

Preliminary findings from 2016 Gu season nutrition surveys among Internally Displaced Persons (IDPs) in Somalia

Key Highlights

As part of *Gu* 2016 assessment plan, FSNAU and partners working in Somalia conducted integrated Nutrition and Food security assessments among the 12 Internally Displaced Person (IDP) settlements across Somalia from May 28th to June 3rd 2016. A total of 7 683 children (6-59 months) and 3 710 of women in the reproductive age group (15-49 years) were taken from 4 520 households. The objective of the assessments was to monitor the nutrition situation of these vulnerable IDP population groups as part of FSNAU's biannual surveillance activities. The Standardized Monitoring and Assessment of Relief and Transitions (SMART) methodology was used for the assessment. Sampling was based on Probability Proportionate to Size (PPS) two stage cluster sampling procedure for all assessments except Qardho and Dhusamareeb where exhaustive sampling was used.

Mortality survey was collected at the household level retrospectively within 90 days recall period. While other contextual factors on food security, WATSAN, household and child diversity, maternal health and nutrition data were collected at every Nth Household (skip pattern at every odd numbered household). 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) respectively. 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.

Acute malnutrition in children 6-59 months is a direct outcome indicator of recent changes in nutritional status and sickness. (Map 1 and Annex 7) shows coverage of IDP nutrition situation in *Gu* 2016 among 12 IDP settlements across Somalia (location of IDP's, sample size and response rate).

Critical levels of Global Acute Malnutrition (GAM rate $\geq 15\%$) were observed among six IDPs of 12 surveyed during *Gu* 2016 assessment. These are Dhobley, Baidoa and Dolow IDPs in South-Central regions and Garowe, Bosasso and Galkayo in Northeast region. It is also of a concern to note that nutrition situation in three of these IDPs (Dolow, Garowe & Galkayo) is sustained as Critical since last two years. Serious GAM levels (10-14.9%) were also recorded among IDPs in Mogadishu, Kismayo and Dhusamareeb in South Central region, Qardho IDPs (Northeast) and Hargeisa IDPs (Northwest). Alert level of GAM (5-9.9 %) was seen only among Burao IDPs in the Northwest.

Since *Gu* 2015, a drastic deterioration in nutrition assessment is noted in Bossaso IDP located in Northeast region while malnutrition prevalence in Doble IDP in South Central region showed an improvement from a GAM of 20.7 percent to 17.7 percent. However, the change in prevalence was not statistically significant and it remained as critical in terms of the burden of wasting prevalence.

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Map 1: Gu 2016 IDP Nutrition Assessment Coverage in Somalia based on May-June 2016 Surveys

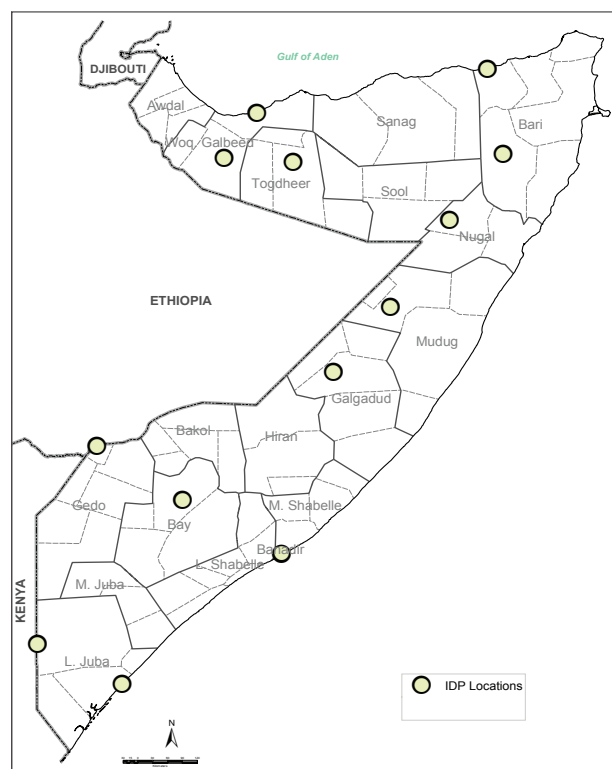
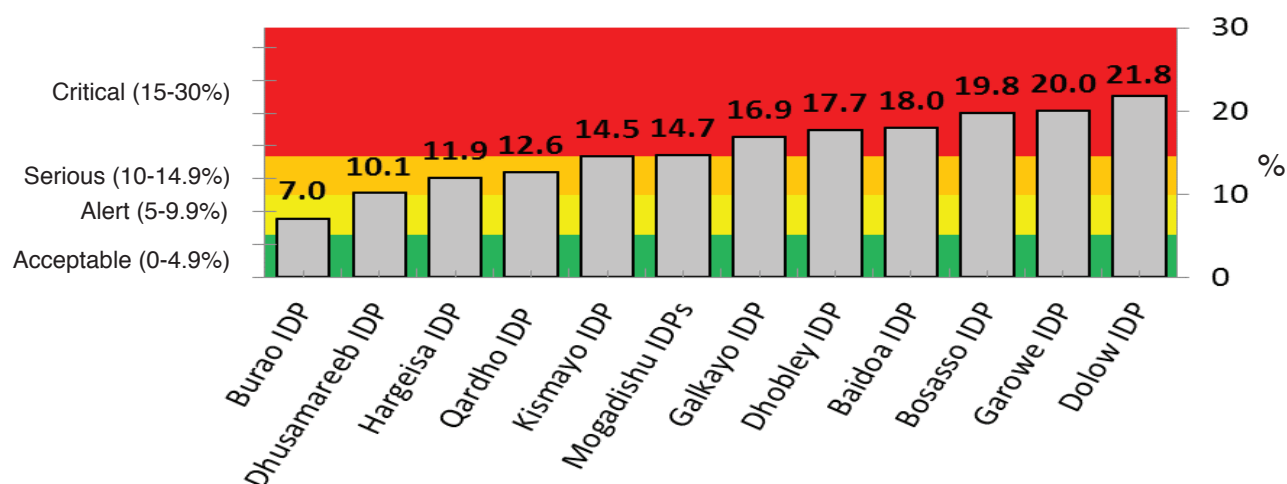


