

South Sudan Food Security Monitoring

A collaborative activity of FSTS, RRC, MAF, MoH, FAO, WFP, UNICEF and UNHCR

Round 6, February 2012

Highlights

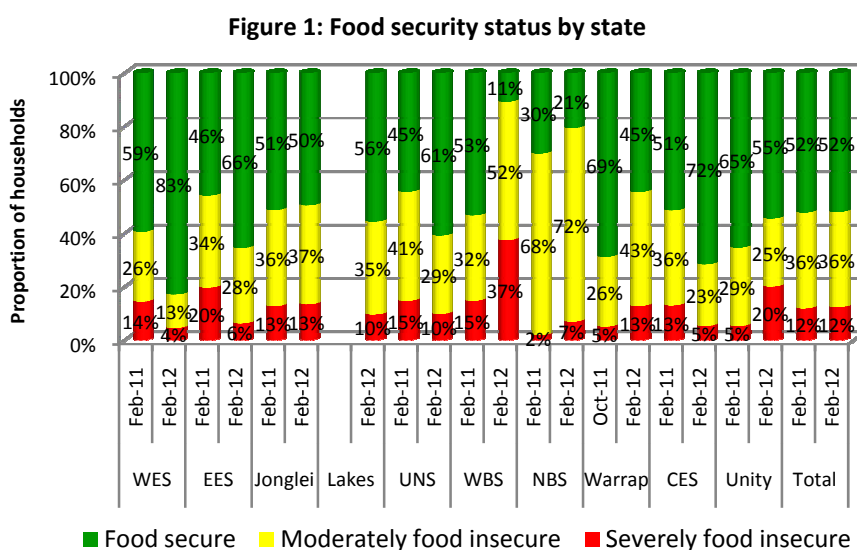
- While overall food security situation remain relatively unchanged, there is a substantial increase food insecure households from February 2011 in border states specifically WBS, Unity, Warrap and NBS. Improvements over the same period were observed in the greater Equatoria states.
- The major food security shocks reported by households in most states were high food prices and human sickness. In addition, insecurity was reported mainly in Jonglei, Lakes, WES and Unity states and delay of rains mainly in WES, WBS and UNS.
- High food prices continue to diminish households' food access in South Sudan particularly in the northern states as well as in Jonglei where sorghum prices increased by more than doubled. Households in these states spend more than 60 percent of their income on food, indicating vulnerability to price increases and income shocks.

Food security situation

During the sixth round of the food security monitoring in February 2012, 12 percent of households were found to be severely food insecure, 36 percent moderately food insecure and 52 percent were food secure (Figure 1). These results are similar to those obtained in February 2011, and in October 2011 where 10 percent were severely food insecure and 37 percent moderately food insecure.

Although the overall food security situation remained comparable to the previous year, there is a significant variation across the states. Substantial deterioration occurred in WBS where the percentage of severely food insecure increased from 15 percent in February 2011 to 37 percent in February 2012 mainly due to high food prices and crop failure because of delayed rains.

The proportion of severely food insecure households also increased in Unity, from 5 percent to 20 percent, and in Warrap, from 5 percent to 13 percent, over the same period. This was mainly due to high food price resulting from reduced supply and insecurity. In the greater Equatoria states, food security has instead improved compared to the same time last year. In EES, however, there was a sudden drop in the proportion of severely food insecure households compared to all previous rounds. One possible reason could be availability of stock in February and improved access as insecurity in the state eased. The proportion of households reporting high food prices have steadily reduced from 67 percent in February 2011 to 63 percent in October 2011 and 54 percent in February 2012. Although Jonglei state witnessed repeated armed conflicts, the food security situation has not changed significantly. This could be a result of the humanitarian assistance provided amidst the conflict. Up to 41 percent of the sampled households in the state received assistance and 29 percent received food assistance. In February 2011, the sample covered mainly IDPs settlement, so results are not comparable. About 11 percent of female-headed and 13 percent of male-headed households were severely food insecure. Nearly 59 percent of the returnees were classified as food insecure, compared to 36 percent for IDPs.



