Highlights

- In June 2011, FSMS Round Four data collected from all nine states (except Unity) shows that the food security situation has remained relatively unchanged compared to the last round in February, with some interstate variations.
- The effect of North-South Sudan border closure which resulted in shortage of food and fuel across South Sudan, insecurity and delayed start of season rainfall were the key drivers of food insecurity.
- Although there was increased influx of returnees, massive displacement into NBS, Warrap, Unity and WBS states from Abyei area, the food security remained relatively stable because of emergency humanitarian support from Government and UN and NGO partners. Monitoring will continue as agriculture season progresses and the next Round of FSMS will take place in October 2011.

Food security situation

In June, 11 percent of the households were severely food insecure, 33 percent moderately food insecure and 56 percent were food secure (Figure 1). Compared to the previous FSMS round, the overall food security situation remained relatively unchanged although there is marked variation from one state to state. Noticeable deterioration in food security situation was observed in EES and NBS. Remarkable improvement in the food security situation occurred in WES as well in CES especially in terms of moderately food secure category. The low relative expenditure on food, extremely low coping strategies and high contribution of own production (47 percent) as well as improvements in food consumption among households in WES indicate end of the hunger gap and start of first harvest period. In EES where majority (64 percent) spent above 65 percent on food purchase, increasing food prices is to blame for the deteriorating food security situation, while in NBS, food access is influenced by large proportion of the households with poor income (60 percent).

Some 13 percent of the female-headed households were severely food insecure and 36 percent were moderately food insecure, whereas 10 percent of male-headed households were severely food insecure and 28 percent moderately food insecure. Unlike the previous round in February, returnees were found to be more food insecure compared to the IDP and resident households. About 13 percent of the returnee households were severely food insecure, whereas 11 and 7 percent of resident and IDP households respectively were severely food insecure. The main important factors that have affected food situation in South Sudan include high food and fuel prices, late and erratic rains, human sickness and insecurity. Food aid played a significant role in stabilizing the food security situation.

Food consumption

Based on the food consumption score derived from a 7-day recall period, 12 percent of the households were categorized as having poor food consumption, 29 percent borderline and 59 percent had acceptable food consumption (Figure 2). There is a slight improvement from the previous round where 15 percent had poor food consumption. Although poor food consumption is slightly higher among female-headed households, the difference is not statistically significant. Returnees had more proportion of...
households with poor food consumption (14 percent) than residents (12 percent) and IDP households (11 percent). Recently concluded food security assessment of Abyei IDPs attributed acceptable food consumption to food aid1 provided to the IDPs. Despite the observed improvement in the overall food consumption, in Jonglei and NBS, proportion of households with poor and borderline food consumption increased whereas this has decreased in WES.

Staples were consumed almost daily (6.1 days), protein sources and fruits and vegetables were consumed about 4 days each on average. Milk and dairy products were consumed at least once and both sugar and oil were consumed at least twice a week (Figure 3). Consumption of protein has improved significantly compared to the previous round but it was consumed more frequently by the food secure households. Consumption of fruits and vegetables has improved among severely food insecure households. This depicts seasonality trend of consumption of various food items since most of the vegetables (45 percent) and fruits (66 percent) come from the wild. Severely food insecure households are mostly involved in gathering compared to the other food security groups.

**Agriculture**

In June, 90 percent of the households cultivated. This is in line with finding of the previous round where 92 percent expressed interest to cultivate this season. About 71 percent of the households cultivated sorghum, 61 percent maize, 49 percent groundnuts, 38 percent sesame and 56 percent cultivated various crops. More than half (53 percent) of households that did not cultivate are planning to cultivate sorghum, 31 percent maize, 40 percent groundnuts, 34 percent sesame and 27 percent planned to cultivate other crops (Table 1).

Sorghum was widespread across the states except in WES and UNS where there exist alternative staples such as cassava and maize in WES and maize in UNS. There was no significant difference in cultivation of sorghum among various food security groups, but food secure and moderately food insecure households cultivated groundnuts, sesame and other crops more often than severely food insecure households. More male-headed households (94 percent) cultivated this agricultural season than female-headed households (87 percent).

