

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 11, October 2013

Highlights

- Overall, major key food security indicators have showed consistent seasonal improvement since the beginning of the year but also a significant improvement compared to the same period since 2010. Currently, 3.4% and 30% of the assessed households are severely and moderately food insecure respectively compared to 10% and 30% respectively in October 2012 or 10% and 28% respectively in October 2011. Equally, the proportion of households with acceptable food consumption score is 75% compared to 59% and 60% in October 2012 and February 2013 respectively. Reliance on own production as a source of food had increased to 41% from 38% in October 2012.
- Reasons for improvement include: good harvest prospects; relative stability in food prices; increased food availability in markets following early harvest in some parts of the country, increased flow of goods from Sudan following the improved trade relationship with Sudan; and a much more settled population following massive returns between 2005 and 2012.
- There remain however, major disparities in food security indicators across states with Western Bahr el Ghazal (WBS), Eastern Equatoria and Jonglei showing the highest levels of food insecurity. These States have poor market integration with Jonglei increasingly experiencing poor agricultural production prospects due to combined effects of widespread insecurity and displacements as well as significant flooding in the 2013 season. Flooding is one of the main factors that negatively affected food security indicators in states such as Warrap, Unity and Northern el Bahr Ghazal (NBS).
- Prevalence of acute malnutrition using Mid Upper Arm Circumference (MUAC) is estimated at 8.6%, same as it was in October 2012 down from a current seasonal high of 11% in June 2013.
- There is an improved participation in crop production from 88% in 2012 to the current 95% and also in the cultivated area which is currently averages at 2.8 feddans (from 2.1 in 2012) for farming households (measured by feddans¹).

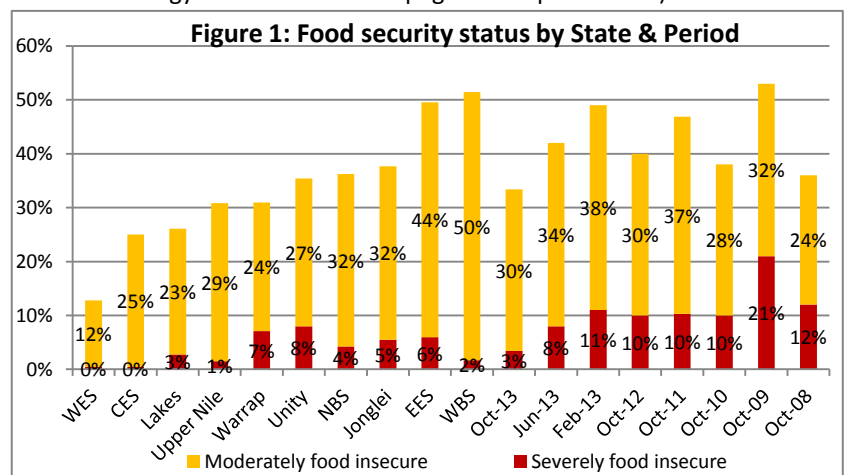
Food security situation

For better understanding of the food security situation, households are classified into three food security groups: *severely food insecure, moderately food insecure and food secure* (refer to methodology section on the last page of this publication).

Some 3.4% of the assessed households are severely food insecure and 30% are moderately food insecure, an improvement from levels experienced during the year but also compared to same seasons in the previous years with exception of 2008. The most significant improvement is seen in the prevalence of severe food insecurity which currently stands at 3% compared to 10% during the same period in the last 3 years (**Figure 1**).

With the exception of Unity that showed an increase in the proportions of severely food insecure (attributed to significantly high risks to shocks—flood, high food price, human sickness; and low diet and income diversity), the rest of states witnessed decline in severe food insecurity compared to June 2013 and previous seasons. The most dramatic decline in severe food insecurity (20% in 2012 to 2% currently) was witnessed in Western el Bahr Ghazal (WBS) — due to better harvest prospects and stable prices. Compared to the same period in 2012. Proportions of moderately food insecurity increased in Jonglei, Eastern Equatoria and WBS while the rest of the states either showed decline or minimal variations in proportions of moderate food insecurity when to same period in 2012.

The returnees² had significantly higher level of the food insecure households (47%) than the residents (over 1 year of stay) (39%). Women-headed households also had higher prevalence of food insecurity (36% versus 32% for men), a possible indication of gender-based vulnerabilities.

