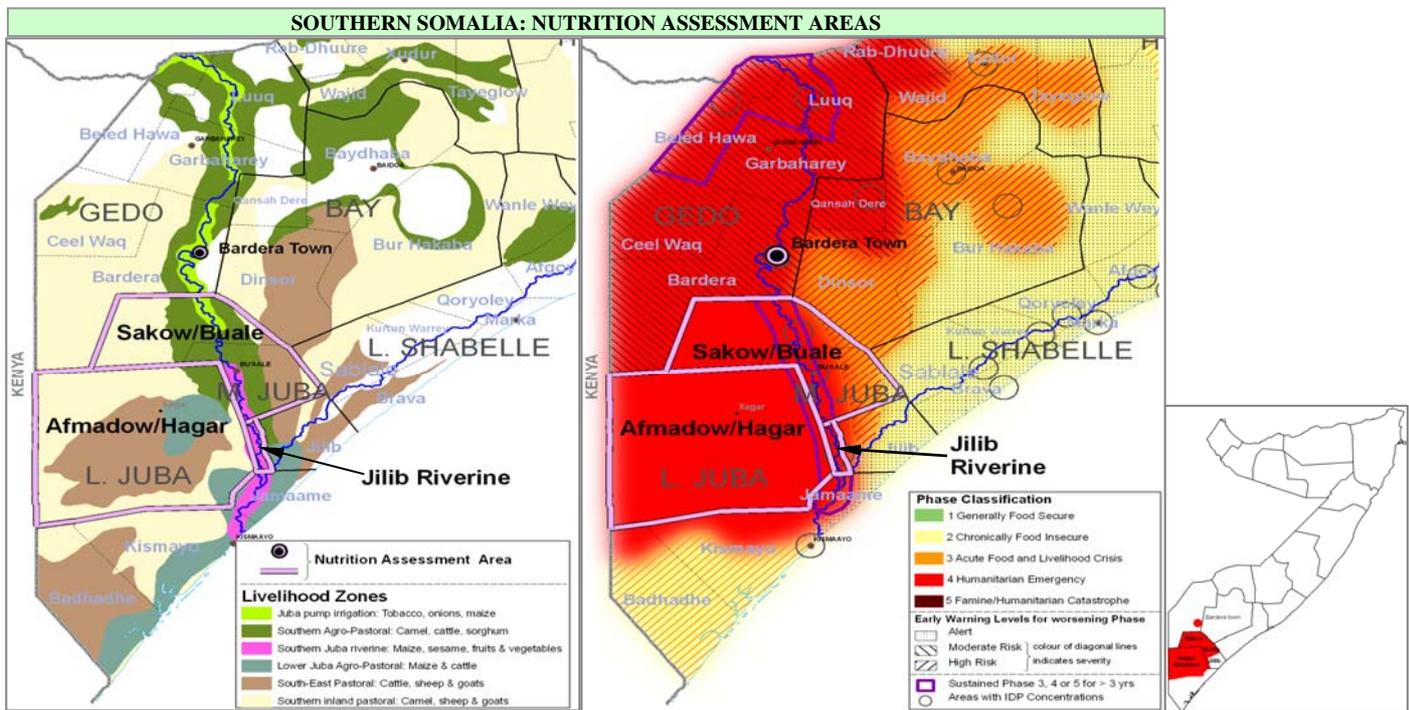


Overview

This month, we present the preliminary results of four nutrition assessments undertaken in areas of southern Somalia affected by the current crisis in food security. In general, the results show the expected outcome of months of increasing household stress. Diet quality and diversity has been poor, children have consumed unsafe water, households have not had access to adequate preventive or curative health services and care practices are generally detrimental to the health and development of women and children. All factors that contribute to increased levels of malnutrition appear to have deteriorated in recent months. Short-term 'humanitarian' assistance remains a priority for the coming months.

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Buale and Sakow Districts Nutrition Assessment

Buale and Sakow districts are located in Middle Juba Region. Buale district has an estimated population size of 46,520 and Sakow, 87,935 (WHO, 2005 NIDS figures further verified by the survey team). The two districts are located along the Juba River. Buale district has five main livelihood zones: the southern inland pastoral (5%), south east pastoral (15%), southern agropastoral (25%), southern Juba riverine (50%) and urban (5%). Sakow district has four livelihood zones: the southern agropastoral (45%), Juba pump irrigated riverine (30%), southern inland pastoral (20%) and urban (5%).

The FSAU led Post Deyr 2005/6 Food Security and Nutrition situation analysis/projections for January through June 2006¹, classified most parts of Buale and Sakow districts as faced with a humanitarian emergency and other areas, an acute food and livelihood crisis/high risk of humanitarian emergency (see map on page 1). This was primarily attributed to the impact of below normal Gu 2005 rains, followed by completely failed Deyr 2005/6 rains. From April 22nd-27th, 2006, FSAU, WVI, UNICEF and WFP conducted a joint assessment to analyze the nutrition situation and retrospective mortality rates in Buale

¹ FSAU Technical Series No. IV 8

and Sakow districts. A 30 by 30 cluster sampling methodology was used and 899 children and 347 adult women aged 15 – 49 years were assessed; while mortality data was collected from 900 households.

Findings indicate a global acute malnutrition (weight for height <-2 Z score or oedema) of 21.9% (CI:19.3-24.8) and severe acute malnutrition (weight for height <-3 Z score or oedema) of 6.6% (CI:5.1-8.4). This highlights a critical nutrition situation (WHO) and a worsening one when compared to long term estimates of malnutrition for the area (see maps on page 6). Additionally, about 40% of the 97 assessed pregnant women had MUAC < 23.0 cm, while 3% of the 250 non-pregnant women

had MUAC <18.5cm and were categorized as malnourished. The crude mortality rate was 0.61 (CI: 0.39 – 0.83) deaths/10,000/day and the under five mortality rate 1.98 (CI:1.26 – 2.69) deaths/10,000/day which are acceptable (WHO). About 38% of the children were introduced to complementary foods at the age of 6 months and above. A summary of assessment findings is indicated in the table.

Qualitative data indicates poor household food access due to high food prices, and general unavailability of animal products, most of the livestock having either died, migrated back to areas of origin or, in too poor body condition to provide milk and milk products.

Indicator	No.	% (95% CI)
Number of households assessed	548	100
Under-five children screened during the assessment.	898	100
Global acute malnutrition – WHZ < -2 or oedema	197	21.9 (CI:19.3-24.8)
Severe acute malnutrition – WHZ < -3 or oedema	59	6.6 (CI:5.1-8.4)
Children with diarrhoea in 2 wks prior to the assessment	246	27.4
Children with ARI in 2 wks prior to the assessment	128	14.2
Children with suspected malaria in 2 wks prior to assessment.	238	26.5
Children with Measles in 1 month prior to the assessment.	181	20.8
Proportion of people with suspected night blindness n=5439	66	0.12
Children supplemented with vitamin A in 6 months prior to assessment	562	69.0
Children (≥ 9 months) immunised against Measles. N=873	812	92.5
Children immunised against Polio N=898	816	90.0
Crude Mortality Rate (per 10,000 per day) N=5439	0.61 (0.39 – 0.83)	
Under-five Mortality Rate (per 10,000 per day) N=1669	1.98 (1.26 – 2.69)	

The critical nutrition situation is attributed to poor dietary intake and presence of communicable diseases. About 30% of the children came from households consuming three or fewer food groups². About 49% of the children reported having suffered from an episode of a communicable disease in the preceding two weeks.

The high disease incidence may be partly attributed to limited access to preventive and curative health care services, with Sakow district having no health facility. However, in Buale, WVI/UNICEF operates an MCH/OPD/EPI with 38 health posts. Additionally, about 75% of the children came from households which consume water from unsafe sources (the river, unprotected wells or water catchments) and about 50% came from households that dispose of faecal matter in the bush. Consumption of unsafe river water is a possible cause of diarrhoeal infections and subsequent malnutrition.

Mitigating factors include vitamin A supplementation (69%) and measles vaccination coverage (about 93%) attributed to the recent immunization campaigns in Buale and Sakow districts. Nevertheless these are below the SPHERE minimum recommendation of 95%. About 64% of the children came from households accessing formal humanitarian support in the preceding three months, mainly in the form of food assistance (about 46%) in February 2006; and informal humanitarian support, mainly in the form of gifts (about 43%). About 0.12% of the assessed population was reported to have night blindness³. On-going humanitarian interventions which may also have mitigated the nutrition situation include: food assistance by the WFP/WVI, health care services and a water and sanitation program in Buale by the World Vision and supplementary feeding by the African Muslim Aid (AMA).