---

1 Food security monitoring among Abyei IDPs in Warrap and WBS states, South Sudan, June 2011.
Table 1: Percentages of households that cultivated various crops

<table>
<thead>
<tr>
<th>State</th>
<th>Cultivated in June 2011</th>
<th>Planned to cultivate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Any</td>
<td>Sorghum</td>
</tr>
<tr>
<td>WES</td>
<td>99%</td>
<td>32%</td>
</tr>
<tr>
<td>EES</td>
<td>88%</td>
<td>88%</td>
</tr>
<tr>
<td>Jonglei</td>
<td>93%</td>
<td>65%</td>
</tr>
<tr>
<td>Lakes</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>UNS</td>
<td>64%</td>
<td>30%</td>
</tr>
<tr>
<td>WBS</td>
<td>88%</td>
<td>80%</td>
</tr>
<tr>
<td>NBS</td>
<td>100%</td>
<td>98%</td>
</tr>
<tr>
<td>Warrap</td>
<td>98%</td>
<td>94%</td>
</tr>
<tr>
<td>CES</td>
<td>91%</td>
<td>61%</td>
</tr>
<tr>
<td>Total</td>
<td>90%</td>
<td>71%</td>
</tr>
</tbody>
</table>

Income sources

During June, the main income sources reported by households include sale of natural products (firewood, charcoal and grass), sale of crops and livestock (Figure 4). As the hunger season peaks in most states, sale of livestock increased. Sale of livestock increased from 9 percent in February to 14 percent in June. There was no significant difference in sale of cereals compared to the previous round. With the start of agricultural season, sale of natural resources started to decline as more households are involved in agricultural activities on their farms. Result of the food security monitoring also show slight reduction in agriculture labour as income source.

About 14 percent of respondents relied on sale of cereal and another 14 percent sale of livestock. Generally, reliance on sale of natural resources is on the decline particularly sale of grass which is not available at this time of the year and therefore the proportion of households involved in the sale of natural resources reduced from 28 percent in the previous round to 22 percent during this round. Households that reported sale of firewood constituted 12 percent, sale of charcoal 6 percent and grass 3 percent. Considerable proportion of households also depended on brewing as the main income source (12 percent).

Based on the reliability of the income sources, 30 percent of households were classified as having poor income, 36 percent medium and 34 percent good income sources. This indicates slight change in the proportion of households with poor income sources which was found to be 33 percent in February round. Percentage of those with medium income source remained the same.

Expenditure (income proxy) and purchasing power

Overall, 40 percent of households spent more than 65 percent on food. This is similar to the previous round. About 22 percent spent between 50 and 65 percent on food, while 38 percent spent less than 50 percent on food alone. The average food expenditure accounted for 56 percent of household total expenditures (Figure 5), which is similar to the previous round. Unlike, the previous round, expenditure on staples reduced from 27 percent to 33 percent. This drastic increase in expenditure on food had been particularly observed in EES where average food expenditure was 69 percent and 64 percent of households spent above 65 percent on food. This is followed by NBS and Lakes states with 62 percent each.
Amount spent on food and specifically on staples depends, to a large extent, on the households’ food security status. Severely food insecure households spent as high as 70 percent on food alone and moderately food insecure spent an average of 69 percent whereas food secure households spent 46 percent for food purchase. In terms of amount spent on staples alone, severely food insecure households spent as high as 51 percent, while moderately food insecure spent 43 percent and food secure households spent 24 percent. Both the relative food expenditure and amount spent on staples alone have increased compared to the previous round. This could be the manifestation of the delayed rains and the ever increasing food prices coupled with reduced commodity flow from North Sudan.

More IDP and residents households spent highly on food (40 and 41 percent respectively) compared to 32 percent of returnees spending highly on food. The per capita total expenditure during this FSMS Round was 2.5 SSP per day. This is higher than the previous round and same as October 2010. The average household monthly expenditure was 545 SSP. During the previous round, it was 456 SSP. Increased prices were observed across the country following the hike in fuel price and the temporary closure of the Sudan-South Sudan border.

**Coping strategies index**

More households have adopted coping strategies (66 percent) compared to 60 percent in February 2011 and 41 percent in October 2010. Although the proportion of households adopting coping strategies is highest among IDPs (70 percent), they were mostly found to use low coping, which are less detrimental to their livelihoods and food security. About 67 percent of returnees and 66 percent of residents adopted coping. The most commonly adopted coping strategies were reliance on less preferred or cheaper food, limiting portion size, reducing number of meals and restricting adults’ consumption to enable children eat (Figure 6). This is similar to the previous round but number of households using them has increased.