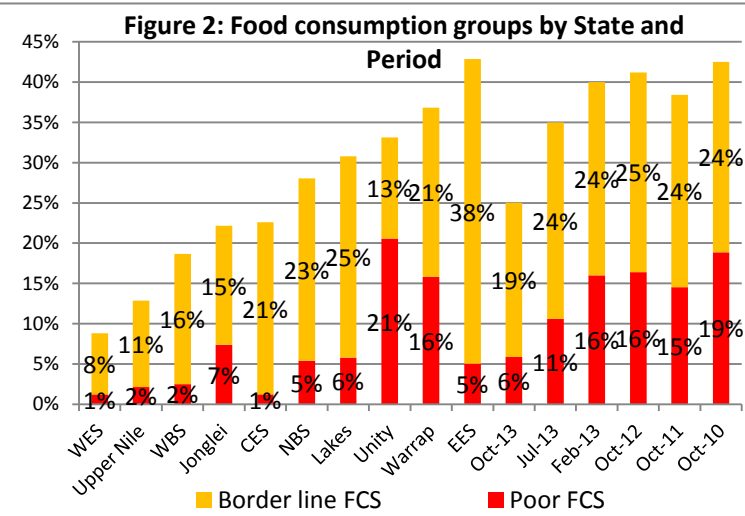


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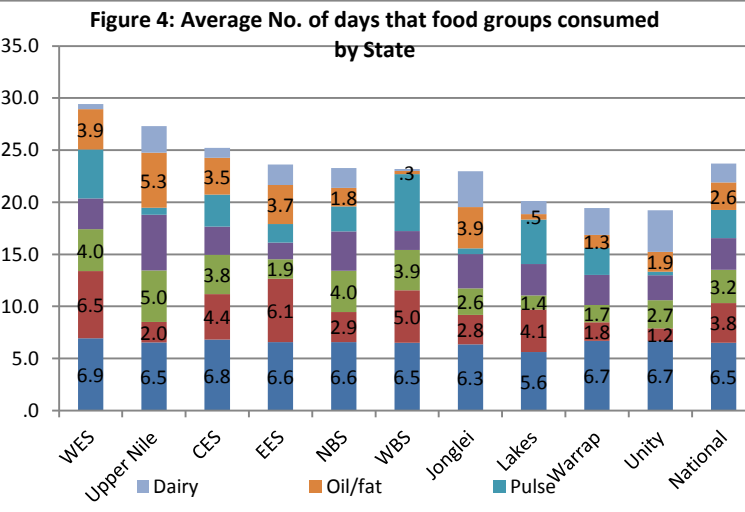
¹ 1 feddan is roughly 1 acre or 0.96 acres

² Returnees are defined as those who returned to the country within the last 12 months, and accounted for about 1.5% of the sampled households.

Food consumption

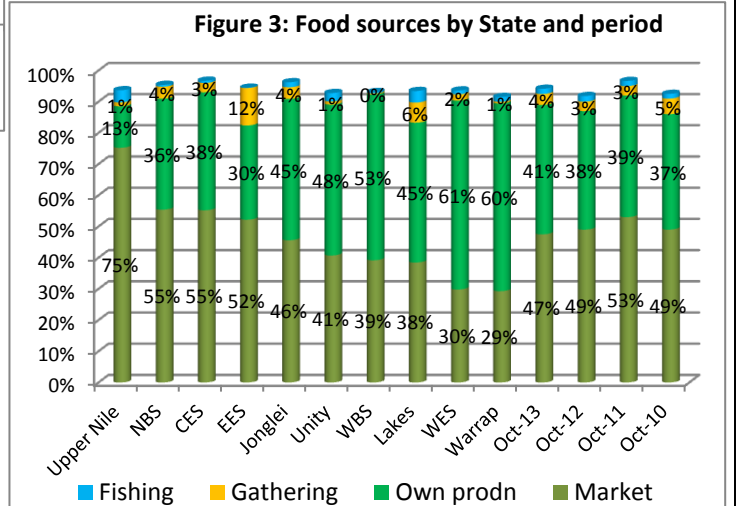


Food Consumption Scores (FCS), based on seven-day recall period, show that about 25% of the households have inadequate food consumption with some 6% indicating poor food consumption (i.e. a lopsided dietary intake mainly consisting of cereals which is inadequate to meet the requirements for a healthy life) while 19% have borderline food consumption (Figure 2). This is a significant improvement compared to the same period in the previous years but also with other seasons. Despite the improvement, Unity, Warrap and Jonglei report relatively high proportions of poor consumption, observations attributed to low dietary diversity and unreliable income activities in addition to rampant inter-communal conflicts. Poor food consumption, a reflection of low dietary diversity is a major contributor to food insecurity: 96% of the severely food insecure had poor food consumption whereas none of the food secure households had poor FCS. Conversely, whereas none of the severely food insecure had acceptable consumption, 82% of the food secure households had acceptable FCS. Returnee households showed higher proportions (19%) in poor food consumption compared to residents (6%).



Market remains the main source of cereals, accounting for 47%, nearly similar to same period in 2012 and 2010. However, there is a significant increase in those depending on their own production (from 28% in June 2013 to the current 41%). Western Equatoria is the state mostly dependent on its own production; Upper Nile is most reliant on market sources for food (Figure 3).

The diet of the households is largely composed of cereals/staples (nearly consumed everyday of the week) followed by vegetables/fruits (about 4 times in a week) while animal protein sources are only consumed 3 times in a week and pulses only rarely (2 times in a week). As shown in Figure 4, the highest dietary diversity is observed in Western Equatoria, Upper Nile and Central Equatoria respectively while the lowest food diversity in Warrap, Unity and Lakes, the later three hosting high proportions of pastoral livelihoods. This underscores poor dietary diversity as a factor contributing to food insecurity.



