

## OVERVIEW

This month's Nutrition Update presents findings from nutrition assessments conducted in Sool Plateau (Sool and Sanag Regions) and Berdale in August/September 2006, and Sentinel Sites Surveillance in Bakool and Lower Shabelle Regions. Analysis of the findings indicates a general improvement in the nutrition situation, mainly associated with improved dietary diversity. The map below highlights the assessed areas.

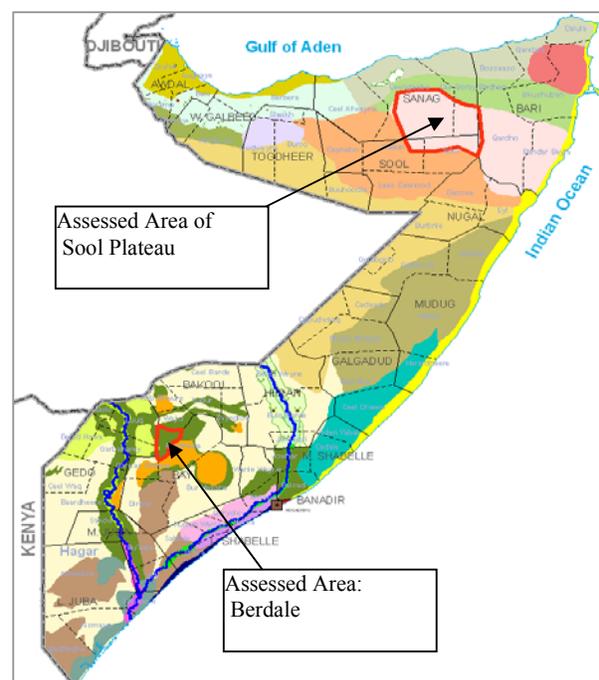
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A summary of discussions in the Mid Level Managers' workshops conducted in Garowe and Hargeisa in August 2006 is also presented. Detailed reports on the nutrition assessments and Mid Level Managers' trainings are being finalized.

### Sool Plateau Nutrition Assessment Findings

The Sool Plateau is a pastoral livelihood zone that cuts across Sanag, Sool and Bari regions in Northern Somalia. Following three years (2002 – 2004) of successive drought, pastoral communities in Sool Plateau lost substantial numbers of livestock, including about 80% of pack camels. This impacted significantly on livelihoods, food security and nutrition. Findings from a nutrition assessment conducted in the Sool Plateau in June 2004 indicated a serious situation, with global acute malnutrition levels (Weight for Height < -2 z scores or oedema) of 13.7% (CI: 11.5 – 16.1). The FSAU Post Gu 2004 Analysis classified Sool Plateau as a Humanitarian Emergency (Technical Series Report No IV.2 2004). Nevertheless, the Deyr 2004, Gu 2005 and Deyr 05/06 rains were above normal and have facilitated on-going recovery efforts. Findings from the FSAU Post Gu 2006 analysis continue to identify the Sool Plateau in a phase of Acute Food and Livelihood Crisis, however, the population in this phase is significantly reduced and is roughly half of what it was estimated at, during the Post Deyr '05/'06 Analysis.

**Map: Highlighting Assessed Areas**



FSAU in collaboration with UNICEF, MOHL, MOH, SRCS and Horn Relief conducted a nutrition assessment in Sool Plateau of Sool and Sanag regions from August 22<sup>nd</sup> to 30<sup>th</sup>, 2006. This area has an estimated population of 45,845 (WHO/UNICEF August 2005 NID polio figures, which were further verified by the assessment team). A two-stage (30x30) cluster sampling methodology was used to identify and assess 935 children aged 6-59 months and/or measuring 65-109.9 cm in height/length. Additionally, a total of 905 households were assessed for mortality data.