Food consumption

Based on the dietary diversity and the number of days each food type was consumed over the seven-day recall period, 16 percent of the sampled households had poor consumption, 27 percent borderline and 57 percent acceptable food consumption (Figure 2). This is comparable to the result of the third round conducted in February 2011 and consistent with the seasonal pattern. The result also indicates a slight decline of households with acceptable food consumption from 61 to 57 percent. More female-headed than male headed households had poor food consumption (17 and 13 percent respectively). Fewer IDPs had poor food consumption compared to returnees and residents (13, 16 and 15 percent respectively).

There was a significant increase in the proportion of households with poor food consumption in WBS, Unity and Jonglei compared to February 2011. A substantial improvement in food consumption was observed in UNS, EES, CES and WES. However, the situation in WBS and EES require more investigation to explain the unprecedented change in both states. Overall, households consumed staples on average 6.2 days per week, protein (4.5 days) and vegetables and fruits (3.4 days). There were only marginal differences in consumption of staples, vegetables and fruits across different food security groups, while protein, dairy products, sugar and oil were more frequently consumed by food secure households. (Figure 3). The consumption of protein was reduced in February as most livestock have already moved to dry season grazing land compared to October 2011 when livestock were close to homesteads. In February 2011, consumption of protein was at the same level across food security groups because of exceptionally good rainfall in 2010 when the movement of livestock to dry season grazing lands was delayed as water and pastures remained available.

Figure 2: Food consumption category by state

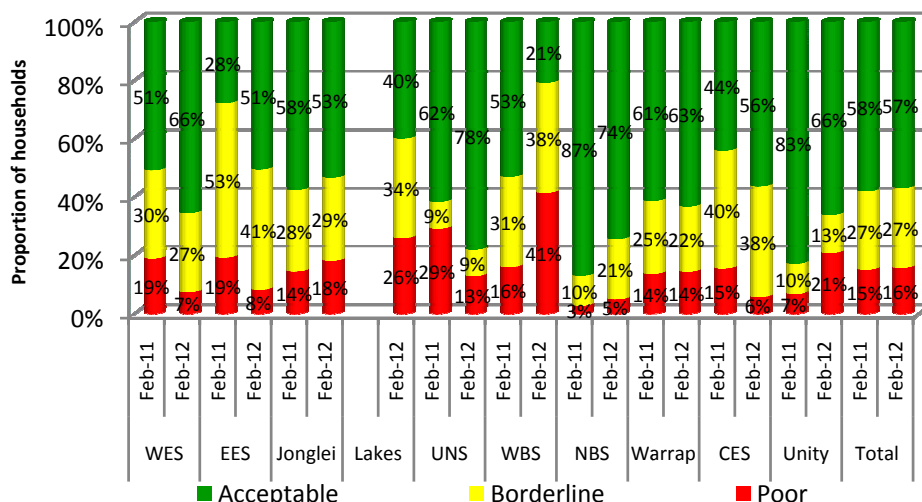
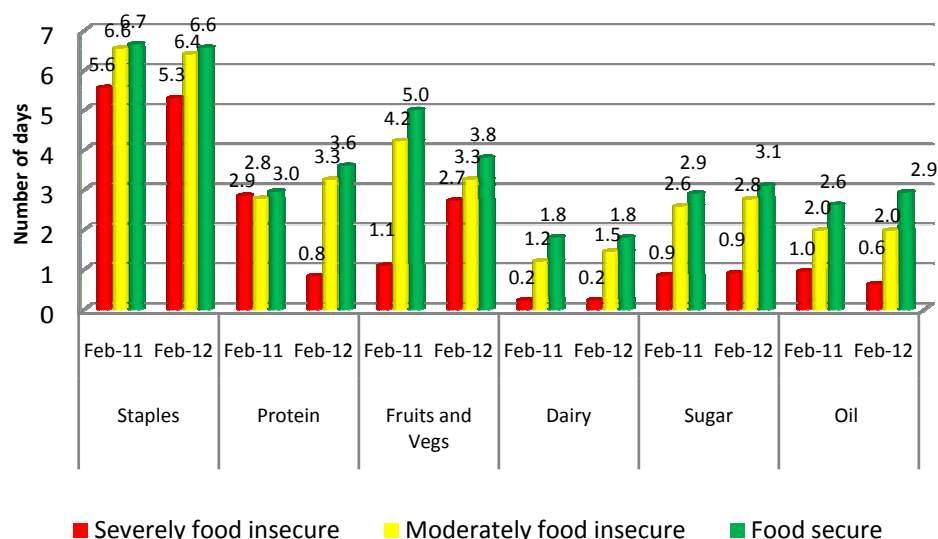