Agriculture

Some 95% of the households had cultivated³ in 2013 cycle, an increase from 88% reported in 2012 agricultural season. The main crops cultivated remains sorghum (78%), ground nuts (59%), maize (52%) and sesame (45%). On average, households reporting cultivation during the season had on average 2.8 feddans, up from 2.1 feddans in 2012. Lakes, Northern and Western el Bahr Ghazal reported

³ Participation in cultivation simply means that a household mentions to be involved in any crop production activity, no matter how minute the farm is or what crop it is—whether vegetable or any other.

larger average feddans cultivated compared to Jonglei and Unity with the smallest average feddans cultivated (Table 1).

Internally displaced persons (IDPs) and returnees (accounting for 5% of the assessed households) were significantly less likely to cultivate than the residents. Only 86% of returnees cultivated in 2013 against 96% of residents.

Sorghum is predominant in all states with exception of Western Equatoria and Unity where maize as the most commonly cultivated crop. The proportion of households participating in groundnut and sesame is highest in Western Equatoria (WES) and WBS (60% or more) but lowest in Jonglei and Upper Nile states (less than a quarter). Pulses are more likely to have been cultivated in Central Equatoria (EES) and WES but less likely to have been found in Upper Nile and NBS. Western Equatoria reported better perception of crop harvest prospects (with at least three-quarters indicating good to excellent harvest condition) whereas Warrap and EES had the least perception of better crop harvest (less than 15%). Whereas Western Equatoria believes than the current harvest will last them at least 5 months, Unity and Warrap State report a possibility of their current harvest lasting for only 2.5 months. .

Some 19% of the respondents report having been involved in fishing with the highest proportion reported in Upper Nile (34%) while the least is reported in EES (only 2%). An estimated 67% report ownership of livestock with goats reported at 45%, cattle (36%), poultry (35%) and sheep (18%). Unity state, Jonglei, Warrap, Lakes and EES report the highest proportions (more than 70%) have ownership of cattle, goats and sheep while the lowest ownership of similar livestock is report in WES and WBS (less than a quarter).

Table 1: Proportion of households that participated in crop cultivation and area cultivated

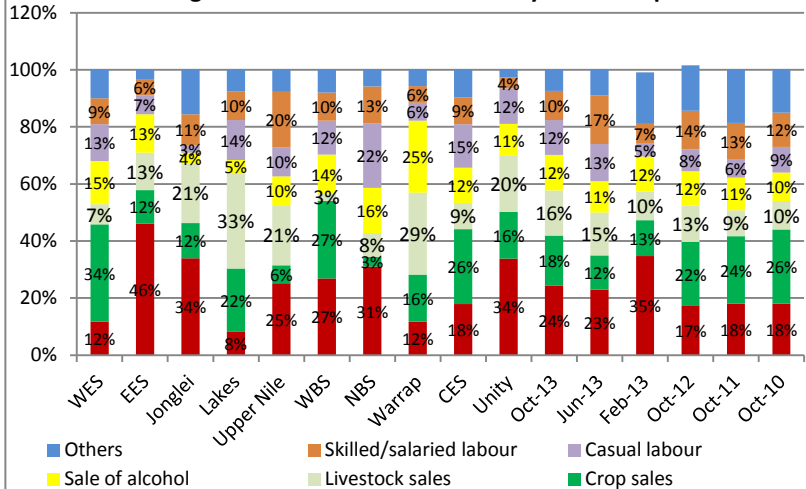
	Cultivated in 2013 Season							Cultivated in 2012 Season				
	Feddans (mean)	Any crop	Sorghum	Maize	G/nut	Sesame	Pulses	Any crop	Sorghum	Maize	G/nut	Sesame
WES	2.9	99%	50%	62%	91%	70%	58%	97%	95%	95%	96%	88%
EES	2.3	93%	88%	19%	49%	41%	23%	88%	92%	25%	67%	50%
Jonglei	1.2	93%	89%	70%	6%	6%	31%	81%	78%	64%	4%	1%
Lakes	4.1	96%	94%	43%	83%	48%	26%	88%	90%	33%	88%	32%
UNS	1.6	82%	59%	58%	6%	23%	11%	56%	54%	55%	1%	2%
WBS	3.8	99%	91%	32%	92%	59%	39%	92%	96%	81%	95%	90%
NBS	3.9	99%	96%	28%	55%	48%	13%	96%	96%	29%	69%	72%
Warrap	3.0	98%	97%	63%	59%	56%	17%	86%	88%	69%	58%	55%
CES	2.0	98%	75%	66%	81%	47%	64%	97%	95%	96%	96%	92%
Unity	1.8	95%	39%	91%	35%	27%	35%	93%	87%	78%	10%	0%
National	2.8	95%	78%	52%	59%	45%	32%	88%	88%	68%	70%	53%

Income sources

The main income sources for households at this time of the year remain: sale of natural resources (firewood, grass, charcoal etc) (24 %), sale of crops (18%), sale of livestock (16%), brewing and casual labour (each 12%). This shows a dramatic decline in the sale of natural resources from 35% in February 2013 but an almost similar level to the same time in previous two years (Figure 5). Conversely, there is a steep rise in the combined sale of crop and livestock (34% from 23% in February 2013), a seasonal improvement during harvest period.

As expected, Western Equatoria, reports the highest proportion of households that depend on sale of crops (34%) while NBS has the least (3%). Warrap and Lakes report the highest proportions of households that sell livestock and livestock products (these are pastoral communities) while WES and CES are the least dependant on the same activity Sale of natural resources (grass, charcoal, firewood etc) is commonest in EES (46%) and least in Lakes (8%). Western Equatoria and Unity States have the most diversified income sources while Warrap and WBS have the least diversified incomes.

Figure 5: Main Income activities by State and period



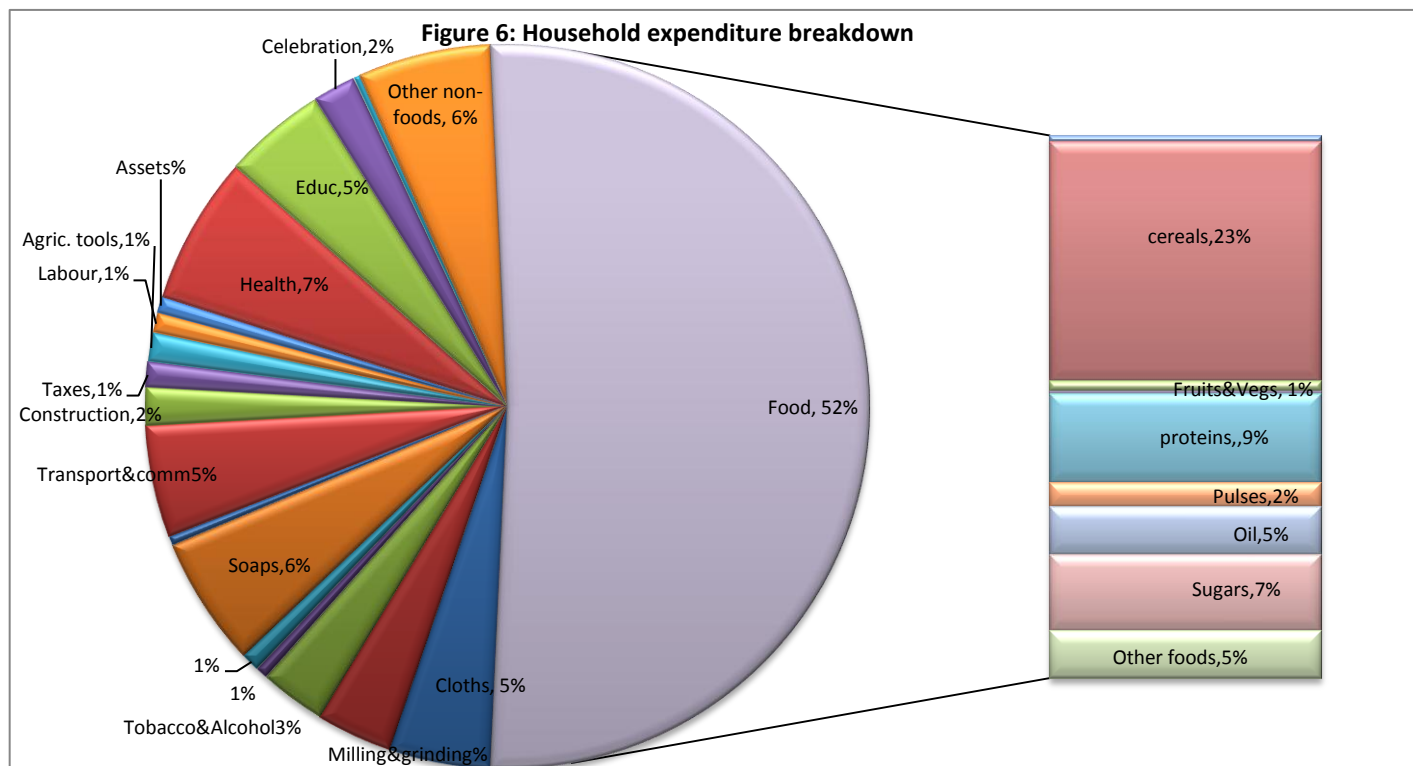
The households were also classified based on reliability and sustainability⁴ of their income sources. The proportion of households with poor reliable and unsustainable income is 26%, a slight decline from 31% in June 2013 and 30% in October 2012. About 35% of the households reported good income reliability and sustainability, similar to previous observations during the same period in the previous two years.

Returnees were significantly more likely to depend on income sources that are unreliable and unsustainable compared to the local residents (41% versus only 26% for residents). Similarly, households that depend on unreliable and unsustainable income sources are less likely to be food secure than those with reliable income sources (36% versus 94% for those with reliable income sources).