Figure 1: Prevalence of GAM among 12 IDPs in Somalia



The mortality survey took place the same time while anthropometric data from each selected households were being collected. Household selection for mortality also followed the same principles of second stage household selection procedure for anthropometry. In most of the IDP's located in the Northeast and South Central, modified EPI methodology was adopted while for those IDP's in the Northwest, a simple random sampling procedure was adopted. A total of 4 939 households were sampled for mortality survey. 90 days prior to this assessment, there were a total of 544 people registered as in-migration, 741 people registered as out-migration, 293 new birth and 88 deaths. Out of the total 88 deaths, 44 were children under five where the highest number of deaths registered came from IDP's situated in Mogadishu, Kismayo Qardho and Bossaso.

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 among the 12 IDP settlements. Measles coverage and vitamin A supplementation was the lowest in for IDP's residing in Mogadishu, Dhobley and Dhusamareeb. However, coverage estimate was only calculated by asking or taking mothers recall and hence may not represent true estimate.

Figure 2: Gu 2016 Immunization / Supplementation Coverage in Somalia

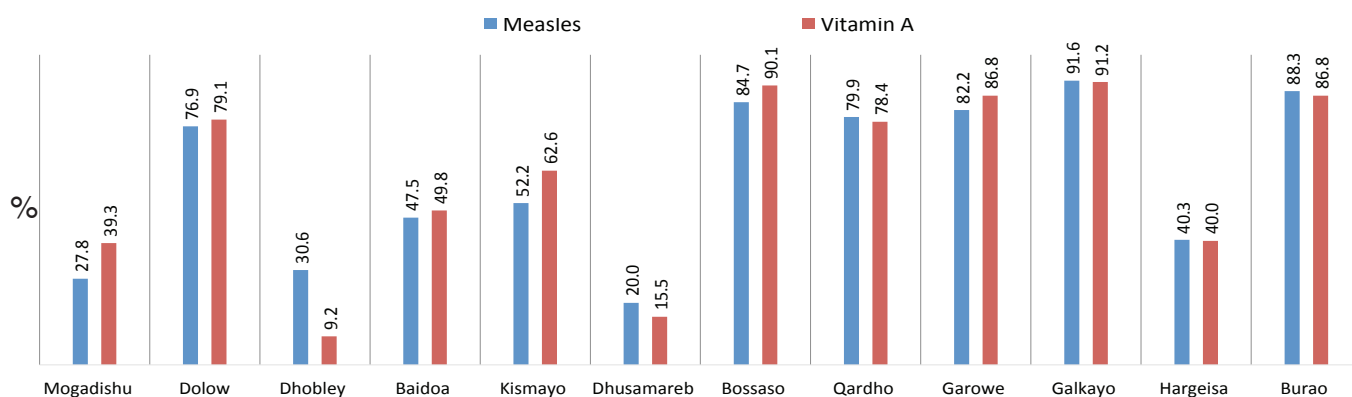


Table 1: Absolute number of malnourished children (Gu 2016)

IDP Settlements	GAM			SAM		
	Gu 2016	Deyr 2015	Gu 2015	Gu 2016	Deyr 2015	Gu 2015
Mogadishu	10850	8400	11000	2500	1850	2450
Baidoa	750	600	650	300	200	150
Dhobley	450	350	550	20	50	100
Kismayo	300	250	250	150	50	50
Dolow	350	400	400	100	100	100
Dhusamareeb	700	800	750	200	100	200
Bossaso	1950	1650	1250	450	300	150
Qardho	50	50	50	50	0	0
Garowe	400	350	300	150	50	50
Galkayo	1550	1550	1900	0	150	450
Hargeisa	1050	1050	900	60	200	200
Burao	350	350	350	100	50	0
TOTAL	18750	15800	18350	4080	3100	3900
% Change		18.7%	2.2%		31.6%	4.6%

Results of *Gu* 2016 assessment suggest that the total absolute number of children affected with Global acute malnutrition and severe wasting among the displaced population were 18 750 and 4 080 respectively (Table 1). This represents a 18.7 percent increase in GAM cases when compared to *Deyr* 2015 but only 2.2 percent increment from *Gu* 2015 findings. The burden of 2016 SAM cases, however, showed an increment by 31.6 percent when compared to *Deyr* 2015 but only 4.6 percent compared to *Gu* 2015.

Conclusion:

The current nutrition situation in the Northeast IDPs residing in Bossaso, Garowe and Galkayo is considered as alarming with Critical levels of malnutrition while a Serious situation in Qardho. The findings also show high morbidity rates which indicate a direct effect on the nutrition status of the children.

IDP's nutritional status located in Baidoa and Dhobley has deteriorated from Serious (*Deyr* 2015) to critical levels while Kismayo IDPs nutritional status remained Serious since *Deyr* 2015. In Mogadishu, the current malnutrition prevalence was categorized as serious. Nevertheless, continuous arrival of new IDPs as a result of the on-going Government eviction plans, limited interventions in the Afgoye corridor, high morbidity, low immunization coverage (< 40 %), outbreak of unconfirmed Chikungunya (clinical signs like dengue fever) might further worsen the current nutritional situation.

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 in Mogadishu, Dhobley, Baidoa in the South central zones and Dhusamareb in the North East zone (Annex 4). The measles coverage in Dhusamareb and Mogadishu was 20.0 percent and 27.8 percent respectively. Consequently, any measles outbreak where these IDP reside will further escalate the morbidity and mortality rate found from the current assessment. Interventions that helps to improve access and provision of health services are crucial in order to rehabilitate the acutely malnourished children and prevent further deterioration.

