FSNAU
Food Security and Nutrition Analysis Unit - Somalia

NUTRITION UPDATE

December 2016

Results of Deyr 2016 IDP assessment conducted in November 2016 across Somalia show rapid deterioration in the nutrition situation among IDPs in Mogadishu (Banadir), Dhusamareb (Galgadud) and Qardho (Bari) while prevalence of Critical levels of acute malnutrition (Global Acute Malnutrition ≥ 15%) are sustained among IDPs in Garowe (Nugal) and Bossaso (Bari)

OVERVIEW

FSNAU assessed the nutritional status of 7 234 children (6-59 months) from 4 639 households in 12 main displaced populations settlements across Somalia in November 2016 using SMART Methodology1 (Table 1). Galkacyo IDPs were not surveyed due to Insecurity. The objective of the 12 integrated nutrition and food security surveys was to assess the nutrition and food security situation of these vulnerable IDP population groups as part of FSNAU's biannual surveillance activities Mortality and nutritional status information as well as household food security data was gathered at the same time, from the same households. Weight-for-height, height-for-age and weight-for-age were calculated for children using the ENA for SMART and epinfo software.

Prevalence of Global Acute Malnutrition (GAM) was estimated using World Health Organization growth standards while Crude Death Rates (CDRs) and Under - Five Death Rates (U5DR) were calculated using the most recent population estimates available (UNDP PESS, 2014). Sampling was based on two stage probability proportionate to size (PPS) cluster sampling procedure for all assessments except Qardho and Dhusamareeb exhaustive sampling was employed.

Mortality survey was collected at all household level retrospectively (90 day recall period) and anthropometry were collected among all households with children aged 6-59 months. While the other contextual factors on food security, water and sanitation, household food consumption and coping strategy and hunger scale questionnaires were collected at every second household (odd numbered household). Variables such as anthropometric and all other contextual indicators and mortality were entered using EPI info soft 3.5.4 and ENA SMART software (July 9th, 2015 version). For quality assurance, supervisors would export EPI info file having anthropometric dataset to ENA software and were able to gauge quality of data and survey team performance on a daily basis using ENA SMART software plausibility parameters. The summary results from Deyr 2016 nutrition assessment among 12 IDP settlements across Somalia are shown in Figures 1 and 2 and Table 2.

Map 1: Deyr 2016 IDP Nutrition Assessment Coverage in Somalia and Results, November 2016

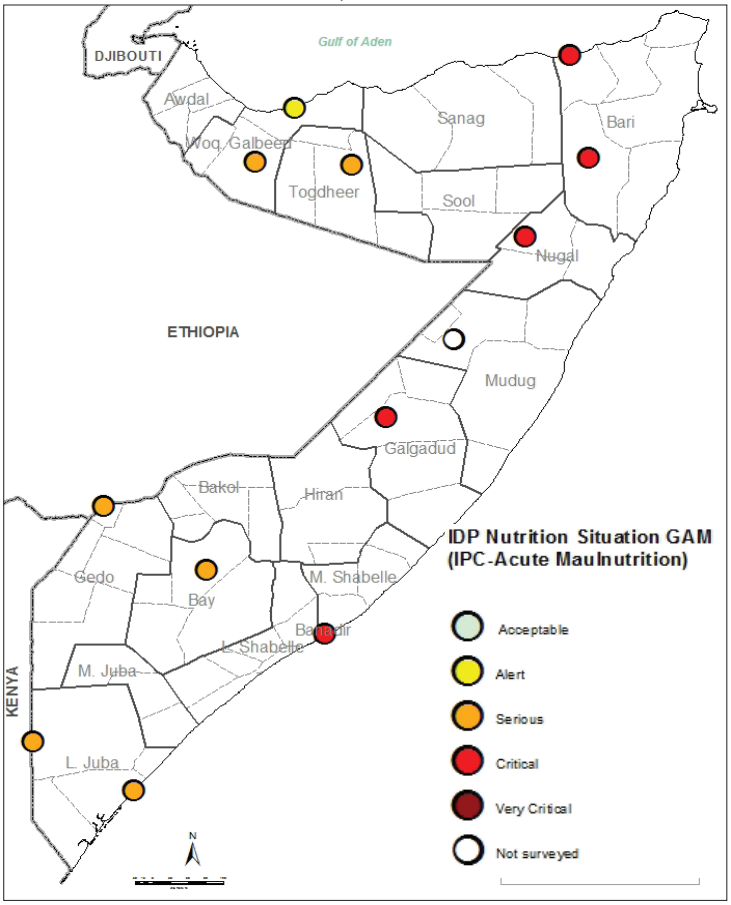

Table 1: Survey Sample Details

IDP Settlement	# of Households Covered	# of Children Assesed
Burao (Awdal)	311	484
Hargeisa (W. Galbeed)	344	559
Berbera (W. Galbeed)	393	480
Bosasso (Bari)	471	712
Qardho (Bari)	325	646
Garowe (Nugaal)	433	838
Dhusamareeb (Galgadud)	225	265
Baidoa (Bay)	448	658
Mogadishu (Banadir)	425	676
Dolow (Gedo)	467	695
Dhobley (L. Juba)	376	512
Kismayo (L. Juba)	421	709
TOTAL	**4 639**	**7 234**

1 Standardized Monitoring and Assessment of Relief and Transitions (http://smartmethodology.org)

Food and Agriculture Organization of the United Nations
Technical Partners: FEWS NET, World Food Programme, JRC, unicef, SWALIM
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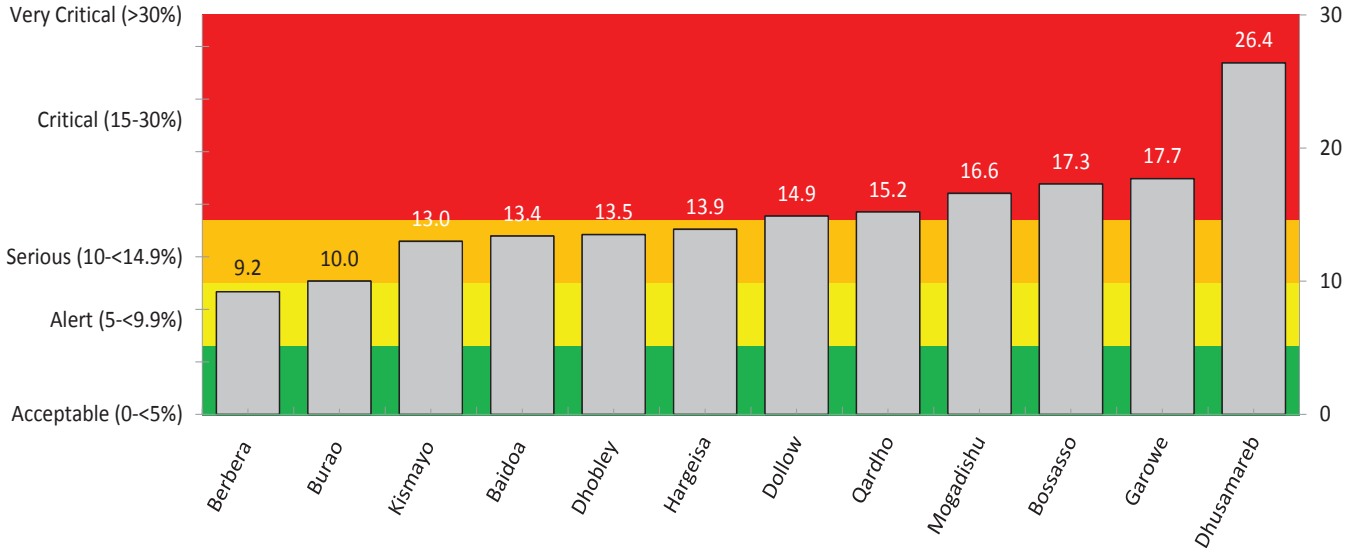
Acute malnutrition in children 6-59 months is a direct outcome indicator of recent changes in nutritional status and sickness. (Map 1 and Table 1) show coverage of IDP nutrition situation in Deyr 2016 among 12 IDP settlements across Somalia (location of IDP's, sample size and response rate). Map 1 also displays GAM results (color code).