Expenditure (income proxy) and purchasing power

More than half (52%) of household expenditures are directed to purchasing food as shown in Figure 6. This is slightly higher than the 48% recorded during the same period last year but less than the 55% recorded in 2011. Similarly cereals currently account for 23% of household expenditures, similar to the levels recorded during the same period in 2012, but lower than 34% recorded in June this year. Western el Bahr Ghazal, Eastern Equatoria and Jonglei States have the highest (about 60%) share of expenditure on food while Western Equatoria has the lowest expenditures on the same. The relatively good local production within Western Equatoria contributes to households' lower dependence on food purchases.

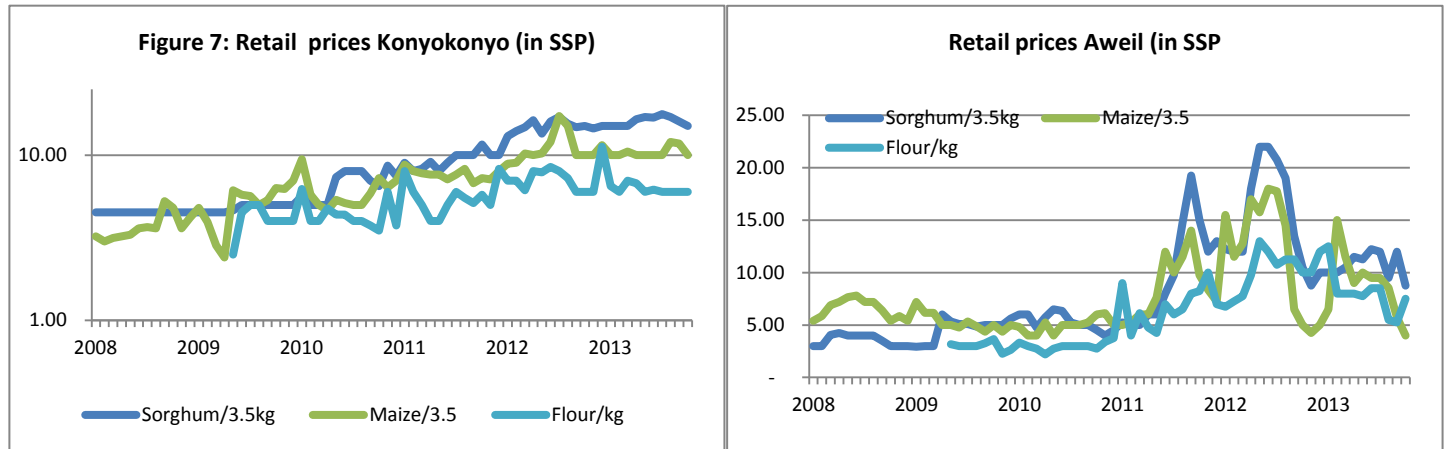
Figure 6: Household expenditure breakdown



⁴ 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

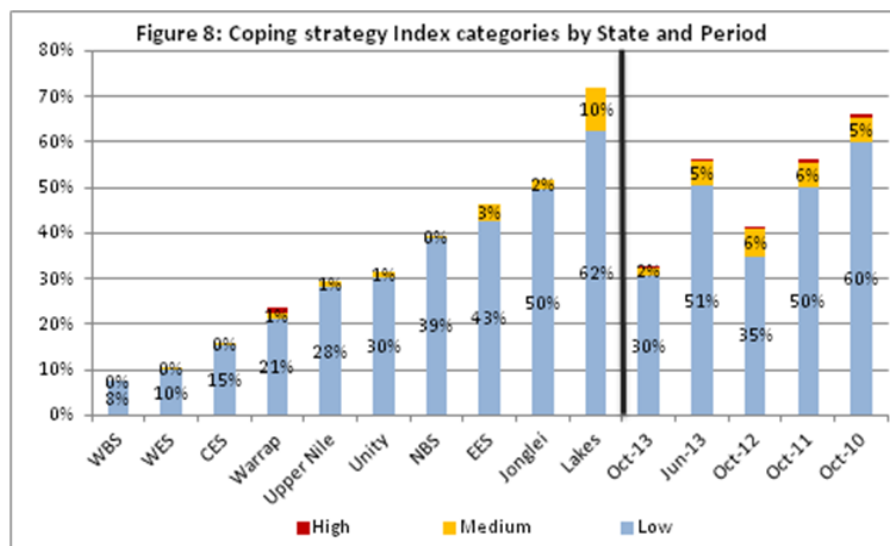
Figure 7: Retail prices of staple cereal commodities in Konyoknyo (Juba) Aweil Markets (SSP)



Two markets are chosen to provide an overview of market condition—with Konyoknyo largely sending signals to the whole country (terminal market) while Aweil represents the extreme end of the border with Sudan, mirroring a large number of northern border markets. The prices of essential food commodities such as white sorghum, maize grain and wheat flour are currently witnessing a downward push since September 2013 (Figure 7). This downward trend is likely to continue through February, mainly attributed to the post-harvest stocks from the ongoing harvest coupled with increased market access as the country begins the seasonal dry spell. The graphs depict a high variability for all the main staples in Aweil (Northern el Bahr Ghazal) with the peak prices observed between June 2011 and July 2012. However, since 2013, the prices stabilized at relatively lower levels compared to 2011-12. Northern el Bahr Ghazal is at the border with Sudan, thus, recurrent political uneasiness with resultant economic embargoes between Juba and Khartoum has had its greatest toll at the borders besides the prohibitive transportation costs associated with getting commodities to northern states from Uganda. However, the border re-opening has created a new impetus for increased market function in border markets, thus resulting in the stability seen in 2013.

