

South Sudan Food Security Monitoring

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

Round 7, July 2012

Highlights

Overall, food security situation shows a slight worsening compared to same month last year and February 2012, while child malnutrition reached the highest values obtained since June 2010, with 20% of acute malnourished children between 6 and 59 months according to MUAC thresholds.

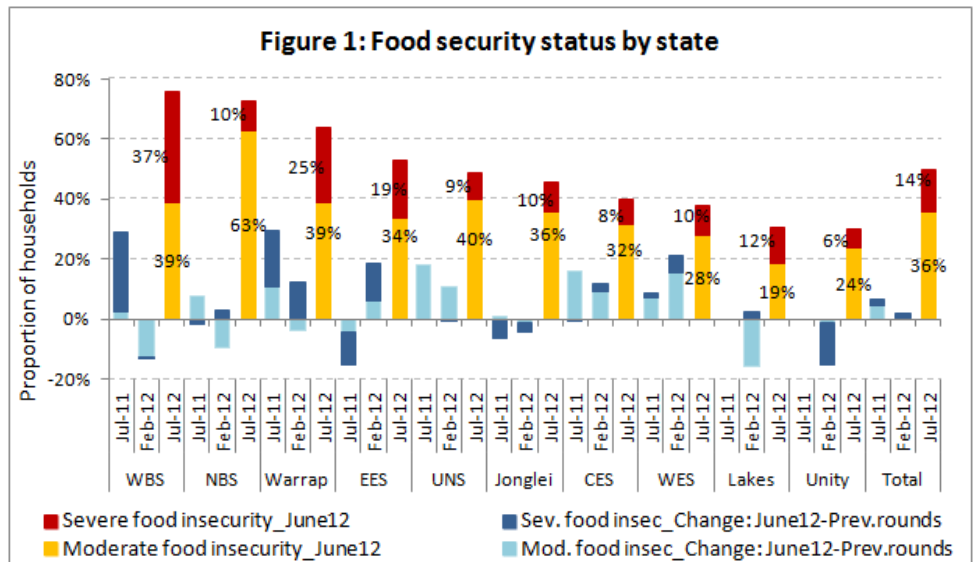
Currently, half of assessed households are food insecure and 14% severely food insecure. However, significantly different values and trends are found among states. The food security situation has worsened in Warrap, Upper Nile and Western and Central Equatoria compared to last year and to the previous round, as well as in WBS and NBS respect last year. Jonglei and Eastern Equatoria showed some improvement from June 2011.

The main limiting factor relies on food access. The expected seasonal food security deterioration for this time of the year, of lean season and physical access difficulties due to rains, is aggravated by the total trade closure between Sudan and South Sudan in late April and the increased food demand in areas of high returnees. High fuel prices, weakening of local currency against dollar and scarcity of certain staples in markets intensifies the already existing food access problems. High food prices remain the shock most frequently reported by households; nearly half of them need to spend a high percentage of their total expenditure on food, compromising the expenses on other basic services, and the sale of natural resources constitutes the main source of income for 20% of households. The situation is not expected to improve until the new harvest, end of rainy season and/or reopening of the border between Sudan and South Sudan.

Food security situation

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*.

Results showed that 36% of the assessed households are moderately food insecure and about 14% severely food insecure. It indicates a slight overall food insecurity deterioration with 6.5% more food insecure households compared to same month last year and 2% more than previous round. However, a wide variability in percentages and trends is found across the states. **Figure 1** shows the percentages of moderate and severe food insecurity for June 2012 as well as the changes observed with respect to same month last year and the previous FSMS round (positive when there has been an increase of food insecurity and vice versa).



Prev. rounds: Previous FSMS rounds for June 2011 and February 2012.

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There was no significant difference in food insecurity based on the gender of households' head. Returnees are significantly more likely to be severely food insecure than residents. The proportion of severely food insecure households was 12% among IDPs, 15% among residents and 27% of returnees.