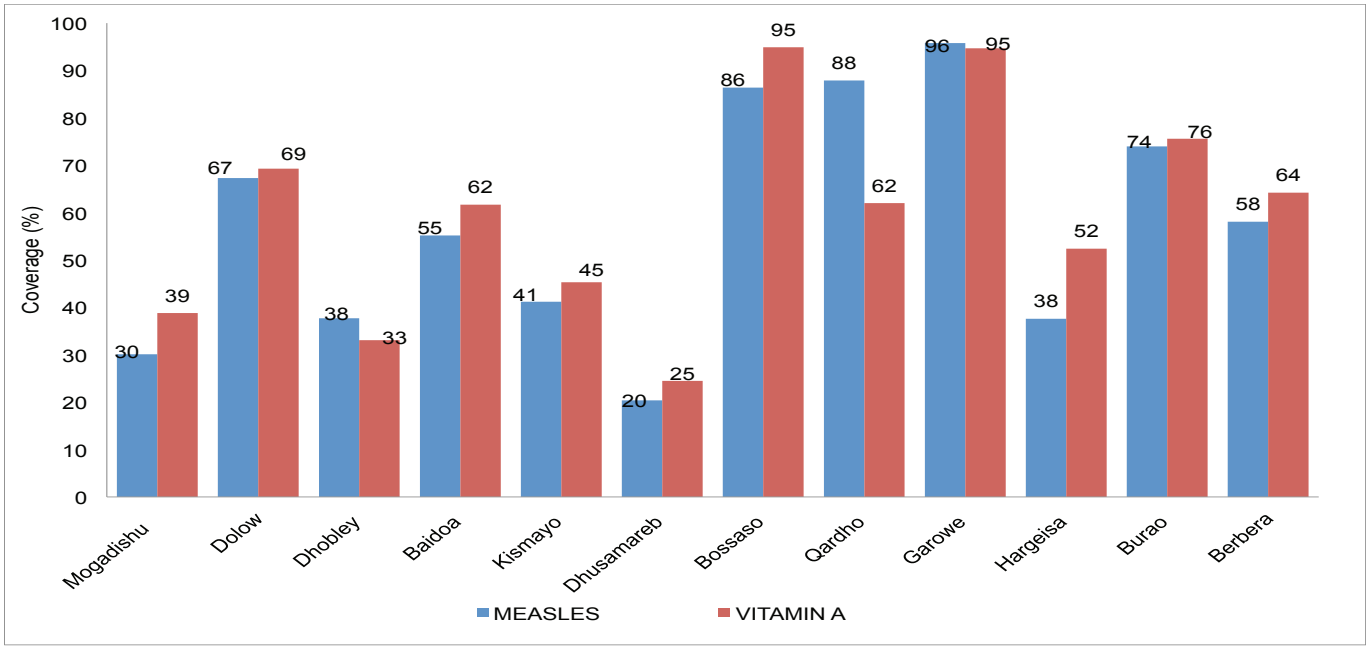
POST Deyr 2016 ASESSMENT RESULTS

Figure 1: Prevalence of GAM among IDPs in Somalia - Deyr 2016



Post Deyr 2016 assessment results (Figure 1),indicate an improvement in nutrition situation among IDPs in Dolow,Dhobley,Baidoa, Kismayo and Berbera while rapid deterioration was noted since July 2016 among Mogadishu IDPs (14.7% to 16.6 %) Dhusamreb IDPs (10.1 % to 26.4 %) in South central Central) region and Qardho IDPs (12.6 % to 15.2 %) in northeast region. Critical levels of Global Acute Malnutrition (GAM rate ≥15 %) were observed in five out of 12 IDP populations surveyed during Deyr 2016 assessment. These are Mogadishu and Dhusamareb IDPs in south-central region and Bossaso ,Garowe and Qardho in northeast region (Figure 1). It is also of a concern to note that nutrition situation among IDPs in Garowe & Bossaso is sustained as Critical over the last two years or more. Serious GAM levels (≥10 and < 15 %) were recorded among IDPs in Dolow,Dhobley, Kismayo, Baidoa and in south-central region, and Hargeisa and Burao IDPs in northwest. Alert levels of GAM (≥5 % and <10 %) were seen only in northwest among Berbera IDPs.

Figure 2: Deyr 2016 Measles Immunization and Vitamin A Supplementation Coverage among IDPs in Somalia - Deyr 2016



Deyr 2016 assessment recorded Critical levels of GAM (≥15 %) and SAM (≥4-5.6 %) prevalence among IDPs in Mogadishu and Dhusamareb. Significant increase in SAM prevalence was recorded among Hargeisa IDPs (from 1.9% in Gu 2016 to 3.5% in Deyr 2015). Serious levels of SAM prevalence were recorded among four IDPs surveyed (Bossaso,Hargeisa, Baidoa and Garowe). Among Garowe IDPs Serious SAM prevalence is sustained since Deyr 2015. Alert SAM levels were noted among Burao, Berbera in northwest, Qardho in northeast, and Dhobley and Dolow in south-central while Kismayo IDP showed Acceptable SAM prevalence.

Alert CDR was observed among Dhobley, Mogadishu and Hargeisa IDPs. U5DR was acceptable in all12 IDP settlements of Mogadishu IDPs showed doubling of CDR since Gu 2016 (July). Improvement in both CDR and U5DR was seen in Dolow and Kismayo IDPs along with improvement in morbidity as well as in nutrition situation, which is primarily attributed to scaling up of assistance.

There was no major outbreak of communicable disease reported. However, morbidity prevalence in two weeks prior to the assessments were high (>25%) in all IDPs, Qardho and Garowe consistently reported morbidity greater than 30 percent, while low morbidity (<10%) were seen in nortwest and Dolow IDPs.

The current IDP assessment also looked into other public health indicators such as immunization coverage for measles and supplementation of Vitamin A within a six month recall period. Measles coverage and vitamin A supplementation was the lowest (<40%) for IDPs residing in Dhusmareeb,Mogadishu and Dhobley However, coverage estimate was only calculated by asking mothers (recall) and hence interpretation should be used with caution.

cross the 12 IDPs surveyed in Somalia the Deyr 2016 assessments identified a total of 18 450 acutely malnourished children which include 4 200 children that were severely malnourished. (Table 2).