On the other hand, Konyoknyo (Juba) which is relatively accessible to Uganda has only witnessed gradual increases in staple commodity prices with the current stabilization/downward trend attributed to improved commodity availability in the markets (from both own production and external trade).

Coping strategies index and shocks experienced by households



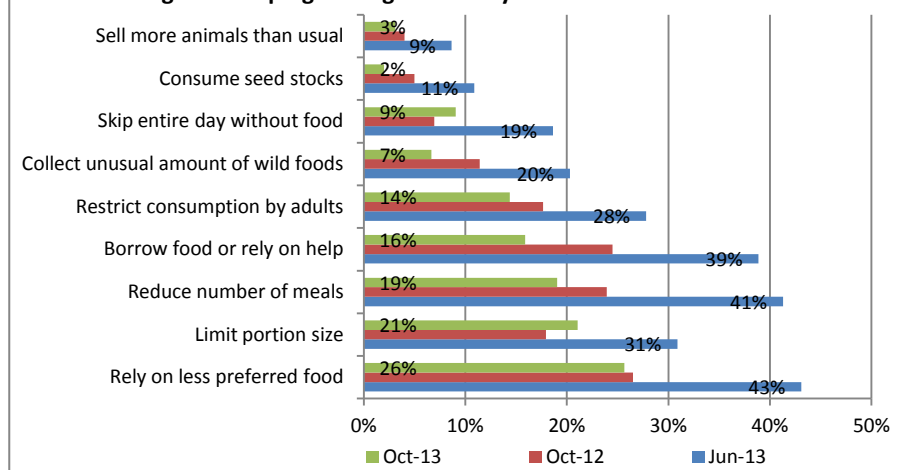
Overall, only 33% of the households employed some form of coping strategy in the three months preceding the assessment. This is slightly lower than the 41% and 56% in October 2012 and June 2013 respectively.

Level of coping varied between the states. A significant proportion of households in Lakes (72%), Jonglei (51%) and EES (46%) had adopted some level of coping, while 15% or less of the households in lowest WES, CES and WBS reported coping. In general, households are using low coping strategies with 2% of households applying medium coping strategies (Figure 8).

The commonly used coping strategies are diet-related and less adverse on livelihoods. They include the consumption of less preferred food, followed by limiting meal sizes, reducing the number of meals and borrowing forward. The unusual high sale of livestock and seed stock consumption are the least used coping strategies (Figure 9). The use of

any of these coping strategies significantly reduced compared to June 2013 but with only a marginal decline compared to October 2012.

Figure 9: Coping strategies used by household 2012 to 2013

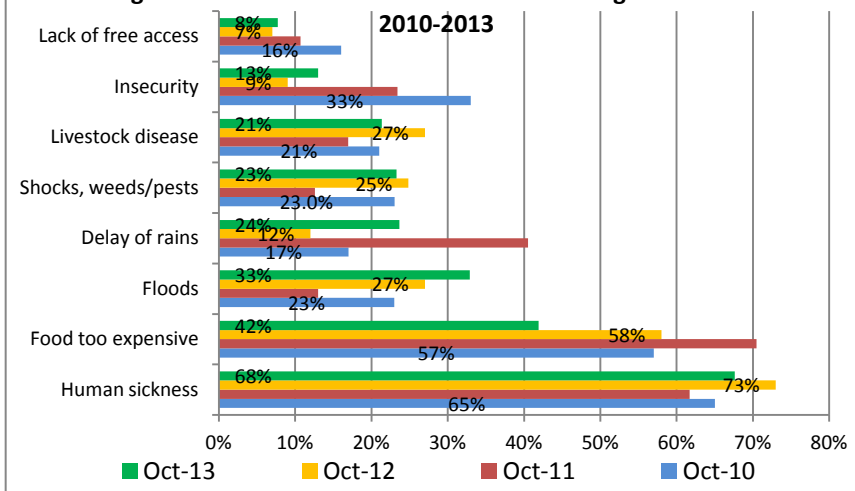


This indicates that coping varies with season. In October, households tend to use coping strategies less due to relative abundance of food from the harvest.