Figure 3: Average food item consumption frequency



Agriculture

About 79 percent of the assessed households cultivated in the 2011 agricultural season although 92 percent expressed interest to cultivate. In February 2011, 81 percent reported having cultivated in the 2010 season. In February 2012, the main reasons cited by households for not cultivating included insecurity and delay of rains. Most households reported late and erratic rainfall. Delayed rains have been reported by 70 percent of households in WES, 41 in WBS and 34 percent in UNS. Despite the widespread insecurity in Jonglei state, 77 percent managed to cultivate though many were displaced thereafter. Being the most important staple crop in South Sudan, sorghum was cultivated by 67 percent of the households in 2011 compared to 69 percent in 2010. Other crops cultivated by households included maize (25 percent), groundnuts (30 percent), sesame (19 percent) and 9 percent cultivated other crops (Table 1). An estimated 90 percent of the households expressed interest to cultivate in the 2012 season.

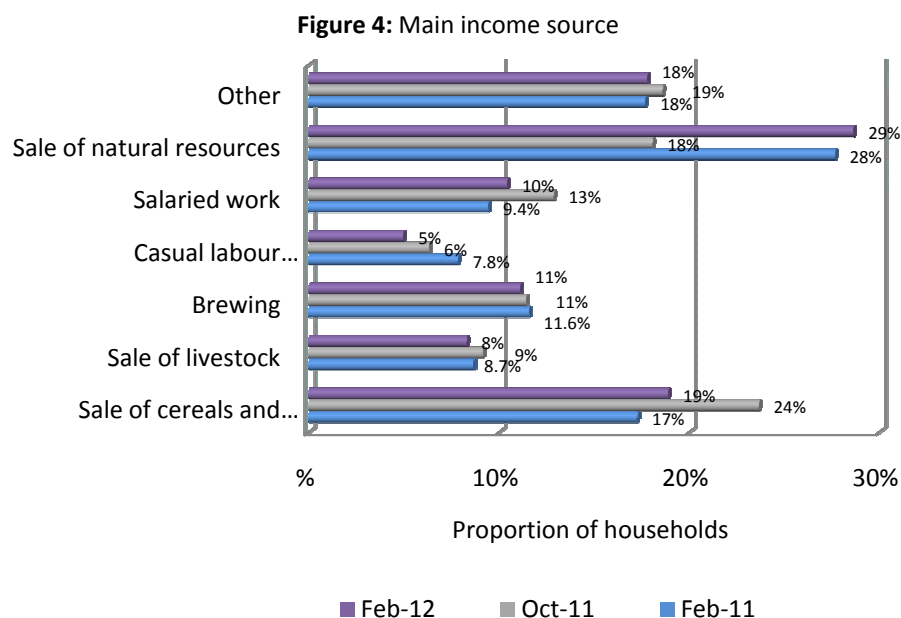
Households involved in cultivation were more food secure than those who do not cultivate. 84 percent of the food secure households cultivated, while 77 percent and 68 percent of moderately and severely food secure cultivated. Generally, food insecure households cultivated only cereals with fewer cultivating pulses but food secure households cultivated more diverse crops. Female-headed households were less involved in cultivation than male-headed households and average land cultivated was also larger among the households headed by males. Only 30 percent of returnees cultivated while 81 percent and 66 percent of residents and IDPs respectively have cultivated.

Table 1: Percentages of households that cultivated various crops

State	Cultivated in 2010 season						Cultivated in 2011 season					
	Any	Sorghum	Maize	G/nuts	Sesame	Other	Any	Sorghum	Maize	G/nuts	Sesame	Other
WES	88%	50%	40%	49%	23%	12%	94%	59%	51%	70%	43%	19%
EES	90%	87%	5%	15%	10%	5%	86%	83%	11%	19%	24%	5%
Jonglei	84%	69%	42%	6%	0%	15%	77%	70%	33%	5%	2%	9%
Lakes	83%	80%	13%	43%	20%	2%	81%	81%	14%	54%	31%	5%
UNS	57%	40%	21%	1%	1%	0%	38%	29%	21%	2%	2%	0%
WBS	76%	70%	12%	44%	31%	8%	73%	60%	12%	52%	30%	11%
NBS	91%	88%	8%	22%	13%	5%	72%	71%	4%	15%	9%	0%
Warrap	93%	92%	23%	33%	19%	6%	93%	90%	11%	25%	11%	4%
CES	86%	71%	39%	47%	34%	19%	89%	72%	48%	58%	31%	33%
Unity	63%	47%	48%	3%	1%	0%	83%	60%	44%	1%	1%	1%
All	81%	69%	25%	27%	16%	7%	79%	67%	25%	30%	19%	9%