The assessment team recommends: improved access to food (short & long term approaches), health care services; safer water for consumption; and rehabilitation of the malnourished children and women.

Bardera Town Nutrition Assessment

Bardera Town is located in Bardera District, Gedo region. It is the largest town in Gedo region with an estimated population size of 51,800 (WHO, 2005 NIDS figures further verified by survey team). The town is located along the Juba River with three main forms of livelihoods namely: urban (67%), riverine (19%) and agropastoral (13%).

According to the FSAU 2005/2006 Food Security and Nutrition Post Deyr analysis, Gedo region, including Bardera town, is classified to be in the humanitarian emergency phase (see map on page 1). Similarly, malnutrition levels within the region

² FAO classification

³ According to SPHERE standard a prevalence of night blindness >1% signifies a problem of public health significance

have remained high⁴. Since Bardera town was not included in the regional assessment, the need for up to date nutrition information for the town remained.

From 20th to 27th April 2006 FSAU in collaboration with WFP, UNICEF and SRCS undertook a nutrition and mortality assessment in Bardera town. Using a two stage cluster sampling methodology (30 clusters by 20 children⁵), a total of 558 children aged 6 – 59 months and measuring 65 – 109.9 cm in height/length, 200 non pregnant and 74 pregnant women aged 15 – 49 years from 291 households were randomly assessed. Mortality data was collected from 902 households.

The global acute malnutrition (weight for height <-2 Z score or oedema) was 19% (CI: 15.9 – 22.6) while the severe acute malnutrition (weight for height <-3 Z score or oedema) was 3.9% (CI: 2.5 – 6.0). The results indicate a critical nutrition situation according to WHO classification. Compared to the long term estimates of malnutrition for the town, the results indicate a worsening nutrition situation (see maps on page 6).

The crude and underfive mortality rates were 0.83 (CI: 0.59 – 1.07) and 1.69 (CI: 0.98 – 2.41) deaths/10,000/day respectively.

Indicator	No	% (95% CI)
Total number of households surveyed	291	100
Total number of children assessed	558	100
Global Acute Malnutrition (WHZ<-2 and or oedema)	106	19 (15.9– 22.6)
Severe Acute Malnutrition (WHZ<-3 and or oedema)	22	3.9 (2.5 – 6.0)
Oedema	4	0.7 (0.2 – 2.0)
Proportion of children with diarrhoea in 2 wks prior to assessment	144	25.8
Proportion of children with ARI within 2 wks prior to assessment	150	26.9
Children with suspected malaria in 2 weeks prior to assessment	133	23.8
Suspected measles within one month prior to assessment	110	19.7
Children (9-59 months) immunised against measles (N=546)	490	89.7
Children who have ever received polio vaccine (N=558)	406	72.8
Children supplemented with vit. A in last 6 months or before	441	79
Under five Death Rate (U5DR) as deaths/10,000/ day	1.69 (CI:0.98 – 2.41)	
Crude Death Rate (CDR) as deaths/10,000/ day	0.83 (CI: 0.59 –1.07)	

Both mortality rates indicate an acceptable situation. Diarrhoea and measles were the main illnesses associated with deaths among underfives while among persons aged five or more was suspected malaria and measles. About 24.3% of the pregnant women were malnourished (MUAC <23 cm) while among the non pregnant, 10% were malnourished (MUAC <18.5 cm). About 1% of households reported cases of night blindness.

Overall, about 61% of the children had suffered from one or more

communicable childhood diseases during the two weeks prior to the assessment. The high prevalence of measles is explained by a recent measles outbreak in the town following which an immunization campaign was conducted. Access to health services in the town is limited with only one functional MCH, supported by SRCS.

About 20% of the households had consumed three or fewer food groups in the twenty four hours prior to the assessment. Purchase was the main food source for nearly all (96.2%) households yet the main source of income for about 64% of the households was irregular casual labour. Casual labour was mainly within the construction sector, riverine farms and restaurants. Water for household consumption was mainly obtained from the river and other unprotected sources. Children consuming water from unprotected sources were more at risk of diarrhoeal diseases than those consuming from protected sources ($p<0.05$). Additionally, children who had recently joined resident households following the drought were 2.06 times more likely to be malnourished than those who were within their original homes.

Suboptimal childcare practices were evident in the study area, negatively affecting children's nutritional status. Among the children aged 6 – 24 months, only 35.3% were still breastfeeding at the time of assessment. The majority of the children had stopped breastfeeding before the age of one year. About 20% of the children were introduced to complementary foods at the age of six months and above.

Immunisation services and humanitarian support are among factors mitigating malnutrition in the town. About 90% of children aged 9 – 59 months were immunised against measles with the majority (73.1%) having been immunised in the six months prior to the assessment. Polio immunization and vitamin A supplementation coverage were 73% and 79% respectively. However, these are below the minimum SPHERE recommendation of 95%. Humanitarian support includes health services by SRCS/UNICEF, food aid by ICRC and local organizations/communities and a feeding programme run by African Muslim Aid (AMA).

Following data analysis and discussion of assessment findings with partners recommendations made include 1) Initiate sustainable income generating activities, 2) Improve water quality for household level consumption through establishment of water purification systems, 3) Continued & improved provision of health services in the town, 4) Rehabilitation of malnourished children and women, 5) Intensify health & nutrition education and 6) Continued monitoring of situation.

⁴ A nutrition assessment conducted by FSAU and partners in March 2006 covering the region (except Bardera town) showed a global acute malnutrition rate of 23.8% (CI:21.1 – 26.7).

⁵ Based on the regional prevalence of malnutrition, the desired sample size was calculated, which guided the number of children to be assessed in each cluster.

Afmadow and Hagar Districts Nutrition Assessment

Afmadow/Hagar district is located in Lower Juba region in southwest Somalia. The district has an estimated population size of about 77,027 (WHO 2005, NID figures verified by the survey) distributed into three main livelihood zones: 45% agropastoral; 50% pastoral and 5% urban. The region is one of the most affected by the drought-induced humanitarian crisis that has recently affected Southern Somalia (see map on page 1). Afmadow has no formal administrative structure in operation and has experienced several security incidents in past few months.

About 69% of Afmadow/Hagar population is in humanitarian crisis with 46% classified to be in the humanitarian emergency phase and 23% in acute livelihood crisis (FSAU 2005/2006 Post Deyr analysis). Information on malnutrition levels in Afmadow has been scarce and no standardised assessment has been conducted in this remote area due to insecurity.

From 2nd to 9th May 2006 FSAU in collaboration with WFP, UNICEF, World Concern and AFREC undertook a nutrition and mortality assessment in Afmadow/Hagar district to determine the nutrition status and associated influencing factors among children aged between 6 - 59 months or 65 - 110 cm tall using weight for height index in the area and to provide recommendations for interventions based on the findings. Using a two stage cluster sampling methodology (30 clusters by 30 children), a total of 903 children aged 6 - 59 months and measuring 65 - 109.9 cm in height/length and 437 women aged 15 - 49 years from 455 households were randomly assessed. Mortality data was collected from 899 households.

The global acute malnutrition (weight for height <-2 Z score or oedema) was 22.0% (CI: 19.4 - 24.9) while the severe acute malnutrition (weight for height <-3 Z score or oedema) was 4.2% (CI: 3.0 - 5.8), indicating a critical nutrition situation

according to WHO classification. Compared to the long term levels of malnutrition for the district, the results indicate deterioration in nutrition situation (See maps on page 6).

The crude and underfive mortality rates were 0.77 (CI: 0.46 - 1.08) and 1.57 (CI: 0.85 - 2.29) deaths/10,000/day respectively. These rates indicate acceptable levels according to WHO classification.

Overall, about 70% of the assessed

children had suffered from one or more communicable childhood diseases during the two weeks prior the assessment. A widespread measles outbreak experienced in the previous 2-3 months in the region and wider Somalia accounts for the high measles incidence. Slightly more than one-quarter (26.4%) had consumed 3 or fewer food groups reflecting a poor dietary diversity. Very few children (5.2%) are introduced to complementary foods at the age of six or more months. Immunization coverage in the district was generally high following recent campaigns by humanitarian agencies. About 88% and 84% of the assessed children had been immunized against measles and polio respectively. The on-going humanitarian food assistance by the WFP/AFREC may also have mitigated the nutrition situation.

The nutrition and food security situation has worsened and requires continued intervention and close monitoring. There is an urgent need to rehabilitate the many marasmic and oedematous children and improve access to diversified diet to the households until the community recovers from the impact of the drought.

Jilib Riverine Nutrition Assessment

Jilib district is among the most populated in the Middle Juba Region in southern Somalia. It comprises six livelihood zones: Juba riverine (*dheshak*), Southeast agro-pastoral, Southern inland pastoral, Southern agropastoral, lower juba agropastoral and Shabelle riverine. This study concentrated on the riverine livelihood zone (see map on page 1).

In the 2005/2006 Post *Deyr* analysis and projection up to June 2006 by FSAU, the Jilib Riverine is classified to be in the humanitarian emergency phase. The last survey done in May 2004, found high rates of malnutrition (GAM, 19.5 % CI: 17 - 22.2) and under five mortality (5.42 deaths/10000/day).

From 2nd to 8th May 2006 FSAU in collaboration with UNICEF, World Concern and AFREC undertook a nutrition and mortality assessment in the Jilib Riverine zone. Using the 30 by 30 cluster sampling methodology (30 clusters by 30 children), a total of 884 children aged 6 - 59 months and measuring 65 - 109.9 cm in height/length, were assessed for anthropometric

data and 900 households for mortality data. This survey was conducted to examine the current nutritional situation and factors underlying the persistent high levels malnutrition and mortality as found in the previous survey among the riverine community.

The global acute malnutrition (weight for height <-2 Z score or oedema) was 16.2% (95%CI: 13.8-18.8) while the severe acute malnutrition (weight for height <-3 Z score or oedema) was 4.4% (95%CI: 3.2-6.0).

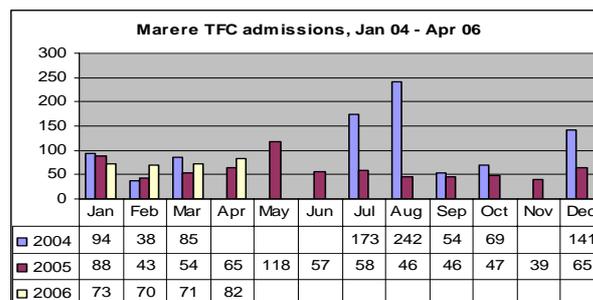
The results indicate a critical nutrition situation according to WHO classification and a persistently poor nutrition situation (see maps on page 6). Additional findings indicate persistently high admissions in the MSF Marere TFC centre (see figure below).

The crude and under five mortality rates were 0.80 (CI: 0.32- 1.28) and 2.05 (0.65- 3.44) deaths /10,000/day respectively. The crude mortality rate is acceptable while the

underfive mortality rate is in the alert level according to WHO classification. In addition, about 19.2% of the 99 pregnant women were malnourished (MUAC <23 cm) but there was no case of undernutrition reported for the non pregnant women. Furthermore, 1.3% of the households reported cases of night blindness.

About 17.5%, of children were introduced to complementary foods at the age of six or more months. More than half (55.8%) of the households consumed three or fewer food groups in the previous 24 hours to the time of the study which indicates poor dietary diversity.

Access to a sufficient and diverse diet and prevalence of common childhood illnesses appear to have been the major factors contributing to high levels of malnutrition. About 53% of the children had suffered one or more communicable childhood diseases during the two weeks prior to the assessment.



The on-going humanitarian interventions which may also have mitigated the nutrition situation include: food assistance by WFP/AFREC, out-patient health care services, supplementary and therapeutic feeding services in Marere by the MSF/Holland, maternal and child health services by SRCS, a local agency.

The survey team recommends 1) increased food access at household level and in particular by assisting farming communities with means of increasing food production, processing and storage especially during the *Gu* season 2) continued rehabilitation of malnourished children and pregnant mothers 3) continued monitoring of the situation and 4) nutrition education

Other related publications

- FSAU Integrated Food Security and Humanitarian Phase Classification Technical Manual Version 1, May 11, 2006.
- FSAU/FEWSNET Market Data Update, April 2006.
- FSAU/FEWSNET Climate Data Update, April 2006.



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