Table 2: Absolute Number of Malnourished Children (Deyr 2016) - Prevalence Estimate - Deyr 2016

IDPs	GAM				SAM			
	Deyr 2016	Gu 2016	Deyr 2015	Gu 2015	Deyr 2016	Gu 2016	Deyr 2015	Gu 2015
SOUTH								
Mogadishu	11 350	10 850	8 400	11 000	2 750	2 500	1 850	2 450
Baidoa	550	750	600	650	120	150	200	150
Dhobley	150	450	350	550	20	100	50	100
Kismayo	250	300	250	250	20	100	50	50
Dolow	250	350	400	400	50	50	100	100
NORTHEAST								
Dhusamareeb	1850	700	800	750	420	150	100	200
Bossaso	1700	1950	1650	1250	350	450	300	150
Qardho	150	250	50	50	50	50	0	0
Garowe	350	400	350	300	50	60	50	50
Galkayo	Not Surveyed	1550	1550	1900	Not Surveyed	300	150	450
NORTHWEST								
Hargeisa	1250	1050	1050	900	300	200	200	200
Burao	500	350	350	350	50	20	50	0
Berbera IDP	100	50	700	500	20	10	100	100
Total	**18 450**	**19 000**	**16 500**	**18 850**	**4 200**	**4 140**	**3 200**	**4 000**

Note: For operational, response planning and programming purposes, the above acute prevalence estimates need to be translated into estimated acute malnutrition burden which depends on calculating a number of elements but primarily the GAM and SAM prevalence, the incidence correction factor and the population figures for each of the IDP settlements.

Conclusion:

The results of the Deyr 2016 assessment show that acute malnutrition among protracted IDPs in south-central region of Somalia showed some improvement, with the exception of Mogadishu and Dhusamareb which showed rapid deterioration to Critical GAM. Northeast IDPs showed sustained Critical GAM (≥15%) .

It's also worth to note that IDP access to and coverage of vital public health programs such as routine immunization and Vitamin A supplementation were the lowest for IDP residing in Dhusmareeb, Mogadishu and Dhobley in south central somalia (Annex 4). Measles coverage in Dhusamareb and Mogadishu was 30.1 percent and 20.4 percent respectively. Consequently, any measles outbreak where these IDP reside will further escalate the morbidity and mortality rate found from the current assessment. Mop-up campaigns should be conducted to raise the coverage to reach the SPHERE standards (≥90%).

The worsening nutrition situation among Mogadishu , Dhusamareeb and Qardho is partly linked to limited access to humanitarian interventions, unstable casual labour for income to purchase food, high morbidity, low immunization coverage, continuous arrival of new IDPs and on-going evictions particularly among Mogadishu IDPs. Nutrition interventions should be prioritised to displaced population and accompanied by efforts to reduce high morbidity and improving health services.

Results highlight the necessity to rapidly detect the acute worsening of a protracted crisis, and need to scale up of existing Community Management of Acute Malnutrition (CMAM) programs to contain and arrest critical levels of acute malnutrition (where wasting prevalence is the highest or sustained as critical for many seasons) for those IDP's located in Bossaso, Qardho,Garowe, Dhusmareeb, and Mogadishu

NUTRITION SITUATION AMONG IDPs IN SOUTHERN AND CENTRAL SOMALIA

Mogadishu IDP settlement shows an evolving humanitarian situation with Critical levels of acute malnutrition and high mortality rates. Deyr 2016 assessment has recorded a GAM prevalence of 16.6 percent and SAM prevalence of 4.0 percent indicating a Critical nutrition situation which reflect deterioration when compared with GAM rate of 14.7 percent recorded in Gu 2016 and GAM rate of 11.4 percent recorded in Deyr 2015. The severe acute malnutrition rates are also nearly double from the levels observed in Deyr 2015 and increase from Gu 2016 (3.5%).

The crude and under five death rates reported are 0.61/10,000/day (Alert) and 0.74/10,000/day (Acceptable) for Mogadishu IDPs according to WHO classification, and a deterioration from the post Gu 2016 reported crude and under five mortality rates of 0.33 /10,000/day,and 0.40 /10,000/day, respectively. Main causes of under-five death reported were fever, diarrhoea and acute respiratory infection (ARI).

No major outbreaks of communicable disease were reported during this period but increased seasonal trends in communicable disease like Acute Water Diarrhoea (AWD), and ARI were observed.Morbidity levels decreased as compared to levels reported in Gu 2016 from 44.6 to 29.6 percent. Information from implementing partners in Mogadishu indicate increasing trend in OTP and TSP admissions from October to November 2016.

Ongoing eviction of IDPs in Mogadishu, high morbidity, low immunization coverage (< 40 %), arrival of new IDPs from drought affected areas and IDP returnees from Kenya, decreased labour opportunities coupled with shrinking interventions are likely to aggravate in the nutrition situation.

Dolow IDPs: settlement recorded a GAM rate of 14.9 percent and SAM rate of 2.3 percent indicating an Serious nutrition situation which is significant improvement when compared with GAM prevalence of 25 percent recorded in Deyr 2015 and GAM prevalence of 21.8 percent recorded in Gu 2016.

Figure 3: Trends in GAM and SAM prevalence among Mogadishu IDPs

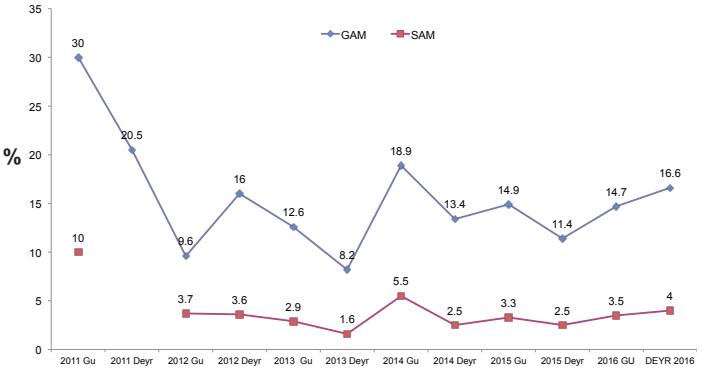


Figure 4: Mortality Trends among Mogadishu IDPs

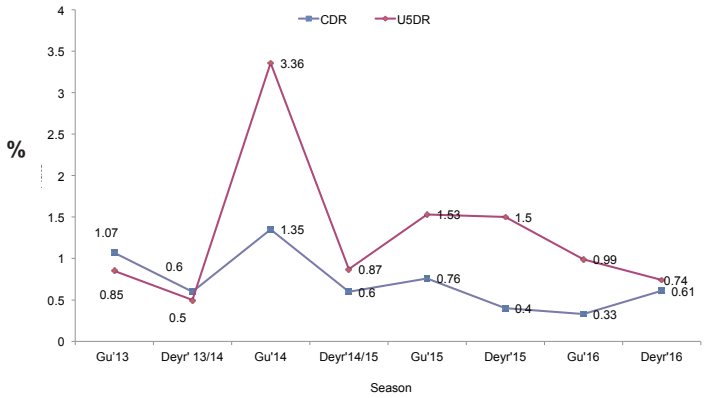
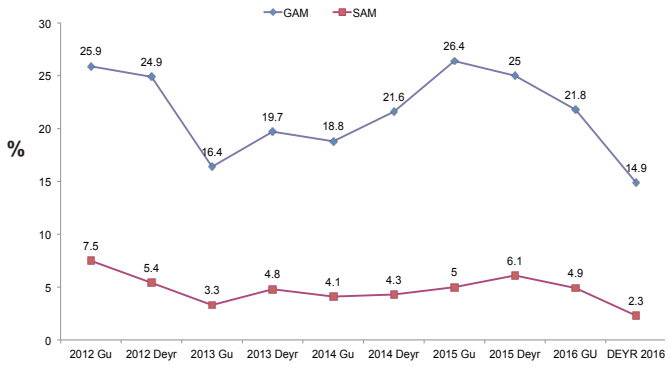


Figure 5: Trends in GAM and SAM prevalence among Dolow IDPs



The improvement is linked to the scaling up of humanitarian support in these settlements. The on-going targeted assistance by WFP, UNICEF, COOPI and DRC include: cash vouchers for households and families of malnourished children, food for asset as well as routine TSF/OTP programs in the area.

Decrease in both Crude Death Rates (0.24) and Under Five Death Rates (0.47) suggesting Acceptable situation and an improvement from Gu 2015 when Serious CDR and U5DR of 0.90/10,000/day and 1.20/10,000/day were recorded respectively (Figure 6).

Morbidity rate 8.6 percent among Dolow IDPs in Deyr'2016 is lower when compared to 24.3 percent observed during Deyr 2015 or 13.4 percent noted in Gu 2016.

Low morbidity, improved referrals and case finding and scaling up of humanitarian intervention can be attributed to significant improvement of malnutrition observed among IDPs of Dolow.

Figure 6: Trends in CDR and U5DR among Dolow IDPs

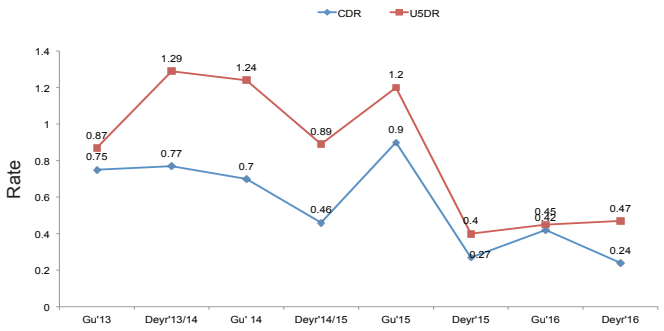


Figure 7: Trends in GAM and SAM prevalence among Dhobley IDPs

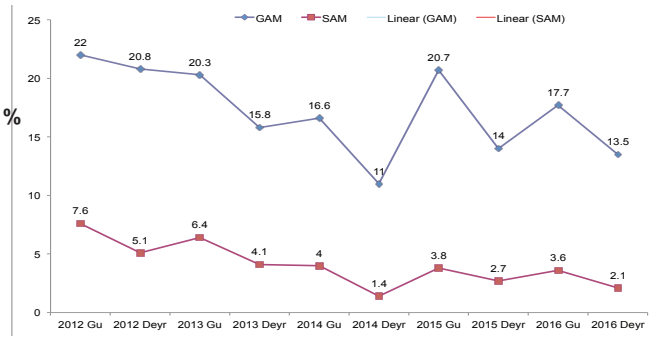


Figure 8: Trends in GAM and SAM prevalence among Baidoa IDPs

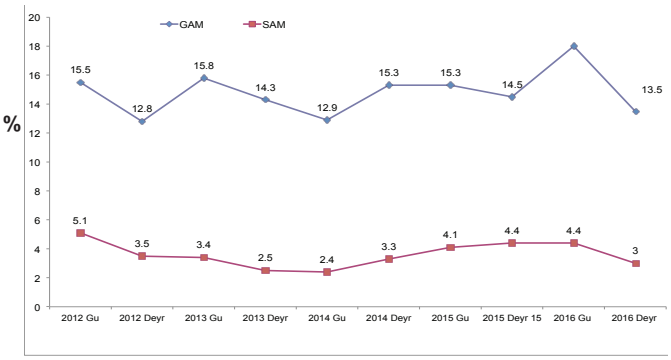
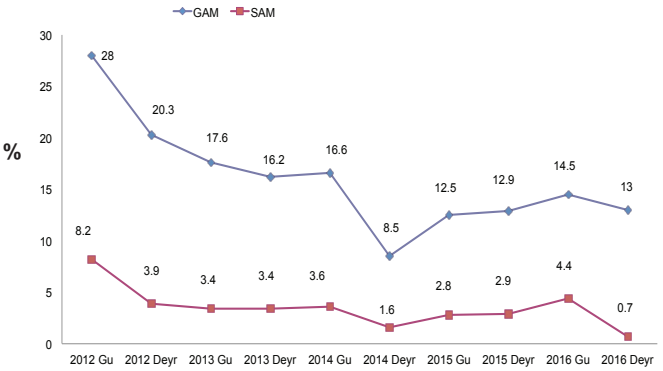


Figure 9: Trends in GAM and SAM prevalence among Kismayo IDPs



Dhobley IDPs

The nutrition situation among Dhobley IDPs settlement is showing some improvement representing Serious nutrition situation with a GAM prevalence of 13.5 percent and SAM prevalence of 2.1 percent. This indicates that there is a significant improvement ($p < 0.05$) in nutrition situation in Deyr 2016 (13.5 %) when compared to Gu 2016 (17.7% GAM) which was Critical nutrition situation. However significant differences ($p < 0.05$) when comparing GAM and SAM in Deyr 2016 to GAM and SAM in Deyr 2015.

Alert levels of CDR (0.40/10000/day) and U5DR (0.17/10000/day) were recorded during the 90 days recall retrospective study in Deyr 2016. The overall morbidity reported two weeks prior to the assessment shows decreased levels (26.2%) in Deyr 2016 when compared to Gu 2015 (42.9%).

Baidoa IDP

The nutrition result indicates Serious nutrition situation (GAM of 13.4 percent and SAM of 3 percent).

This improvement nutrition situation from Critical to Serious was recorded in Deyr 2016 (13.4%) when compared to Gu 2016 (18%) and sustained Serious when compared to Deyr 2015 (14.5%). This is mainly linked to improved water and sanitation facilities and access to health services.

The overall morbidity reported two weeks prior to the assessment shows sustained high levels of (28.2%) in Deyr' 2016 when compared to Deyr 2015 (24.2%) and Gu' 2016 (37.4%)

Kismayo IDPs

The nutrition assessment conducted in Kismayo IDPs in November 2016 recorded a Sustained Serious level of GAM rate of 13 percent and Acceptable SAM rate of 0.7 percent. This is a sustained nutrition situation when compared with GAM rate of 14.5 in Gu 2016 and 12.9 percent GAM in Deyr 2015. The difference in GAM prevalence across the three seasons were not statistically significant.

Acceptable levels of both CDR (0.19/10000/day) and U5DR (0.27/10000/day) were recorded in Kismayo IDPs in Deyr 2016. This is a sustained levels of Acceptable in Gu 2016 CDR (0.49/10000/day) and in Deyr 2015 (0.47/10000/day) and improvement to Alert level in U5DR from Serious levels recorded in Gu 2016 (1.2/10000/day).