Income sources

During February, sale of natural resources seems to be the most important sources for the rural households in South Sudan. About 29 percent of the households reported sale of natural resources as their main income source. This is comparable to the 28 percent in February 2011 but significantly lower (18 percent) in October 2011 which is a typical at the onset of the main harvest. Sale of natural resources and cereals have much more pronounced seasonal variations compared to other income sources such as brewing and sale of livestock. Severely food insecure households rely heavily on sale of natural resources followed by moderately food insecure (46 and 36 percent of households in each group respectively). About 25 percent of the food secure households rely on sale of cereals as the main income source.



Based on their income sources, the proportion of households classified as having poor, medium and good income reliability and sustainability was 36, 35 and 29 percent respectively. In February 2011, 33 percent of the households had poor income reliability, 36 medium and 32 percent had good income reliability. Income sources classified as unreliable include sale of grass, charcoal and firewood, while income sources such as salary and sale of cereals, livestock and petty trade are considered as more reliable income sources.

The highest percent of households with poor income reliability and sustainability was found in NBS (70 percent), WBS (59 percent), Jonglei (48 percent) and Warrap (35 percent). As a composite indicator for food access, poor income reliability and sustainability had a significant impact on households' food access in these states.

Expenditure (income proxy) and purchasing power

Table 2: Relative food expenditure and expenditure on staples

State	Relative food expenditure			Staples expenditure		
	Feb-11	Oct-11	Feb-12	Feb-11	Oct-11	Feb-12
WES	49%	39%	39%	13%	9%	5%
EES	60%	65%	53%	38%	49%	20%
Jonglei	71%	53%	60%	43%	23%	32%
Lakes		52%	49%		33%	28%
UNS	51%	63%	54%	19%	30%	27%
WBS	52%	57%	76%	22%	31%	39%
NBS	68%	63%	72%	26%	35%	45%
Warrap	50%	53%	66%	24%	29%	32%
CES	52%	53%	46%	18%	21%	14%
Unity	53%	53%	61%	27%	26%	47%
All	56%	55%	57%	25%	29%	29%

On food expenditure, there was a slight change from February 2011 to February 2012. However, the proportion of income spent on only staples increased from February 2011 to October 2011 and remained the same in February 2012 (**Table 2**). In Western and Northern Bahr el Ghazal states, households spent as high as 76 percent and 72 percent respectively on food and 39 percent and 45 percent on staples. This is a clear indication that the combined effect of low production and high prices due to border closure have started taking effect especially in the border states. All states except WES, CES and Lakes spent more than half of the total expenditures on

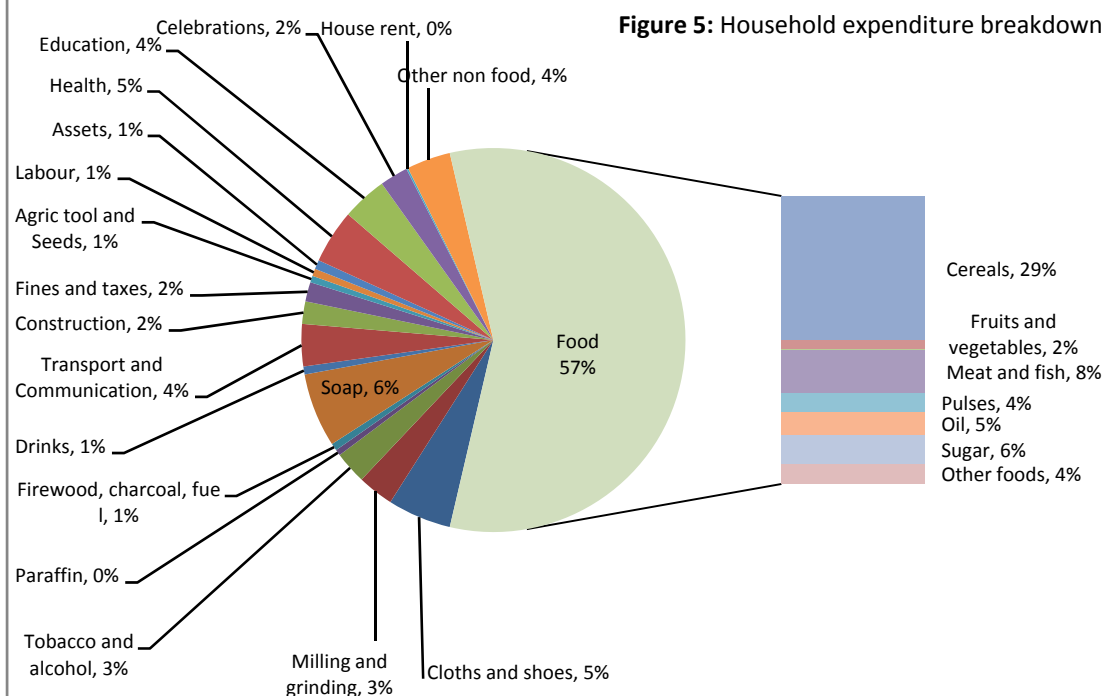
food purchase.