Findings indicate global acute malnutrition (Weight-for-Height < -2 z scores or oedema) rate of 9.0% (CI: 7.3 – 11.0) and severe acute malnutrition of 0.7% (CI: 0.3- 1.6) and signify an alert nutrition situation (FSAU, WHO). The findings show an improvement over the typical levels for the area (10 – 14.9%) and the June 2004 nutrition assessment which indicated a serious situation (GAM of 13.7%). Additional findings indicate a retrospective crude mortality rate (CMR) of 0.54 (CI: 0.40- 0.69), which is acceptable according to WHO (though alert according to Sphere) and under five mortality rate of 1.45 (CI: 0.89 – 2.02) deaths/10,000/day which indicates an alert situation. This is an improvement from the results of 2004, when crude mortality rate was 2.89 deaths/10,000/day (FSAU, 2004).

Morbidity was high, with at least 35.6% of all the assessed children suffering from at least one of the communicable childhood illnesses (ARI, diarrhoea, febrile illness and measles) in the two weeks prior to the study (one month for measles cases). In particular, ARI (21%) and diarrhoea (14.1%) cases are still high. The assessment also found cases of febrile illness (10.7%) and suspected measles (2.7%). Additional findings are provided in the following table.

The improvement in the nutrition situation is attributed to dietary diversity, with the majority of households (81%) consuming four or more food groups<sup>1</sup>. Dietary diversity is in turn attributed to improved livelihoods and food security situation. Since the Deyr 2004, the rainfall situation has been improving, leading to recovery in livestock herd size, body condition and production. Additional information shows that there is increasing access to income and animal source-foods especially meat and milk, which, when combined with cereals, provided a diverse and healthy diet for the households. The substantial humanitarian response that followed the drought of 2002-2004, including food distribution by the World Food Programme and immunisation campaigns led by UNICEF and other agencies in the region, has supported the recovery process.

Indicator	No	% (95% CI)
Total number of households assessed	494	100
Total number of children assessed	935	100
Global Acute Malnutrition (WHZ<-2 and/or oedema)	84	9.0 (7.3 – 11.0)
Severe Acute Malnutrition (WHZ<-3 and/or oedema)	7	0.7 (0.3 -1.6)
Oedema	0	0
Proportion of children aged 6– 24 months breastfeeding (N=324)	135	42.0 (36.3– 47.3)
Proportion of children introduced to solid food before 6 months (n=324)	216	66.7
Proportion of children, sick in 2 weeks prior to assessment (n=935)	333	35.6 (32.6– 38.8)
Proportion with diarrhoea in 2 weeks prior to assessment	132	14.1 (12.0 -16.6)
Proportion with ARI within 2 weeks prior to assessment	196	21.0 (18.4– 23.7)
Proportion with febrile illness in 2 weeks prior to assessment	100	10.7 (8.8 -12.9)
Suspected measles within one month prior to assessment (N=885)	25	2.7 (1.8 -4.0)
Children (9-59 months) immunised against measles (N=885)	670	75.7 (72.7– 78.5)
Children who have ever received polio vaccine (N=935)	771	82.5 (79.8– 84.8)
Children supplemented with Vitamin last 6 months or before	505	54.0 (50.8–57.2)
Households using open wells/ berkads as the main source water	383	77 (73.0 – 80.6)
Proportion of households who used the bush for faecal disposal	286	58.0 (53.0–62.0)
Under five Mortality Rate (U5MR) as deaths/10,000/ day	1.45 (CI: 0. 89 – 2.02)	
Crude Mortality Rate (CMR) as deaths/10,000/ day	0.54 (CI: 0.40 – 0.69)	

The morbidity level (36%) in the two weeks preceding the assessment was high, and negatively influenced the nutrition situation of the affected children. Suspected measles incidents were high (2.7%), posing a risk of an epidemic and further decline of the nutrition situation. The water and sanitation situation is poor for most of the communities in the plateau; about 58% of the households use the bush for faecal disposal. Moreover, 77% of the households use unprotected wells/berkads, which are prone to contamination, as the main source of water. Unprotected water sources are prone to contamination by dirt and/or faecal matter and therefore predisposing factors to water-borne diseases. Humanitarian and social support are on the decline, and in the three months prior to the assessment, were accessed by 16% and 1.8% of the households, respectively. This has reduced access by the poor households to food and health care services. Infant and child feeding practices such as non-exclusive breastfeeding of infants up to the age of six months as recommended (Facts for Life), continue to negatively influence the nutrition status of children.