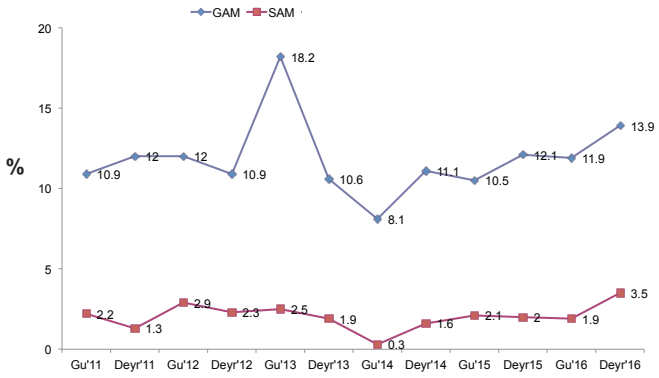
The overall morbidity reported two weeks prior to the assessment is low levels (16.8%) in Deyr 2016 when compared to Deyr 2015 (27.6%) and Gu 2016 (28.1%). This is mainly attributed to improved water and sanitation facilities and access to health services.

Low vitamin A supplementation was recorded among Kismayo IDPs of 45.3 percent and measles vaccination coverage 41.2 percent

NUTRITION SITUATION AMONG IDPs IN NORTHWEST REGION

Hargeisa IDP: Hargeisa IDPs registered a GAM prevalence of 13.9 percent and SAM prevalence of 3.5 percent in Deyr' 2016 assessments which indicate a sustained Serious nutrition situation in the last 12 months. This Serious level of malnutrition among the Hargeisa IDPs has been sustained since Deyr 2014. The SAM prevalence has deteriorated from Alert 1.9 percent in Gu 2016 to Serious 3.5 percent in Deyr 2016 (Figure 10).

Figure 10: Trends in GAM and SAM prevalence among Hargeisa IDPs

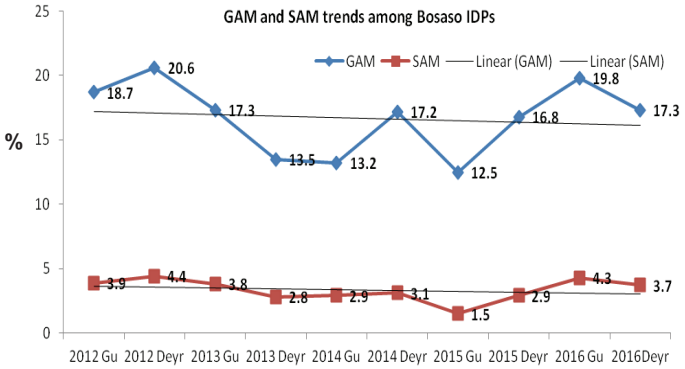


Burao IDP: The GAM prevalence in Burao IDP reported was 10.0 percent and SAM prevalence of 1.3 percent indicating deteriorating nutrition situation from Alert to Serious in the last six months. The SAM prevalence has slightly deteriorated from Acceptable (0.4%) in Gu 2016 to Alert phase (1.3%) in Deyr' 2016.

The Crude and under five mortality rates among Burao IDPs are within the Acceptable levels. This reflects stable mortality levels since Gu 2013 (annex 5).

Berbera IDP: The Berbera IDP settlements registered a GAM prevalence of 9.2 percent and SAM prevalence of 1.7 percent indicating Alert nutrition situation. This shows an improvement in the nutrition situation from last Gu' 2016 season which had registered a Critical GAM prevalence of 19.5 percent and Serious SAM prevalence of 3.6 percent.

Figure 11: Trends in GAM and SAM prevalence among Bossaso IDPs



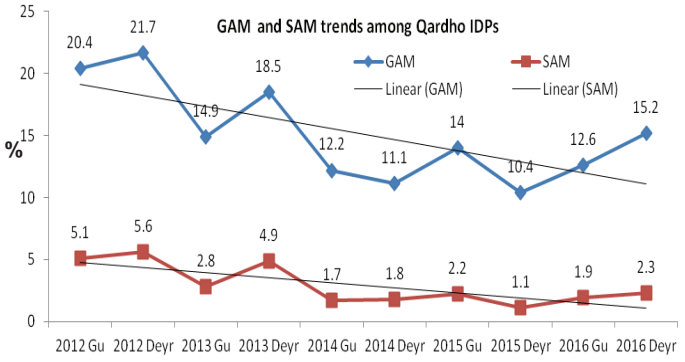
The overall morbidity among the northwest IDP settlements in the two weeks prior to the assessment registered relatively low morbidity levels among: Burao (3.5%), Hargeisa (11.4%) and Berbera (11.5%) IDPs.

NUTRITION SITUATION AMONG IDPs IN NORTHEAST AND CENTRAL REGIONS

Bosaso IDPs: Critical level of acute malnutrition (GAM 17.3%) and (SAM 3.7%) were observed in Deyr 2016. The malnutrition level has sustained as Critical since Deyr 2015 (Figure 11).

Qardho IDPs: Deyr 2016 Nutrition assessment in Gardho IDPs showed a significant deterioration ($p<0.01$) in nutrition situation with Critical level of GAM (15.2%) and Serious level of SAM (2.3%) compared to Gu 2016. High morbidity levels (39.3) have also been recorded in Deyr 2016 assessment. There has been a stable nutrition situation in the previous four seasons with sustained Serious level of GAM and Alert level of SAM.

Figure 12: Trends in GAM and SAM prevalence among Qardho IDPs



Garowe IDPs: Result of Deyr 2016 assessment of IDPS in Garowe registered a GAM (17.7%) and SAM prevalence of (3.1%), which indicate a sustained Critical level of acute malnutrition since previous seasons of Gu'2016 (GAM 20.2%) and Deyr 2015 (19% GAM). High morbidity level (34.1%) has been recorded in Deyr 2016 assessment. High morbidity results were also seen in Gu 2015 (46.0%) and Deyr 2015 (41.3%). High morbidity can be among the contributing factors of persistent Critical level of acute malnutrition.

The crude and under five death rates reported were Acceptable.

Dhusamareb IDPs: Critical nutrition situation (GAM of 26.4% and SAM of 6.0%) were observed among IDPs in Dhusamareeb (Figure 14). This shows significant deterioration from Serious level in Gu 2016 (GAM 10.1%).

Acceptable levels of CDR and U5DR (<0.5 and <1/10,000/ day, respectively) were found among Dhusamareeb IDPs during Deyr 2016

Figure 13: Trends in GAM and SAM prevalence among Garowe IDPs

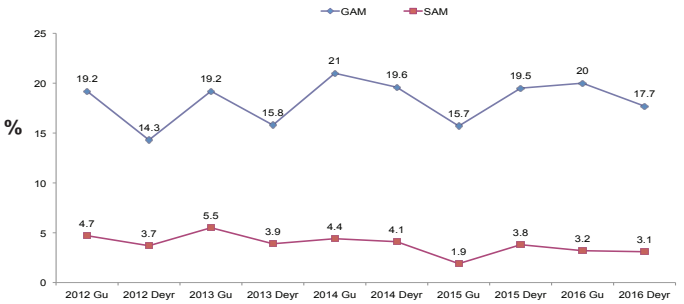
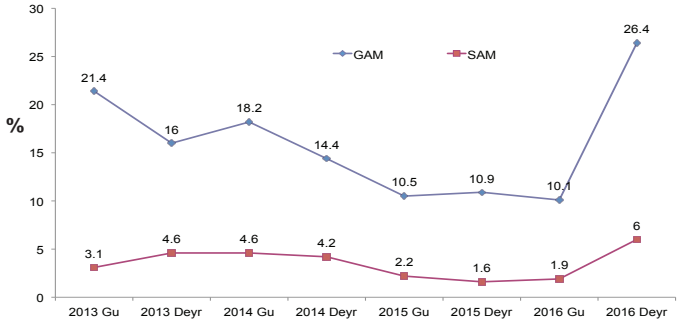