Recommendations:

In light of the current preliminary findings, FSNAU puts forward the following recommendations:

- 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, Garowe, Galkayo, Doble, Baidoa and Dolow.
- Scale up the existing preventive health programs (routine vaccination program and vitamin A supplementation) in IDP's that have registered high levels of stunting, underweight and under five death rate (U5DR) i.e. Kismayo, Doble, Baidoa, Garowe, Bossaso) [Annex 3,4 and 5].
- Coverage of measles immunization and vitamin A was observed to be significantly below WHO target¹. Mop-up campaigns should be conducted to raise the coverage to reach the targets. Assessments are needed to determine the true coverage rates following immunization campaigns, and to identify the reasons for low coverage.
- For IDPs in Dolow and Mogadishu recommendations from the recent Nutrition Casual Analysis (NCA) on addressing underlying causes should be implemented.
- Similar NCA should be conducted for IDPs that have persistently high levels of acute malnutrition (Bossaso, Garowe, Galkayo, Doble, Baidoa) in order to help inform the design of program interventions aimed at addressing the underlying causes of acute malnutrition in these populations.

¹ WHO recommends an immunization coverage level of >90%

NUTRITION SITUATION AMONG IDPs IN NORTHWEST REGION

Hargeisa IDP: IDP's in Hargeisa registered GAM prevalence of 12.0 percent and SAM prevalence of 1.9 percent in *Gu* 2016 which indicate a sustained Serious nutrition situation in the last 12 months. These trends typically indicate sustained serious level of malnutrition among Hargeisa IDPs (Figure 3).

Burao IDP: the GAM prevalence in Burao was 7.0 percent and SAM prevalence of 0.4 percent indicating Alert nutrition situation reflecting sustained nutrition situation since Deyr 2014/15.

The Crude and under five death rates in Burao IDPs are within the Acceptable WHO/UNICEF levels of <0.5 and <1/10 000/day respectively. This reflect a stable mortality levels since *Gu* 2013 (Annex 6).

Morbidity remains to be a key driver of malnutrition in Somalia due to suboptimal provision of health services even among the IDP population. Morbidity levels in two weeks prior to the assessment ranged from 7.0 percent in Burao IDP to 10.8 percent in Hargeisa IDPs. (Annex 6). These indicate a reduction in the reported morbidity in Hargeisa but a slight increase in Burao from 2.9 percent reported in *Deyr* 2015.

NUTRITION SITUATION AMONG IDPs IN NORTHEAST AND CENTRAL REGIONS

Bosaso IDPs: *Gu* 2016 nutrition assessment in Bosaso IDPs showed a significant deterioration ($p<0.01$) in nutrition situation with Critical levels of both GAM (19.8%) and SAM (4.3%) compared to **Critical** levels of GAM (16.8%) and **Serious** SAM (2.9%) reported in *Deyr* 2015 assessment.

Qardho IDPs: There has been stable nutrition situation in Qardho IDPs for the last four seasons. A total of 546 children aged 6-59 months anthropometry measurement during *Gu* 2016 showed a Serious level of GAM (12.6%) and Alert level of SAM (1.9%). In *Deyr* 2015, similar nutrition situation among Qardho IDPs was recorded with a 10.4% level of GAM (Serious) and 1.1percent level of SAM (Alert).

Garowe IDPs: 570 children aged 6-59 months were surveyed among IDP's of Garowe. The findings showed Critical levels of acute malnutrition (GAM 20.0%) and (SAM 4.3%) in *Gu* 2016. The malnutrition level has sustained as Critical since *Deyr* 2015 (GAM 19.5%) and (SAM 3.8%). High morbidity levels (46.0%) have also been recorded in *Gu* 2016 assessment. Similar results of morbidity seen in previous seasons of *Deyr* 2015 (41.3%) and *Gu* 2015 (46.8%), which can be among the contributing factors of persisting Critical malnutrition level (Figure 5).

Galkacyo IDPs: A total of 707 children aged 6 -59 months were surveyed among IDP's of Galkacyo. The result showed sustained Critical nutrition situation GAM (16.9%) and SAM (3.1%) during *Gu* 2016 nutrition assessment. The current GAM and SAM however, has slightly deteriorated when compared to *Deyr* 2015 GAM (16.5%) and SAM (1.7%) [Figure 6].

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

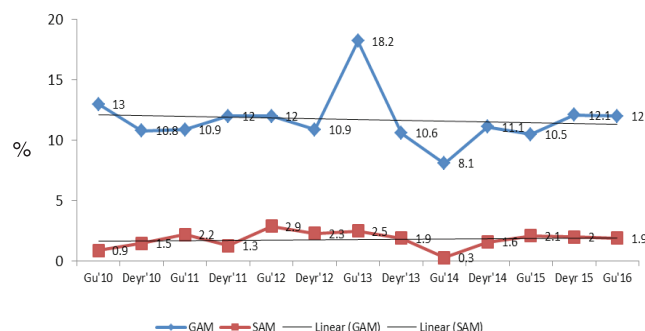


Figure 4: Trends in GAM and SAM prevalence among Bossaso IDPs

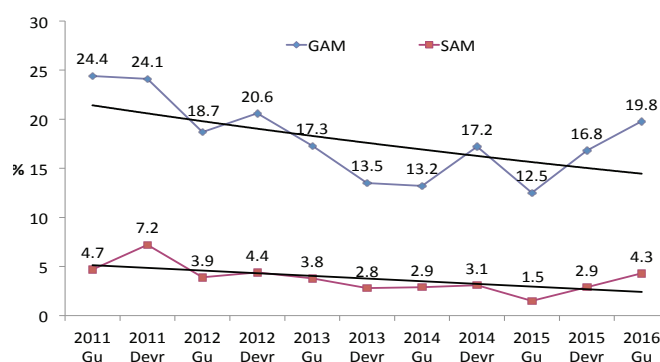


Figure 5: Trends in GAM and SAM prevalence among Garowe IDPs

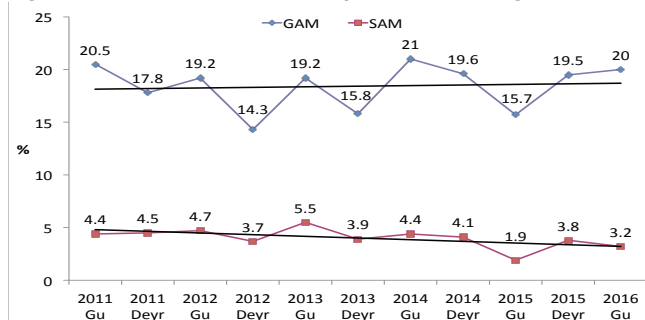
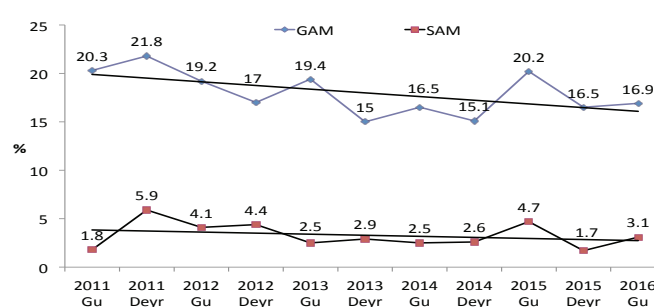


Figure 6: Trends in GAM and SAM prevalence among Galkayo IDPs



Morbidity trends of Galkayo IDPs showed a higher prevalence during the *Gu* season than in *Deyr* which normally has a lower rate by comparison. The current morbidity levels showed a higher (36.7%) morbidity rate as compared to *Deyr* 2015 (24.6%) among children who reported as sick two weeks prior of assessment. The same trend was also observed for *Gu* 2015 (35.9%) as compared to *Deyr* 2014 (23.2%), signaling higher morbidity in *Gu* season than in *Deyr* among IDPs located in Galkayo.

Dhusamareb IDP: Acceptable nutrition situation (10.1% GAM)

and (1.9% SAM) was shown after 382 children were assessed from IDP's of Dhusamareb. *Deyr* 2015 showed Serious (10.9% GAM) and Alert (1.6% SAM), however many of the other indicators including stunting and underweight show significant improvement ($P < 0.01$) compared to the previous season of *Deyr* 2015 assessments (Figure 7 and Annex 4).

The current nutrition situation for IDP's located in the Northeast IDPs indicates nutritional deterioration or critical level of severe acute malnutrition in Bossaso, Garowe and Galkayo IDPs and with a serious level of malnutrition in Qardho IDP. The findings also showed high morbidity rates which affects negatively the health and nutrition status of the children under-fives. Health facility data compiled from many of the regions in North from January to June indicated high admission rates of Malaria, Acute Respiratory Infections (ARI) and measles outbreak. Interventions to improve access and provision of health services are crucial in order to rehabilitate the acutely malnourished children and prevent further deterioration.

NUTRITION SITUATION AMONG IDPs IN SOUTH CENTRAL REGION

Mogadishu IDPs: Results of *Gu* 2016 assessment of IDP's in Mogadishu registered a GAM prevalence of 14.7 percent and SAM prevalence of 3.5 percent which indicate a sustained serious level of acute malnutrition since *Deyr* 2014/15 (Figure 8).

The crude and under five death rates reported were 0.33 /10 000/day and 0.99 /10 000/day respectively in the Mogadishu IDPs, indicating acceptable according to WHO classification, and an improvement from the reported doubling Serious level of under- five death rates (1.50/10 000/day) in *Deyr* 2015 and (1.36) in *Gu* 2015. Main causes of under-five death reported was fever, Diarrhoea and acute respiratory infection (ARI).

No major outbreaks of communicable disease were reported during this period but high morbidity rate of 44.6 percent as compared to last year *Deyr* 2015 of 29.7 percent.

The current Mogadishu IDPs evictions, high morbidity, low immunization coverage (<40%), outbreak of unconfirmed Chikungunya (clinical signs like dengue fever), limited interventions in the Afgoye corridor and arrival of new IDPs are likely to aggravate the nutrition situation.

Dolow IDPs: Critical level of malnutrition among Dolow IDPs has remained since *Gu* 2012. *Gu* 2016 assessment showed Critical prevalence for both GAM (21.8 %) and SAM (4.9%). The SAM prevalence observed in *Gu* 2016 is 4.9 percent lower when compared to *Deyr* 2015 of 6.1 percent suggesting decreasing trend in severe acute malnutrition (Figure 10).

Decrease in both Crude death rates (0.42) and under five death rates (0.45) suggesting Acceptable situation and an

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

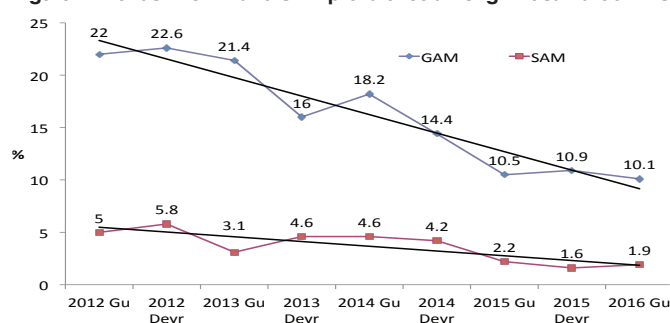


Figure 8: Trends in GAM and SAM prevalence among Mogadishu IDPs

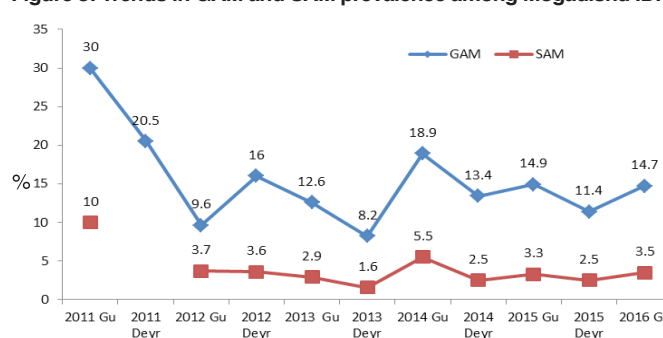


Figure 9: Mortality Trends among Mogadishu IDPs

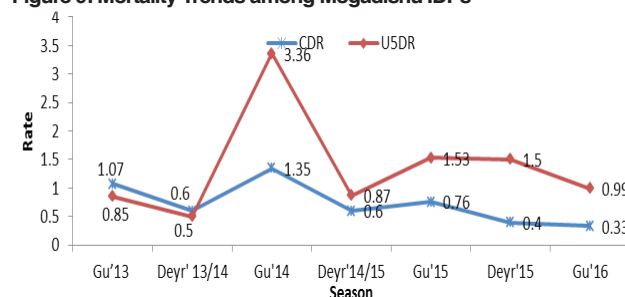
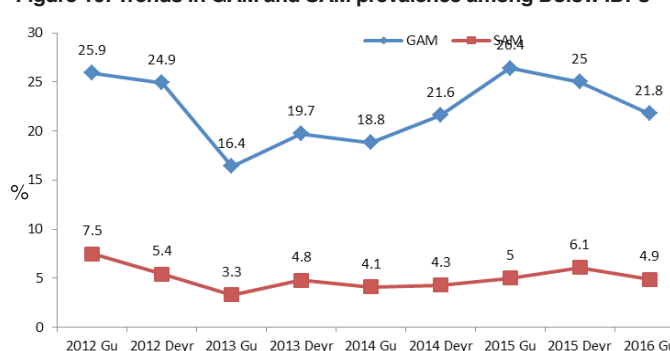


Figure 10: Trends in GAM and SAM prevalence among Dolow IDPs



improvement from *Gu* 2015 when both Serious CDR and U5DR of 0.90/10 000/day and 1.20/10 000/day was recorded (Figure 11).

Morbidity rate 13.4 percent among Dolow IDPs in *Gu* 2016 is lower when compared to 24.3 percent observed during *Gu* 2015 or 36.9 percent noted in *Deyr* 2014/15. High morbidity, Low Immunization coverage, can be attributed to the sustained critical malnutrition situation observed among IDPs of Dolow.

Dhobley IDPs: Anthropometric measurement from 780 children aged 6-59 months revealed Global acute malnutrition of Critical level in Dhobley while SAM prevalence was 3.6 percent. This indicates that there was a deterioration from serious to Critical levels in nutrition situation from *Deyr* 2015 (14.0% GAM).

Alert level of crude death rate (CDR) with (0.60 /10 000/day) and under five death rate (U5DR) with (0.51/10 000/day) was recorded during the 90 days recall retrospective survey in *Gu* 2016.

The overall morbidity reported two weeks prior to the assessment shows sustained high levels (24.6%) in *Gu* 2016 when compared to *Deyr* 2015 (39.6 %).

Baidoa IDP: Anthropometric measurement from 762 children aged 6-59 months indicated a Critical nutrition situation (18.0 % GAM) with SAM prevalence of 4.3 percent (Critical). This shows deterioration from Serious level in *Deyr* 2015 (14.5%). Acceptable levels were recorded for both CDR and under five death rates (0.25/10000/day) retrospectively during *Gur* 2016.

The overall morbidity reported two weeks prior to the assessment shows deterioration (37.4%) in *Gu* 2016 when compared to *Deyr* 2015 (24.2%)

Kismayo IDPs: the prevalence of GAM for IDP's in Kismayo was 14.5 percent i.e. serious however having Critical levels of SAM 4.4 percent. Serious level of malnutrition prevalence has sustained since *Gu* 2015.

Acceptable levels of CDR (0.51/10 000/day) but a Serious levels of U5DR (1.4/10 000/day) were recorded in Kismayo IDPs in *Gu* 2016. In terms of CDR, the situation has remained as alert level since *Deyr* 2015.

The current morbidity which stood as 28.1 percent has not significantly decreased from the one that was reported in *Deyr* 2015 (27.6%).

Figure 11: Trends in CDR and U5DR among Dolow IDPs

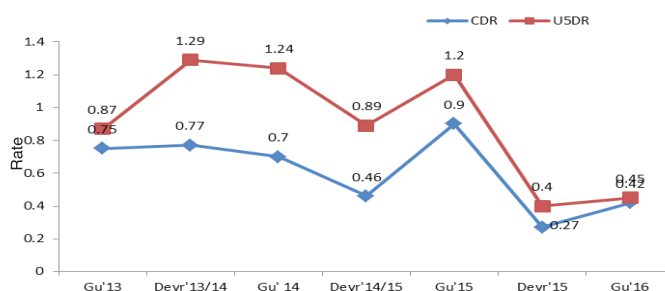


Figure 12: Trends in GAM and SAM prevalence among Dhobley IDPs

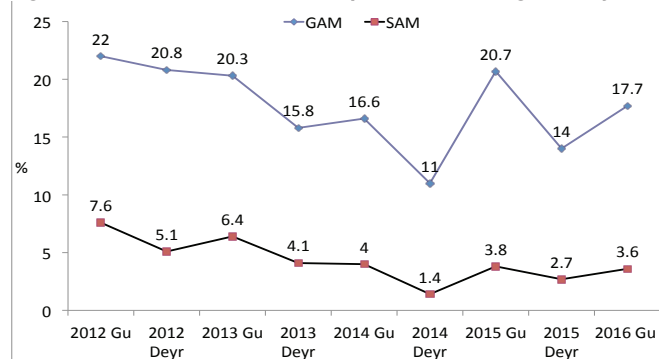


Figure 13: Trends in GAM and SAM prevalence among Baidoa IDPs

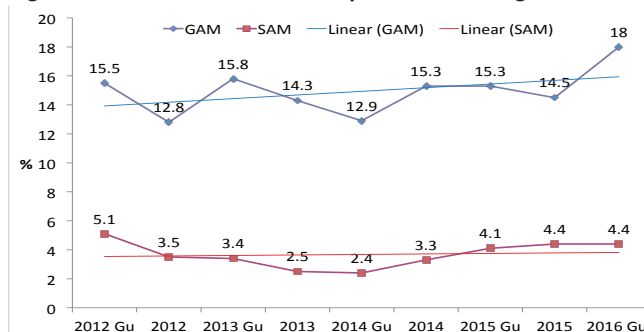
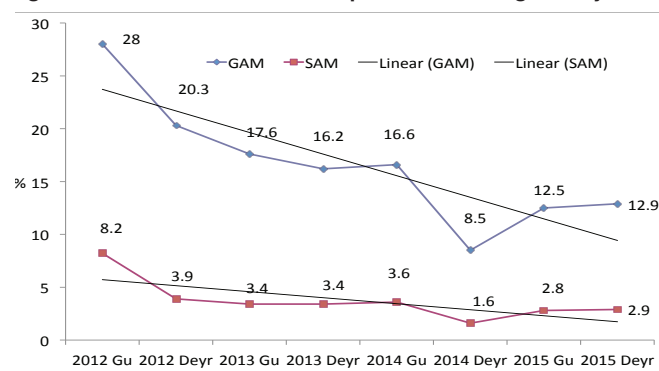


Figure 14: Trends in GAM and SAM prevalence among Kismayo IDPs



Annex 1: Gu 2016 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
LOCATION	NORTHEAST										
Bosasso IDPs	0 (0.2%)	0 (p=0.731)	10 (p=0.000)	0 (2)	0 (6)	0 (5)	5 (1.12)	0 (0.04)	1 (-0.24)	0 (p=0.070)	16%
Garowe IDPs	0 (0.0%)	0 (p=0.586)	0 (p=0.396)	0 (5)	0 (7)	0 (7)	5 (1.15)	0 (0.02)	5 (-0.66)	0 (p=)	10%
Galkayo IDPs	0 (2.4%)	0 (p=0.413)	0 (p=0.640)	0(7)	2 (8)	0 (7)	5 (1.10)	0 (0.00)	1 (-0.27)	0 (p=)	8%
Qardho IDPs	0 (1.5%)	2 (P=0.072)	4 (P=0.003)	0 (4)	0 (3)	0 (3)	0 (0.97)	0 (-0.09)	1 (0.34)	0 (P=)	7%
LOCATION	NORTHWEST										
Hargeisa IDPs	0 (2.4%)	0 (p=0.371)	10 (p=0.000)	0 (5)	2 (9)	2 (8)	0 (1.04)	0 (-0.10)	1 (-0.27)	5 (p=0.000)	14%
Burao IDPs	0 (0.1%)	0 (p=0.110)	0 (p=0.236)	0 (4)	0 (5)	0 (5)	5 (0.87)	1 (-0.36)	3 (0.53)	3 (p=0.004)	12%
LOCATION	CENTRAL										
Dhusamareb IDPs	0 (1.3%)	0 (p=0.282)	0 (p=0.762)	2(10)	2 (10)	2 (9)	0 (1.05)	5 (-0.63)	0 (0.07)	0 (p=)	16%
LOCATION	SOUTH										
Mogadishu IDP	0 (0.9%)	0 (p=0.622)	4 (p=0.024)	0 (2)	0 (4)	0 (4)	0 (1.08)	0 (-0.11)	0 (-0.16)	0 (p=0.090)	4%
Baidoa IDPs	0 (1.2%)	0 (p=0.719)	10 (p=0.000)	0 (4)	0 (7)	0 (5)	0 (1.07)	0 (0.00)	0 (-0.01)	5 (p=0.000)	15%
Dolow IDPs	0 (1.3%)	0 (p=0.475)	2 (p=0.83)	0 (4)	2 (9)	2 (9)	5 (1.11)	0 (0.16)	1 (-0.33)	5 (p=0.000)	17%
Kismayu IDP	0 (2.2%)	0 (p=0.737)	4 (p=0.005)	0 (6)	2 (11)	0 (5)	6 (1.17)	0 (-0.01)	1 (-0.30)	3 (p=0.001)	16%
Dobley IDP	0 (2.0%)	0 (p=0.832)	0 (p=0.600)	0 (3)	0 (6)	0 (6)	2 (1.11)	0 (0.19)	0 (-0.14)	0 (p=0.119)	5%

Annex 2: 2016 Gu IDP Wasting prevalence and trends

IDP Settlements	GAM						SAM					
	Gu 2016	Deyr 2015	Gu 2015	Deyr 2014	Gu 2014	Deyr 2013	Gu 2016	Deyr 2015	Gu 2015	Deyr 2014	Gu 2014	Deyr 2013
SOUTH CENTRAL												
Mogadishu	14.7	11.4	14.9	13.4	18.9	8.2	3.2	2.5	3.3	2.5	5.5	1.6
Dolow	21.8	25.0	26.4	21.6	18.8	19.7	4.9	6.1	5.0	4.3	4.1	4.8
Dhobley	17.7	14.0	20.7	11.0	16.5	15.8	3.6	2.7	3.8	1.4	4.0	4.1
Baidoa	18.0	14.5	15.3	15.3	12.9	14.3	4.3	4.4	3.3	3.3	2.4	2.5
Kismayo	14.5	12.9	12.5	8.5	16.6	16.2	4.4	2.9	2.8	1.6	3.6	3.4
Dhusamareb	10.1	10.9	10.5	14.4	18.2	16.0	1.9	1.6	2.6	4.2	4.6	4.2
**Median for South	16.2	13.5	15.1	13.9	17.4	15.9	3.4	2.8	3.3	2.9	4.1	3.8
NORTH EAST												
Bosaso	19.8	16.8	12.5	17.2	13.2	13.5	4.3	2.9	1.5	3.1	2.9	2.8
Qardho	12.6	10.4	14.0	11.1	12.2	18.5	1.9	1.1	2.2	1.8	1.7	4.9
Garowe	20.0	19.5	15.7	19.6	21.0	15.8	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	18.35	16.7	14.9	16.2	14.9	15.4	3.9	2.3	2.1	2.9	2.7	3.5
NORTH WEST												
Hargeisa	12	12.1	10.5	11.1	8.1	10.6	1.9	2.0	2.1	1.6	0.3	1.9
Burao	7.0	6.4	7.1	9.7	12.4	10.0	0.4	0.4	0.5	0.6	1.8	1.0
**Median for NW	9.45	9.3	8.8	10.4	10.3	10.3	1.15	1.2	1.3	1.1	1.1	1.5

** Median estimate are not weighted

Annex 3: 2016 Gu IDP Chronic and underweight prevalence

IDP Settlements	STUNTING						UNDERWEIGHT					
	Gu 2016	Deyr 2015	Gu 2015	Deyr 2014	Gu 2014	Deyr 2013	Gu 2016	Deyr 2015	Gu 2015	Deyr 2014	Gu 2014	Deyr 2013
SOUTH CENTRAL												
Mogadishu	12.4	14.9	15.7	12.1	16	20	17.2	15.6	18.9	14.3	23	16.6
Dolow	29.1	26.7	23.8	29	26.9	27.1	29.7	29.7	27.8	32.0	26.4	28.5
Dhobley	11.9	9.3	12.1	9.4	10.3	14.9	13.8	9.9	14.2	8.1	12.3	14.5
Baidoa	32.3	26.8	29.7	31.1	41.5	33	30.1	23.6	27.3	26.2	31.6	25.3
Kismayo	38.4	43.8	33.5	38.9	39.8	30.7	29.6	30.1	24.8	23.2	32.8	30.1
Dhusamareb	2.1	14.1	6.8	7.7	12.2	8.4	4.5	11.7	8.9	12.0	17.9	12
**Median for South	20.75	20.8	19.75	20.55	21.45	23.55	23.4	19.6	21.85	18.75	24.7	20.95
NORTH EAST												
Bossaso	21.5	16.3	25.9	32.7	22.8	29.5	26.7	18.9	23.5	29.8	22.6	26.2
Qardho	8.3	10.6	13.4	16.7	16.5	30.9	10.7	9.5	17.4	15.9	18.7	27
Garowe	14.7	27.5	22.8	18.4	22.3	21.4	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	15.15	18.45	19.2	17.55	19.4	25.45	16.65	20.15	20.2	21.05	20.65	24.65
NORTH WEST												
Hargeisa	4.9	5.0	5.2	3.3	4.1	7.1	9.5	9.0	0.9	6.7	7.4	8.6
Burao	0.4	1.8	0.2	9.7	2.1	2.8	1.9	2.7	2.2	3.0	2.7	3.7
**Median for NW	2.65	3.4	2.7	6.5	3.1	4.95	5.7	5.85	1.55	4.85	5.05	6.15

** Median estimate are not weighted

Annex 4: 2016 Gu IDP Immunization/supplementation coverage

IDP Settlements	MEASLES COVERAGE						VITAMIN A SUPPLEMENTATION(6 months prior to the survey)					
	Gu 2016	Deyr 2015/16	Gu 2015	Deyr 2014/15	Gu 2014	Deyr 2013/14	Gu 2016	Deyr 2015/16	Gu 2015	Deyr 2014/15	Gu 2014	Deyr 2013/14
SOUTH CENTRAL												
Mogadishu	27.8	39.5	43.9	47.4	70.8	48.5	39.3	44.1	51.3	52.3	61.2	41.8
Dolow	76.9	61.4	64.2	61.8	71.7	~	79.1	64.7	75.2	66.5	56.4	~
Dhobley	30.6	25.1	39.4	76.9	~	~	9.2	22.3	38.1	41.7	~	~
Baidoa	47.5	41.6	70.1	44.8	40.4	41.5	49.8	48.3	78.1	57.5	51.9	36.9
Kismayo	52.2	49.6	51.1	66.1	51.7	~	62.6	62.9	72.4	61.1	61.8	~
Dhusamareb	20.0	36.5	29.5	33.8	37.8	33.3	15.5	17.5	21.9	33.3	38.2	29.2
**Median for South	39.05	40.55	47.5	54.6	51.7	41.5	44.55	46.2	61.85	54.9	56.4	36.9
NORTH EAST												
Bossaso	84.7	78.9	85.5	88.7	79.2	79.9	90.1	82.2	91.5	93.3	86.0	79.1
Qardho	79.9	42.7	65.2	76.6	58.9	85.9	78.4	25.4	72.8	78.7	56.2	85.9
Garowe	82.2	87.5	91.5	93.8	89.6	57.8	86.8	89.0	93.0	87.7	92.7	62.9
Galkayo	91.6	82.5	81.0	87.1	89.9	89.7	91.2	82.0	85.5	72.0	83.4	91.6
**Median for NE	83.45	80.7	83.25	87.9	84.4	82.9	88.45	82.1	88.5	83.2	84.7	82.5
NORTH WEST												
Hargeisa	40.3	59.4	66.8	67.2	64.8	52.6	40.0	59.4	61.9	77.3	66.6	58.3
Burao	88.3	75.4	88.9	94.5	91.2	75.4	86.8	70.3	90.6	96.6	92.4	86.6
**Median for NW	64.3	67.4	77.85	80.85	78	64	63.4	64.85	76.25	86.95	79.5	72.45

** Median estimate are not weighted

Annex 5: 2016 Gu IDP Morbidity and mortality trends

Mortality rate (90 days recall period)													Morbidity rate (15 days recall period)					
CDR							U5DR											
IDP Settlements	Gu 2016	Deyr 2015	Gu 2015	Deyr 2014	Gu 2014	Deyr 2013	Gu 2016	Deyr 2015	Gu 2015	Deyr 2014	Gu 2014	Deyr 2013	Gu 2016	Deyr 2015	Gu 2015	Deyr 2014	Gu 2014	Deyr 2013
SOUTH CENTRAL																		
Mogadishu	0.33	0.40	0.63	0.60	1.27	0.60	0.99	1.50	1.36	0.87	3.13	0.50	44.6	29.70	39.30	39.10	43.10	37.30
Dolow	0.42	0.27	0.90	0.46	0.70	0.77	0.45	0.40	1.20	0.89	1.24	1.29	13.4	24.30	29.00	36.90	43.30	55.20
Dhobley	0.6	0.52	1.47	1.25	0.46	0.40	0.51	0.98	1.27	1.55	0.95	0.40	24.6	39.60	42.90	34.10	31.40	23.20
Baidoa	0.25	0.28	0.27	0.74	0.69	0.40	0.37	0.10	1.39	1.21	0.76	1.00	37.4	24.20	46.80	45.20	32.30	44.40
Kismayo	0.49	0.47	0.34	0.84	1.28	1.30	1.2	0.69	0.96	2.08	1.42	0.40	28.1	27.60	33.10	62.30	41.20	36.40
Dhusamareb	0.08	0.08	0.64	0.07	0.15	0.10	0.27	0.27	0.50	0.00	0.32	0.00	38.2	28.50	45.60	28.60	30.10	46.50
**Median for South	0.375	0.34	0.64	0.67	0.70	0.50	0.48	0.55	1.24	1.05	1.10	0.45	32.75	28.05	41.10	38.00	36.75	40.85
NORTH EAST																		
Bossaso	0.21	0.26	0.25	0.36	0.32	0.10	0.21	0.27	0.22	0.61	0.40	0.30	34.1	32.00	18.20	30.90	22.80	40.60
Qardho	0.35	0.10	0.34	0.36	0.28	0.40	0.73	0.16	0.83	1.09	0.69	0.90	50.7	46.10	41.60	37.80	52.40	46.40
Garowe	0.4	0.24	0.14	0.20	0.10	0.20	0.49	0.49	0.24	0.59	0.12	0.30	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	0.00	0.10	0.00	0.36	0.40	36.7	24.60	35.90	23.20	29.80	33.40
**Median for NE	0.28	0.17	0.20	0.28	0.19	0.25	0.35	0.22	0.23	0.60	0.38	0.35	41.35	36.65	38.75	34.35	31.30	40.55
NORTH WEST																		
Hargeisa		0.14	0.37	0.11	0.68	0.20		0.47	0.84	0.18	0.68	0.60	7.0	10.80	12.80	9.70	12.00	19.90
Burao	0.05	0.15	0.49	0.04	0.18	0.20	0.22	0.23	0.00	0.34	0.32	0.40	9.0	2.90	15.00	17.80	15.60	13.60
**Median for NW	0.05	0.15	0.43	0.08	0.43	0.20	0.22	0.35	0.42	0.26	0.50	0.50	8.0	6.85	13.90	13.75	13.80	16.75

** Median estimate are not weighted

Annex 6: Details of 2016 Gu IDP assessment sample size, coverage and response rate

Annex 6: Details of 2016 IDP assessment sample size, coverage and response rate

IDP Settlements	Survey performance based on HH as sampling unit			Survey performance based on children reached			Second stage sampling methodology based on HH as sampling unit	Overall performance (area covered, field execution rate) 1= adequate 2= inadequate
	No of Planned HH's	No of Actual HH's reached	HH Response rate	No of planned children	No of actual children measured	Response rate for children covered		
South central zone								
Mogadishu	560	438	78.2%	586	689	118%	Modified EPI	Adequate
Kismayo	549	352	64.1%	575	867	150%	Modified EPI	Adequate
Dhobley	589	504	86%	617	780	126.4%	Modified EPI	Adequate
Baidoa	549	476	87%	575	762	133%	Modified EPI	Adequate
Dolow	508	400	79%	532	628	118%	Modified EPI	Adequate
Dhusamareb							Exhaustive	
Sub total	2755	2384	87%	2885	4108	142%		Adequate
North East zone								
Bossaso	683	463	68%	716	738	103%	Modified EPI	Adequate
Qardho							Exhaustive	Inadequate
Garowe	767	401	52%	804	570	71%	Modified EPI	Adequate
Galkayo	673	446	66%	706	707	100%	Modified EPI	Adequate
Sub total	2844	1622	57%	2982	2561	86%		Adequate
North West zone								
Hargeisa	520	303	58.3%	545	540	99%	SRS	Adequate
Burao	319	211	66.1%	418	474	113%	SRS	Adequate
Sub Total	839	514	61.3%	963	1014	105%		Adequate

Annex 7: Colour Codes Used in FSNAU Nutrition Dashboard and in Analysis and 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-<1	1- <2	2-4.9	>5
U5DR: IPC	<1	1-1.99	2-3.9	4-9.9	>10
MUAC <12.5:FSNAU	<5	5-7.4	7.5- 10.6	10.7-16.7	>16.7
MUAC <11.5:FSNAU	< 1	1-1.6	1.7-2.4	2.5-4	>4
HIS Trends	< 5 - Very Low	5-10 - Low	10-<15 - Moderate and Stable or Low	> 15 High and Stable	> High and Increasing proportion
Stunting: WHO/UNICEF	<20-low	20-29.9-medium	30-39.9-high	>40-v high	
Underweight: WHO/UNICEF	<10-low	10-19.9-medium	20-29.9-high	> 30-v high	

Recent publications and releases

- *FSNAU/ FEWS NET Somalia Livelihood Profiles, 30 June 2016*
- *FSNAU Quarterly Brief, June 2016*
- *West Golis Pastoral Livelihood Zone, Baseline Report, June 2016*
- *FSNAU Nutrition Update, May 2016 - Health facility based nutrition surveillance (Jan-Mar 2016)*
- *Guban Pastoral Livelihood Zone, Baseline Report, May 2016*
- *FSNAU Climate Update, May 2016*
- *FSNAU Market Data Update, May 2016*
- *East Golis Frankincens, Goat and Fishing Livelihood Zone, Baseline Report, May 2016*
- *FSNAU 2015/16 Post - Deyr Nutrition Technical Report, April 2016*
- *FSNAU Post Deyr 2015/16 Food Security and Nutrition Analysis Technical Report, April 2016*

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