The assessment team recommends short and long-term efforts that address access to food among the poor and destitute in Sool Plateau, measles vaccination campaigns, improved quality of water and sanitation, especially rehabilitation of water points and provision of sanitary facilities, and nutrition education on appropriate infant and child feeding practices.

## Berdale Nutrition Assessment Findings

Berdale district is located in Bay region and has an estimated population of 129,730 (WHO, 2005 NIDS figures further verified by the assessment team). The district has four livelihood zones: the Bay Bakool High Potential Agro-Pastoral (63%), Southern Agro-Pastoral (26%), Southern Inland Pastoral (6 %) and Urban (4%). The FSAU 2005/06 Post Deyr analysis classified Bay region, including Berdale district, as an Acute Food and Livelihood Crisis. This was primarily due to critical food insecurity following below normal Gu '05 and complete failure of Deyr '05/06 rains. The FSAU Post Gu '06 Analysis provides similar findings (FSAU Technical Series Report No IV. 8).

From 28<sup>th</sup> August to 5<sup>th</sup> September 2006, FSAU in collaboration with UNICEF, WFP and SRCS undertook a nutrition assessment in Berdale district of Bay region using a two stage cluster sampling methodology (30 x 30). A total of 984 children aged 6-59 months and measuring 65-109.9 cm in height/length were assessed. Mortality data was collected from 901 households.

The global acute malnutrition (weight for height <-2 Z score or oedema) was 11% (CI: 9.5-13.6) while the severe acute malnutrition (weight for height <-3 Z score or oedema) was 2.6% (CI: 1.8-3.9). The results indicate a serious nutrition situation

<sup>1</sup> The FAO food grouping system

(WHO classification). Nevertheless, there is an improvement in the nutrition situation compared to the May 2002 assessment (global acute malnutrition of 17.1%) and long-term estimates (15-19.9%) of acute malnutrition for the district. The crude and under five mortality rates were 1.28 (0.96-1.61) and 1.46 (0.75-2.17) deaths/10,000/day respectively. Crude mortality rate indicates a situation of alert. Additional findings are presented in the table.

The improved nutrition situation is attributed to increased dietary diversity with about 65% of households consuming four or more food groups (FAO classification) in the preceding 24 hours. The main sources of food for the assessed households are: own crop production (55%), purchase (44.7%) and humanitarian food assistance (2.2%). Additionally, the high measles immunization coverage of about 80% and Vitamin A supplementation of about 66% contributed to minimizing measles outbreaks. Nevertheless the coverage is below the minimum SPHERE recommendation of 95%. On going humanitarian interventions which may also have mitigated the nutrition situation includes health services by SCRS/UNICEF/ICRC, food aid by the WFP and feeding programme run by SRCS supported by WFP.

Despite the improvement, the nutrition situation is serious (WHO) and attributed to poor childcare practices and high morbidity. About 54% of the assessed children had been stopped from breastfeeding before the recommended minimum age of 24 months. Additionally, among the children aged 6-24 months, only about 43% were fed on demand. Whereas it is recommended to introduce foods to children from the age of six months, this was effected in 9% of the assessed children, the rest being introduced to foods much earlier.

High morbidity levels were also contributing factors, with those who had suffered from a communicable child hood illness in the preceding two weeks to the assessment (P = 0.00 and RR=1.63) being 1.63 times more likely to be malnourished. The high prevalence (5.2%) of measles is explained by a recent measles out-break in the district. Access to health services in the district is limited, with only one functional MCH/OPD, supported by SRCS/ICRC/UNICEF. About 63.3% of the children came from households which consume water from unsafe sources (unprotected wells and water catchments), and about 81.2% came from households that dispose faecal matter in the bush – these may have contributed to the high incidents of water-borne diseases.

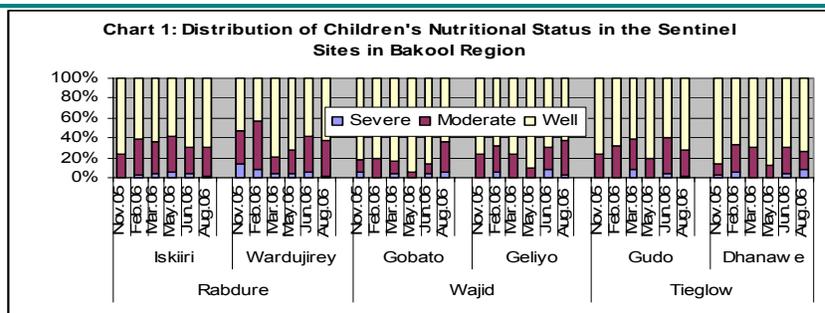
Based on the analysis of findings, the assessment team in collaboration with partners recommend: improved provision of health services in the district; rehabilitation of malnourished children; intensified health and nutrition education; sustainable income generating activities; safe water for consumption and sanitation especially provision of sanitary facilities; improved access to food, both in the short and medium term.

Indicator	No	% (95% CI)
Number of households assessed	537	100
Under five children screened during the assessment	984	100
Global acute malnutrition - WHZ <-2 or oedema	112	11.2 (9.5-13.6)
Severe acute malnutrition – WHZ <-3 or oedema	26	2.6 (1.8-3.9)
Oedema	4	0.4 (0.1-1.1)
Proportion of children with an illness in 2 weeks prior to the assessment	290	29.5 (26.7-32.4)
Proportion with diarrhoea in 2 wks prior to the assessment	115	11.7 (9.8-13.9)
Proportion with ARI in 2 wks prior to the assessment	178	18.1(15.8-20.7)
Proportion with suspected malaria in 2 wks prior to the assessment	82	8.3(6.7-10.3)
proportion with measles in one month prior to assessment N=984	50	5.2 (3.9-6.8)
Children supplemented with Vitamin A in 6 months before the assessment N=984	646	65.7 (62.6-68.6)
Children (≥9 months) immunized against Measles, N= 925	741	80.1(77.3-82.6)
Children immunized against Polio N= 984	945	96(94.6-97.1)
Children (6-24 months) breastfeeding N=291	59	54.6 (48.7-60.6)
Children breastfed on demand	125	43 (27.2 – 48.8%)
Crude Mortality Rate ( as deaths/10,000/ day)		1.28 (CI: 0.96-1.61)
Under Five Mortality Rate (U5MR) as deaths/10,000/ day		1.46 (CI: 0.75-2.17)

### Bakool Sentinel sites surveillance

In November 2005, the FSAU Nutrition project commenced surveillance in eleven sentinel sites in Bakool Region. Selection of the sites was based on: risk of deterioration in nutritional status and livelihood representation within the region.

FSAU conducted the sixth round of sentinel sites surveillance in the eleven sites in Bakool region in August 2006. Most sites

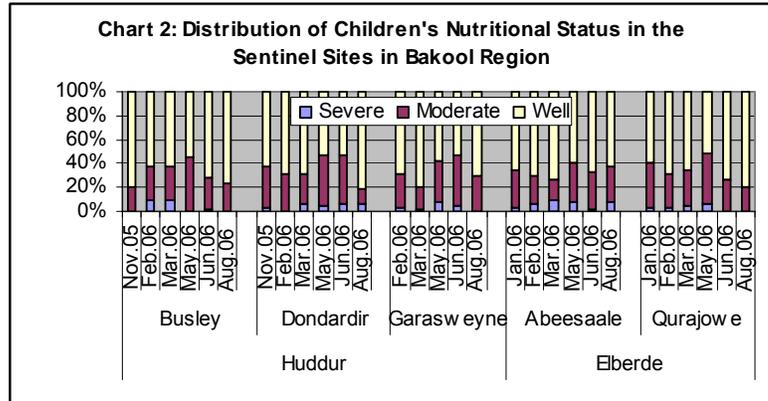


recorded high levels of malnutrition, with fluctuating trends (Charts 1 & 2). This is with exception of Gobato and Geliyo sites in Wajid and Abeesaale in Elberde district, which showed increasing trends.