Food consumption

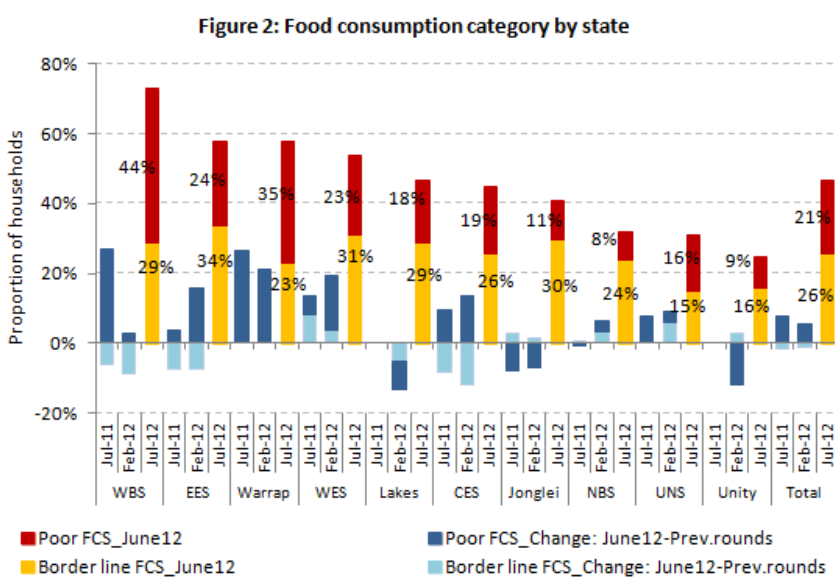
Food Consumption Score (FCS), based on seven-day recall period, is below the acceptable thresholds for nearly 50% of households assessed, and poor for 21%. In **Figure 2** are represented the percentages of households with poor and borderline FCS for June 2012 as well as the changes observed with respect to same month last year and the previous FSMS round (positive when there has been an increase of food insecurity and vice versa). Compared to June 2011, there are 7.5% more households with poor food consumption, and 5.4% more than in February 2012. Again, states show substantial differences: nearly 75% of households in WBS have unacceptable food consumption, 44% poor, whereas in Unity 25% households had unacceptable FCS, out of them 9% poor.

Generally, food consumption results are correlated with the general food security status: 88% of severely food insecure households had poor food consumption scores whereas 70% of food secure households have acceptable FCS and none poor. There was no difference in food consumption scores based on the gender of household heads.

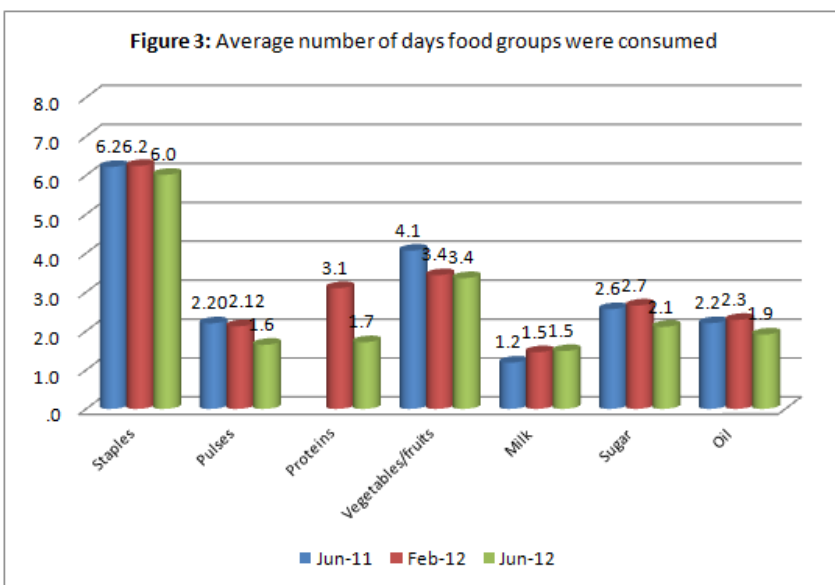
Out of ten food groups (staple, pulses, vegetables, fruits, meat, eggs, fish, dairy, sugar and fats), 42% of the households consumed on average less than 3 food groups per day, and 74% less than 4 food groups. In terms of weekly diet diversity, 43% of the households reported to have consumed only 4 different food groups in the past week and 27% just 3 out of the ten described above.

In terms of food items consumed, there is no change in the main food pattern compared to previous rounds but a decrease in the mean consumption of most main food groups: staples, oil, sugar, pulses and especially animal protein sources

(**Figure 3**). The most frequently eaten food items were sorghum (4.0 days), vegetables (3.4 days), sugar (2.1 days) and oil (1.9 days). Among severely food insecure groups, consumption of meat (1.0 days), tubers, and other cereals and proteins was generally low.



Prev. rounds: Previous FSMS rounds for June 2011 and February 2012.



Agriculture

In 2012 agricultural season, overall proportion of households that cultivated is similar to last year, at 88%, but the proportion of those who have plans to cultivate is higher than in June 2011. Main crops are sorghum and maize, as key staples, cultivated by 72% and 60% of the households, respectively, ground nuts (43%) and sesame (38%); nearly half of the households planted other crops as well. This cultivation profile is also similar to last year, although a small reduction of diversity is observed (**Table 1**).

Sorghum is the commonest staple, cultivated more than 80 percent of households in NBS, Warrap, EES and, together with groundnut, in WBG and Lakes. Maize is the main crop in Unity and Jonglei, and also in Central and Western Equatoria but here closely followed by groundnut and sorghum; in Upper Nile sorghum and maize are cultivated in similar but lower proportions (35%).

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Compared to IDP (90%) and residents (88%), a slightly lower proportion of returnees cultivated some crop (82%).

Proportion of households that practiced **agriculture** decreased in WES (-18%), NBS (-14%), Warrap (-9%) and WBS (-6%) and increased in UNS (+20%). Cultivation of **sorghum** increased in WES (15%) and UNS (7%) and decreased in Jonglei (-12%) and CES (-11%); **Maize** experienced a reduction mainly in WES and Warrap (-21%), and also in UNS (-8%) and rose in Lakes and WBS by 8%. **Groundnuts** plantation is diminished in Jonglei (-15%), Western and Eastern Equatoria by 13% and Warrap (-11%) whereas it increased in UNS (+8%) and Lakes (+6%). **Sesame** cultivation dropped off in Jonglei and Warrap (-8%) and improved in WES and WBS by 12%, Lakes (+9%) and WES (+6%). **Other crops** were more cultivated this year compared to last one in CES (+20%), Jonglei and Lakes by 11-12%, WES (+9%) and UNS (+7%), but a significant reduction is observed in Warrap, NBS and Eastern Equatoria by 20-30%. The states that are not mentioned experienced changes equal or below 5%.

In 2012, proportion of households with more than 2 feddans cultivated decreased by 5% compared to last year whereas the percentage with cultivated lands between 1 and 2 feddans increased by 10%. These changes are compensated in a way that the average land cultivated per household this year (1.7 feddans) is comparable to the 1.8 feddans obtained in June 2011.

Food secure households cultivated an average land size of 1.7 feddans against 1.4 for the severely food insecure and the mean land size cultivated for male-headed households was 1.6 feddans and 1.4 for female-headed ones.

Table 1: Percentages of households that cultivated by crop and total in June 2011 and 2012.

State	Cultivated in June 2011						Cultivated in June 2012					
	Any	Sorghum	Maize	G/nuts	Sesame	Other	Any	Sorghum	Maize	G/nuts	Sesame	Other
WES	99%	32%	93%	80%	50%	72%	81%	47%	72%	67%	56%	81%
EES	88%	88%	18%	30%	27%	56%	90%	83%	20%	17%	39%	34%
Jonglei	93%	65%	81%	20%	12%	51%	89%	53%	84%	5%	3%	63%
Lakes	92%	89%	60%	78%	50%	48%	96%	91%	68%	84%	59%	59%
UNS	64%	30%	42%	3%	5%	16%	84%	37%	34%	11%	10%	23%
WBS	88%	80%	56%	77%	38%	69%	82%	83%	64%	81%	50%	71%
NBS	100%	98%	43%	19%	52%	60%	86%	99%	39%	22%	48%	34%
Warrap	98%	94%	79%	63%	64%	65%	89%	90%	58%	52%	55%	36%
CES	91%	61%	75%	67%	33%	60%	92%	50%	79%	69%	35%	80%
Unity							88%	70%	94%	20%	8%	22%
All	88%	71%	61%	49%	38%	56%	88%	72%	60%	43%	37%	49%

Income sources

As it can be seen in **figure 4**, the general main income source of the assessed households are the sale of natural resources (20%), livestock and crop sales (16%), salaried work (14%) and others (15%). Overall, livelihood activities appear to be more equally distributed compared to June last year and last FSMS round (February). Following the same seasonal pattern observed last year, the percentage of households relying on the sale of livestock as main source of income increases in June compared to February, while the sale of natural resources decreased, probably due to more involvement of household members in agricultural activities. However, this year, the sale of crops has slightly fallen from February to June, while the trend in 2011 was the opposite. Compared to June last year, currently there is a slightly higher dependence on salaried work and agricultural casual labor.

Whereas the sale of natural resources is the main source in WBS, EES and NBS, the sale of livestock is relatively more important in Unity, Warrap and Lakes; in this last state, crop sales is also the main income source together with Central and Western Equatoria. In Jonglei and Upper Nile State, sources of income are more diversified and percentages of salaried work are the highest.

Sale of natural resources is the main income activity of severely food insecure households (37%), against the 12% of the food secure ones. Almost 60% of food secure households rely on crop and livestock sales followed by salaried work, whereas these activities are the main ones for only 30% of severely food insecure.

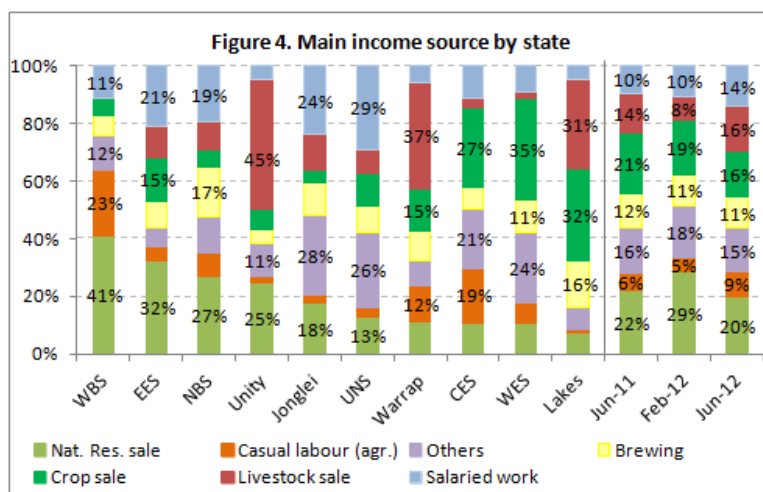
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Income sources classified as unreliable include sale of grass, charcoal and firewood, while income sources such as salaried work, sale of cereals, livestock and petty trade are considered as more reliable income sources. Based on this classification, the proportion of households classified as having poor (31%), medium (37%) and good (32%) income reliability and sustainability reflected slight changes -not exceeding 5%- compared to February 2012 and June 2011 rounds.

Northern and Western Bahr el Ghazal as well as Eastern Equatoria are the states with highest proportion of households (41-53%) depending on poor reliable and sustainable sources of income. Returnee households have higher percentage of poor income reliability and sustainability (43%) followed by IDPs (39%) and residents (30%).

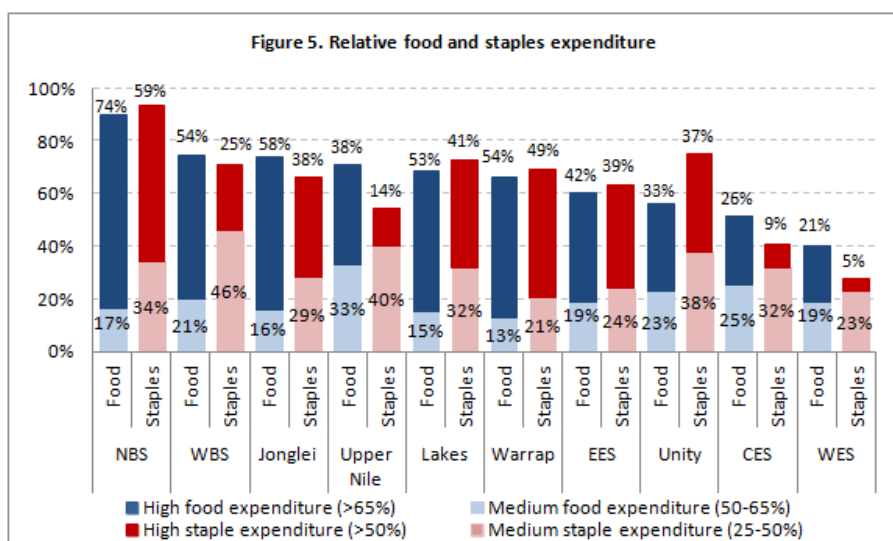


Expenditure (income proxy) and purchasing power

Households with high expenditure share on food and/or staple, are highly vulnerable to income or price shocks and, hence, more likely to fall into food insecurity. According to the percentage of total expenditure dedicated to food or staples, households are classified into three categories: high, medium and low. Figure 5 shows the proportion of households with high and medium food and staple expenditure by state for June 2012 in descendent order according to food expenditure.

Results show a large variation among states, with Northern Bahr el Ghazal having the highest proportion of households with high food and staple expenditure while Western Equatoria has the lowest. However, moderate expenditure is more similar in all regions varying from 13% to 33% (Figure 5).

Overall, percentage of households with high (46%) and moderate (23%) food expenditure has increased compared to the previous round by 5% and 3%, respectively. This trend differs from last year, when no increase in high expenditure was observed. Compared to June 2011, currently there are 9% more households with high food expenditures.



By state, the proportion of households with high food expenditure (higher than 65% on food) has increased by 5% to 15%, except in Unity, Warrap and WBS states, where percentage of households with low food expenditure has risen since February. Compared to June 2011, households with high food expenditure rose across all states except EES; also WES has more households with low food expenditure than in June 2011.

Compared to February 2012, food expenditure has increased across all irrespective of residence status; IDPs (49% to 57%) returnees (60% to 63%) and residents (57% to 60%).

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Food insecure households are associated with higher expenditure on food and staple. On average, and out of the total expenditure, food secure households spent 49% on food and 25% on staples whereas the food insecure ones spent about 70% on food and 50% on staples. With the closure of trade between Sudan and North Sudan coupled with various recent developments in the markets (weakening of local currency, high fuel transport and changes in supply sources), the expenditure on basic commodities continued to rise in 2012. In this situation of high food prices, the food insecure households are the most affected group as they spend the highest proportion of income on food compromising expenses on other basic services.

As indicated on the agriculture section, food secure households cultivated larger area and are expected to harvest relatively higher production which would reduce markets dependence for staples compared to other groups. Hence, price increases in food commodities affects food secure households less as compared to the severely and moderate food insecure ones.

In June 2012, monthly household total expenditure stood at SSP 796 which is 28% percent higher than February round, whereas food expenditure increased 42% in the same period (from 290 to 411 SSP). Similarly, total per capita expenditure rose up from February (SSP 2.81) to June (SSP 3.72).

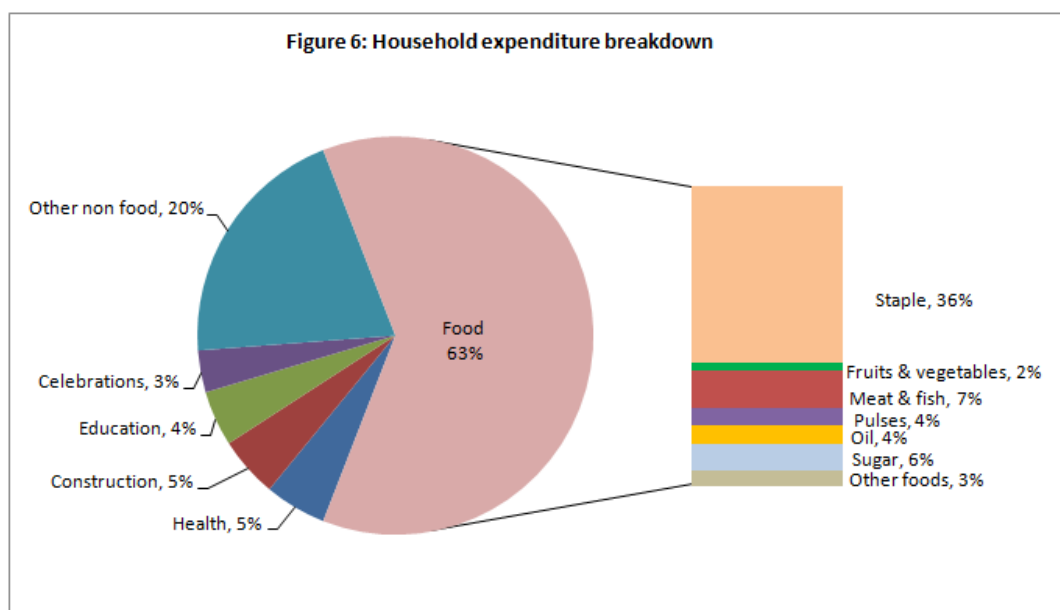
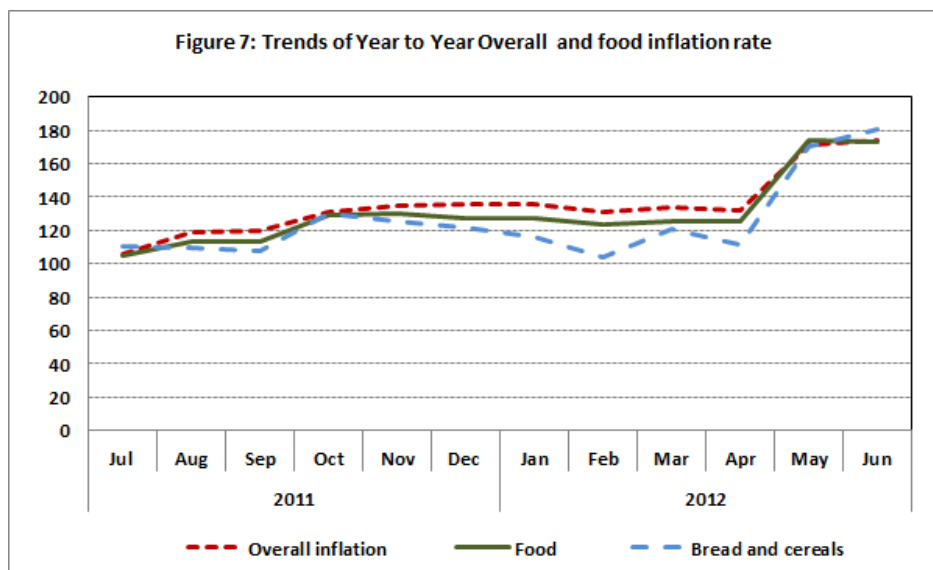


Figure 6 shows the breakdown of expenditures at household level.

Market

In June 2012, the cost of living (overall inflation rate) as reported by National Bureau of Statistics increased by 74 % (June 2011 = 100) as compared to last year the same month (**Figure 7**). In the same month, food inflation rate increased by 73%. Of food components, the increase was 359% for fruits, 81% for cereals and bread, 50% for meat and 33% for oil and fats. The higher the weights of food and non-alcoholic beverages in the analysis, small changes in the prices of these commodities have greater impact on the overall as well on the food inflation rates. Those states with higher relative food expenditure, such as NBS, WBS, Jonglei, Lakes or Warrap, are also experiencing high level inflation rates.

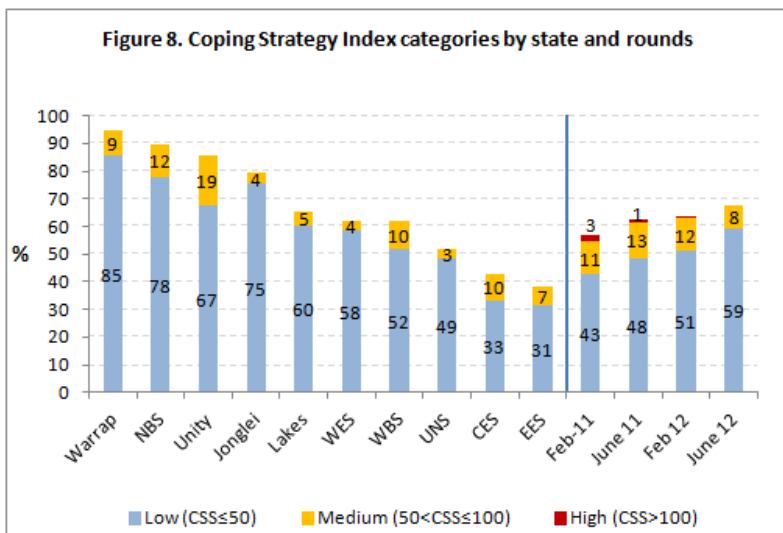
White sorghum is the most widely consumed staples in South Sudan followed by maize and wheat flour. The supply of these staples comes largely from the neighboring countries, Sudan (white sorghum – though declined recently) and Uganda for maize. The prices of staples are continually rising since trade between Sudan and South Sudan ceased in April 2012. Normally, prices of staples rise as the lean season progresses (June – August). However, the trade ban, continued influx of returnees, high dependence on markets which is not supported much by local production, weakening of local currency, increased fuel and transport cost and other factors have exacerbated the situation.



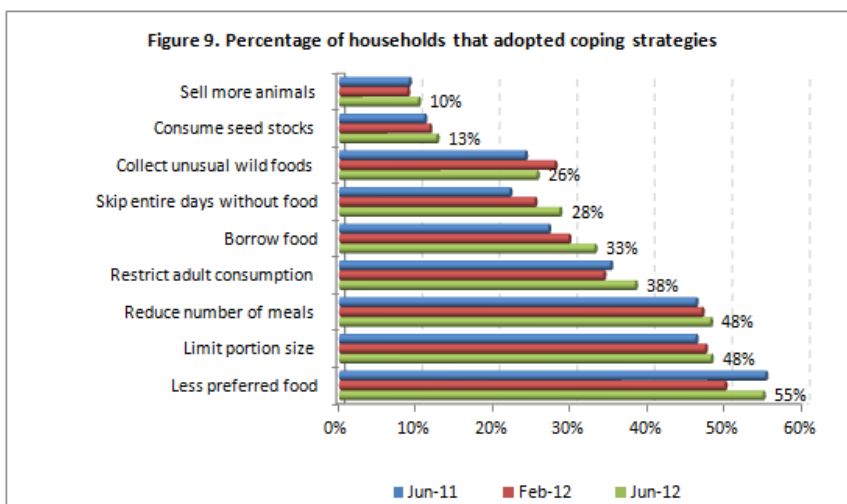
Coping strategies index

Proportion of households adopting some coping strategies increased slightly from 64% in February 2012 to 67% in June 2012, following the same seasonal pattern observed last year. However, regardless this seasonal trend, since February 2011 there is a steady increase of households applying coping strategies together with a reduction in the severity of the specific strategies.

Among states, Warrap, NBS, Unity and Jonglei are the states where the use of coping strategies is most common while Eastern and Central Equatoria showed the lowest percentages. In terms of severity, Unity, NBS, WBS and CES present the highest proportion of households with mild CSI, and UNS, WES, Jonglei and Lakes the lowest (Figure 8).



The commonest strategies are the consumption of less preferred food, followed by reducing the portion size and the number of meals. The sale of livestock or seed stock consumption are the least chosen (Figure 9).



Compared to February 12 and same month last year, a general increase is observed for all the strategies, except for collection of wild food and consumption of less preferred food that seems to be more seasonal sensitive.

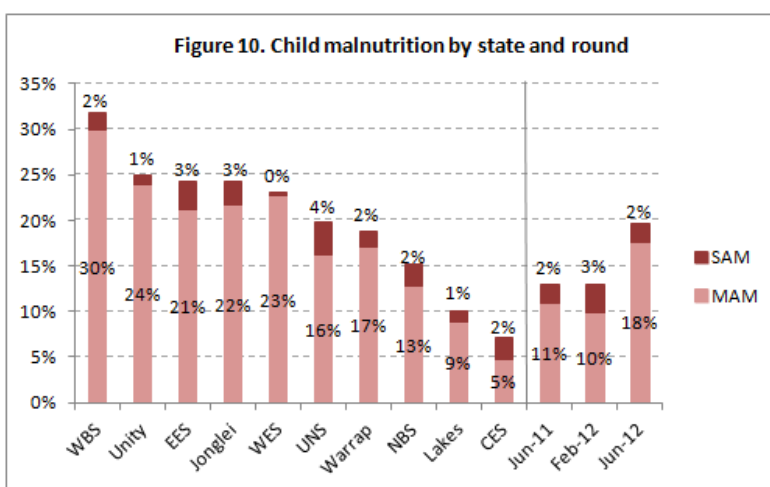
Female headed households are significantly more likely to adopt coping strategies and more severe ones than male-headed ones. While 73% of households with female heads used some coping strategy, 10% less households with male heads reported any strategy.

By resident status, IDPs households are more likely to adopt coping strategies and, among them, more severe ones. Proportion of IDP households that reported some coping strategy was 89%, compared to 71% of returnee households and 67% of residents.

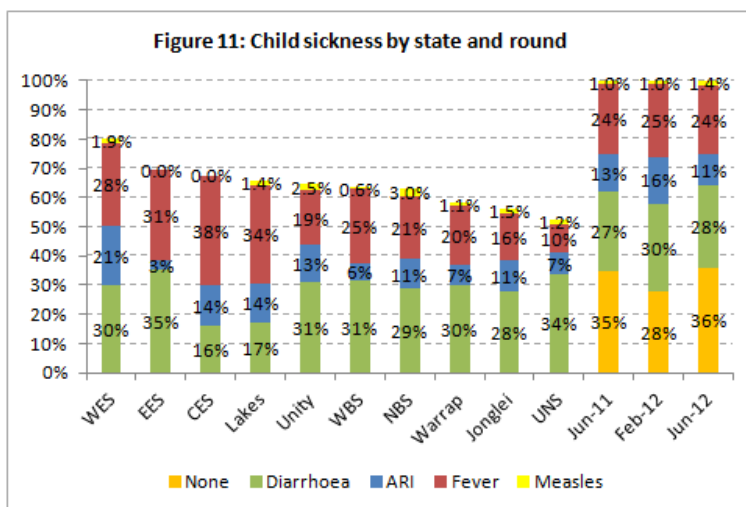
Mid-Upper Arm Circumference (MUAC) and child nutrition

Out of 2,147 non-pregnant women between 15 and 49 year old measured, about 20% showed acute malnutrition, with 2% of severe cases, according to MUAC thresholds of 210-230mm. These rates represent an increase compared to February this year and same month last year, of 5% and 8%, respectively, for GAM, and 0.5 and 1% for SAM, continuing with the increasing trend observed since February 2011. Unity, Warrap and WBS showed the highest values, above 25%, followed by NBS and Jonglei with a Global Acute Malnutrition above 20%. Only women from Central Equatoria maintained an acute malnutrition rate below 10%.

Around 20% out of 3,440 children (6-59 months) measured are acute malnourished according to MUAC thresholds (**Figure 10**). This percentage is the highest obtained in all the FSMS rounds since July 2010. On the other hand, severity appears to be stable, according to MUAC. A large variability is observed among states, although all of them show a Global Acute Malnutrition of 10% or more, except Central Equatoria. Western Bahr el Ghazal showed the highest acute malnutrition rates (32%), followed by Unity, Eastern Equatoria, Jonglei, Western Equatoria and Upper Nile (20-25%). Rate of severe cases are higher in Upper Nile, Eastern Equatoria and Jonglei. Acute malnutrition affects relatively more to children under 2 years old.



Out of 2068 children between 6 and 24 months, 61% were still breastfeeding, with relatively small variations among states: Lakes state showed the lowest percentage (50%) and Upper Nile the highest (70%). An adequate child diet diversity was reached by only 19% of children under 2, ranging from 6% in NBS to 37% in CES. The overall percentage shows a decrease in child diet diversity compared to June 2011 (27%) and February 2012 (25%). This negative trend observed since February is contrary to the improvement observed last year between these seasons. In addition, children under 2 are recommended to have daily intake of meat and vitamin A rich vegetables and fruits. Vitamin A-rich vegetables were consumed by 22% of 6-24 months children, ranging from 5% (Unity and Jonglei) to 41% (WES & CES), whereas between 18% (Lakes) and 49% (Upper Nile) of children had meat the day before.



Between 52-80% of children under 2¹ experienced illness in the past 2 weeks (**Figure 11**). Higher percentages are found in Great Equatoria Region, especially in WES whereas the lowest was obtained in Upper Nile. Diarrhoea and fever are the most common diseases but they also show variations among states: Diarrhoea is more frequent in Eastern Equatoria and Upper Nile and less in Central Equatoria and Lakes, where the incidence of fever is the highest. ARI varies from 3% in Eastern Equatoria to 21% in WES. Globally, child sickness is similar to June 2011 (FSMS 4th) and slightly lower than in February 2012 (FSMS 6th), mainly due to lower Acute Respiratory Infections.

Assistance received

About 45% percent of the assessed households reported receiving at least one form of assistance in the past three months, which represents more than double the assistance received in February 2012 (21%) and 15% more assistance than same month last year. Out of the households that received some assistance, about 77% received food assistance, 20% Vitamin A, 8% seeds or tools and 5% other kind of aid. The highest percentage of households who received any assistance and, specifically food assistance, was in Jonglei state (90%), WBS (83%; 62% food) and Lakes (73%). There are significant differences in the assistance received according to resident status, being significantly higher in IDPs. Assistance covers 71% of IDPs -60% receiving food-, versus 46% of returnees -32% with food- and 45% of residents (35% with food). According to food security group, the severely food insecure households are significantly more covered by any kind of assistance as well by food: 57% of the severely food insecure reported to be receiving some assistance, 46% food; 45% of the moderately food insecure (32% food) and 43% food secure households 35% food. There are no significant differences between female or male headed households.

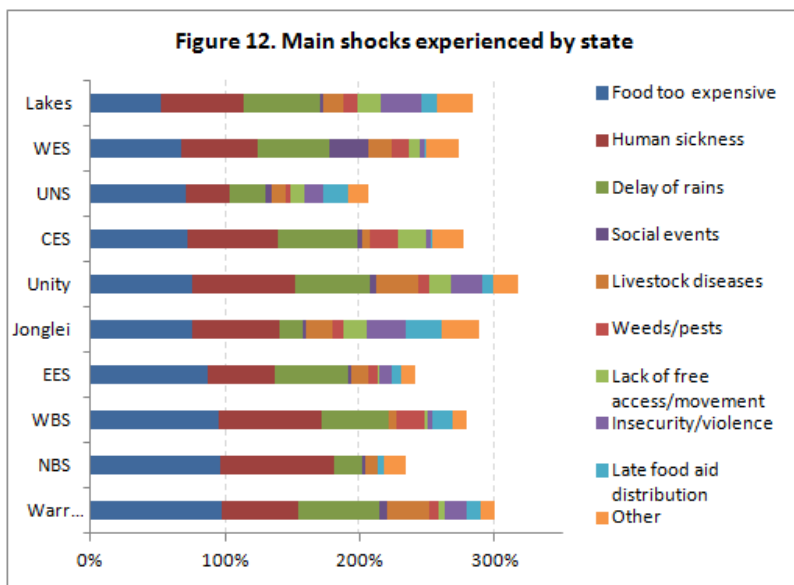
¹ 2,083 children 6-24 months

Shocks experienced

High food prices remained the most frequently reported shock by households in South Sudan as inflation continues to take its toll, and increased compared to February more than expected.

On average, about 80 % of households reported high food prices as the major shock, followed by human sickness (63%) and delay of rains (45%). In all states, high food price was found the leading shock except Lakes and Unity where human sickness have more or equal relative importance. Human sickness was also important in NBS, WBS, CES and Jonglei (65 – 84 percent).

Compared to February 2012, the overall reported insecurity declined by more than half with the exception of Warrap that almost doubled. In spite of overall stable response in human sickness, Jonglei (64%) and WBS (76%) households indicated an increase. Except Jonglei, NBS and UNS, about 50-60% of households reported delay in rainfall as another shock that could affect land cultivation (**Figure 12**).



Demographics

- During this round, 2515 households were interviewed from 101 sites (10 sites per state; exception was in Jonglei (8).
- Female-headed households represented 48 percent of the sampled population.
- Average household size was 7.56 persons.
- The residential status of the sampled households are:
 - 93 percent residents
 - 3.9 percent returnees
 - 2.54 percent IDPs
 - 0.53 others

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 seventh 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 Jonglei state were not assessed due to access problem.

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.

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:

