

## South Sudan Food Security Monitoring

A collaborative activity of FSTS, RRC, MARF, MoH, MOEST, FAO, WFP, UNICEF, UNHCR, WVI, SSRCS, NPA, GAA, World Concern, Plan International, SCC, JAM, LDA, UCDC and NCDA

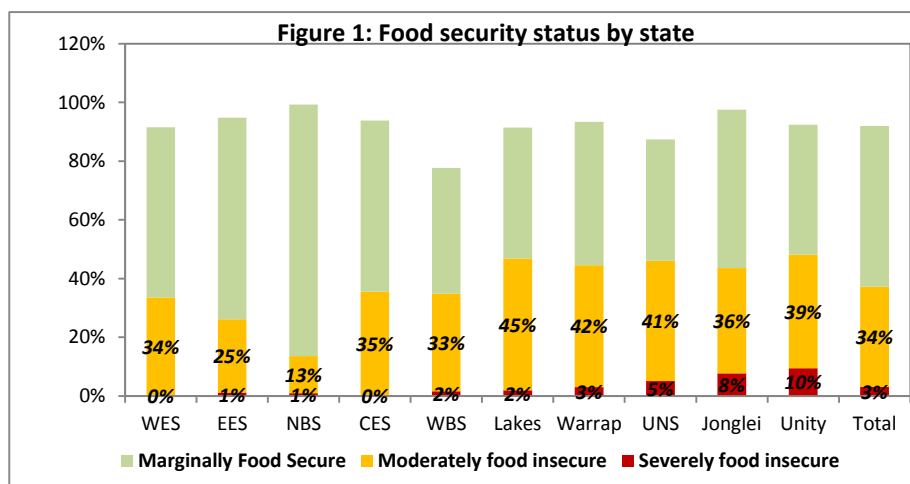
Round 13, July/August 2014

### Highlights

- Food security across the country continued to show improvement according to seasonal trends with this better situation expected to continue through December 2014 in areas not affected by conflict. Normal rainfall, good crop performance, and the start of the green harvest in late August are contributing positively to the seasonal availability of crops, livestock products and fish.
- However, due to displacement planting in Greater Upper Nile has been reduced, which will impact overall cereal production and lead to faster stock depletion and food insecurity remained severer than normal in most of Jonglei, Upper Nile, and Unity states. Conflict continued to uproot and displace households, preventing many from planting and forcing them to sell off assets and livestock for food. Even though consumption levels had improved from the extreme lows in April 2014 (partly due to increasing humanitarian access and intake of green harvest), the households in Greater Upper Nile with their reduced resilience, will likely continue to suffer severely from episodes of further shocks. Depletion of expected harvests is also likely to be earlier than normal-just one to three months in these states, leaving them particularly vulnerable towards the end of the year.
- Levels of acute malnutrition remain critical in most conflict-affected areas. The FSMS nutrition findings show acute malnutrition at critical levels even in areas outside the conflict. Nutrition surveys and screenings conducted in several counties between April and July indicate a prevalence of global acute malnutrition above 30%. Recent levels of severe acute malnutrition exceed historical norms.
- In the short-term, green harvests in mid-August/September and main harvests in October will increase food availability in the Greater Upper Nile region. However, well below-average harvests, above-average green consumption, and sharing with non-cultivating households will limit future stocks. As a result, households are expected to exhaust their own production by December, three to four months earlier than normal.

### Food security situation

For a better understanding of the food security situation, households are classified into four food security groups: *severely food insecure*, *moderately food insecure*, *marginally food secure* and *food secure* (refer to the new CARI methodology on Technical Approach to WFP's Consolidated Approach to Reporting Indicators of Food Security).

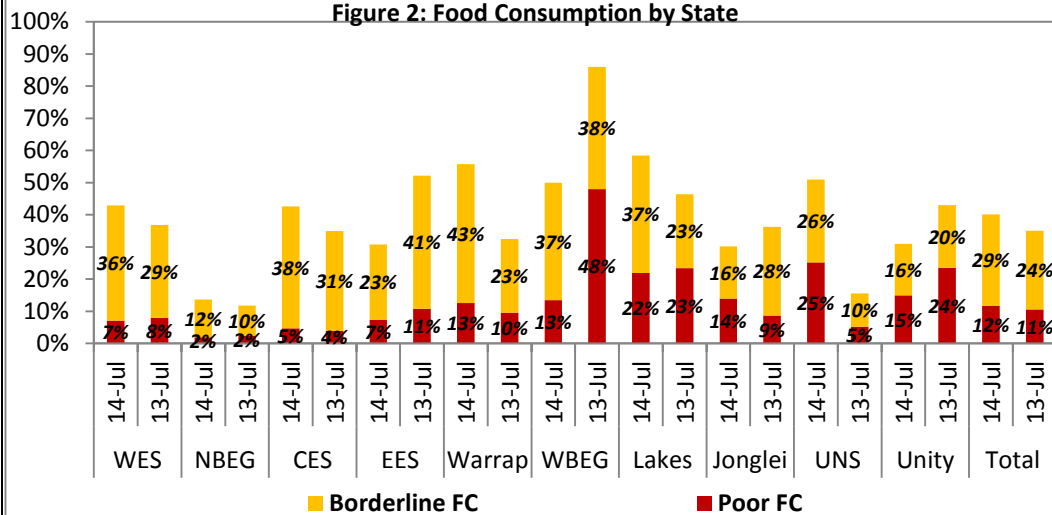


Some 37% of the assessed households were either severely or moderately food insecure (3% and 34%, respectively) the majority of whom are in Greater Upper Nile. The Integrated Food Security Phase Classification (IPC) completed on 10 September 2014, puts the total number in Phase 3 and 4 at 2.1 million, an improvement for the July/August situation reflected in this report. This is expected since the green harvest begins in late July through to September. Although the current status is not directly comparable to previous food insecurity estimations due to changed methodology, the food insecure populations are almost similar to levels recorded during the same time in July 2013. Greater Upper Nile states report significantly higher levels of the severely food

insecure compared to the non-conflict states (severe food insecurity of about 8% compared to other states with levels less than 2% (**Figure 1**). The relatively higher number of food insecure households in Greater Upper Nile compared to the other states is primarily driven by the conflict, which has eroded livelihoods in addition to causing massive disruption to market operations. The IDPs, especially those that were initially displaced and have just returned to their original locations, have significantly higher levels of food insecure households (43%) than residents (35%). Female-headed households also have higher prevalences of food insecurity (45% versus 33% for male-headed households), a possible indication of gender-based vulnerabilities.

**Food consumption**

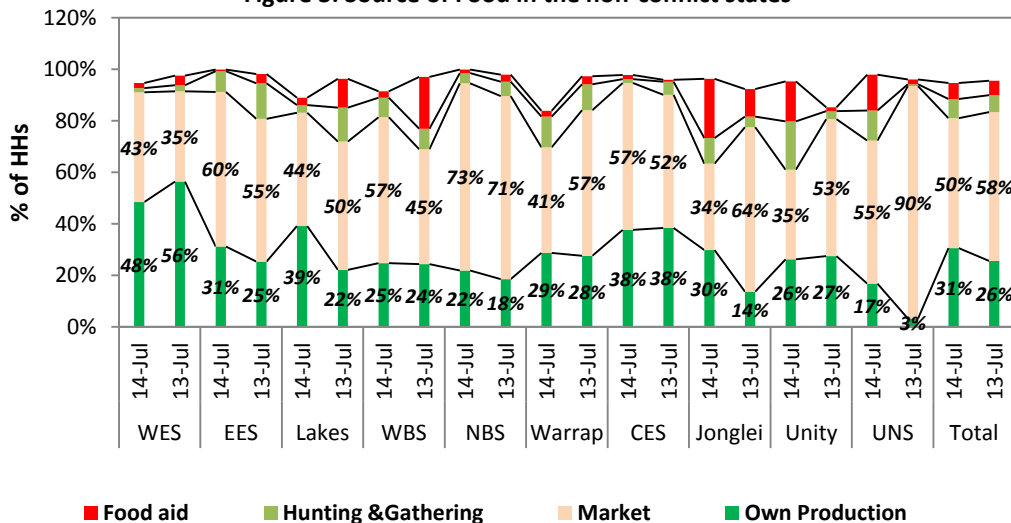
**Figure 2: Food Consumption by State**



Food Consumption Scores (FCS), based on a seven-day recall period, show that about 41% of the households have inadequate food consumption with some 12% indicating poor food consumption (i.e. a lopsided dietary intake mainly consisting of cereals which is inadequate to meet the requirements for a healthy life) while 29% have borderline food consumption (Figure 2). This is a deterioration compared to the same period in 2013 though a slight improvement compared to March/April 2014. Increased levels of poor food consumption are

reported in Upper Nile (from a poor FCG of 5% to current 25%) and Jonglei (from poor FCS of 9% to current 14%). Though Unity has shown some improvement compared to the same time in 2013, it is still reporting the highest levels of poor food consumption. Unity state in particular showed extremely low levels of dietary diversity—the current intake consists mainly of animal products with limited or no cereal intake or diversified food and still low in frequency. Poor food consumption, a reflection of low dietary diversity is a major contributor to food insecurity in almost all parts of the country but with heightened acute levels in Greater Upper Nile states: 96% of the severely food insecure households had poor food consumption whereas only 2% of the food secure households had poor FCS. Conversely, whereas none of the severely food insecure had acceptable consumption, 88% of the food secure households had acceptable FCS. IDPs, especially the currently returning households showed higher proportions (53%) of unacceptable food consumption compared to residents (39%).

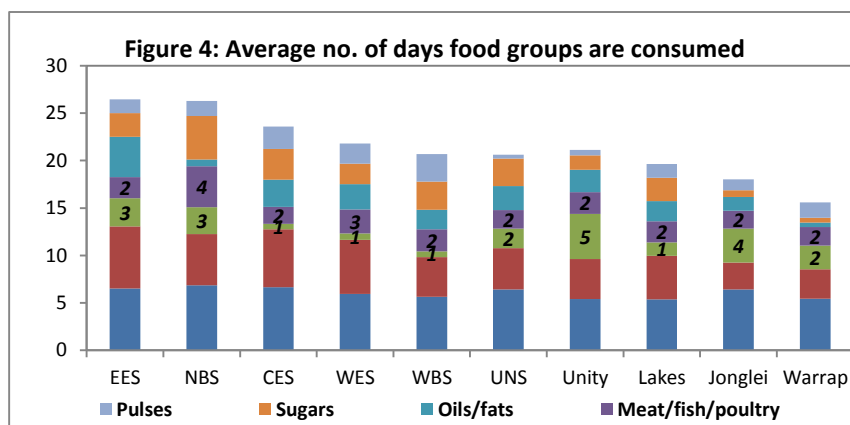
**Figure 3: Source of Food in the non-conflict states**



In the non-conflict states, markets remain the main source of cereals, accounting for 54% reflecting a marginal decline from 2013 levels but nearly similar to the same period in 2012. However, in the three Greater Upper Nile states there was a significant decline in the proportion of households that depend on markets compared to similar seasons in previous years (for instance, reliance of market sources of food declined from 64% to current 34% in Jonglei and 90% to current 55% in Upper Nile), a reflection of the paralyzed and non-functional markets in most parts of the states as a result of the conflict. In contrast food assistance, hunting and

gathering have assumed greater importance as sources of food in Greater Upper Nile compared to the same time in 2013. Western Equatoria remains the state most dependent on its own production followed by Central Equatoria (Figure 3).

The diet of the households is largely composed of cereals/staples (consumed nearly every day of the week) followed by vegetables/fruits (about four times a week) while animal protein sources are only consumed three times a week and pulses only rarely (two times a week). As shown in **Figure 4**, the highest dietary diversity is observed in Greater Equatoria followed by the Bahr el Ghazals with the lowest in Greater Upper Nile and Lakes, which host high proportions of pastoral livelihoods but are also severely affected by the conflicts. Households in Unity state consumed milk more often than any other state, explaining the relatively improved food consumption scores compared to the other states in Greater Upper Nile but with the lowest dietary diversity. It is notable that animal productivity was relatively better at the time of survey and dependence on animal products especially milk and blood increased in Unity, due to the absence of other foods and with mostly non-functional markets.



### Agriculture

The current assessment indicates that access to land was not a major limiting factor in land cultivation across all the states, with 97% of the households assessed reporting access to cultivatable land with exception of Upper Nile where some 22% reported lack of access to land. Equally, some 93% of households indicated plans to cultivate during this ending season although only 81% had actually cultivated at the time of survey. An even smaller proportion (35%) of IDPs had cultivated by July 2014 and it was unlikely that more will engage in cultivation since the planting season was already advanced (except for vegetable gardening). In the seven non-conflict states, over 90% of the households had cultivated with the exception of Lakes, where only 84% (**Figure 4**) had done the same. As expected, the rate of participation in crop season was much lower in the Greater Upper Nile states: in Upper Nile, only 46% reported to have cultivated, same with Jonglei where only 73% had actually planted at the time of assessment. In Unity, participation was not different with an estimated 70% having planted.

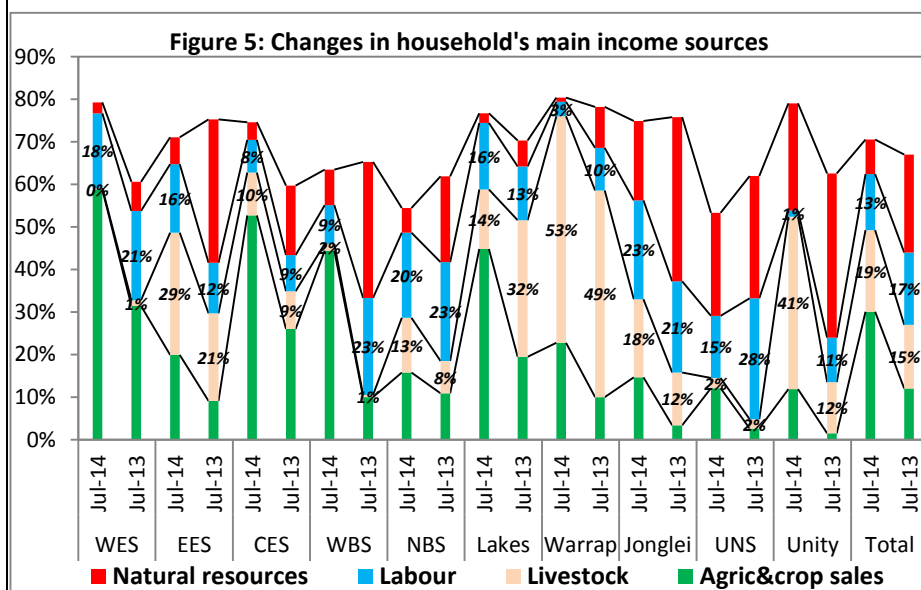
Of the households that had cultivated during the season, 77% planted sorghum, 44% each had planted maize and groundnuts while 25% had cultivated sesame. Generally crop performance and production prospects are good, largely attributable to the normal rainfall patterns this year in all parts of the country with the exception of isolated occurrences of prolonged dry spells in the Kapoetas, Pochalla, Boma and parts of Awerial, Nyirol and Akobo East. The dry spell led to loss of first season crops. Residents in these locations have just replanted and their season will largely depend on the rainfall performance between August and September—which has thus far been projected to be normal to below normal.

### Income sources

The main income sources for households at this time of the year remain: agriculture and sale of crops (30%), sale of livestock (19%), labour (13%) and sale of natural resources (firewood, grass, charcoal etc) (8%) (**Figure 5**).

It is notable that the assessment this year started in mid-July and continued to early August. The assessment therefore captured the green harvest in most areas unlike previous years when assessments were completed by early July. This explains the increased reliance on agriculture/sale of crops as a livelihood source followed by livestock and its products. The result shows a dramatic decline in the sale of natural resources from 23% in July 2013 to the current 8%—with the largest decline reported in Jonglei and Upper Nile, states affected by insecurity and reduced purchasing power. Unity and Upper Nile states reported the most significant decline in reliance on labour as a source of income. These states are also where conflict has severely disrupted one of their major sources of livelihood—oil production. Reliance on livestock has experienced the largest rise in Unity—which also explains higher consumption of milk and blood in the state during the year compared to previous years. As expected, Greater Equatoria, Western Bahr el Ghazal and Lakes report the highest proportion of households that depend on the sale of crops (34%), reflecting the importance of agriculture in these areas but also the two seasons/harvests in the locations.

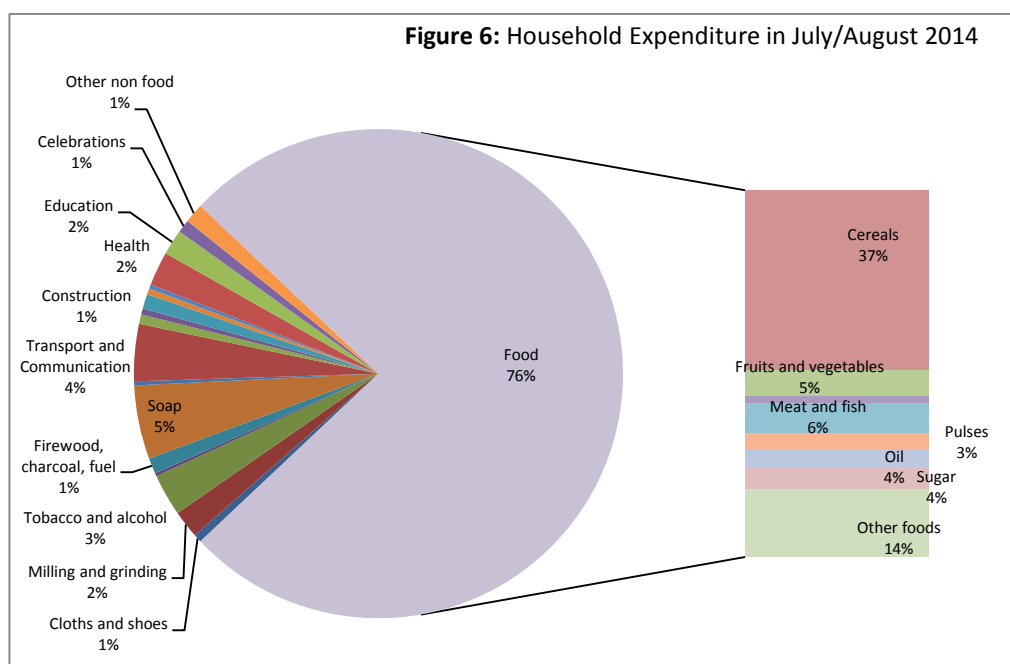
The households were also classified based on reliability and sustainability<sup>1</sup> of their income sources. The proportion of households with poor reliable and unsustainable income is 11%, a decline from 31% in June 2013, attributed to the timing of assessment—when reliance on crops from green harvest had begun (agriculture is regarded as a reliable and sustainable source of income by majority). About 30% of households reported medium income reliability and sustainability, similar to previous observations during the same period in the previous two years. Unity and Jonglei, two of the states heavily affected by the political conflicts reported the highest proportions of households with sub-optimal income reliability, at 67% and 51%, respectively, while Western Equatoria had only 29% with the same characteristics.



for residents with poor income reliability). Similarly, households that depend on unreliable and unsustainable income sources are more likely to be food insecure than those with reliable income sources (47% versus only 32% for those with reliable income sources).

IDPs and newly returning families were significantly more likely to depend on income sources that are unreliable and unsustainable compared to local residents (71% versus only 30%

**Expenditure (income proxy) and purchasing power**



More than three-quarters (76%) of household expenditures are devoted to purchasing food as shown in **Figure 6**. This is significantly higher than the same period in July 2013 that recorded only 57% of the share of food on household expenditure. Similarly cereals currently account for 37% of household expenditures, higher than the 34% recorded during the same period in 2013. Northern Bahr el Ghazal and Jonglei states have the highest share (about 80%) of expenditure on food. These are the states that had also recorded the highest levels of high commodity prices as a shock. Western Equatoria on the other hand, has the lowest expenditures on food—and significantly lower for cereals at only 15% share on overall expenditure within the state compared to 37% for the

country.

Residents in Western Equatoria were more likely to have spent on animal proteins and pulses as reflected in their relatively higher share compared to the other states. In contrast, households in Warrap, Northern Bahr el Ghazal and Jonglei were the most likely to have dedicated a higher share on cereals.

<sup>1</sup> Sale of natural resources such as grass, charcoal and firewood are considered as unreliable/unsustainable and therefore poor while sale of crops, salaried work, livestock and petty trading are considered fairly reliable and sustainable and therefore good. Those income sources that fall in between good and poor have medium reliability.

Market

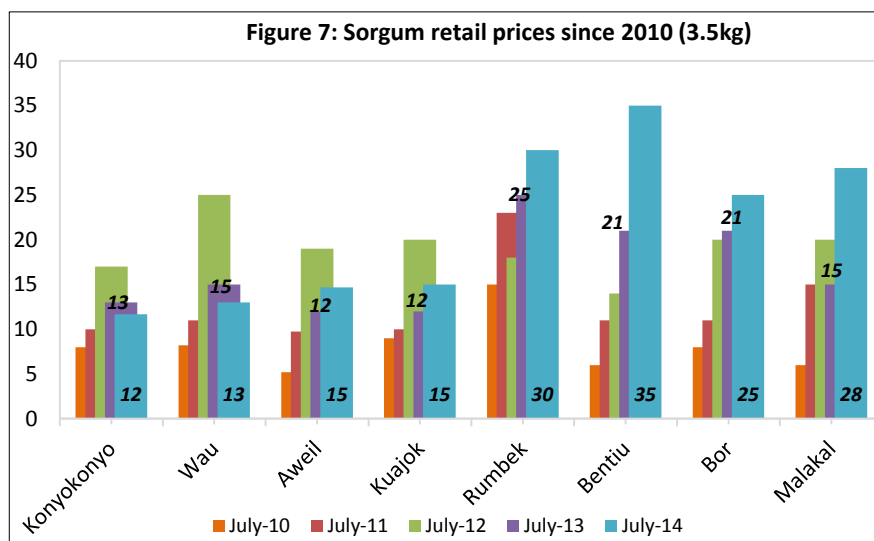
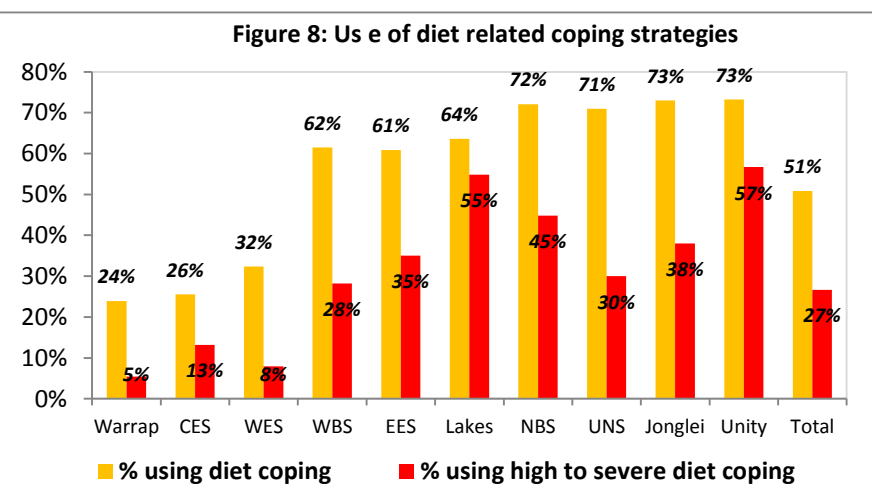


Figure 7 depicts a country characterized largely by two dynamics of market operations—parts of the country currently not experiencing conflict have functional markets and stable prices while the conflict-affected states have areas. In these areas, price of cereals were atypically stable until June (Figure 7 showing prices for Juba and Wau), when prices began to resume seasonal trends in some markets. The current stability of prices/downward trend is attributed to improved commodity availability in the markets (both from individual production and Uganda, a main source of food commodities in Juba). However, markets neighbouring conflict areas may continue to record higher prices compared to Juba although there is likely to be stabilization around September when the harvest sets in.

On the other hand, during July/August, market functioning and trade flows remained significantly disrupted in Greater Upper Nile due to a combination of conflict and limitations on transport during the rainy season. As a result, many markets had no cereals available. In markets with cereal stocks, prices are almost as twice as expensive as the same period in 2013 and also as high as three to four times the prices in Juba. This observation was more manifested in southern Unity where in areas like Koch and Leer, 3.5kg retailed as high as 40-70 SSP compared to only 12 SSP in Juba. Livestock prices had also declined in most areas of Greater Upper Nile due to a surge in livestock sales as a strategy to finance staple foods purchases, further reducing the terms of trade for agro-pastoral families. Furthermore, purchasing power had declined due to unavailability of typical income sources, particularly loss of labour opportunities in Unity and Upper Nile and remittances in Jonglei. It is projected that markets in Greater Upper Nile will continue to remain constrained (at least in the short-term) even if the security situation stabilizes, owing to the loss of trust among trader networks that will take time to rebuild.

Coping strategies index and shocks experienced by households



Overall, 51% of the households employed some form of consumption related coping strategy in the month preceding the assessment. This is slightly lower than the 56% reported in June 2013, mainly explained by the fact that most states had started consuming their green harvest, hence reducing their need to employ diet-related coping (Figure 8).

Level of coping varied between the states. About three-quarters of households in Unity, Jonglei and Upper Nile reported use of diet-related coping strategies with about 60%, 40% and 30% employing high to severe consumption-related coping mechanisms in the three states, respectively (Figure 8). On the other hand, Western and Central Equatoria, and surprisingly Warrap were the least

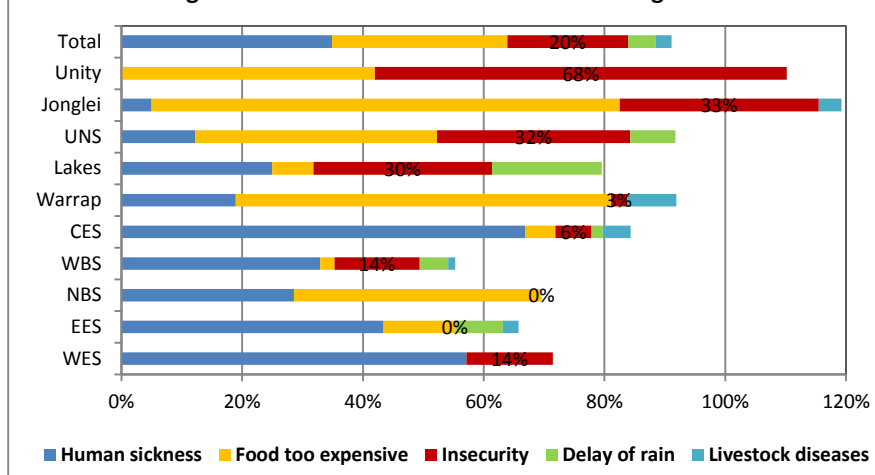
likely to have adopted consumption coping (Figure 8). The most commonly used coping strategies include consuming less preferred food, limiting meal sizes, reducing the number of meals and even allowing only children to eat while adults go without food for a whole day.

Jonglei and Unity states reported the highest proportions of households depending unusually high on the sale of livestock (51% and 44%, respectively) in order to acquire food while Western Equatoria was the least likely to have used the same (5%). Other livelihood coping strategies used by households include borrowing (41%), consumption of seed stocks (22%), reducing health and education



expenses (19%) and begging (16%). The use of any of these coping strategies significantly increased compared to June 2013, primarily for Greater Upper Nile.

Figure 9: Prevalence of main shocks affecting households



Currently, human sickness (35%) and high food prices (29%) remained the most frequently reported shocks by households followed by insecurity (20%) (Figure 9). Unsurprisingly, insecurity as a shock was more prevalent in the Greater Upper Nile states (all reporting prevalence above 30%) followed by Lakes (30%). High food prices as a shock to households was also highest in the Greater Upper Nile states followed by Northern Bahr el Ghazal—the former reflecting the disruptions on market operations due to conflict with the latter signifying the reduced informal trade with Sudan since the eruption of conflict as well as the seasonal deterioration of road conditions.

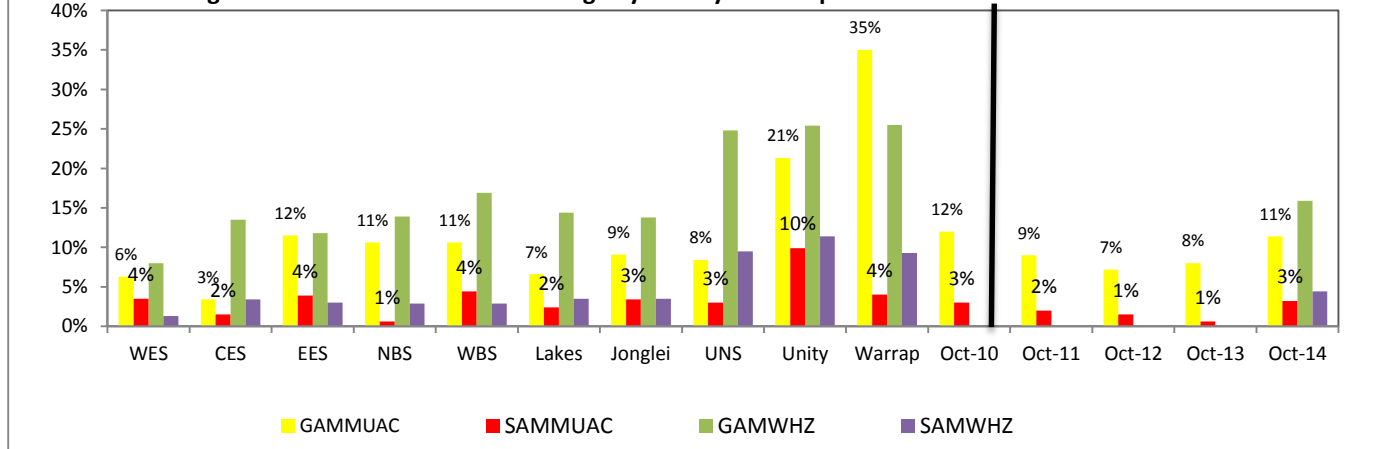
Lakes and Eastern Equatoria are the most likely to have reported delayed rainfall as a shock. The

Kapoetas and eastern parts of Lakes and Jonglei received below normal rains between April and July. In fact some parts of these counties had not received rainfall by end of July. This had a negative impact on the first cultivation period within these areas with resultant drying of plants in Pochalla and eastern parts of Lakes whereas there was no planting in Kapoeta during the first season.

### Mid-Upper Arm Circumference (MUAC) and child nutrition

The global acute malnutrition was 15.9% (WHZ<-2 and/or oedema) in the total 4,387 assessed children in the ten states and severe acute malnutrition rate was 4.4% (WHZ<-3 and/or oedema). And based on Mid Upper Arm Circumference (MUAC), the total acute malnutrition (MUAC<125mm) and severe acute malnutrition were 11.4% and 3.2%, respectively.

Figure 10: Acute malnutrition among <5yr old by State & period



Although the weight-for-height measurements were taken for the first time in Round 13, hence no data to compare to directly, these findings show a deterioration from the GAMMUAC of 8.6% recorded in October 2013 but are consistent with the GAMMUAC rate of 11.0% reported the same period in the June 2013 FSMS assessment. The findings follow a seasonal pattern where malnutrition peaks during the lean season but declines slightly in the post-harvest dry season beginning October. Among the states, the highest prevalence of acute malnutrition (based on MUAC) were Warrap (35.0%), Unity (21.3%), Northern Bahr el Ghazal (10.6%) and Western Bahr el Ghazal (10.6%). On the other hand, Central Equatoria (3.4%) and Western Equatoria (6.3%) recorded the lowest GAMMUAC (Figure 10). The states that reported the highest acute malnutrition rates (by WHZ and by MUAC) are also the same ones that indicated relatively high proportions affected by flooding and high prevalence of childhood diseases and/or from areas affected by conflict.

Nationally, out of the 3,658 women aged 15-49 years assessed, 15.8% were acutely malnourished based on MUAC cut-off points. Acute malnutrition was higher among the 2,012 pregnant and lactating women of whom 27.8% were acutely malnourished based on MUAC<230mm and 6.6% severely malnourished (MUAC<210mm). Of the 1,646 non pregnant women assessed, only 1.0% were acutely malnourished. Acute malnutrition among women was highest in Warrap (41.8%), Unity (22%), and Jonglei (20%). Western Equatoria (3.5%), Central Equatoria (5.2%), Lakes (5.4%) and Upper Nile (5.9%) recorded lower acute malnutrition rates among women. Western Bahr el Ghazal (12.6%), Northern Bahr el Ghazal (13.6%), and Eastern Equatoria (18.4%) had acute malnutrition rates based on MUAC in the 10-19% range. These rates generally indicate deterioration from the October 2013 situation when a prevalence of 11% and 1.0% for acute malnutrition and severe acute malnutrition among the women, respectively.

About 30% of the children aged 6 -24 months had experienced one illness or another in the two weeks preceding the assessment. There was minimal variation across states with an exception of Upper Nile and Western Bahr el Ghazal where more than three-quarters of the children had suffered from some illness. Overall, the three commonest childhood illnesses in October 2013 were fever (12%), diarrhea (9%) and acute respiratory infections (8%) (**Figure 12**). These are relatively lower incidences compared to same period in 2012. Incidences of diarrhoea were relatively higher in Northern Bahr el Ghazal (17%) and Jonglei (12%), though nearly at similar levels in the rest of the states. In general, illness is a major contributor to acute malnutrition. The assessment indicates that a child suffering from any illness such as diarrhea, fever or respiratory infection was more likely to be malnourished.

#### Assistance received

About 22% of the assessed households reported receiving at least one form of assistance or another in the month preceding the assessment, nearly similar to the levels (21%) reported in June 2013, varying from 60% among IDPs to 20% among residents. Some 38% of IDPs that are currently returning to their original areas of displacement also reported having received some form of humanitarian assistance. Of the households that received some assistance, about 64% received food assistance, 32% agricultural tools and/or seeds, 29% non-food items and 23% for nutrition services. The highest percentage of households who received any form of assistance was in Greater Upper Nile with over 50% of the respondents, the highest in Unity and Jonglei with at least two-thirds of respondents reporting having received some humanitarian assistance. As expected, respondents in Western Equatoria were the least likely to have received humanitarian assistance, with only 6%. Of those that received humanitarian aid, at least 8 in 10 recipients received food aid in Greater Upper Nile but only less than 40% in the rest of the country. The states that were most likely to have received agricultural tools and seeds were Jonglei, Unity and Central Equatoria (all reporting more than 40% of humanitarian aid recipients) but least received in Lakes, less than 5%. Nutrition support was most received in Jonglei (38%) Upper Nile (20%) and Unity (13%) but least received in Western Equatoria (5%).

Households that had received food assistance in the month preceding the assessment had significantly better food consumption levels with 67% reporting acceptable food consumption scores compared to only 48% with the same consumption characteristic among households that had not received food assistance in the Greater Upper Nile. They also showed substantially lower levels of share of expenditure on food (39%) compared to those that had not received food aid (51%).

#### Food security Outlook

The food security situation in South Sudan is expected to remain worrisome throughout the year in Greater Upper Nile. The temporary reprieve from this year's harvest is unlikely to last past November. And even with the temporary improvement of food security, the displaced populations who did not plant will not benefit and will continue facing severe food insecurity. These populations will continue to depend on asset stripping coping strategies while also relying heavily on kinship support in addition to humanitarian assistance. The continuing political conflicts are still weighing heavily against food security and most markets remain paralyzed to support with food access.

However, the rest of the country is likely to witness an improving food security situation for the remaining part of the year as the main harvest gets underway in September/October 2014.

**Methodology**

The FSMS is a collaborative effort involving over 22 organizations (government, UN, NGOs and community-based organizations) that provide results that are representative at national and state level, utilizing data collected from 10 to 24 clusters (sentinel sites) selected from each of the ten states based on probability proportional to sizes (PPS) and 25 randomly selected households interviewed from each site. One community/key informant questionnaire and two trader checklists (where applicable) were administered at each sentinel site to provide supplementary information.

The data collection process experienced accessibility challenges with three sites in Jonglei, two each in Unity and Upper Nile and one site in Lakes and Western Equatoria, respectively not being reached. This has a potential of underestimating food security indicators in these states as the sites not surveyed are the worst affected by the prevailing shocks (conflicts) with exception of the site in Nagero, Western Equatoria which was cut off by a collapsed bridge.

Data collection from a total of 3,692 households was undertaken from the first to third week of July in non-conflict states and second week of July to the second week of August in Greater Upper Nile states (the beginning of the first harvest season for the most parts of the country) followed by analysis and reporting in the fourth week of August to the first week of September 2014. Some 27% of the surveyed households are female-headed while the average household size is seven persons. About 11% of the respondents were IDPs, some of them just returning to their original homes during the survey.

FSMS provided basis to monitor trends and changes in key food security and nutrition indicators over time.

In understanding food security situation, the below were basic indicators used:

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.

The Coping Strategies Index was derived from the severity and the frequency of the consumption 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.

Household food security categories were established according to a composite index derived from household food access (relative food expenditure), food consumption and livelihood coping strategies.

**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](mailto:Juba.VAM@WFP.org)**

**The FSMS partners:**