There was an overall improvement in dietary diversity with most households (>80%) consuming four or more food groups. Milk consumption, which is an important source of nutrients was notably high in all sites. Consumption of diversified diets is associated with better nutrition status, and this explains the decreasing trends of malnutrition evidenced in most sites. Data also revealed that ‘own production’ is the main source of food, particularly for cereals and milk in most households. However, in Wajid sites (and Dhanawe), purchase was the main source of food. This may imply that those households which are relying on purchase as the main source of staple food are not accessing adequate food, hence low dietary diversity and the noted increasing trend of malnutrition in Wajid.

The proportion of sick children two weeks prior to the assessment increased in all sites. Watery diarrhea and ARI had particularly increased in most sites, and this is a major contributory factor to malnutrition.

Additional data from the MCH and targeted feeding programmes in the region show a reduction in the number of malnourished children admitted in these facilities from the month of May. In the light of poor Gu 2006 rains, a poor crop harvest (FSAU Post Gu 2006 Analysis report), and persistence of a high proportion of malnourished children, the nutrition situation remains precarious and needs close monitoring.



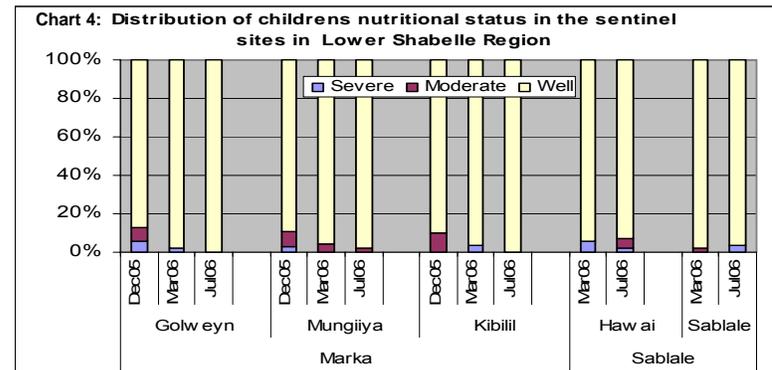
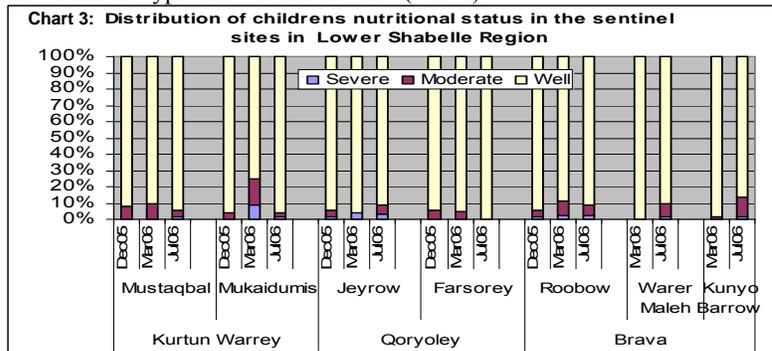
### Lower Shabelle Sentinel Sites Surveillance

Following the Gu '06 analysis, Lower Shabelle is classified to be in Chronically Food Insecure phase with a moderate risk to Acute Food and Livelihood Crisis. The region has faced three consecutive poor rainy seasons, namely Gu 2005, Deyr 2005/06 and Gu 2006. Cereal prices have been increasing though these are expected to decline in the short run. On the contrary, malnutrition levels have remained relatively low and within the typical levels for the area (<10%).

The third round of sentinel sites surveillance data collection was undertaken by FSAU in collaboration with COSV in July 2006 covering a total of 12 sites<sup>2</sup>.

Data from the sentinel sites continues to indicate generally low levels, of malnutrition. In sites where more than two rounds of data collection have been conducted, a declining trend in malnutrition levels has been observed. Similar observations were made from health facilities data where the proportion of malnourished children screened monthly remained low. Dietary diversity was better compared to the past months due to the positive impact of the Gu '06 harvest. Among all sites assessed, only three reported some (no more than 7%) households having consumed three or fewer food groups.

The proportion of the children who were reported to have been sick two weeks prior to the screening continued to decline in all the sites, contributing to low malnutrition levels



<sup>2</sup> Eight of these sites, namely Mustaqbal, Mukaidumis, Jeyrow, Farsoley, Roobow, Golweyn, Mungiiya and Kibiliil, were covered in January 2006, while four (Warer Maleh, Kunyo barrow, Hawaii and Sablale) were newly identified sites.

observed. ARI was the most common disease reported. Measles cases were reported in Mustaqbal, Farsoley and Golweyn sites.

A nutrition assessment is planned for the Middle Shabelle Region in November 2006.

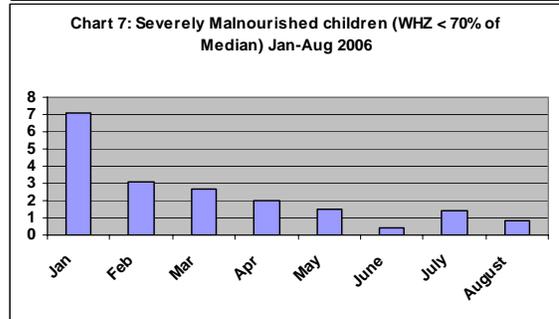
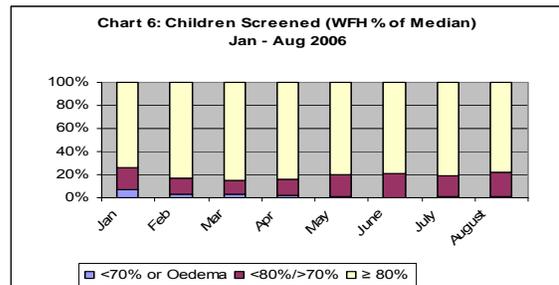
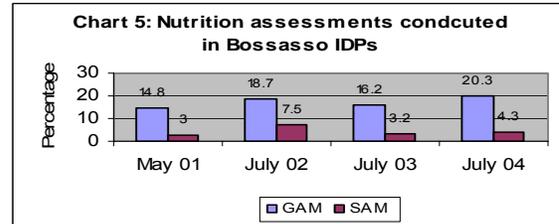
### Bossaso IDPs

Nutrition assessments conducted by UNICEF in collaboration with FSAU and other partners in the NE in the past five years, indicate persistent critical levels of global and severe acute malnutrition (GAM and SAM) among Bossasso IDPs (Chart 5). Data for January to August 2006 for about one thousand children screened monthly at the 'AID' Agency health centers shows persistent malnutrition levels of around 20% (Chart 6).

The major causes of the high malnutrition are explained by food insecurity due to limited income opportunities, low access to health services, and poor environmental sanitation and shelter. Humanitarian interventions undertaken to reduce the level of malnutrition and prevent further deteriorations among IDPs, particularly since 2005, include health service delivery (including EPI services), supplementary feeding programs targeting families of the malnourished children, food aid distributions, sanitation activities (including latrines), and formal and non-formal education.

From February 2006, a referral system was established to rehabilitate severely malnourished children from Bossasso IDPs at the Galkayo Therapeutic Feeding Center (TFC), the only TFC in Puntland. This intervention contributed to decreased severe acute malnutrition in the IDPs camps from 7% in January '06 to 0.4% in June '06 (Chart 7). Unfortunately, this referral system collapsed in June '06 following the closure of the TFC in Galkayo. The situation has subsequently reverted and the number of severe cases identified during screening, increased from July 2006 (Chart 7).

A nutrition assessment is planned at the end of September 2006 for further detailed analysis of the Bossasso IDPs situation.



### Mid Level Managers' Trainings in Garowe and Hargeisa

In an effort to link nutrition information to action, the FSAU Nutrition Project is currently working to build the capacity of partners in food processing, preservation and storage techniques. The project has prepared a set of three manuals: i) The Food Composition Table for Somalia; ii) Food Processing, Preservation and Storage in Somalia; iii) Seasonal Food Availability and Household Access in Somalia. These are intended to serve as reference guides in training and creating awareness of the subject matter. In August 2006, about 120 sets of the manuals were distributed in the North East, North West and Nairobi, and an additional 100 sets are planned for distribution in the South and Central in November 2006.

Besides production of the manuals, the FSAU nutrition project in August 2006 conducted a three-day training workshop on 'Food processing, preservation and storage' in Garowe (12<sup>th</sup> to 14<sup>th</sup>) and Hargeisa (17<sup>th</sup> to 19<sup>th</sup>). A total of twenty two Mid Level Managers from ten agencies<sup>3</sup> and two line ministries (Health and Education) in the North East attended the Garowe workshop. Additionally, 31 Mid-Level Managers from nine agencies<sup>4</sup> and four line ministries (Health, Family and Social welfare, Rural Development and Agriculture) in the North West attended the Hargeisa workshop. The aim of the workshop was to strengthen the technical capacity and stimulate partners to promote appropriate food processing, preservation and storage techniques at the community level in Somalia. Participatory methods of training were used to enhance contribution from the participants. The workshop objectives were to provide participants with: i) knowledge on basic food technology, nutrition and food security concepts; ii) training on basic processing, preservation and storage techniques for various foods in Somalia, including current practices and problems encountered; iii) an opportunity to identify and document opportunities to enhance

<sup>3</sup> FSAU, WHO, Care International, ADRA, SRCS, Horn Relief, PENA, MERLIN, WANAG and AID.

<sup>4</sup> FSAU, NRC, CARE, SRCS, FAO, WFP, HAVOYOCO, PENHA, VET AID, ANDRA

food processing, preservation and storage in Somalia; and, iv) address food deficits related to seasonal food availability and access in Somalia.

Discussions and conclusions from the participants suggest that the workshops were timely for the target group, most of whom expressed a desire to initiate programmes at the community level. The overall observation is that in both regions of North West and North East, food processing, preservation and storage is still a challenge. Most communities use either traditional methods, which are at times unsafe, or when they are aware of the modern technologies, they lack capital and capacity to implement them.



Underground store for cereals (Gabiley)



Dried meat (*odka mugmad*) preserved in Ghee (Garowe)



Condiment prepared from dried lemon (Hargeisa)

Some of the recommendations made following the workshop include:

- Creating awareness of appropriate techniques in food preservation, processing and storage through stakeholders and the media. Support to mid level managers to conduct trainings at the community level are crucial.
- Lessons learnt from the pre-war food processing entrepreneurs and practitioners in training to the community, women 's groups, schools, health institutions and agricultural sectors need to be revisited so that good preservation and processing practices are carried to the youth.
- Financial support for communities and/or regional administration offices to undertake appropriate food preservation, processing and storage.
- Need for humanitarian agencies to include food processing, preservation and storage in their livelihood support programmes.

Detailed reports on the Garowe and Hargeisa workshops are available at FSAU. Two additional workshops are planned in Wajid and Buale in November 2006.

### Training and courses announcements

- Mid level managers training on 'Food Processing, Preservation and Storage' scheduled in Buale on October 31 - November 2, 2006 and Wajid on November 5 -7, 2006.
- Public Health in Complex Emergencies Training Program to be held at Makerere University Institute of Public Health (MUIPH) in Kampala on November 6-18, 2006. For more details, contact Dr. Christopher Orach on cgorach@iph.ac.ug.

### Other related publications and Releases

- FSAU Technical Series Report No. 9, 2006 Post Gu Analysis, September 15, 2006
- FSAU: Processing, Preservation and Storage of Foods, July 2006
- FSAU: Seasonal Food Availability and Household Food Access in Somalia, July 2006
- FSAU: Composition of Foods Consumed in Somalia, July 2006
- FSAU/FEWSNET Market Data Update, September 2006.
- FSAU/FEWSNET Climate Data Update, September 2006



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