Figure 14: Trends in GAM and SAM prevalence among Dhusamareb IDPs



Annexes

Annex 1. Deyr 2016 IDP Survey Anthropometric Plausibility report

	Missing/ Flagged data	Overall sex ratio	Age Ratio (6-29 vs 30-59)	Digit Preference score-weight	Digit Preference score-Height	Digit Preference score-MUAC	SD WHZ	Skewness WHZ	Kurtosis WHZ	Poisson Distribution	Overall Score
RATING											
Excellent	0-2.5(0)	>0.1(0)	>0.1(0)	0-7(0)	0-7(0)	0-7(0)	<1.1 (0)	<±0.2(0)	<±0.2(0)	>0.05(0)	0-9
Good	>2.5-5.0 (5)	>0.05(2)	>0.05(2)	8--12(2)	8--12(2)	8--12(2)	<1.15(2)	<±0.4(1)	<±0.4(1)	>0.01 (1)	10--14
Acceptable	>5.0-7.5(10)	>0.001 (4)	>0.001 (4)	13-20(4)	13-20(4)	13-20(4)	<1.20 (6)	<±0.6(3)	<±0.6(3)	>0.001(3)	15-24
Problematic	>7.5 (20)	<=0.001(10)	<=0.001(10)	> 20 (10)	> 20 (10)	> 20 (10)	>=1.20(20) &<= 0.8 (20)	>=±0.6 (5)	>=±0.6 (5)	<=0.001(5)	>25
NORTH EAST AND CENTRAL											
Bosasso IDPs	0 (1.4%)	0 (p=0.435)	10 (p=0.000)	0 (5)	0 (6)	0 (3)	0 (1.9)	1 (-0.21)	0 (-0.17)	1 (p=0.035)	12%
Garowe IDPs	0 (1.5%)	0 (p=0.515)	10 (p=0.000)	0 (6)	0 (7)	0 (6)	2 (1.13)	0 (0.02)	1 (-0.29)	1 (p=0.048)	14%
QardhoIDPs	0 (0.5%)	0 (p=0.367)	4 (p=0.006)	0 (1)	0 (2)	0 (3)	2 (0.88)	1 (-0.33)	5 (0.65)	0 (p=)	12%
Dhusamareb IDPs	0 (0.0%)	0 (p=0.667)	2 (p=0.079)	0 (6)	2 (12)	2 (12)	5 (1.14)	0 (-0.09)	3 (-0.50)	0 (p=)	14%
NORTH WEST											
Hargeisa IDPs	5 (3.4%)	0 (p=0.331)	4 (p=0.006)	0 (6)	0 (5)	0 (5)	5 (1.5)	1 (-0.31)	1 (-0.23)	0 (p=0.224)	16%
Burao IDPs	0 (1.0%)	0 (p=0.467)	4 (0.004)	0 (6)	0 (7)	0 (4)	0 (1.07)	0 (0.06)	1 (-0.38)	3 (p=0.003)	8%
Berbera IDPs	5 (2.9%)	0 (p=0.523)	4 (p=0.001)	2 (9)	2 (8)	2 (11)	0 (1.02)	0 (-0.12)	0 (0.05)	0 (p=)	15%
SOUTH											
Mogadishu IDPs	0 (0.6%)	0 (p=0.645)	0 (p=0.262)	0 (1)	0 (2)	0 (2)	0 (1.08)	0 (-0.11)	1 (-0.29)	0 (p=0.408)	1%
Baidoa IDPs	0 (2.0%)	0 (p=0.231)	10 (p=0.000)	0 (3)	2 (12)	0 (7)	0 (1.8)	1 (-0.21)	0 (-0.03)	0 (p=0.481)	13%
Dolow IDPs	0 (1.7%)	0 (p=0.188)	0 (p=0.538)	0 (6)	2 (11)	2 (8)	0 (1.09)	1 (0.21)	0 (-0.06)	1 (p=0.026)	6%
Kismayu IDPs	0 (0.8%)	0 (p=0.852)	10 (p=0.000)	0 (5)	4 (13)	0 (6)	0 (1.07)	1 (0.37)	3 (-0.53)	0 (p=)	18%
Dobley IDPs	0 (1.4%)	0 (p=0.568)	0 (p=0.128)	0 (7)	2 (8)	2 (8)	2 (1.13)	1 (0.35)	1 (-0.37)	0 (p=0.160)	8%

Annex 2. Deyr 2016 IDP wasting prevalence and trends

	GAM							SAM						
IDPs	**Deyr 2016**	**Gu 2016**	**Deyr 2015**	**Gu 2015**	**Deyr 2014**	**Gu 2014**	**Deyr 2013**	**Deyr 2016**	**Gu 2016**	**Deyr 2015**	**Gu 2015**	**Deyr 2014**	**Gu 2014**	**Deyr 2013**
SOUTH CENTRAL														
Mogadishu	16.6	14.7	11.4	14.9	13.4	18.9	8.2	4.0	3.5	2.5	3.3	2.5	5.5	1.6
Dolow	14.9	21.8	25.0	26.4	21.6	18.8	19.7	2.3	4.9	6.1	5.0	4.3	4.1	4.8
Dhobley	13.5	17.7	14.0	20.7	11.0	16.5	15.8	2.1	3.6	2.7	3.8	1.4	4.0	4.1
Baidoa	13.4	18.0	14.5	15.3	15.3	12.9	14.3	3.0	4.3	4.4	3.3	3.3	2.4	2.5
Kismayo	13.0	14.5	12.9	12.5	8.5	16.6	16.2	0.7	4.4	2.9	2.8	1.6	3.6	3.4
Dhusamareb	26.4	10.1	10.9	10.5	14.4	18.2	16.0	6.0	1.9	1.6	2.6	4.2	4.6	4.2
Median for South	**14.2**	**16.2**	**13.5**	**15.1**	**13.9**	**17.4**	**15.9**	**2.65**	**4.0**	**2.8**	**3.3**	**2.9**	**4.1**	**3.8**
NORTH EAST														
Bossaso	17.3	19.8	16.8	12.5	17.2	13.2	13.5	3.7	4.3	2.9	1.5	3.1	2.9	2.8
Qardho	15.2	12.6	10.4	14.0	11.1	12.2	18.5	2.3	1.9	1.1	2.2	1.8	1.7	4.9
Garowe	17.7	20.0	19.5	15.7	19.6	21.0	15.8	3.1	3.2	3.8	1.9	3.9	4.4	4.1
Galkayo	~	16.9	16.5	20.2	15.1	16.5	15.0	~	3.1	1.7	4.7	2.6	2.5	2.9
Median for NE	**17.3**	**18.35**	**16.7**	**14.9**	**16.2**	**14.9**	**15.4**	**3.1**	**3.2**	**2.3**	**2.1**	**2.9**	**2.7**	**3.5**
NORTH WEST														
Hargeisa	13.9	11.9	12.1	10.5	11.1	8.1	10.6	3.5	1.9	2.0	2.1	1.6	0.3	1.9
Burao	10.0	7.0	6.4	7.1	9.7	12.4	10.0	1.3	0.4	0.4	0.5	0.6	1.8	1.0
Berbera	9.2	19.5	9.9	7.3	9.9	10.0	16.1	1.7	3.6	1.4	1.1	1.9	1.7	3.6
Median for NW	**10.0**	**11.9**	**9.9**	**7.3**	**9.9**	**10**	**10.6**	**1.7**	**1.9**	**1.4**	**1.1**	**1.6**	**1.7**	**1.9**

Annex 3.Deyr 2016 IDP chronic malnutrition (Stunting) and Underweight prevalence

IDPs	STUNTING (%)							UNDERWEIGHT (%)						
	Deyr 2016	**Gu 2016**	**Deyr 2015**	**Gu 2015**	**Deyr 2014**	**Gu 2014**	**Deyr 2013**	**Deyr 2016**	**Gu 2016**	**Deyr 2015**	**Gu 2015**	**Deyr 2014**	**Gu 2014**	**Deyr 2013**
SOUTH CENTRAL														
Mogadishu	11.8	12.4	14.9	15.7	12.1	16	20	16.7	17.2	15.6	18.9	14.3	23	16.6
Dolow	17.8	29.1	26.7	23.8	29	26.9	27.1	16.8	29.7	29.7	27.8	32.0	26.4	28.5
Dhobley	19.0	11.9	9.3	12.1	9.4	10.3	14.9	16.1	13.8	9.9	14.2	8.1	12.3	14.5
Baidoa	31.5	32.3	26.8	29.7	31.1	41.5	33	25.5	30.1	23.6	27.3	26.2	31.6	25.3
Kismayo	40.3	38.4	43.8	33.5	38.9	39.8	30.7	35.5	29.6	30.1	24.8	23.2	32.8	30.1
Dhusamareb	19.6	2.1	14.1	6.8	7.7	12.2	8.4	25.7	4.5	11.7	8.9	12.0	17.9	12
Median for South	**19.3**	**20.75**	**20.8**	**19.75**	**20.55**	**21.45**	**23.55**	**21.15**	**23.4**	**19.6**	**21.85**	**18.75**	**24.7**	**20.95**
NORTH EAST														
Bossaso	17.5	21.5	16.3	25.9	32.7	22.8	29.5	19.2	26.7	18.9	23.5	29.8	22.6	26.2
Qardho	7.2	8.3	10.6	13.4	16.7	16.5	30.9	11.0	10.7	9.5	17.4	15.9	18.7	27
Garowe	12.8	14.7	27.5	22.8	18.4	22.3	21.4	17.2	16.4	24.0	18.8	23.1	25.1	23.1
Galkayo	~	15.6	20.6	15.6	15.4	15.3	19.6	~	16.9	21.4	21.6	19.0	17.8	20.6
Median for NE	**12.8**	**15.15**	**18.45**	**19.2**	**17.55**	**19.4**	**25.45**	**17.2**	**16.65**	**20.15**	**20.2**	**21.05**	**20.65**	**24.65**
NORTH WEST														
Hargeisa	4.9	5.4	5.0	5.2	3.3	4.1	7.1	10.3	9.3	9.0	0.9	6.7	7.4	8.6
Burao	1.5	0.4	1.8	0.2	9.7	2.1	2.8	2.1	1.9	2.7	2.2	3.0	2.7	3.7
Berbera	1.9	2.7	2.3	4.1	1.5	2.2	6.1	4.1	6.9	7.5	5.6	4.1	5.6	12
Median for NW	**1.9**	**2.7**	**2.3**	**4.1**	**3.3**	**2.2**	**6.1**	**4.1**	**6.9**	**7.5**	**2.2**	**4.1**	**5.6**	**8.6**

Annex 4. Deyr 2016 IDP Measles Immunization and vitamin A supplementation coverage

	MEASLES VACCINATION (%)						VITAMIN A SUPPLIMENT (%)					
	Deyr 2016/17	Gu 2016	Deyr 2015/16	Gu 2015	Deyr 2014/15	Gu 2014	Deyr 2016/17	Gu 2016	Deyr 2015/16	Gu 2015	Deyr 2014/15	Gu 2014
SOUTH CENTRAL												
Mogadishu	30.1	27.8	39.5	43.9	47.4	70.8	38.8	39.3	44.1	51.3	52.3	61.2
Dolow	67.3	76.9	61.4	64.2	61.8	71.7	69.3	76.1	64.7	75.2	66.5	56.4
Dhobley	37.7	30.6	25.1	39.4	76.9		33.1	9.2	22.3	38.1	41.7	
Baidoa	55.2	74.5	41.6	70.1	44.8	40.4	61.7	49.8	48.3	78.1	57.5	51.9
Kismayo	41.2	52.2	49.6	51.1	66.1	51.7	45.3	62.5	62.9	72.4	61.1	61.8
Dhusamareb	20.4	20.0	36.5	29.5	33.8	37.8	24.5	15.5	17.5	21.9	33.3	38.2
Median for South	**39.45**	**39.05**	**40.55**	**47.5**	**54.6**	**51.7**	**42.05**	**44.55**	**46.2**	**61.85**	**5.9**	**56.4**
NORTH EAST												
Bossaso	86.4	84.7	78.9	85.5	88.7	79.2	94.9	90.1	82.2	91.5	93.3	86.0
Qardho	87.9	79.9	42.7	65.2	76.6	58.9	62.0	78.4	25.4	72.8	78.7	56.2
Garowe	95.8	82.2	87.5	91.5	93.8	89.6	94.7	86.8	89.0	93.0	87.7	92.7
Galkayo		91.6	82.5	81.0	87.1	89.9		91.2	82.0	85.5	72.0	83.4
Median for NE	**87.9**	**83.45**	**80.7**	**83.25**	**87.9**	**84.4**	**94.7**	**88.45**	**82.1**	**88.5**	**83.2**	**84.7**
NORTH WEST												
Hargeisa	37.6	40.3	59.4	66.8	67.2	64.8	52.4	39.3	59.4	61.9	77.3	66.6
Burao	74	88.3	75.4	88.9	94.5	91.2	75.6	86.8	70.3	90.6	96.6	92.4
Berbera	58.1	74.9	36	56.3	49.7	68.6	64.2	74.9	28.6	60.0	49.5	71.8
Median for NW	**58.1**	**74.9**	**59.4**	**66.8**	**67.2**	**68.6**	**64.2**	**74.9**	**59.4**	**61.9**	**77.3**	**71.8**

Annex 5. Deyr 2016 IDP Morbidity and Mortality trends

	CMR							U5MR							MORBIDITY						
IDPs	Deyr 2016	Gu 2016	Deyr 2015	Gu 2015	Deyr 2014	Gu 2014	Deyr 2013	Deyr 2016	Gu 2016	Deyr 2015	Gu 2015	Deyr 2014	Gu 2014	Deyr 2013	Deyr 2016	Gu 2016	Deyr 2015	Gu 2015	Deyr 2014	Gu 2014	Deyr 2013
SOUTH CENTRAL																					
Mogadishu	0.61	0.33	0.40	0.63	0.60	1.27	0.60	0.74	0.99	1.50	1.36	0.87	3.13	0.50	29.6	44.6	29.70	39.30	39.10	43.10	37.30
Dolow	0.24	0.42	0.27	0.90	0.46	0.70	0.77	0.47	0.45	0.40	1.20	0.89	1.24	1.29	8.6	13.4	24.30	29.00	36.90	43.30	55.20
Dhobley	0.92	0.6	0.52	1.47	1.25	0.46	0.40	0.34	0.51	0.98	1.27	1.55	0.95	0.40	26.2	24.6	39.60	42.90	34.10	31.40	23.20
Baidoa	0.14	0.25	0.28	0.27	0.74	0.69	0.40	0.31	0.37	0.10	1.39	1.21	0.76	1.00	28.2	37.4	24.20	46.80	45.20	32.30	44.40
Kismayo	0.19	0.49	0.47	0.34	0.84	1.28	1.30	0.26	1.2	0.69	0.96	2.08	1.42	0.40	16.8	28.1	27.60	33.10	62.30	41.20	36.40
Dhusamareb	0.0	0.08	0.08	0.64	0.07	0.15	0.10	0.0	0.27	0.27	0.50	0.00	0.32	0.00	22.8	38.2	28.50	45.60	28.60	30.10	46.50
Median for South	**0.22**	**0.38**	**0.34**	**0.64**	**0.67**	**0.70**	**0.50**	**0.33**	**0.48**	**0.55**	**1.24**	**1.05**	**1.10**	**0.45**	**24.5**	**32.75**	**28.05**	**41.10**	**38.00**	**36.75**	**40.85**
NORTH EAST																					
Bossaso	0.12	0.21	0.26	0.25	0.36	0.32	0.10	0.27	0.21	0.27	0.22	0.61	0.40	0.30	19.4	34.1	32.00	18.20	30.90	22.80	40.60
Qardho	0.16	0.35	0.10	0.34	0.36	0.28	0.40	0.36	0.73	0.16	0.83	1.09	0.69	0.90	39.3	50.7	46.10	41.60	37.80	52.40	46.40
Garowe	0.16	0.4	0.24	0.14	0.20	0.10	0.20	0.36	0.49	0.49	0.24	0.59	0.12	0.30	34.1	46.0	41.30	46.80	45.20	32.80	40.50
Galkayo	~	0.08	0.08	0.03	0.05	0.09	0.30	~	0.0	0.00	0.10	0.00	0.36	0.40	~	36.7	24.60	35.90	23.20	29.80	33.40
Median for NE	**0.16**	**0.28**	**0.17**	**0.20**	**0.28**	**0.19**	**0.25**	**0.36**	**0.35**	**0.22**	**0.23**	**0.60**	**0.38**	**0.35**	**34.1**	**41.35**	**36.65**	**38.75**	**34.35**	**31.30**	**40.55**
NORTH WEST																					
Hargeisa	0.54	0.25	0.14	0.37	0.11	0.68	0.20	0.0	0.2	0.47	0.84	0.18	0.68	0.60	11.4	7.0	10.80	12.80	9.70	12.00	19.90
Burao	0.27	0.05	0.15	0.49	0.04	0.18	0.20	0.0	0.22	0.23	0.00	0.34	0.32	0.40	3.5	9.0	2.90	15.00	17.80	15.60	13.60
Berbera	0.14	0.47	0.40	0.14	0.14	0.32	0.20	0.0	0.00	0.46	0.00	0.00	0.18	0.40	11.5	18.2	6.50	6.40	5.00	5.80	9.80
Median for NW	**0.27**	**0.25**	**0.15**	**0.37**	**0.11**	**0.32**	**0.2**	**0.0**	**0.2**	**0.46**	**0**	**0.18**	**0.32**	**0.4**	**11.4**	**9.0**	**6.5**	**12.8**	**9.7**	**12.0**	**13.6**

Annex 6. Details of the Deyr 2016 IDP assessment sample size, coverage and response rate

Names of IDP's	Survey performance based on HH as sampling unit			Survey performance based on children reached			Second stage sampling methodology	Overall performance (area covered, field execution rate)
	Planned No of HH's	Actual No of HH's reached	HH Response rate	Planned No of children	Actual No of children measured	Response rate for children covered	(Based on HH as sampling Unit)	1= adequate 2= inadequate
South Central zone								
Mogadishu	555	425	77%	581	676	116%	SRS	Adequate
Kismayo	464	421	91%	486	709	146%	SRS	Adequate
Dhobley	504	376	75%	571	512	90%	SRS	Adequate
Baidoa	579	448	77%	552	658	119%	SRS	Adequate
Dolow	504	467	93%	528	695	132%	SRS	Adequate
Dhusamareb	230	225	98%	276	265	96%	Exhaustive	Adequate
Sub total	**2836**	**2362**	**83%**	**2994**	**3515**	**117%**		**Adequate**
Northeast Zone								
Bossaso	491	471	96%	515	712	138%	SRS	Adequate
Qardho	351	325	93%	421	646	153%	Exhaustive	Adequate
Garowe	473	433	92%	496	838	169%	SRS	Adequate
Sub total	**1315**	**1229**	**93%**	**1432**	**2196**	**153%**		**Adequate**
Northwest Zone								
Hargeisa	551	344	62%	577	559	97%	SRS	Adequate
Burao	406	311	77%	425	484	114%	SRS	Adequate
Berbera	487	393	81%	584	480	82%	SRS	Adequate
Sub total	**1444**	**1048**	**73%**	**1586**	**1523**	**96%**		**Adequate**
Total	**5595**	**4639**	**83%**	**6012**	**7234**	**120%**		**Adequate**

Note: SRS= Simple Random Sampling

Annex 7. Color codes used in FSNAU Nutrition Dashboard and in analysis & Presentation – IPC Version 2.0

Color Code used	Acceptable	Alert	Serious	Critical	Very critical
GAM:WHO/UNICEF	<5 %	5-9.9 %	10-14.9 %	15-30 %	>30
SAM:FSNAU	<1%	1.1-2.4%	2.5-4	4-5.6	>5.6
CDR:IPC	<0.5	<0.5	0.5 to <1	1 to <2	>2
U5DR: IPC	≤ 1	≤ 1	1 to 1.9	2 to 3.9	>4
MUAC <12.5:FSNAU	<2%	2-5.5%	5.6-8%	8.1-11%	>11%
MUAC <11.5:FSNAU	<1%	<1%	1-2%	2.1-3%	>3.1
HIS Trends	< 5% - Very Low	5-10% - Low	10-<15% - Moderate and Stable or Low	> 15% Highand Stable	> High and Increasing proportion
Underweight: WHO/UNICEF	<10 %-low	10-19.9%-medium	20-29.9%-high	> 30% -v high	
Stunting: WHO/UNICEF	<20 %-low	20-29.9%-medium	30-39.9%-high	>40% -v high	

Recent publications and releases

- *Post Gu Summary of the Nutrition Situation for Somalia September 20, 2016*
- *FSNAU-FEWSNET Technical Release, September 20, 2016*
- *FSNAU Presentation: Key Findings from the 2016 Post Gu Seasonal Food Security and Nutrition Assessment September 20, 2016*
- *FSNAU Climate Update, October 2016*
- *FSNAU Market Data Update, October 2016*
- *FSNAU Post - Gu Food Security and Nutrition Analysis Technical Report, October 19, 2016*
- *Joint FEWS NET/FSNAU, Somalia Food Security Outlook, November 1, 2016*
- *FSNAU Post - Gu Nutrition Technical Report, December 2016*

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