Currently, human sickness and high food prices remained the most frequently reported shocks by households followed by the occurrence of flooding. It is notable that high food prices as a shock to households has steadily declined since 2011 from 70% reportage to the current 41%, a confirmation of stabilizing market conditions and improved trade inflows from neighbouring countries including Sudan. On the other hand, the occurrence of flooding increased over the last two years from 13% in 2011 to a current reportage of 33%. Also increasing is the incidence of insecurity from

9% in October 2012 to 13% in this year, though a decline from 23% reported in February 2013 (Figure 10). Incidences of insecurity normally tend to rise during the dry seasons as was the case in February 2013. As expected, insecurity as a shock is commonest in Jonglei (55%), and Lakes (42%) compared to WES where 2% of households reported insecurity.

Figure 10: Occurrence of main shocks affecting households



Northern border states of Unity, WBS and Upper Nile reported the highest (ranging from 58% in WBS to 78% in Unity State) perception of high food prices as a major shock compared to WES where only 10% reported the same shock. The long distance and poor road network needed to transport food northwards exacerbated by relatively low local production causes prices to remain higher.

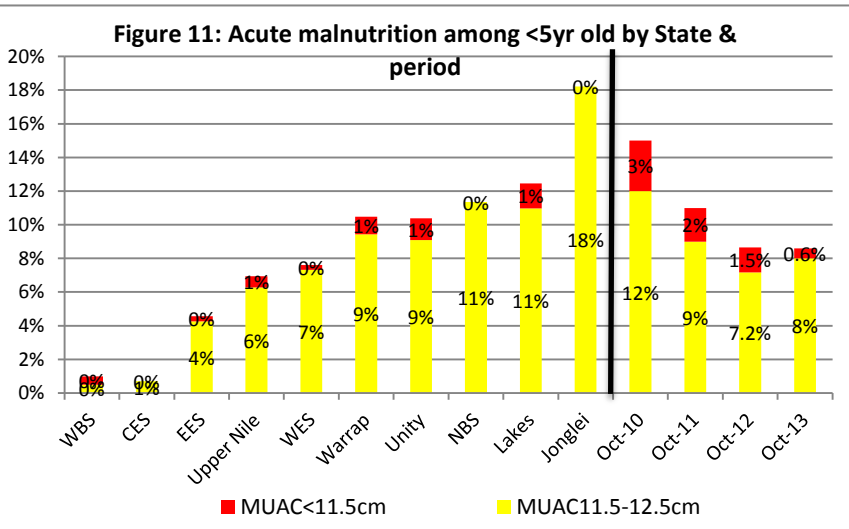
Floods were more likely to have been reported in Unity, Warrap and NBS while least reported in the Greater Equatoria states. It was only Eastern Equatoria that significantly (50%) reported delayed rains as a shock. Livestock disease was more common in Warrap (49%) and Unity (34%) States and least reported in Western Equatoria. Overall,

Unity and Lakes were more prone to shocks than any other state as reported by the majority of households.

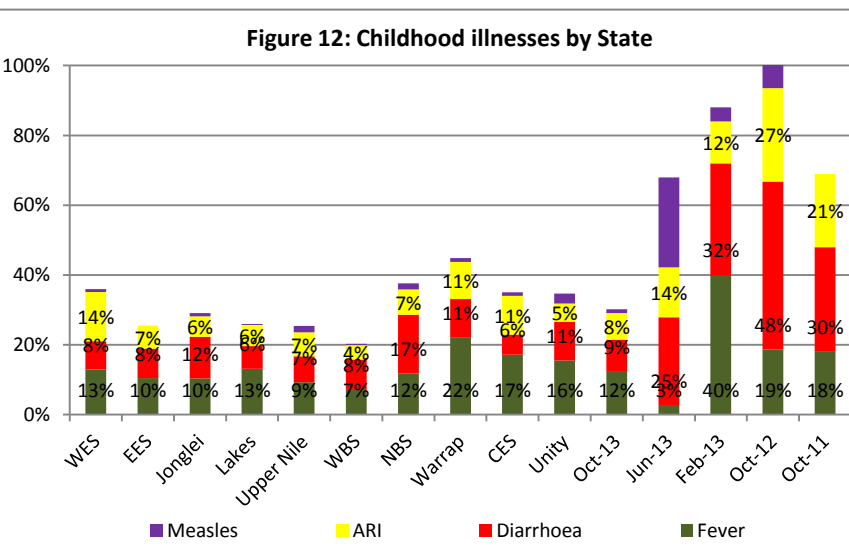
Mid-Upper Arm Circumference (MUAC) and child nutrition

An estimated 8.6% of 3,023 children (6-59 months) measured in the October 2013 FSMS assessment are acutely malnourished according to Mid Upper Arm Circumference (MUAC) thresholds of <12.5cm for total acute malnutrition (Figure 11). This shows an improvement from a high rate of 11% (based on MUAC measurements) in June 2013, primarily as a result of seasonal fluctuations where malnutrition peaks during the rainy season (also coinciding with a lean period) but declines as the dry season sets in beginning October. However, prevalence of severe acute malnutrition (using MUAC cut-off of <11.5cm) was 0.6%. These rates are similar to those reported during the same period in 2012. Among the states, the highest prevalence of acute malnutrition (based on MUAC) were seen in Jonglei, Lakes and Northern Bahr el Ghazal in that order while the lowest prevalence was recorded in the Greater Equatoria states, just about 5% or less. Severe acute malnutrition is significantly higher in Lakes, Unity and Warrap states (all at 1%) compared with the rest of the country at an average of 0.5%. The states that reported the highest acute malnutrition rates are also the same ones that indicated relatively high proportions affected by flooding and high prevalence of childhood diseases.

A total of 1,799 non-pregnant women aged between 15 and 49 years were measured, of whom some 6.7% were acutely malnourished based on MUAC <230mm. About 0.6% showed severe acute malnutrition (MUAC <210cm). These rates represent an improvement from October 2012 which showed a prevalence of 11% and 1.0% for acute malnutrition and severe acute malnutrition among the women respectively, and from a moderate acute malnutrition of 8.6% in June 2013. The highest prevalence of acute malnutrition among women is witnessed in Unity and Warrap States each at 15% or more while the lowest was recorded in Western Equatoria (1%).



with the lowest prevalences in Unity, Warrap and Lakes States, all at less than 20%. Only 14% of children aged 6 -24 months had adequate dietary diversity (consumed 4 or more food groups), a deterioration from the 29% reported in October 2012. Only Upper Nile, WES and Unity showed the prevalence of adequate dietary diversity to at least one-fifth of the children aged 6-24months while Jonglei and Lakes States had the lowest (6% or low). The most consumed foods by 6-23 months are cereals/tubers (38%), followed by dairy products (30%) while the least consumed were eggs (7%) and fruits & vegetables (10%).



Of the 1,739 children aged 6-24 months surveyed, only 27% were still breastfeeding⁵ with variations across states: Only Upper Nile state reported breastfeeding prevalence among children aged 6-24 months at more than a of the children (59%)

indicates that a child suffering from any illness such as diarrhoea, fever or respiratory infection was more likely to be malnourished.

Assistance received

About 24% of the assessed households reported receiving at least one form of assistance or another in the three months preceding the assessment, significantly lower than during the same period in 2012 (44%), but higher (21%) than in June 2013. Of the households that received some assistance, about 82% received food assistance, 9% seeds or tools, 21% vitamin A and 9% other types of assistance. The highest percentage of households who received any form of assistance was in Jonglei (51%), Lakes (40%), EES (38%) and WBS (37%) while the least recipients of any humanitarian aid were in Unity and Upper Nile, all at less than a tenth. Of those that received humanitarian aid, at least 9 in 10 recipients received food aid in Jonglei, Lakes, Upper Nile, NBS and WBS compared to just a third of humanitarian aid recipients in WES that got food aid. The states that were most likely to have received agricultural tools and seeds were NBS, EES and WES (all reporting more than 10% of humanitarian aid recipients) but least received

⁵ Breastfeeding prevalence is under-reported since the 0-6 months old are not included, an age group that would ideally exclusively breastfeed

in Upper Nile, Warrap and WBS (all at less than 2%). Vitamin A supplements were most received in Upper Nile (45%) and EES (40%) but least received in Unity (3%)

Households that had received food assistance in the month preceding the assessment had significantly better food consumption (78%) than those who had received food assistance (75%) but also has 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 precarious in 2014 especially in larger parts of Greater Upper Nile (Jonglei, Unity and Upper Nile states), eastern parts of Eastern Equatoria. These areas have been affected by recurrent shocks (floods and high prices) but also continuing inter-communal conflicts resulting from competition over resources, especially within the pastoral communities. Other parts of western flood plains especially in Greater Bahr Ghazal are likely to remain stressed in the coming years with pockets of crisis phases.

Although the current improvement in key food security indicators is likely not just seasonal but also evident of gradual stability in most parts of the country, structural challenges that contribute to food insecurity in South Sudan remain. These include poor road linkages to markets, low domestic production, erratic weather changes, recurrent inter-communal conflicts, high number of vulnerable populations that are not in the mainstream production system (returnees, IDPs and refugees) etc. Thus, heightened monitoring in addition to humanitarian and livelihood assistance to the most vulnerable are still foreseen in 2014.

Methodology

The FSMS is a collaborative effort involving over 20 organizations (government, UN, NGOs and community-based organizations that provides results that are representative at national and state level, utilizing data collected from 10 to 12 clusters (sentinel sites) selected from each of the ten states 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.

However the data collection experienced accessibility challenges with 4 sites in Jonglei, 3 each in Warrap and Unity states 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 (flooding and conflicts).

Data collection from a total of 2,330 households was undertaken during the 2nd to 4th weeks of October 2013 (the beginning of harvest season for the whole country and second harvest for Greater Equatoria states) followed by analysis and reporting in November 2013. Some 26% of the surveyed households are female headed while the average household size is 7 persons. Some 6% of residents host IDPs or returnees with the mean duration of their stay at 5 months.

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 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 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.

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

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The FSMS partners:

