Coastal Deeh was classified as **Chronically Food Insecure**. This was an improvement from the three previous seasons¹² in which the livelihood zone was faced with an **Acute Food and Livelihood Crisis** following the impact of multiple shocks that included the December 26th, 2004 Tsunami and freezing temperatures which led to massive loss of livestock, widespread damage to infrastructure and loss of fishing equipment. In August 2005, FSAU in collaboration with UNICEF, ADRA, MOH and SRCS undertook a nutrition assessment in Dangoroyo & Eyl Districts (including the Coastal Deeh of these districts) using the standard methodology to determine the nutrition status. Findings indicated an alert situation¹³ with a GAM of 8.9% (7.2-11) and a SAM of 1.0% (0.5-1.9).

On May 23rd - 31st 2007, the Mid¹⁴ Gu'07 Season, a joint nutrition assessment was conducted by FSAU in collaboration with UNICEF, and MOHS Puntland, using the standard methodology where 911 children aged 6-59 months from 507 households were assessed for nutrition status, and 908 households for the retrospective mortality assessment (90 days). Findings indicate **GAM rates of 14.9%** (CI: 12.1 – 17.7) and **SAM rates of 1.1%** (CI: 0.2-1.9). The results indicate a serious nutrition situation (WHO classification) which has deteriorated in relation to the August 2005 findings and routine surveillance findings of the ¹⁵January 2007 (from alert to serious levels). The retrospective Crude Mortality Rate of **0.62** (0.3-0.93) deaths/10,000/day indicates an acceptable situation. A summary of findings from the assessment is presented in *Table 5*.

Indicator	No	%	95% CI
Global Acute Malnutrition (WHZ<-2 or oedema)	136	14.9	(12.1-17.7)
Severe Acute Malnutrition (WHZ<-3 or oedema)	10	1.1	(0.2-1.9)
Oedema	0	0	0
Global Acute Malnutrition (WHM<80% or oedema)	68	7.5	(5.6-9.3)
Severe Acute Malnutrition (WHM<70% or oedema)	3	0.3	(0.0-0.7)
Children reported with diarrhoea in 2 weeks prior to study	84	9.2	(7.5-11.3)
Children reported with ARI within 2 weeks prior to study	91	10	(8.2-12.2)
Children with febrile illness in 2 wks prior to study			
Suspected measles within one month prior to study (N=871)	5	0.6	(0.2-1.4)
Children (9-59 months) immunized against measles (N=871)	456	50.1	(46.8-53.3)
Children who have ever received polio vaccine (N=911)	767	84.2	(81.2-86.5)
Children supplemented with vitamin A in last 6 months	241	26.5	(23.6-29.5)
Households who consumed ≥4 food groups	499	98	(96.8-99)
Children 6-24 months who are breastfeeding (N=332)	114	34.3	(29.3-39.8)
Children introduced to other foods before 6 months (N=332)	315	94.9	(91.8 – 96.9)
Under five Mortality Rate (U5MR) as deaths/10,000/ day		1.52	(0.64-2.4)
Crude Mortality Rate (CMR) as deaths/10,000/ day		0.62	(0.3-0.93)

Additional findings indicate that 16.6% of the assessed children were reported to have suffered from one or more communicable childhood illnesses in the two weeks prior to the assessment, the most common illnesses being ARI (10.0%) and diarrhoea (9.2%).

12 The FSAU Post Gu 2005, Post Deyr 2005/2006 and the Post Gu 2006 (Ref: FSAU Technical Series Reports)
 13 GAM of 8.9% (CI: 7.2 – 11.0) and SAM of 1.0% (CI: 0.5 – 1.9).
 14 Gu' - the wet season occurring in April-June
 15 FSAU Nutrition situation estimates Map, January 2007
 16 FAO/Fanta Food Grouping System 2005

