

South Sudan Food Security Monitoring

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

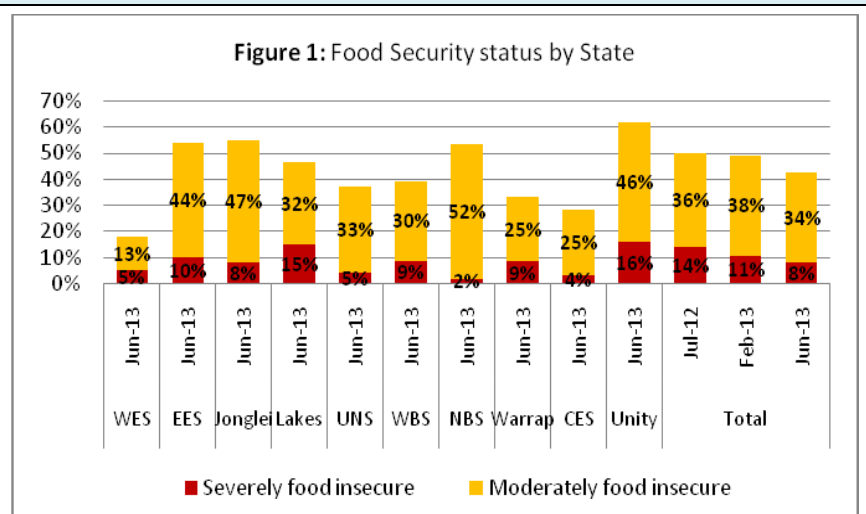
Round 10, June 2013

Highlights

- The food security situation is currently showing improvement compared to the same period in 2012. Current findings show that about 8 percent and 34 percent of the households are severely and moderately food insecure respectively. However, the findings also show deterioration in food security situation within some areas especially in Unity State, eastern parts of Eastern Equatoria and Lakes, areas that are experiencing drier-than-normal conditions characterized by erratic rainfall coupled with prolonged dry spell. Moreover, there is persistent and worsening localized food situation in Pibor County, South east of Jonglei State where populations are affected by fighting between state and non-state armed actors and resurgence of inter-communal clashes. Food access indicators (limited and unreliable income opportunities and poor purchase power) rather than food consumption are shown as the main drivers of food insecurity during the current period.
- Market is the main source of food as reported by 57 percent of the assessed households, as would be expected during the lean season. The highest market dependence is reported in the northern border areas that also experience irregular trade inflows due to unpredictable political relations between South Sudan and Sudan. Furthermore market prices are already increasing, consistent with the expected seasonal patterns, though still much lower than the 2012 levels when the country was faced with persistent trade disruptions with Sudan since 2011. The current rise in prices is also moderated by renewed inflow of commodities from Sudan, although the observed upward price trend may continue due to constrained physical access to markets as the rainy season progresses.
- Malnutrition rates using MUAC measurements <12.5cm is estimated at 11 percent although Jonglei, Unity, Warrap and Lakes States shows serious to critical levels ranging from 14 percent to 21 percent. Both Lakes and Unity States also indicate the highest levels of poor food consumption scores, which may explain the relatively higher levels of malnutrition.
- The findings highlight the continued vulnerability of IDPs and returnee communities due to structural problems as well as the precarious situation of northern Border States of Unity, Warrap, NBS and conflict prone Jonglei State¹.
- Precarious food security situation is projected in the coming months—explained by the expected poor accessibility during the rainy season, poor first season harvest during to delayed rains and uncertain relationship with Sudan as relates to oil trade.

Food security situation

The findings from the June 2013 FSMS shows that 8 percent and 34 percent of households are severely and moderately food insecure respectively. This indicates an overall improvement in the food security situation during compared to the same period in 2012. In June 2012, severely food insecure was 14 percent. Compared to the current year, 2012 was characterized by harsh economic situation following the ban in oil production and strained border relations with Sudan that severely affected the food security situation. However, since April 2013, oil production has resumed while trade flows including that of food commodities from Sudan has improved thereby moderating the seasonality affects.



¹ The estimated food insecurity levels are presumed lower than the acute since the sites most affected by displacement (Pibor and Pochalla counties) were not accessible during the data collection.

The state by state analysis also shows a reduction in prevalence of severe food insecurity for most states (**Figure 1**) except Unity (16 percent), Warrap (9 percent), Lakes (15 percent) and EES (10 percent), all with levels above the national average (8 percent) and almost similar levels as the same period in 2012. Despite a reduction in the proportion of SFI households, the proportion of MFI still remains high on average at 34 percent, implying that most South Sudanese are still vulnerable to further decline in food security in case of a minor shock.