The proportion of households spending more than 65 percent on food increased from 40 percent in October 2011 to 43 percent in February 2012. About 17 percent of the households spent between 50 and 65 percent on food. The highest proportion of households spending highly on food was found in WBS (77 percent) followed by NBS (68 percent). The smallest proportion was found in WES (14 percent).

Almost half (48 percent) of the returnee households spent highly (more than 65 percent) on food compared to residents (43 percent) and IDPs (30 percent). On average, returnees spent 60 percent of income on food, compared to 57 and 49 percent for residents and IDPs respectively. Severely food insecure households spent as high as 76 percent on food, while moderately food insecure households spent 73 percent and food secure households spent 42 percent on food. These percentages are higher than in October 2011 except for food secure. Overall expenditure on staples did

not change significantly when compared to October 2011. However, it increased from 47 percent to 52 percent for severely food insecure and from 38 percent to 39 percent for moderately food insecure households. Amount spent on staples instead reduced from 18 percent to 16 percent for the food secure households. Food secure households' reliance on sale of cereals also indicates availability of stock and hence the reduced expenditure on staples.

During this round, the per capita total expenditure was SSP 2.81 per day. This is similar to October 2011 round which was SSP 2.89 and higher than in February 2011 at SSP 2.1 per day. The average monthly household expenditure during this round (SSP 622) was not significantly different from the October 2011 round (SSP 629) but higher than in February 2011 (SSP 522).



Coping strategies index

Proportion of households that had adopted coping strategies increased from 50 percent in October 2011 to 64 percent in February 2012. This is higher than in February 2011 when 60 percent of the households reported using at least one coping strategy. Increasing number of households using coping strategies is consistent with the seasonal patterns. Increased number of households relied on less preferred foods, limiting portion size, reducing number of meals and particularly remarkable increase of collection of wild foods (**Figure 6**). Households skipping entire day without food also increased.

Although most households are using relatively mild coping strategies that have no potential serious implication on their livelihoods, there is noticeable upward trend of the coping strategy index (CSI)¹. The CSI is particularly high in June followed by February of each year. During this round, the overall CSI for South Sudan was 20 with the highest CSI being in Jonglei state (33) followed by NBS (26), Warrap (25) and Unity state (24). Proportions of households skipping days without food and collecting unusually high amount of wild foods have increased significantly during this round.

About 88 percent of households used mild or no coping strategies (**Figure 7**). The proportion of households using medium to high coping increased from 7 percent in October 2011 to 12 percent in February 2012 but remained smaller than a year ago. The use of medium to high coping strategies is also more common among IDP households (26 percent) than among resident (11 percent) and returnee households (6 percent). In Jonglei and Unity states, more households adapted medium to high coping strategies than in February 2011 while in Lakes, Warrap, CES EES and WES the number of those using medium to high coping has reduced.

Figure 6: Percentage of households that adopted coping strategies

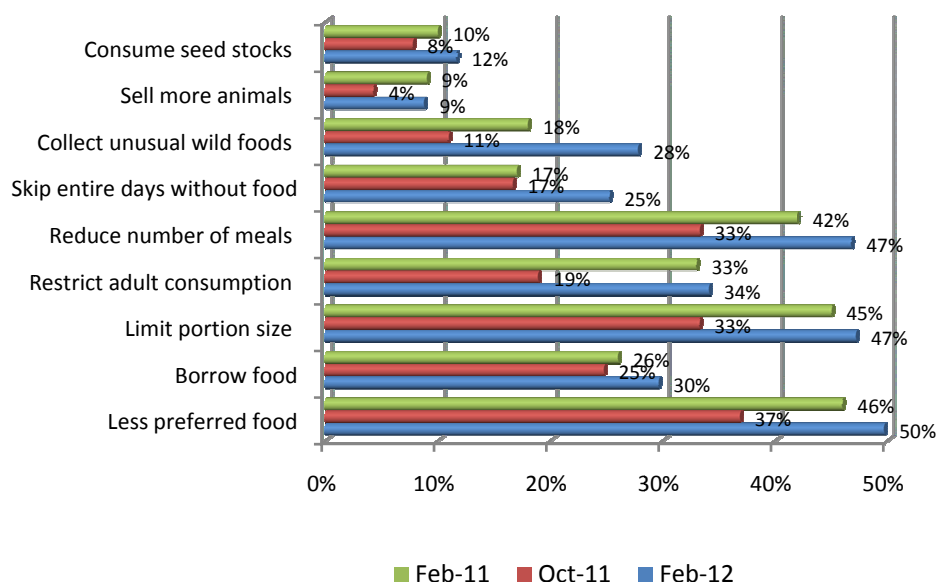
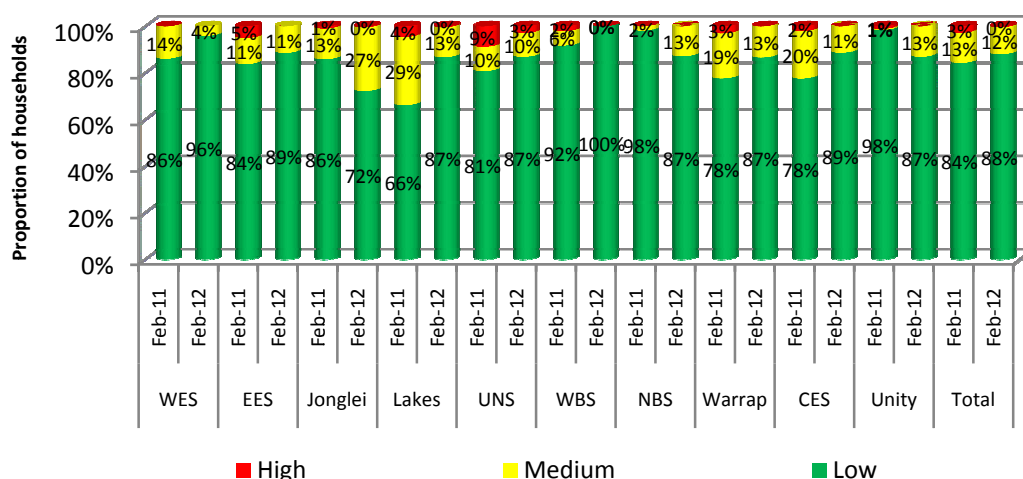


Figure 7: CSI categories by state



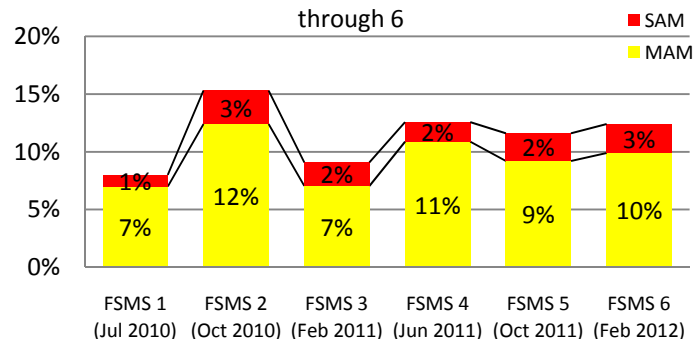
¹ CSI cutoffs: Low (0-50); Medium (51-100); High (>100)

Mid-Upper Arm Circumference (MUAC) and child nutrition

2,235 non-pregnant women of child bearing age were measured for malnutrition by using Mid-Upper Arm Circumference (MUAC) methodology in February 2012. The data shows that 13.2 percent were moderately malnourished (MUAC 210-230mm) and 1.5 percent severely malnourished (MUAC <210mm) translating to a GAM (Global Acute Malnutrition) rate of 14.8 percent. GAM level has increased modestly from the previous two rounds and is almost double the rate from a year ago (7.8 percent GAM in February 2011). The states with highest malnutrition levels on this round were Warrap (23.1 percent), NBS (22.6 percent), WBS (21.9 percent), and Lakes (20.2 percent). GAM increased in every state except CES and UNS since this time last year.

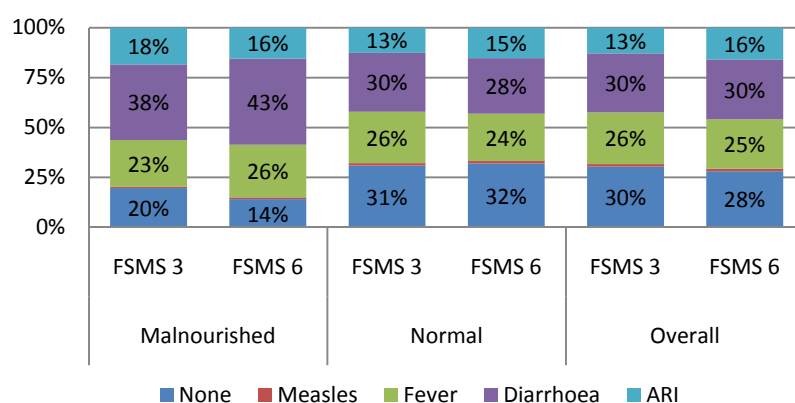
3,373 children between 6-59 months were included in the MUAC measurement. The average GAM prevalence (MUAC <125mm) across the 10 states was 12.5 percent. More specifically, 2.4 percent were severely malnourished (MUAC <115mm) and 9.9 percent moderately malnourished (MUAC ≥115 - <125mm). GAM level increased slightly since the previous round and is higher than the rate from a year ago (**Figure 8**). Unlike last year, the GAM rate did not decrease between October and February rounds, which suggest that June rate may increase even more to over the emergency thresholds. Within states, the prevalence of GAM was very high in Jonglei (31.8 percent) while the rates in WBS (18.5 percent), UNS (17.7 percent), and NBS (14.4 percent) were also above or at the emergency thresholds.

Figure 8: Child malnutrition among FSMS rounds 1 through 6



Dietary diversity information was collected from 2,292 children 6-24 months. Overall, 25 percent of the children 6-24 months consumed food from 4 or more food groups in February 2012, which indicates adequate dietary diversity. This is slightly higher than in February 2011 (21 percent). In terms of seasonality, acceptable consumption improved steadily during 2011 from February (21 percent) towards October (32 percent). In 2012 the starting point is slightly better so the upcoming rounds will show if the consumption will remain better in coming months. Like in February 2011, the dietary diversity based on child nutritional status was better for the non-malnourished than malnourished children (25 vs 18 percent). Among age groups, children >18 months have persistently more diverse diet compared to the younger children.

Figure 9: Child illness in the past 2 weeks, by nutritional status



More than two thirds of all children under 2 years² experienced illness in the past 2 weeks (**Figure 9**), a slight decrease from June and October 2011 (30 and 30 percent, respectively). Illness remains higher among the malnourished and diarrhoea is the main cause of illness with prevalence of 43 percent..

Assistance received

About 21 percent of the assessed households reported receiving at least one form of assistance in the past three months. The highest percentage of assistance was received in Jonglei state (41 percent) followed by UNS (37 percent), EES (22 percent) and WBS (20 percent). Overall, 12 percent received food assistance. Majority of those who received food assistance were found in Jonglei (29 percent), Warrap (18 percent) and EES (16 percent) and UNS (13 percent). Only 3 percent of the assessed households received agricultural tools and/or seeds, whereas 11 percent received vitamin A supplement and 2 percent received other forms of assistance.

² 1,921 children 6-24 months

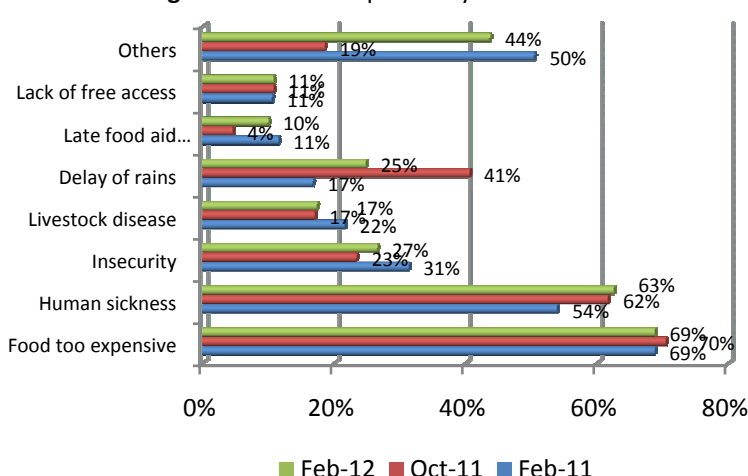
Shocks experienced

High food prices remained the number one shock to most households in South Sudan as inflation continues to take its toll. About 69 percent of households reported high food prices as the major shock, followed by human sickness (63 percent), insecurity (27 percent) and delay of rains (25 percent) (Figure 10).

The frequency of specific shocks varied between

states. Insecurity was reported by 83 percent of the households in Jonglei state, 61 percent in Lakes and 31 percent in Unity state. High food price was reported in all states with the highest being in NBS, Warrap, WBS and UNS. High prevalence of human diseases was also reported in NBS (86 percent), Unity state (75 percent), WES (72 percent), Lakes (70 percent), Warrap (68 percent), CES (68 percent) and WBS (65 percent). Delay of rains was frequently reported in WES (70 percent), WBS (41 percent), UNS (34 percent) and Lakes (19 percent).

Figure 10: Shocks reported by households



Demographics

- During this round, 2,456 households were interviewed from 98 sites (10 sites per state except in Warrap where 8 sites were assessed).
- Female-headed households represented 45 percent of the sampled population.
- Average household size was 7.7 persons.
- The residential status of the sampled households are:
 - 93.4 percent residents
 - 3.5 percent returnees
 - 1.9 percent IDPs

Methodology

Selection of the sentinel sites as the first stratum was purposively done to represent various livelihood zones. A total of 10 clusters were selected from all the ten states and 25 randomly selected households were interviewed from each site. One community/key informant questionnaire and two trader checklists (where applicable) were administered at each site to provide supplementary information.

During the sixth round, all ten states; WES, EES, Jonglei, Lakes, UNS, WBS, NBS, Warrap, CES and Unity were included in the monitoring system. However, two sites in Warrap state were not assessed due to insecurity.

Food consumption was derived using a seven-day recall period and the food items were weighted based on their nutritional value to establish a food consumption score that classifies the households having either acceptable, borderline or poor food consumption.

Food access was obtained by combining households' income source/reliability and relative expenditure on food. Food consumption, food access and coping strategies were combined to obtain food security indicator.

The coping strategies index was derived from the severity and the frequency of the coping strategies applied by households in the last seven days prior to the assessment. More severe coping strategies are often those with irreversible effects on the households' livelihoods. Based on this, households have been categorized as having low, medium and high coping.

State abbreviations

Western Equatoria (WES), Eastern Equatoria (EES), Central Equatoria (CES), Upper Nile (UNS), Western Bahr el Ghazal (WBS), Northern Bahr el Ghazal (NBS)

For additional information, please contact Juba.VAM@WFP.org

The FSMS partners:



The FSMS Partners

During the FSMS round six, the following partners also actively participated in data collection and qualitative analysis.

Acronym	Agency full name
RCSO	Residence Coordinator's Support Office
CDOT	Catholic Diocese of Torit
KUCDA	Kueng Community Development Agency
APAD	Aweil Programme for Agriculture Development
WVI	World Vision International
UNKEA	Upper Nile Kalaazar Eradication Agency
NPA	Norwegian People's Aid
NCDA	Nasir Community Development Agency
LDA	Lead Development Agency
JAM	Joint Aid Mission
ADRA	Adventist Development and Relief Agency
WVSS	World Vision South Sudan
Oxfam Intermon	Oxfam Intermon