Household dietary diversity in the preceding 24 hours to the assessment was high with 98% of the assessed households reporting to have consumed from four or more food groups¹⁶. This serious nutrition situation is mainly attributed to morbidity and poor child feeding practices. Analysis of findings indicates significant association between acute malnutrition and morbidity ($p=0.03$). Diarrhoea ($p=0.0007$) had significant association with malnutrition with children suffering from diarrhoea almost 2.2 times as likely to be malnourished compared to those who did not ($RR=2.15$; $CI: 1.38 - 3.35$). The high incidences of morbidity are due to poor access to health services (including low immunization and vitamin A supplementation coverage) and poor quality drinking water and sanitation. There are no public health services in the Coastal Deeh with the exception of one MCH center in Eyl where health services can be accessed. Child feeding practices are sub-optimal with only 34.3% of children in the breastfeeding age (6-24 months) assessed currently breastfeeding and 94.9% of the children introduced to complementary foods prematurely before the recommended age of six months.

The frequency of feeding is poor with about 94% of the assessed children fed less than the recommended minimum of five times a day. Due to the closure of the fishing season there was inadequate access to fish and only 17% of the assessed households reporting fish consumption in a 24-hour recall. The positive factors include increased access to and consumption of milk (90.9%). Additionally, dietary diversity was high with 98% of the households consuming 4 or more food groups. Malnutrition equally affected the younger (6-29 months) and older children (30-59 months) with no statistical difference between the two categories ($p>0.05$), therefore highlighting a range of likely contributing factors including morbidity, care and food security to the nutrition situation. Recommendations include sustained long term approaches to improve access to enhanced health care services and increased access to safe water for consumption, in addition to nutrition education to enhance appropriate infant and child feeding practices. Efforts to further exploit the locally available fishing resources could also be explored to improve dietary quality.

OTHER NEWS

Lasanod Slaughter Practices – Follow Up

Lasanod Town, located in the Nugal Valley Pastoral Livelihood Zone, is the capital of Sool Region. Lasanod spans about 10 km and has an estimated population of 100,000 people including short & long term IDPs (UNDP 2005). Lasanod Town mainly serves a Pastoral livelihood group hence, sale and/or purchase of livestock products is a common practice. It is therefore crucial that in managing livestock slaughter points, adherence be made to appropriate public health and hygiene standards to prevent disease outbreaks.

The FSAU Nutrition Update for February 2007 highlighted a grave public health problem in Lasanod Town associated with lack of a slaughter house. Up until this time, animals were slaughtered in an open field next to the town and internal organs and bones left lying on the ground where dogs and wild animals scavenged. This increased the risk of contamination of water catchments (see Figure 3, February 2007 pictures) with run-off, and disease epidemics. A recommendation was made for a well managed slaughter site/house where public health standards and procedures including meat inspection could be adhered to.



February 2007: The open ground which acted as the slaughterhouse for the town



February 2007: A woman from the poor section of the town drawing water from a shallow well



June 2007: Structures erected by Lasanod Town residents to discard of affluent



June 2007: A new slaughter site built through community contributions

As a follow up to the highlight, the Lasanod local authorities have mobilized the NGOs based in Lasanod Town and community members to clean up on weekly basis, all slaughter areas in the town; and relocated the slaughter site to a distance of 3km away from the town. As a result, the Lasanod Town slaughter sites are therefore currently cleaner and better managed (see Figure 3, June 2007 pictures). The local authorities have also mandated NGOs to coordinate these activities, fundraise and thereafter to provide Lasanod Town with a slaughter house.

Other related publications and Releases

- o FSAU Press Release, June 15th, 2007
- o FSAU Food Security and Nutrition Brief, June 15th 2007
- o FSAU/FEWSNET Market Data Update, June 2007.
- o FSAU/FEWSNET Climate Data Update, June 2007

Training and courses announcements

- Nutrition in Emergencies Course, University of Westminster, UK, on 10th-14th September 2007. For details contact, Kate Godden at k.godden@wmin.ac.uk
- Public Health in Complex Emergency (PHCE) Course, Makerere University Institute of Public Health (IPH) in Kampala on December 3-15th, 2007. Information and application forms are also available at: www.phcetraining.org



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