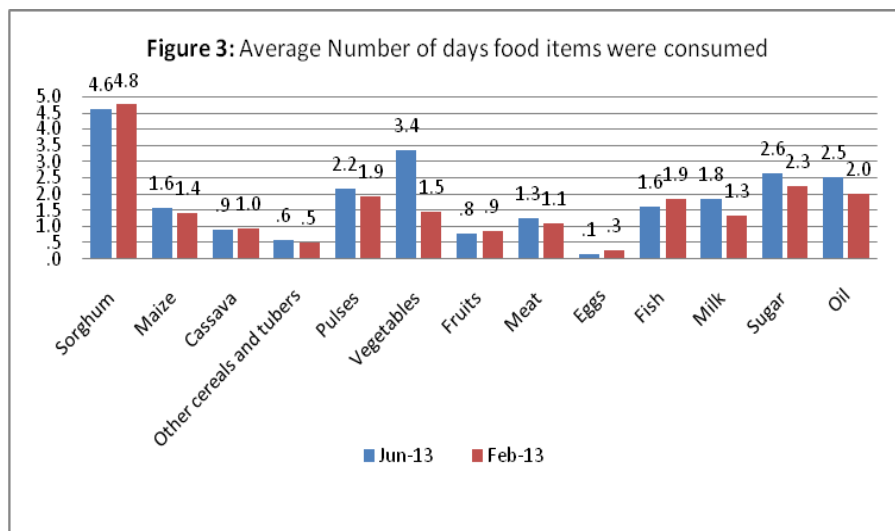
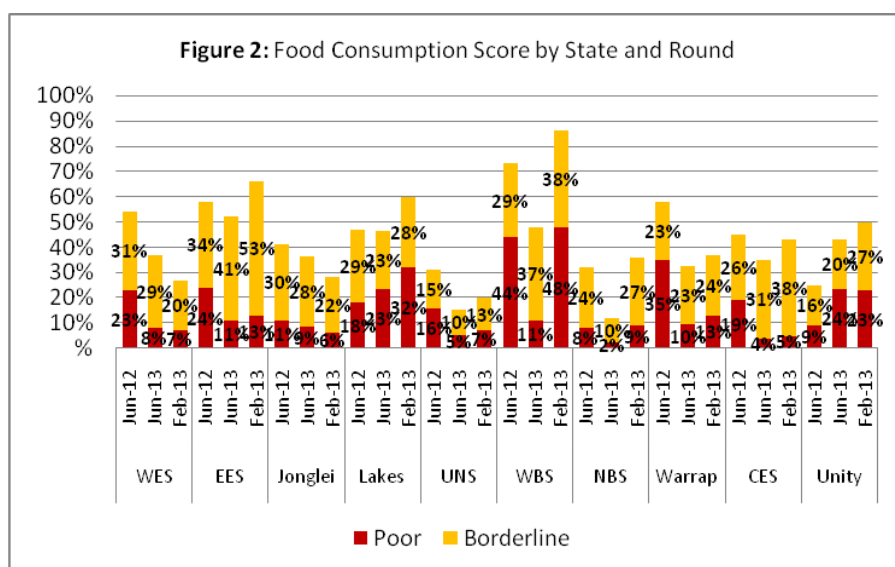
Analysis by residential status also indicates that IDPs are worse-off with 36 percent severely food insecure followed by returnees (29 percent) compared to only 8 percent severe food insecurity amongst residents. Female-headed households showed higher levels of severe food insecurity (13 percent) than Male-headed households (7 percent). Regionally, EES has the highest level of food insecurity within the Greater Equatoria (**Figure 1**). In Greater Upper Nile, Unity State is the most affected while Lakes State has the highest levels of severe food insecurity in Greater Bahr El Ghazal. The drivers of food insecurity during the period are related to food access issues (a combination of diminished livelihood sources—mainly depending on unreliable and unsustainable income sources coupled with increasing food prices) rather than food consumption.

Food consumption

Food consumption score (FCS) is derived from the 7 day recall period for a variety of food items eaten by a households. Currently, 11 percent and 24 percent of households indicate poor and borderline food consumption scores respectively. This shows an improvement compared to June 2012. About 21 percent had poor food consumption while 27 percent had borderline food consumption in June 2012.

The improvement in food consumption is reported in virtually all the states (**Figure 2**). For instance, in WES and WBS the proportion of households with poor food consumption reduced from 23 percent and 44 percent in June 2012 to 8 percent and 11 percent by June 2013 respectively. Improved food consumption is attributed to relatively good intake of diversified household diet as a result of early green harvest in some states, especially in the Equatorias. Milk consumption during this period also improved as livestock moved closer to homes compared to June last year which also faced some delays in on-set of rains. The positive changes in food consumption score partly explains the current observation of improved food security situation in the country. Equally notable is the relatively high levels of poor food consumption in some states especially Unity States (24 percent from 11 percent in June 2012) and Lakes (23 percent from 18 percent in June 2012), areas that are also showing compromised food security levels.

Cereals as a staple food item continues to be the most consumed (6 days in a week) followed by vegetables (3.4 days), pulses (2.2 days), milk (1.8 days) and meat (1.3 days) (**Figure 3**).



Consistent with the lean season, markets are currently the primary source of food commodities. Specifically, 66 percent for cereals, 57 percent for pluses and 83 percent for oil/fats are currently obtained from markets. Upper Nile state has the highest dependence on markets for sorghum (96 percent), followed by Unity (84 percent), EES (75 percent), Jonglei and Lakes (individually at 73 percent). With exception of UNS, the rest of the states with high dependence on markets also depict extremely compromised food security, a manifestation of low purchasing power that limits their ability to obtain adequate quantity and quality for their consumption. Own production as a source of food items currently accounts for 21 percent for cereals, 33 percent for pulses, 38 percent for vegetables and 43 percent for dairy products. However, in WES (a state with consistent surplus production over the last three years), about 71 percent of households rely on own production of cereals, 60 percent for pulses, 90 percent for vegetables.

Agriculture

In the February 2013, respondents were asked whether they intended to cultivate in the new season. An overwhelming majority (91 percent) said they would cultivate. In June 2013, it was confirmed that many households actually cultivated their main crops. About 74 percent cultivated sorghum, 62 percent planted maize, 55 percent groundnuts and 41 percent cultivated sesame (**Table 1**) Cultivation of sorghum is least reported in Upper Nile and Western Equatoria States (only 34 percent and 43 percent respectively) but most reported in Warrap and WBS (over 90 percent). On the other hand, households reporting maize cultivation were highest in Warrap, WES and CES (more than three-quarters in any of these states). Groundnuts cultivation was also more commonly reported in WES, Lakes and WBS (at least three-quarters of the households) while sesame was mainly reported in Warrap and NBS (**Table 1**).

There was erratic rainfall experienced in June as well as delays in onset of the rainy season especially in Greater Bahr El Ghazal and parts of Eastern Equatoria. This somehow influenced perceptions of respondents on crop conditions across the country. Overall, about 40 percent of households mentioned that crop condition was relatively good while 28 percent said it was fair. However, some 31 percent of households mentioned that crop condition was poor. The highest proportions of households indicating poor crop conditions were in UNS (71 percent), EES (47percent), Lakes (40 percent), WBS (35 percent), Jonglei (36percent), and Unity (33 percent). Should the perceptions hold, households' access to food through own production and therefore food security situation will be greatly impacted most parts of the country. The States that have experienced either delayed rains or erratic rainfall pattern also reported high levels of severe food insecurity, namely EES (10 percent), Lakes (14 percent) and Unity (16 percent). EES also indicated higher perception of poor crop performance in the first season of the year.

Table 1: Percent of households that cultivated various crops

State	Intended to cultivate in 2013 season						Cultivated in 2013 season				
	Any	Sorghum	Maize	G/nuts	Sesame	Other	Sorghum	Maize	G/nuts	Sesame	Other
WES	98%	64%	62%	91%	45%	42%	43%	76%	77%	46%	71%
EES	86%	90%	18%	35%	18%	8%	75%	22%	27%	35%	50%
Jonglei	85%	67%	41%	4%	0%	7%	76%	65%	5%	4%	30%
Lakes	94%	95%	22%	72%	18%	2%	86%	57%	84%	55%	41%
UNS	74%	62%	52%	1%	1%	1%	34%	47%	10%	6%	15%
WBS	92%	88%	31%	83%	55%	28%	88%	62%	86%	42%	71%
NBS	92%	94%	6%	32%	10%	1%	100%	52%	50%	72%	49%
Warrap	97%	99%	31%	46%	32%	2%	96%	88%	73%	70%	78%
CES	95%	86%	70%	79%	53%	32%	63%	73%	73%	35%	70%
Unity	97%	65%	74%	16%	10%	1%	73%	79%	45%	22%	47%
All	91%	82%	40%	45%	25%	11%	74%	62%	55%	41%	53%

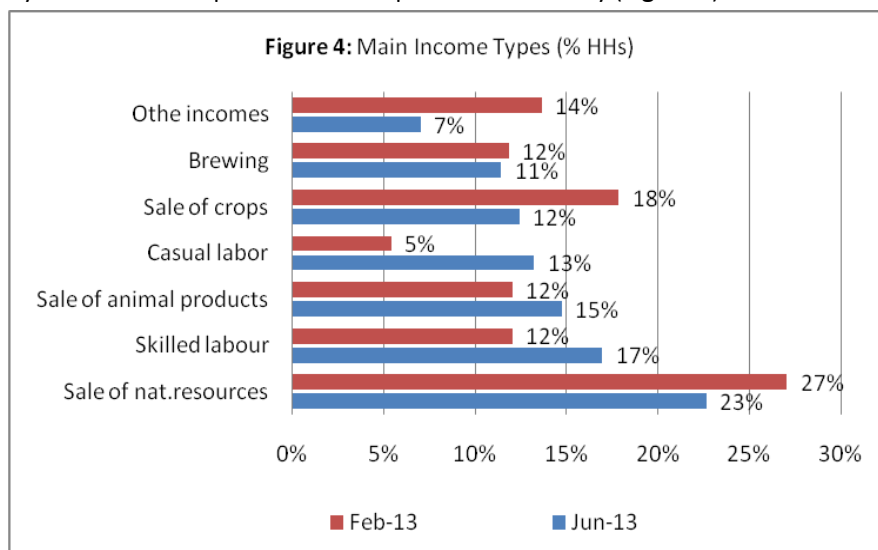
Income sources

The assessment noted changes in income opportunities available to households since February 2013. Households that depend on sale of natural resources reduced from 27 percent in February 2013 to 23 percent in June while sale of crops reduced from 18 percent to 12 percent during the same period. On the other hand, reliance on skilled labour increased from 12 percent in February 2013 to 17 percent in June, casual labour from 5 percent to 13 percent and sale of animal and animal products, a distress coping

mechanism among pastoral communities, also slightly increased to 15 percent from 12 percent in February (Figure 4).

Some 31 percent of households reported poor income sustainability and reliability while another 39 percent have medium income sustainability and reliability. These proportions are similar to those observed during the same period in 2012. More female headed households (38 percent) than male headed households (29 percent) have poor income reliability and sustainability. The IDPs also experienced the highest prevalence of income unreliability (71 percent) followed by returnee households (52 percent) whereas only 30 percent of Residents households had poor income source reliability and sustainability.

Over-reliance on natural resource-based incomes such as collection/sale of firewood and charcoal burning remains a major problem and may have a negative impact on the environment and food security if not well managed. The severely food insecure households reported higher levels (55 percent) of poor income reliability and sustainability than the food secure (16 percent). Unreliable income sources limit the ability of the affected household's access to food. This explains why resident households with fairly reliable and sustainable income sources are relatively less food insecure compared to IDPs and returnees.



Expenditure (income proxy) and purchasing power

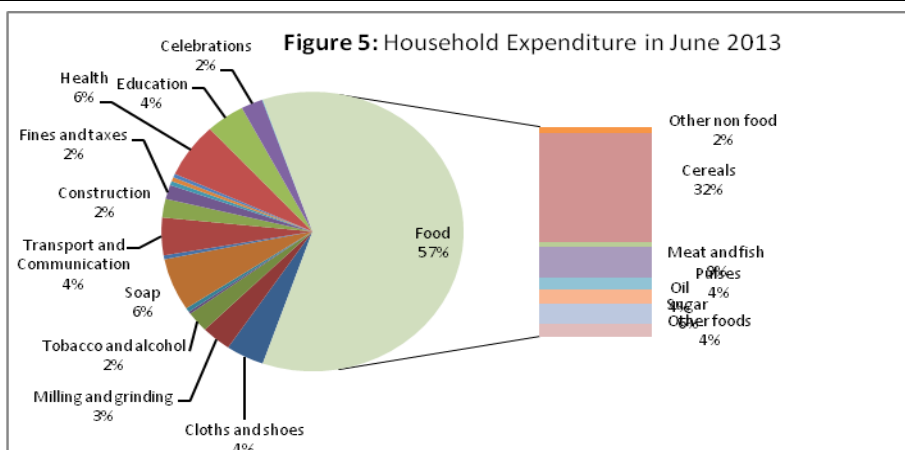
In June 2013, 43 percent of households showed high expenditure shares on food (i.e. they spent above 65 percent of their income on food) compared to 46 percent during the same time in 2012 indicating a slight decrease by 3 percent. Overall, households allocated 57 percent of their expenditure on food with at least 34 percent of the overall expenditure on cereals alone. This is slightly lower (by 3 percent) than average expenditure allocation on food in June 2012. There were variations across regions with regard to expenditure

Table 2: Relative expenditure on food and staples

State	Relative food expenditure			Staples expenditure		
	Jun-13	Feb-13	Jun-12	Jun-13	Feb-13	Jun-12
WES	39%	41%	45%	9%	9%	16%
EES	57%	59%	56%	38%	39%	40%
Jonglei	69%	67%	66%	46%	38%	39%
Lakes	59%	62%	61%	43%	49%	43%
UNS	57%	62%	60%	32%	31%	31%
WBS	53%	58%	64%	25%	29%	36%
NBS	65%	69%	76%	38%	41%	55%
Warrap	61%	61%	61%	39%	28%	46%
CES	51%	48%	49%	26%	15%	21%
Unity	65%	58%	54%	50%	41%	42%
All	57%	59%	60%	34%	32%	37%

shares on food. For instance, the highest expenditures on food were observed in Jonglei (69 percent), NBS (65 percent), and Unity (65 percent) while the lowest expenditures on food were witnessed in WES, a region with surplus production in the last season. Most WES residents may still be having some stocks from previous harvest minimizing their need to purchase food. This is corroborated with findings on sources of food which indicates higher reliance on own production within WES.

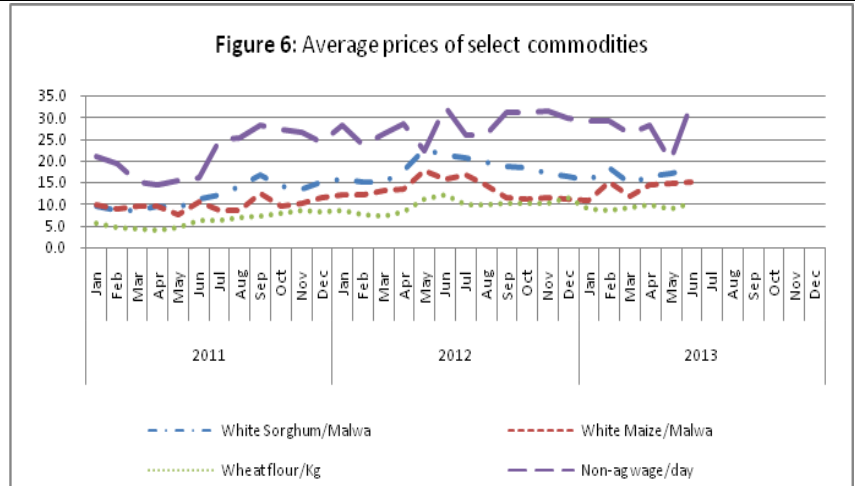
As shown in Table 2, Unity state reports the highest expenditure on staple (50 percent)



followed by Jonglei (46 percent), Lakes (43 percent) and EES (38 percent) while the lowest expenditure on staples was in WES (9 percent). As shown in **Figure 5**, other major expenditure at household level include: health (7 percent), detergents (6 percent), transport and communication (5 percent) and education (4 percent). Expenditure on non-food items was highest in WES (61 percent) but lowest in Jonglei (31 percent). Specifically, expenditures on transport was highest in UNS (8.6 percent), medical expenses were highest in Warrap (22 percent) and while expenditure on education was highest in NBS (29 percent). Both severely food insecure and moderately food insecure households spent very high proportions on food at 73 percent and 77 percent respectively compared to only 18 percent of the food secure households. Such high expenditures on food restrict households from diversifying their diets and spending on other essential needs like health, education etc thus making them even more vulnerable.

Market conditions

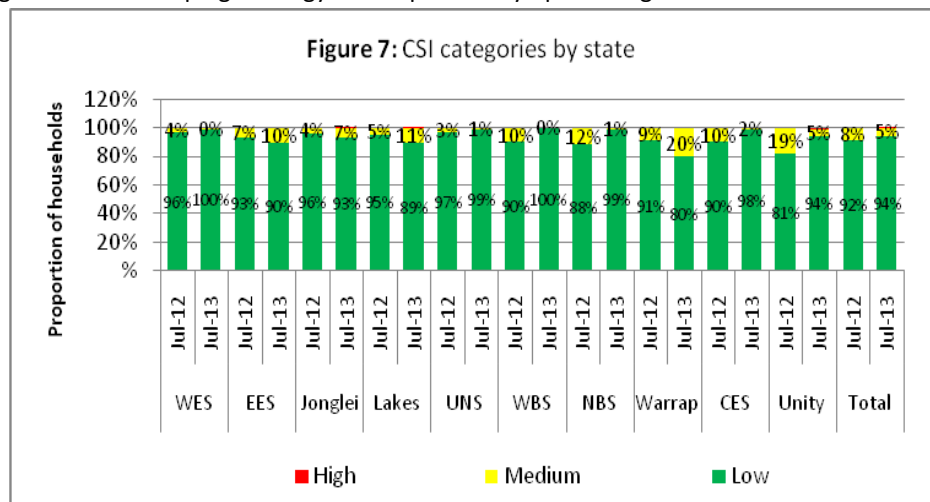
South Sudan market situation is characterized by high food prices, low inter-market linkages and generally poor market integration due to deplorable road conditions worsened during the rainy seasons. White sorghum, a staple food commodity in South Sudan consumed by majority of the population as well as maize and wheat flour have all witnessed a rise in market prices. The price pattern of white sorghum and other major food items are indicating an upward trend in recent months though still lower than the same period last year with exception of Wau and Aweil markets. Increased informal trade between Sudan and South Sudan following the decline in tension between the two countries since March 2013 could explain the less dramatic rise in food prices compared to 2012.