In terms of severity, proportion of households that adopted medium and high coping strategies reduced from 13 and 3 percent respectively in February to 10 and 1 percent respectively in June 2011. (Figure 7). Although more households adopted coping strategies, low coping strategies are often used. There is no significant difference between households headed by males and those headed by females in terms of the overall coping strategies index.
Mid-Upper Arm Circumference (MUAC) and child nutrition

1,943 non-pregnant women of child bearing age were measured for malnutrition by using Mid-Upper Arm Circumference (MUAC). The data shows that 10.6 percent were moderately malnourished (MUAC 21-23cm) and 1.0 percent severely malnourished (MUAC <21cm) translating into Global Acute Malnutrition (GAM) level of 11.6 percent. This is an increase from February 2011 round when GAM was 8 percent and the level is almost at the same level as in October 2010 with 12 percent GAM. The highest prevalence were found in Jonglei (24 percent), WBS (21 percent), UNS (18 percent) and EES (17 percent).

2,428 children between 6-59 months were included in the MUAC measurement. The GAM prevalence (MUAC <12.5cm) was 12.6 percent. More specifically, 1.7 percent were severely malnourished (MUAC <11.5cm) and 10.9 percent moderately malnourished (MUAC ≥11.5 - <12.5cm). This is an increase from February when GAM was 9.1 percent but the level is still slightly lower compared to October 2010 round GAM finding of 15 percent. When looking at child GAM per state, the highest prevalences were reported in WBS (34 percent), UNS (30 percent) and Warrap (23 percent) States.

Overall, 27 percent of the children 6-23 months consumed food from 4 or more food groups, indicating adequate dietary diversity in June 2011 round, a slight increase from 21 percent in February 2011. There was no significant difference between the malnourished and normal children even though number of food groups was slightly less for the malnourished children. 62 percent of the children consumed breast milk in addition to the other food groups. This still indicates that child feeding practices were not optimal and children are lacking nutrients and possibly also energy from the diet which can contribute to malnutrition.

Approximately two thirds of all children under 2 experienced illness in the past 2 weeks (Figure 8), a slight increase from February 2011 round. Furthermore, illness was more prevalent among malnourished children. The most common illness was diarrhea which was more prevalent among the malnourished. Also fever and Acute Respiratory Infection (ARI) were reported.

Assistance received

During the fourth round of the FSMS, 31 percent received at least one form of assistance in the past three months. This is slightly higher than the previous round where 22 percent reported having received some sort of assistance. The proportion of households that had received food assistance doubled from 11 percent during the previous round to 22 percent in June. Increased number of returnees and massive displacement are the factors behind this increase. About 17 percent received agricultural tool and/or seeds, 7 percent received Vitamin A supplement and 2 percent received various forms of other...
The most frequently reported shocks by the households included high food prices, delay of rains, human sickness and insecurity (Figure 9). High food prices was a common across the country, other shocks varied from one state to the other. However, delay of rains was most frequently reported by households in Warrap, Lakes (both 79 percent) and EES (73 percent). Proportion of households that had reported high food prices increased compared to February round when it was 69 percent. Closure of the border between South Sudan and Sudan resulted in reduced fuel and commodity flow and triggered the unprecedented hike in commodity prices which is likely to continue until main harvest starting in October. Insecurity was also reported by 70 percent of households in Jonglei, 56 percent in Lakes and 40 percent in WES.

Methodology
FSMS Round Four data was collected from 10 purposively selected sentinel sites (all rural) representing different livelihood zones from each state. 25 randomly selected households were interviewed at each site. One community questionnaire and two trader checklists were administered at each site to provide supplementary information. The findings are also complemented with regular market price monitoring and agrometeorological information for trend analysis.

During the fourth round, nine of the ten states; WES, EES, Jonglei, Lakes, UNS, WBS, NBS, Warrap and CES were included in the monitoring system. Unity state was dropped due to insecurity.

Food consumption was derived using a 7-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.

Demographics
- A total of 2,216 households were interviewed from 89 sites in all but one state. Unity state and one location in Jonglei state were dropped due to insecurity.
- Female-headed households represented 44 percent of the sampled population.
- Average household size was 7.6 persons.
- The residential status of the sampled households are:
  - 89.8 percent residents
  - 7.9 percent returnees
  - 2.3 percent IDPs

Food access was obtained by combining income source/reliability and relative expenditure on food. The food security indicator is based on household food consumption, food access, and coping strategies.

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. Based on this, households have been categorized as having low, medium and high coping.

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