Prices are, however expected to increase as the rainy season progresses due to seasonal decline in trade flow as the road conditions deteriorate. On the other hand, casual labour wage rate in the non-agricultural activities shows a sharp increase between June and July 2013 (**Figure 6**), an observation that could derail increased crop productivity as agricultural labourers could shift their labour to other sectors that are better paying.

Coping Strategy Index

About 55 percent of households reported using at least one coping strategy in the past 7 days preceding the assessment. Overall majority of households used low coping (94 percent) while those with medium coping and high coping strategy indices (CSI) were only 5 percent and 1 percent respectively.

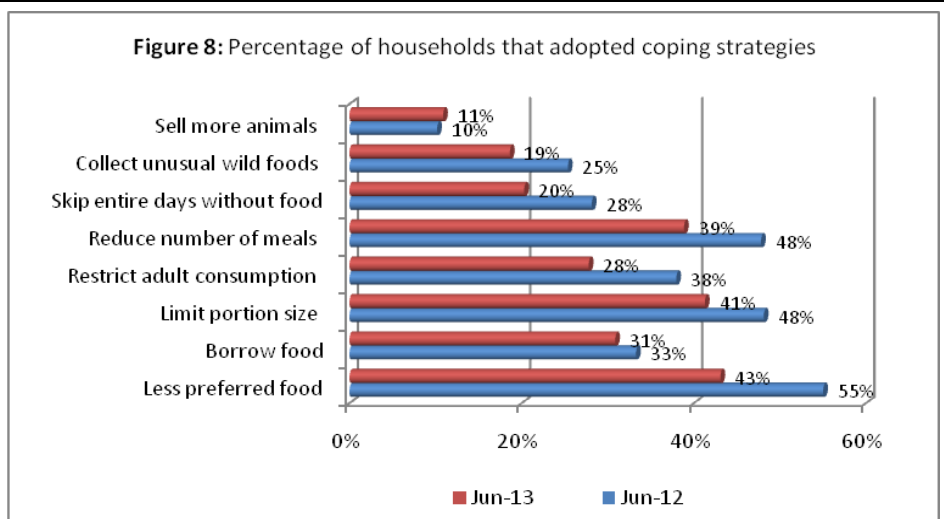


Compared to June 2012, there is no major difference in the level of coping (**Figure 7**). The CSI among male and female headed households also showed no significant difference with just 7 percent of female headed households compared to 5 percent of the male headed reporting medium coping indices.

The results further shows that while 21 percent of IDPs have medium to high coping strategy indices, only 9 percent of residents have the same characteristic. The commonly used coping strategies include eating less preferred and less expensive foods (43 percent), limiting portion size at meals (41 percent), reducing the number of meals eaten per day (39 percent), borrowing food from relatives/friends (30 percent) and skipping the entire days without meals (20 percent) (**Figure**

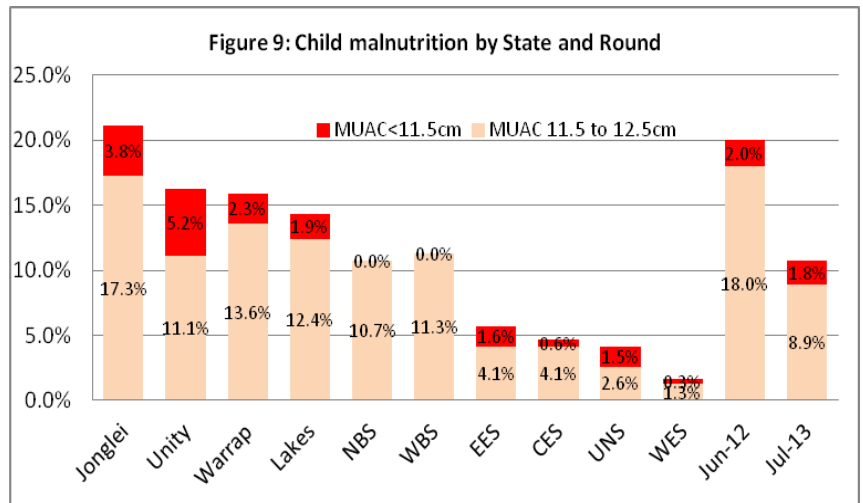
8). Distress sale of animals was reported at 5 percent with variations across pastoral states. Unity state was more likely to have sold animals in order to acquire food as reported by 23 percent of households followed by Warrap (14 percent), EES (9 percent) and Upper Nile (7 percent) respectively.

Compared with June 2012, there is a reduction in the use of adverse coping strategies such as limiting portion size at meals, skipping entire days without meals and reducing the number of meals eaten in a day. Although June/July is usually the peak of the lean season when food security is most precarious, it appears households could still manage to survive using less severe coping mechanism, a consequence of improving food security condition.



Mid-Upper Arm Circumference (MUAC) and child nutrition

Some 11 percent of 3,087 children aged 6-59 months measured in June/July 2013 assessment (Figure 9) are acutely malnourished according to MUAC thresholds of MUAC <125mm for Acute Malnutrition. This shows a significant improvement from a high acute malnutrition rate of 20 percent (based on MUAC measurements) in June/July 2012 but remained similar to prevalence in February 2013. In the previous assessments, acute malnutrition using MUAC measurements have peaked around June but gradually decline to its lowest in October before rising again in February. Severe acute malnutrition using MUAC cut-off of < 115mm is 1.8 percent, almost similar to same period in 2012 but significantly higher than the levels in February this year, a confirmation of the lean season deterioration. Among the states, the highest prevalence of acute malnutrition (based on MUAC) was reported in Jonglei, Unity and Warrap (all reporting rates more than 15 percent) closely followed by Lakes State while the lowest prevalence is recorded in the WES, UNS and CES, a similar trend witnessed in previous rounds. Severe acute malnutrition is highest (5 percent) in Unity State and also elevated in EES, possibly due to drier than normal weather conditions which has impacted on food access amongst the pastoralists.

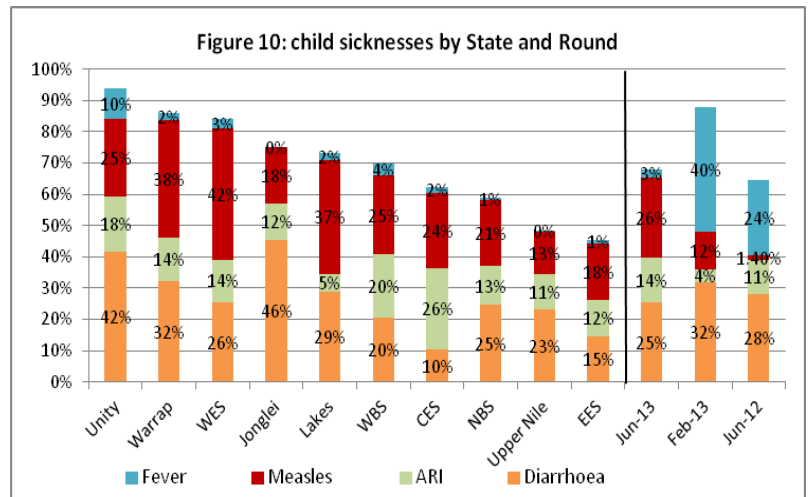


A total of 2,083 non-pregnant women aged between 15 and 49 years were measured, of whom some 10.4 percent were acutely malnourished based on MUAC <230mm while 1.6 percent were severely malnourished (MUAC <210cm). These rates represent an improvement from the June 2012 that showed a prevalence of 20 percent and 2 percent for overall acute malnutrition and severe acute malnutrition among women respectively, though worse than the levels observed in February 2013. Malnutrition amongst women showed similar pattern in geographical disparity as underfives with the highest prevalence of acute malnutrition among women recorded in Unity, Warrap and Lakes (each reporting more than 15 percent) while the lowest was recorded in WES and CES (<3 percent).

Of the 2,336 children aged 6-24 months surveyed, 52 percent were still breastfeeding with variations across states: The Bahr el

Ghazals and CES reported the highest percentage (over 70 percent) while Unity, Lakes and UNS reported the lowest occurrence of breastfeeding at less than 45 percent. Some 29 percent of the under 2s had adequate dietary diversity (consumed 4 or more food groups), an improvement from the 19 percent and 20 percent reported in June 2012 and February this year respectively. The most consumed foods by 6-23 months are cereals/tubers (70 percent) while the least consumed were eggs (13 percent). It is also recommended that children under 2 should have daily intake of meat and vitamin A rich vegetables and fruits. Vitamin A-rich vegetables were consumed by 33 percent of 6-23 months children, ranging from 19 percent (Unity and Lakes) to 63 percent and 56 percent in WES & CES respectively. Proportions of under 2s reporting intake of meat ranged between 20 percent (Lakes) and 73 percent (WBS).

About 29 percent of the children under 2 years had experienced illness in the two weeks preceding the assessment. There was minimal variation across states with exception of Warrap and Jonglei where 64 percent and 42 percent of the children had suffered from some illness respectively. Overall, diarrhoea, measles and respiratory infections are the most common childhood diseases (**Figure 10**) though with variations across the country: Diarrhoea was more frequent in Jonglei and Unity but least frequent in Central and Eastern Equatoria. Incidences of measles were highest in WES and Warrap but lowest in Upper Nile. Respiratory Infections are however, highest in Central Equatoria. Childhood illnesses are found to be highly correlated to acute malnutrition with a child suffering from any of the illnesses about 2.7 times more likely to have been severely malnourished and 1.9 times more likely to have been moderately malnourished.



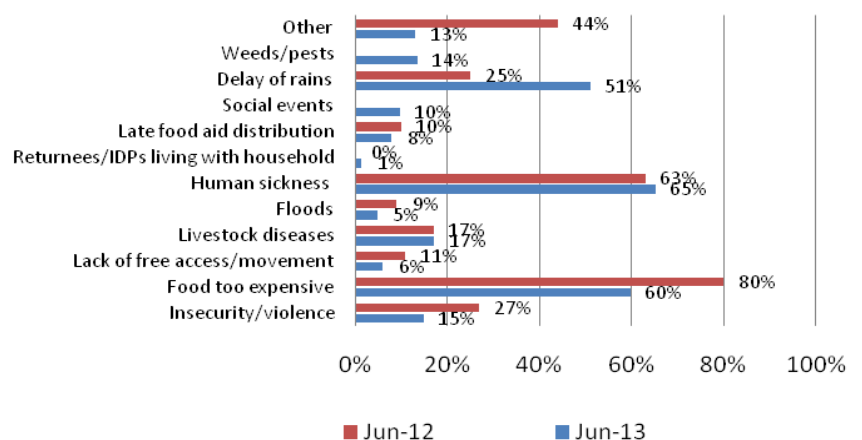
Assistance received

The June 2013 findings indicate that 33 percent of households received at least some form of humanitarian assistance while 32 percent received food assistance in the three month preceding the assessment. Humanitarian assistance with seeds and tools was received by 9 percent of assessed households while vitamin A supplements was received by 39 percent. Vitamin A supplementation was most received in Warrap (80 percent), NBS & CES (each at 72 percent), and UNS (54 percent). Lowest recipients of Vitamin A supplementation were in Unity (2 percent) and Lakes (12 percent). The highest proportion of recipients of seeds and tools was CES and Warrap (27 percent) while the lowest was Unity (5 percent) with Lakes and EES each reporting 6 percent. About 17 percent of the assessed households reported receiving other forms of humanitarian assistance e.g. NFIs, shelter etc.

For households that reported receiving food assistance, the main modalities of assistance are: General Food Distribution (53 percent), Food For Asset (23 percent), nutrition (20 percent) and Food For Education (4 percent). WFP and their cooperating partners are the main providers of food assistance.

A state by state analysis of food assistance received shows that food assistance was more likely to have been received in Jonglei (75 percent), NBS (62 percent), WBS (57 percent), EES (42 percent) and Lakes (41 percent) but least likely to have been provided in WES (22 percent), Warrap (13 percent), Unity (9 percent) and CES (8 percent). This points to relatively good targeting as the most food insecure states were

Figure 11: Shocks reported by Households in July 2013 compared with June 2012



more likely to have been provided with food assistance compared to those that are less food insecure.

Shocks experienced

Human sickness (65 percent), high food prices (60 percent) and delayed rains (51 percent) were the main shocks reported by households during the June 2013 FSMS assessment (**Figure 11**). The persistently high food prices as a shock to households in the last three years is partly due to volatile market conditions for key food items occasioned by dependence on imports that are prone to uncertainties associated with long road transportation in addition to the suspicions related to trade relations with Sudan. Incidences of specific shocks however, vary between states. For example, insecurity is more likely to have been reported in Jonglei State as indicated by 63 percent of the households while human sickness were more commonly reported in WBS (82 percent), WES (76 percent) and CES (72 percent). Delayed rains which also included its erratic nature were more likely to have been reported in Lakes State (83 percent), EES (80 percent) and WBS (70 percent). High food prices are high across all states although highest in Warrap (86 percent), Unity (79 percent) and UNS (70 percent), states bordering Sudan.

Demographics

- During this round, 2,533 households were interviewed from 96 sites (10 sites per state except in Jonglei where 6 sites were assessed and Upper Nile 9).
- Female-headed households represented 20 percent of the sampled population.
- Average household size was 7.5 persons.
- The residential status of the sampled households was as follows: 97 percent residents, 2 percent returnees and 1 percent IDPs

Methodology

Data collection was undertaken in 21st June to 4th July 2013 while data entry and processing was undertaken from July 10th to 15th. 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 each of the ten states and 25 randomly selected households were interviewed from each site. One community/key informant questionnaire and one trader checklists (where applicable) were administered at each site to provide supplementary information. In the tenth round, all ten states; WES, EES, Jonglei, Lakes, UNS, WBS, NBS, Warrap, CES and Unity were included in the monitoring system. However, five sites (four in Jonglei and one in Upper Nile) states were not assessed due to insecurity and inaccessibility.

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.

Food security is a composite indicator that includes information on food consumption (Food Consumption Score), coping strategies (Coping Strategy Index), relative expenditure on food and reliability and sustainability of income sources. By cross tabulation of these indicators, households are classified into three food security groups: *severely food insecure, moderately food insecure and food secure*

State abbreviations

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

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The FSMS partners:

