Emergency Food Security Assessment for Returnees in South Sudan

Western Bahr El Ghazal, Northern Bahr El Ghazal, Central Equatoria, Unity, Warrap and Jonglei States
7th – 15th February, 2011
ACKNOWLEDGEMENTS

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WFP is greatly indebted to all, too many to list here, who participated in the assessment exercise and without whom the task would not have been possible.

National counterparts: SSRRC, SSCSE, MOAF
UN agencies: RSCO/OCHA, FAO
LIST OF ACRONYMS

CBO       Community Based Organization  
CES       Central Equatoria State  
CSI       Coping Strategies Index  
EES       Eastern Equatoria State  
EFSA      Emergency Food Security Assessment  
FAO       Food and Agriculture Organization of the United Nations  
FCS       Food Consumption Score  
FGD       Focus group discussions  
GAM       Global Acute Malnutrition  
GOSS      Government of southern Sudan  
HH        Household  
IOM       International Organization for Migration  
MOAF      Ministry of Agriculture and Forestry  
MUAC      Mid-Upper Arm Circumference  
NBS       Northern Bahr el Ghazal State  
NFI       Non-Food items  
NGO       Non-Governmental Organization  
OCHA      Office for the Coordination of Humanitarian Affairs  
PPS       Probability Proportional Size  
RCSCO     Resident Coordinator's Support Office  
SAM       Severe Acute Malnutrition  
SSCCSE    South Sudan Commission for Census, Statistics and Evaluation  
SSRRC     South Sudan Relief and Reconstruction Commission  
VAM       Vulnerability Analysis and Mapping Unit  
WBS       Western Bahr el Ghazal State  
WES       Western Equatoria State  
WFP       World Food Programme
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Executive summary

The main objective of the returnee Emergency Food Security Assessment (EFSA) was to assess the food security status of the returnees and local resident community in the main returnee concentration areas. It aimed to understand the food and/or non-food needs of returnees after 3 months upon return to southern Sudan. The data was collected from 7-15 February 2011 in six out of ten South Sudan States selected based on return concentration. The selected states were Western Bahr El Ghazal, Northern Bahr El Ghazal, Unity, Jonglei, Warrap and Central Equatoria. Due to insecurity and logistical reasons, the assessment was not conducted in Upper Nile State. A total number of 340 households in 17 sites were assessed. The EFSA was a joint effort by SSRRC, SSCCSE, MOAF, FAO and WFP.

Food availability
- 82 percent of residents and 27 percent of returnees have access to land which they can cultivate. The land for those households with access to land is mostly their own while some 26 percent of returnees and 9 percent of residents use land that is not theirs but can be used free of charge.
- Food is generally available in markets. 69 percent of residents compared with 72 percent of returnees used markets as main source of food.

Food access
- 46 percent of returnees had poor food access based on their income source and expenditure on food, compared to 36 percent of residents.
- 76 percent of residents and 27 percent of returnees own some kind of livestock.
- 58 percent of returnee households allocated their expenditure on food compared to 53 percent of resident households.
- Before return, 34 percent of returnees relied on casual labour, 30 percent on skilled labour and 20 percent on sale of alcohol. Upon return, only 21 percent relied on casual labour while 27 percent relied on other income sources such as begging and sale of household assets. 16 percent relied on sale of natural resources e.g. burning charcoal, sale of firewood.
- 93 percent of communities have accessible fishing grounds, mostly rivers (82 percent) or swamps (52 percent).
- 55 percent of returnee households had received food assistance since their arrival in South Sudan, however, bias by respondents and the time lag between returnees registration, verification and food distribution could account for this low coverage, 35 percent received non-food items, 4 percent other types of assistance (such as mosquito nets or cash assistance), and 3 percent received seeds and tools.
- 73 percent of returnee households had adopted coping strategies after return to South Sudan; an increase from 33 percent representing the proportion of these households before return. 64 percent of residents used coping strategies. The most common coping strategies adopted among returnees and residents were limiting portion size at meals (51 vs. 58 percent), reducing the number of meals eaten per day (50 vs. 55 percent), eating less preferred, cheaper food (45 vs. 48 percent), restricting adults from food consumption to ensure more food for children (33 vs. 41 percent) and borrowing food (32 vs. 44 percent).

Food consumption
- 15 percent of returnee households had poor food consumption compared to 5 percent of residents. Respectively 31 and 25 percent had borderline food consumption.
- Returnees who returned to South Sudan before December 2010 had poorer food consumption compared to those who returned during or after December 2010 (22 vs. 12 percent).

Food security
- 47,600 (18 percent) of returnees are severely food insecure and 113,700 (26 percent) are moderately food insecure.
- Returnee households who get their main income from sale of natural resources (27 percent) or other income sources such as begging, borrowing, relying on kinship support and sale of household assets (28 percent) were severely food insecure. Among residents the ones getting their main income from sale of natural resources (33 percent), salaried/skilled labour (17 percent) and agriculture (13 percent) were severely food insecure.
- 30 percent of returnee households who do not have relatives or friends at the place of return were severely food insecure. 14 percent of those with relatives or friends were severely food insecure.
• 20 percent of returnees and 10 percent of residents who did not own cattle were severely food insecure.
• 25 percent of returnees living in temporary shelters were severely food insecure.
• 20 percent of returnees who returned during or after December 2010 were severely food insecure compared to 12 percent of those who returned before December 2010. This is attributed to poor food access due to unreliable income sources. 60 percent of returnees who returned during or after December 2010 had poor income reliability compared to 33 percent among those who returned before December 2010.

Community priorities
• Main community priorities identified in the focus group discussions were food assistance (62 percent), drinking water (32 percent) and health services (32 percent).

Recommendations
• Food and non-food assistance to returnees (beyond 3 months assistance package) should be targeted, needs-based and community focused.
• General livelihood support, including support on building permanent houses, distribution of seeds and tools with targeted trainings on how to cultivate in the preferred scale (several feddans vs. small back garden for vegetables cultivation), and provision of well equipped social facilities, is required to assist in reintegration.
• More opportunities should be created to harness the livelihood skill sets of returnees and the most vulnerable residents in the communities to engage them more productively in the local economy.
• Accelerate reintegration activities.
1. Background

South Sudan towards the end of 2010 encouraged returnees to register and participate in the referendum under the Government of Southern Sudan (GoSS) Theme: “Come Home to Choose”. The returnee numbers peaked towards the end of November and December 2010. The weekly return numbers started to reduce in mid-January 2011 around the referendum time. As of March 31\(^1\) 2011, the total number of organized returnees verified by the International Organization for Migration (IOM) was 264,490\(^1\).

WFP has been providing food assistance for both organized and spontaneous returnees. Returnees received a 7-14-day transit ration (in exceptional cases of delays to reach the final destination) and food package (cereals 450 g, pulses 50 g, vegetable oil 30 g and salt 10 g per day per person) for 3 months based on individual household members registered on arrival to the final destination. Food security and livelihood cluster partners provided returnees with production kits (containing seeds, hand tools and in some cases basic fishing gears) at the final destination.

Other agencies provided non-food items (NFIs) such as mosquito nets, blankets and jerry cans. GoSS was to facilitate transportation and free allocation of land for resettlement. Majority of the returnees were expected to complete their 3 months food ration by the end of February 2011.

2. Objectives and methods

2.1 Objectives

The main objectives of the Emergency Food Security Assessment (EFSA) were the following:
- To assess the food security status of the returnees compared to the local resident community.
- To understand the food and/or non-food assistance needs of returnees after 3 months upon return to South Sudan.
- To identify who are the people in need and;
- To identify the kind of response options available.

2.2 Sampling and data collection

The EFSA collected data representative for all returnees and host communities in South Sudan. The aim was to collect data from returnee concentration areas using the Probability Proportional to Size (PPS) cluster sampling. From each cluster 20 households were interviewed\(^2\); 10 returnee and 10 resident households. Two community interviews\(^3\) were conducted in each cluster; one for residents and another for returnees.

The calculated sample size per assessed population group was 200 households\(^4\). Therefore for this assessment the total sample was 400 households; 200 returnee households and 200 resident households.

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\(^{1}\) OCHA return update 31 March, 2011
\(^{2}\) Household questionnaire as Annex 1
\(^{3}\) Community questionnaire as Annex 2
\(^{4}\) 95% confidence interval, 50% prevalence of food insecurity, 10% precision, design effect 2.0, refusal 5%
Table 1: Sampled locations and number of households visited

<table>
<thead>
<tr>
<th>State</th>
<th>Location name</th>
<th>Number of HHs visited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Bahr El Ghazal</td>
<td>Aweil centre, Aweil West, Aweil East, Aweil South</td>
<td>80</td>
</tr>
<tr>
<td>Unity</td>
<td>Panyijiar, Leer, Pariang, Guit, Rubkona</td>
<td>100</td>
</tr>
<tr>
<td>Western Bahr El Ghazal</td>
<td>Wau</td>
<td>20</td>
</tr>
<tr>
<td>Jonglei</td>
<td>Bor South, Piji</td>
<td>40</td>
</tr>
<tr>
<td>Central Equatoria</td>
<td>Morobo, Terekeka</td>
<td>40</td>
</tr>
<tr>
<td>Warrap</td>
<td>Twic, Gogrial East, Gogrial West</td>
<td>60</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>340</td>
</tr>
</tbody>
</table>

However, due to logistical and security reasons, 340 households from 17 out of the 20 locations were visited (Table 1). Upper Nile state was not assessed due to insecurity and logistical arrangements.

The data was collected by at least two teams in some States over a period of five days from 7-15 February 2011 after a 2-day enumerator training on tools and methodology by WFP VAM staff.

The data was analyzed by WFP VAM Unit in Juba by using SPSS software. Details on the calculations of food access, food consumption and food security indicators are presented in Annex 2 of the report.

2.3 Partnership and consultation process
The assessment was a joint effort between Ministry of Agriculture and Forestry (MoAF), Southern Sudan Relief and Rehabilitation Commission (SSRRC), Resident Coordination Office & Office for coordination of Humanitarian Affairs (RCSO/OCHA), Food and Agriculture Organization (FAO) and World Food Programme (WFP). WFP and FAO provided technical, financial and logistical support, including the training of assessment teams.

Field level consultations were conducted prior to the enumerator training with all involved stakeholders such as MoAF, SSRRC, FAO, and RCSO/OCHA. Local teams also produced reports on preliminary findings based on the qualitative data. These reports were used in the writing of the assessment report.

2.4 Limitations and constraints
- The data allows comparisons of the returnees and residents groups but it is not representative at state levels.
- Due to logistical and security reasons, not all the clusters were reached during the assessment, which has an effect on representativeness of the clusters. However, the sample should be adequate to draw a picture of the returnees’ situation compared to the resident communities.

3. Demographics

3.1 Household composition
Out of the 340 households visited during the assessment, 42 percent of both returnee and resident households were male headed while 58 percent were female-headed (Table 2). Average household size for returnees was 8.28 and 8.05 for residents. 49 percent of returnee households had 6-8 members. 36 percent had large household size of 9 or more members while 15 percent had small household sizes of 0-5 members. Among residents, 52 percent had 6-8 household members, 32 percent had 9 or more members and 16 percent had up to 5 members. This indicates shows that returnees have smaller proportion of small and higher proportion of big households.

Table 2: Household size and sex of head of household

<table>
<thead>
<tr>
<th>Residential status</th>
<th>% HH size (members)</th>
<th>Average HH size</th>
<th>Sex of head of HH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;= 5</td>
<td>6 to 8</td>
<td>&gt; =9</td>
</tr>
<tr>
<td>Resident</td>
<td>32%</td>
<td>52%</td>
<td>16%</td>
</tr>
<tr>
<td>Returnees</td>
<td>15%</td>
<td>49%</td>
<td>36%</td>
</tr>
</tbody>
</table>
3.2 Household lived in location before leaving South Sudan
Among returnee households, 41 percent had lived in location before leaving southern Sudan while 59 percent did not live in location before. Originally, returnees were planned to travel to their places of origin upon return to South Sudan.

3.3 Type of accommodation
In terms of type of accommodation used by returnees, 54 percent of returnees still lived in temporary shelters made of very basic grass thatched houses. 23 percent owned houses and another 23 percent were being hosted by someone. Among residents, 87 percent own houses, 8 percent are hosted by someone and 4 percent live in temporary shelter.

4. Agriculture and Livestock

4.1 Access to land and average size of land cultivated
Agriculture plays an important role in livelihood support in southern Sudan. 82 percent of residents have access to land which they can cultivate compared 27 percent of returnees. The land for those households with access to land is mostly their own while some 26 percent of returnees and 9 percent of residents use land that is not their but they can use it free of charge (Figure 1). In the Focus Group Discussions (FGDs), assistance for access to land for people with no land was provided by local community leaders (61 percent) and neighbours (22 percent).

The average size of land cultivated was 1.9 feddans, which was equal for both groups. Based on the community estimates, the average size of land cultivated during rainy and winter seasons was 2.3 feddans\(^5\).

4.2 Interest in crop cultivation
Although the EFSA was conducted at a time when cultivation was not taking place, respondents expressed interest in cultivation of crops in the coming season.

Table 3: Interest in crop cultivation by households who have access to land

<table>
<thead>
<tr>
<th>Type of crops</th>
<th>Residential Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resident</td>
</tr>
<tr>
<td>Sorghum</td>
<td>83%</td>
</tr>
<tr>
<td>Maize</td>
<td>87%</td>
</tr>
<tr>
<td>Groundnuts</td>
<td>85%</td>
</tr>
<tr>
<td>Sesame</td>
<td>59%</td>
</tr>
<tr>
<td>Vegetables</td>
<td>70%</td>
</tr>
<tr>
<td>Other crops</td>
<td>13%</td>
</tr>
</tbody>
</table>

87 percent of residents who owned land mentioned they would cultivate maize, followed by groundnuts (85 percent), sorghum (83 percent), vegetables (70 percent), and sesame (59 percent) (Table 3).

Among returnees who owned land, the top priority for crop cultivation was also maize (95 percent), followed by groundnuts and vegetables (88 percent) and sorghum (76 percent) (Table 3). Higher interest to vegetable cultivation among returnees can provide an opportunity to encourage them to set up even small backyard gardens for vegetables. This could be feasible even in urban settings.

Returnees may require some form of training on what types of crops to cultivate and the possibilities for feasible approach for cultivation especially for those living in urban areas. Based on FGDs the main challenges on cultivation were: pests and disease (88 percent), lack of improved seeds (58 percent), poor soil fertility (56 percent), and shortage of seeds (52 percent). There was also interest at various levels around agricultural pracices especially on vegetable gardening.

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\(^5\) 1 feddan = 70m * 60m area. An Egyptian unit of area equivalent to 1.038 acres (0.42 Ha)
5. Fishing

Fish constitutes and important protein source and as well as income for many communities living near fishing grounds. 93 percent of communities have accessible fishing grounds, mostly river water (82 percent) or swamp (52 percent). Access to fishing areas has increased in 56 percent of the locations visited.

Fish quantities were perceived by respondents in the focus group discussions to have increased by 61 percent, while 39 percent thought quantity had decreased.

Fishing as a possible new income source was also one of the areas of interest for several communities. There was also interest to learn how to make fishing tools, such as nets as lack of fishing gear was reported by some communities.

6. Assistance received by returnee households

Returnee households were entitled to receive food and non-food assistance upon return to South Sudan. Based on the households, 55 percent have received food assistance, 35 percent non-food items and 3 percent seeds/tools and other assistance received (4 percent) (Figure 2).

The low figure presented under food assistance received is attributed to the time lag between returnee registration, verification and food distribution. Based on WFP’s monitoring information a total of 291,790 returnees (including spontaneous) have been assisted with 15,571 mt of food. When comparing resident households, 71 percent of those who have returned after December 2010 have received food assistance compared to 46 percent of those who returned in November 2010 or earlier.

FAO seeds and tools distribution is synchronized with the planting season and beginning of rainy season. For the greater Equatoria (EES, CES and WES) region, the distribution in the greenbelt livelihood zone starts in late March/early April while other areas outside the greenbelt may continue up to late April/early May. In greater Bahr el Ghazal, (NBS, WBS, Lakes and Warrap) and greater Upper Nile (Jonglei, Upper Nile and Unity) the distribution starts in late April and continues until the end of the May. Therefore, since the assessment was done in February, the 3 percent of seeds and tools distributed could have been received by returnees from other players (NGOs, CBOs) and Government since FAO is not the only organization supporting in this area.

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*Figure 2: Assistance received upon return to South Sudan*

<table>
<thead>
<tr>
<th>Type of Assistance</th>
<th>55%</th>
<th>35%</th>
<th>3%</th>
<th>4%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food assistance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-food items</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeds/tools</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other type of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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6 WFP South Sudan monitoring and evaluation data as of 31 March 2011
7. Food access

7.1 Household asset ownership

The ownership of household assets is a proxy to food access at household level and it also provides support against shocks. Asset ownership differed between returnee and resident households.

Majority of returnees owned basic household furniture such as beds, chairs, tables, axes, etc more often than resident households. This indicates that the returnees brought most of their assets with them. On the other hand, residents owned basic household/livelihood assets more compared to returnees (Figure 3).

Ownership of livestock was more prevalent among residents (76 percent) compared to returnees (27 percent). 61 percent of residents owned goats, 48 percent cattle, and 29 percent owned sheep. 49 percent owned other livestock like poultry. Among returnee househoolds, 13 percent owned goats, 10 percent cattle, and 7 percent owned sheep (Figure 4).

In terms of the actual livestock numbers, 48 percent said that the numbers have increased due to good pasture and water availability. The assessment also found out that livestock body conditions was worse (53 percent) compared to the previous year around the same time. 35 percent of respondents perceived the body conditions being better. Maybe also one positive factor to good health of the livestock was that 64 percent of livestock was vaccinated once in 12 months. 18 percent were vaccinated more than once in 12 months while another 18 percent were not vaccinated at all.

7.2 Income sources

Income is used as a proxy indicator to food access. The current main income sources for returnee households was relying on other sources of income (e.g. begging, borrowing, sale of household assets), followed by casual labour and sale of natural resources.

27 percent of returnee households relied on other income sources such as begging, borrowing, sale of household assets as main current income sources, followed by casual labor (21 percent) and sale of natural resources (16 percent).

On the other hand, 33 percent of resident households depended on sale of natural resources, 17 percent relied on salaried/skilled labor and 13 percent relied on agriculture (Figure 5).
There is a drastic shift in sources of income for returnees, mostly from casual (34 percent) and skilled/salaried labour (30 percent), to more unreliable and unsustainable income sources such as extraction of natural resources (firewood, charcoal burning etc) (16 percent) and other sources, such as sale of household assets and using savings (27 percent) (Figure 5). Thus continued dependence on these income sources is likely to compromise their ability to sustain food access.

Majority of returnees who had arrived 3 months (November 2011 or earlier) had engaged in unsustainable income sources which affected their full access to food, thus poor food consumption. This is attributed to food poor food access due to unreliable income sources for returnees who arrived after December 2010. Actually 60 percent of returnees who returned during or after December 2010 had poor income reliability as compared to 33 percent of those who returned before December 2010.

However, some returnee households may also have the advantage of being more technically skilled and relatively more educated and may have other additional opportunities for gainful employment and their skills are also likely to benefit the whole community. Communities had also expressed interest in learning new skills such as carpentry, sewing, handicrafts, bee keeping, metal work and masonry.

7.3 Food sources
Households’ main food source for both groups for most food items consumed was market; overall, 72 percent of returnees and 69 percent of resident households used markets for purchasing their main food items.

The most purchased items from the market for the returnee households were sugar (96 percent), meat (88 percent), oil (80 percent), other cereals/tubers (75 percent), sorghum (59 percent) and maize (51 percent). Among residents, most purchased food items from the markets are as follows: sugar (92 percent), oil (89 percent), meat (84 percent), other cereals/tubers (81 percent), sorghum (63 percent) and maize (47 percent) (Figure 6).
Thus, the presence of a functional market played an important role as a source of food for both groups. An unstable market condition hinders both household physical and economic access to food.

### 7.4 Expenditure

Household expenditure on food and non-food items was also analyzed as a proxy indicator of food access. Classically, households spending more than 65 percent on food are vulnerable as they have little to spend in other crucial outlays in education, healthcare and other basic needs. Households allocating less than 50 percent on food purchases are more flexible to purchase other needed items and are relatively better-off.

The returnees allocated 58 percent of their expenditures on food. 25 percent of the overall share of expenditure on food was spent on cereals (Figure 7). Other main expenditures for returnees after food included: milling (7 percent), transport (6 percent), education and construction (5 percent respectively). Resident households spent 53 percent of their expenditure on food; with cereals accounting for 21 percent.

### 7.5 Food access categories

The assessment found out that 46 percent of returnee households had poor food access, another 31 percent had medium access to food while 23 percent had good access to food (Figure 8).

Resident households had a considerably better access to food, with 39 percent having good access, medium access (25 percent) and poor access (36 percent).

In light of the above, there was a significant difference between food access among resident and returnee households. Residents had a fairly better access to food compared to returnees.

### 7.6 Who has poor food access?

- There is a significant difference between food access among residents and returnees households. 39 percent of residents have good access to food as compared to 23 percent returnee households. In addition, 82 percent of residents own land as compared to 27 percent of returnees.
- Residents have also demonstrated fairly stable income sources compared to returnees. (38 percent vs. 62 percent) respectively. Among returnees, 60 percent of returnees who returned during or after December 2010 had poor income reliability compared to 33 percent of those who returned before December 2010.
- In terms of household asset ownership, residents own more productive assets like livestock, 76 percent of residents and 27 percent of returnees own livestock while the asset base for returnees consists of basic household furniture such as chairs, beds, and tables.
8. Food consumption

8.1 Food items consumed
Although there was slight variation in the household food consumption habits for residents and returnees, the pattern was generally similar for the past 7 days recall period. The most frequently eaten food items were sorghum, oil, fish, sugar and dairy products for both groups. The consumption of pulses, vegetables and fruits was generally low among both groups. It is therefore possible that the people may be at risk for insufficient vitamin and mineral intake leading to micronutrient deficiencies.

The average number of days cereals was consumed was 6.4 days. The consumption of proteins (pulses, meat, fish, and eggs) varied between 4-5 days per week whereas milk was consumed less than twice per week. The difference however is higher for consumption of dairy products among residents (2 days) and once among returnees (Figure 9).

8.2 Food consumption groups
Food consumption was aggregated into food consumption groups based on dietary diversity and frequency of consumption (Annex 3). Accordingly 15 percent of returnee households had poor consumption, as compared with 5 percent of residents.

Food consumption was fairly acceptable for residents compared to returnees. 5 percent had poor food consumption, 25 percent borderline and 69 percent had acceptable food consumption (Figure 10).

The difference between the residents’ and returnees’ food consumption groups without any significant differences in individual food item consumption frequency is due to slightly higher consumption of the valuable protein sources (meat, fish, eggs, pulses) and dairy which provide higher consumption score compared to e.g. staples (4 score per day for protein sources compared to 2 for staples). The standard deviation for the returnee households’ consumption score was higher indicating higher variation in the score.

Among returnee households, there was a difference in the food consumption. Returnees who returned to South Sudan before December 2010 had poorer food consumption compared to those who returned during or after December (22 vs. 12 percent) (Figure 11).

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7 Dairy is kept separate from the protein sources because cattle are a common asset leading to increased consumption of milk in the country. Dairy has also higher carbohydrate content compared to meat, fish, eggs and pulses.
8.3 Who are the people with poor food consumption?
- 15 percent of the returnee households had poor food consumption as compared to 5 percent of resident households.
- 19 percent of households which did not have any relatives, relatives and friends had poor food consumption.
- Additionally, households that did not have land for cultivation, 22 percent of residents and 19 percent of returnees had poor food consumption.
- 17 percent of returnee households and 9 percent of resident households who did not own cattle and other valuable assets had poor food consumption. Returnee households are more affected as compared to resident households.
- The findings of the assessment of food consumption by household size among returnees showed that a larger proportion (19 percent) of households having >=9 members had poor food consumption compared to households with <=5 members which had 12 percent with poor food consumption.
- 48 percent of household >=9 members did not receive food assistance and most of them relied on unsustainable income sources. 48 percent relied on sale of alcohol, 40 percent on sale of natural resources.

9. Coping strategies

About 33 percent of returnee households used coping strategies before returning to South Sudan as compared to 73 percent who were forced to adopt coping strategies to access food in the past 7 days. Among residents, 64 percent of households were also forced to adopt coping strategies. The most often adopted mechanisms were limiting the portion size at meals, the total number of meals and eating less preferred but cheaper food (Figure 12).

The coping strategies, based on their severity and frequency of usage were combined to establish Coping Strategies Index (CSI) for the households.
- High CSI is categorized for those who frequently employ many of the severe coping strategies at the same time
- Medium CSI is categorized for those that from time to time use negative strategies
- Low CSI is categorized for those who did not use any coping strategies or only seldom some of the less severe ones.

97 percent of residents and 89 percent of returnees used low coping strategies. 3 percent vs. 10 percent of residents and returnee households used medium coping. Only 1 percent of returnee households used high coping.
10. Food security

Food access (income and expenditure on food), food consumption, and coping strategies were combined to form a composite food security indicator that was then used to categorize households’ food security status (See Annex 3 for details).

The results showed that 18 percent of returnee households are severely and 43 percent moderately food insecure. In contrast 7 percent of residents are severely food insecure, with 34 percent being moderately food insecure while 59 percent are food secure (Figure 13).

10.1 Who is food insecure?

- Food insecurity was wider among the returnee households compared to the residents (Figure 13).
- Returnee households who get their main income from sale of natural resources or other sources, such as begging, borrowing, relying on kinship support (27 percent) and sale of assets (28 percent were severely food insecure. Among residents, households who relied on sale of natural resources (33 percent), salaried/skilled labour (17 percent) were more severely food insecure.
- 30 percent of returnee households who do not have relatives or friends at the place of return were severely food insecure. 14 percent of those with relatives or friends were severely food insecure. 25 percent of returnees living in a temporary shelters were severely food insecure.
- 20 percent of returnees who returned during or after December 2010 were severely food insecure compared to 12 percent for those who returned before December 2010.

10.2 Why are they food insecure?

- 82 percent of residents and 27 percent of returnees have access to land which they can cultivate. The land for those households with access to land is mostly their own while some 26 percent of returnees and 9 percent of residents use land that is not theirs but can be used free of charge.
- Markets is the main source of food. About 69 percent of residents and 72 percent of returnees used markets to access food. The most often purchased items from the market for the returnee households were sugar (96 percent), meat (88 percent), oil (80 percent), other cereals/tubers (75 percent), sorghum (59 percent) and maize (51 percent). High market prices (83 percent vs. 80 percent among residents and returnees households respectively) have affected household food access.
- 20 percent of returnees and 10 percent of residents who did not own cattle were severely food insecure.
- 55 percent of returnees received food assistance after return, (however bias responses on the side of returnees and time lag between returnee verification, registration and food distribution could account for this low coverage), 35 percent received non-food items, 4 percent other assistance, such as mosquito nets or cash assistance, and 3 percent received tools and seeds.
11. Nutrition analysis for returnee EFSA

11.1 Prevalence of Global Acute Malnutrition
The EFSA measured 427 children 6-59 months for global acute malnutrition (GAM) using Mid-Upper Arm Circumference (MUAC) measurement\(^8\).

Based on the measurement the GAM was 11 percent; slightly higher among resident children than returnees (Figure 14).

The prevalence of Severe Acute Malnutrition (SAM) was 1 percent, equally distributed among the resident status, and included as part of GAM.

11.2 Illness in the past 2 weeks among malnourished and normal children < 5 years
Overall, 27 percent of the children experienced some kind of illness in the past 2 weeks, mostly diarrhea and fever. There was no significant correlation between illness and GAM (Figure 15). Illnesses were also similar among both resident and returnee children.

The children 6-23 months of age are required to consume food from 4 or more food groups to ensure acceptable dietary diversity for adequate micro and macronutrient intake.

The EFSA found that out of the 257 children qualifying for this analysis, only 23 percent consumed acceptable diet.

Breast milk consumption was excluded from these groups, but it was consumed by 58 percent of the children. It is therefore important that education on infant and young child feeding practices is initiated in the communities.

12. Basic community services and priorities

12.1 Health facilities
77 percent of respondents mentioned that health facilities are available in the communities. The health facilities are available to support returnees but services need to be improved. The available health facilities are also very basic and far for many households and requires travel time of more than one and half hours to reach the facilities. Lack of drugs in the health centres was also mentioned as a major problem to the provision of health services. The major health problems identified were diarrhoea (33 percent), inadequate drugs at health centres (15 percent) and high cases of malaria (15 percent). Generally 32 percent of respondents perceived the health situation to be better and 28 percent said it was worse than last year same time.

12.2 Water availability
30 percent of respondent mentioned that water services have improved and are better than last year same time and 48 percent said it was worse. Water services is a problems because over 50 percent of population visited do not have access to clean, safe drinking water (7 percent), there also long queues at water points due to increased number of people in the

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\(^8\) Severe Acute Malnutrition: MUAC <115mm, Moderate Acute Malnutrition: MUAC 115 – 125mm, Normal: MUAC >=125mm. Global Acute Malnutrition: MUAC <=115mm
community with returnees coming in (56 percent). For most communities, there is urgent need to put in place new working bore holes and water sources (7 percent).

12.3 Sanitation
50 percent of respondents mentioned that sanitation had worsened compared to the previous year same time, and only 8 percent perceived it to have improved. It was also mentioned that in many communities, people still defecate in open space/places even where latrines exist (15 percent). The lack of public latrines (15 percent) and sanitation facilities have remained the same with no change and few households have pit latrines in their homes (7 percent).

12.4 Community priorities
Main community priorities identified in the focus group discussions were food assistance (62 percent), drinking water and health services (32 percent). However, the demand for drinking water came as second priority, followed by health services. Communities also expressed interest in learning new skills or improve on already acquired skills more especially in carpentry and sewing, followed by handicrafts, bee keeping, metal work and masonry. There was also interest on various levels of skills around agriculture (vegetable gardening) and fishing-this includes actual fishing practices and making fishing nets.

13. Conclusion of the food security situation
- In conclusion, 18 percent (47,600) returnees are severely food insecure and another 43 percent (113,700) are moderately food insecure. Some 6 percent of the residents were severely food insecure and 28 percent moderately food insecure.
- Returnees had poorer food consumption compared to the residents, leading to food insecurity. 15 percent of returnee households had poor food consumption compared to 5 percent of resident households. Food consumption could improve by encouraging households own food production even by simple vegetable gardening.
- Returnees’ access to land for cultivation is a problem as only 27 percent of returnees have access to land. They may also require some training on what types of crops to cultivate and the possibilities for feasible approach for cultivation, especially if they are living in urban areas. This may need to be assessed.
- There is a drastic shift in the returnees’ sources of income mostly from skilled/salaried labour, casual labour and sale of alcohol to more unreliable and unsustainable income sources such as sale of natural resources (firewood, charcoal burning etc) and sale of household assets.
- The communities identified that they would be interested in learning new skills or improve on already acquired skills more especially on carpentry and sewing, followed by handicrafts, bee keeping, metal work and masonry. There was also interest on various levels around agriculture (vegetable gardening) and fishing – from overall fishing technique to making fishing nets.
- About 55 percent of returnee households received food assistance, 35 percent received non-food items, 4 percent other assistance, such as mosquito nets or cash assistance, and 3 percent received seeds and tools since their return to South Sudan.
- The main community priorities identified in the focus group discussions were food assistance (62 percent), drinking water and health services (32 percent).
- There are indications that the returnee reintegration process has been very slow especially in terms of provision of seeds and tools for them to start a new livelihood. There is need to accelerate reintegration activities for returnees.
14. Future developments and scenarios

Best case scenario

- Rainfall will start on time and continue reliably. Both resident and returnees will engage in early farming and towards August be able to harvest crops.
- Security situation will also continue be stable with no disruption of livelihoods for the communities. This will enable the reintegration process to be steady and continuous.
- Food and other commodities will continue to be supplied into the markets due to regular supply channel. Prices for some commodities are expected remain stable with first harvests.

Worst case scenario

- Poor rainfall in some locations will affect community engagement in early cultivation and cropping thus leading to poor harvest.
- High market prices will continue affecting household food access. Many will not be able to afford the sufficient food especially along the border States to northern Sudan.
- Security situation will deteriorate along the border lines and many people will be displaced and do not have access to their lands leading to decreased engagement in agriculture and inadequate food stocks for own consumption.

Most likely scenario

- Rainfall will be adequate and households will have food stocks at least for their own consumption until the end of the year.
- Some of the returnee and resident households will gain access to their fields, seeds and tools and will be able to harvest some crops for their own consumption. Security situation remains stable. Food will be available at the markets but prices for some commodities may remain higher compared to previous year.

15. Recommendations

- Food and non-food assistance to returnees (beyond 3 months assistance package) should be targeted, needs-based and community focused.
- General livelihood support, including support on building permanent houses, distribution of seeds and tools with targeted trainings on how to cultivate in the preferred scale (several feddans vs. small back garden for vegetables cultivation), and provision of well equipped social facilities, is required to assist in reintegration.
- More opportunities should be created to harness the livelihood skill sets of returnees and the most vulnerable residents in the communities to engage them more productively in the local economy.
- Accelerate reintegration activities.
Annex 1: Household Questionnaire

<table>
<thead>
<tr>
<th>COMPLETE BEFORE THE INTERVIEW</th>
<th>COMPLETE UPON DATA ENTRY</th>
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</thead>
<tbody>
<tr>
<td>Date</td>
<td></td>
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<tr>
<td>Interviewer name</td>
<td>Data clerk name:</td>
</tr>
<tr>
<td>State Code:</td>
<td>Questionnaire number:</td>
</tr>
<tr>
<td>Supervisor Name:</td>
<td></td>
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<tr>
<td>Location name:</td>
<td></td>
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<tr>
<td>Cluster number</td>
<td></td>
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<tr>
<td>Household number</td>
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</tbody>
</table>

**INTRODUCTION AND DEFINITIONS**

First of all, inform and ask for households consent:

We are conducting an assessment on returnees’ food security situation in Southern Sudan. I would like to ask you some questions about your family. The survey usually takes 30 minutes to complete. Any information that you provide will be kept strictly confidential and will not be shown to other people. The outcome of this information will be used to identify possible food/non food needs in the community. This is voluntary and you can choose not to answer any or all of the questions if you want; however we hope that you will participate since your views are important. Do you have any questions? May I begin now?

Before the interview, make sure you walk around the household to put answers into context. Ask for permission first, and look at their assets, food present in granary and kitchen, and general conditions of the household. In this way you will be better able to probe answers that don’t seem to make sense.

- A household is defined as a group of people who routinely eat out of same pot and live on the same compound (or physical location). It is possible that they may live in different structures
- Definition of HH head: is member of the family who manages the family resources and decisions (He/She is the final decision maker on most of the decision related to income allocation and what family has to do)

**1. DEMOGRAPHICS**

1.1 What is the sex of the household head? 1 Male 2 Female

1.2 How many people currently live in your household?  |   |   |

1.3 How many children under 5 years of age you have in your household?  |   |   |

1.4 Do you have any disabled or chronically ill household members? 1 Disabled 2 Chronically ill 3 Both 4 None

1.5 Did you live in this location before leaving South Sudan? 1 Yes 2 No

1.6 Do you have any relatives or friends in your current location? 1 Relative 2 Friend 3 Both 4 None

1.7 What kind of accommodation do you have at the moment? 1 Own house 2 Hosted by someone 3 Temporary shelter 4 Other, specify

1.8 What is the residence status of the household? 1 IDP in camp 2 IDP outside camps 3 Refugees in camp 4 Refugees outside camps 5 Resident 6 Returnees 7 Nomad 8 Other status

1.9 When did you return to final destination? (Ask only from returnees)
2. INCOME SOURCES

2.1 How many people in your household are engaged in income earning?  

2.2 Has this number changed from the time before returning to South Sudan?  

Please complete the table regarding main income sources using the income source codes provided below.

<table>
<thead>
<tr>
<th>Main income source</th>
<th>Second income source</th>
<th>Third income source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
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</tbody>
</table>

2.3 What were your household’s main income activities after your return to South Sudan?

2.4 What were your household’s main income activities before you returned to South Sudan?

INCOME SOURCE CODES:

1 = Sale of cereals (sorghum, maize etc)  
2 = Sale of other crops and products (vegetables, groundnuts etc)  
3 = Sale of livestock  
4 = Sale of animal products (milk etc)  
5 = Sale of alcoholic beverages  
6 = Casual labour related to agricultural activities  
7 = Casual labour related to construction  
8 = Other non-agricultural casual labour (porter, domestic labour etc)  
9 = Skilled labour  
10 = Salaried work

11 = Sale of firewood  
12 = Sales of charcoal  
13 = Sales of grass  
14 = Sale of fish  
15 = Other petty trading/small business (tea seller, kiosk, sales of handicraft etc)  
16 = Kinship/gifts from family friends/remittances  
17 = Begging  
18 = Sale of food aid (received from NGOs, WFP, Government)  
19 = Borrowing  
99 = Other, specify

3. FOOD CONSUMPTION

3.1 Yesterday, how many meals were eaten by:

Focus on food consumed by the household  

3.2 Over the last 7 days, how many days did you consume the following foods?

3.3 What was the main source of the food in the past 7 days?

FOOD SOURCE CODES

1 = Own crop/garden production  
2 = Work for food  
3 = Gifts from neighbors/relatives  
4 = Market/shop purchase  
5 = Borrowing/debts  
6 = Food aid  
7 = Hunting  
8 = Fishing  
9 = Gathering

A. Adults  
B. Children below 5 years
4. EXPENDITURES

SECTION A) In the Past 30 days how much money have you spent to acquire each of the following items for your family consumption?

Use the following table, indicate in NEW POUNDS the amount spent last 30 days. Write 0 if no expenditure. Round up the figures (no comma)

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Cereals (sorghum, cassava, millet, maize, wheat, rice)</td>
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<tr>
<td>4.2</td>
<td>Fruits and vegetables (pumpkins, okra, green leaves etc)</td>
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<td>4.3</td>
<td>Roots and tubers (sweet potatoes, Irish potatoes, yam etc)</td>
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<td>4.4</td>
<td>Meat and fish (both red and white meat)</td>
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<td>4.5</td>
<td>Pulses (Groundnuts, legumes, sesame, beans etc)</td>
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<td>4.6</td>
<td>Cooking oil</td>
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<tr>
<td>4.7</td>
<td>Sugar, honey, sweets</td>
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<tr>
<td>4.8</td>
<td>All other food items (milk, eggs, salt, coffee, tea, pasta, milk, etc.)</td>
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<td>4.9</td>
<td>Clothing, shoes</td>
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<tr>
<td>4.10</td>
<td>Milling and grinding</td>
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<tr>
<td>4.11</td>
<td>Tobacco and Alcohol</td>
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<td>4.12</td>
<td>Paraffin</td>
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<tr>
<td>4.13</td>
<td>Firewood/charcoal/fuel for cooking</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>4.14</td>
<td>Soap</td>
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<tr>
<td>4.15</td>
<td>Drinks (water and soda water)</td>
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<tr>
<td>4.16</td>
<td>Transportation/communication</td>
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</tbody>
</table>

SECTION B) In the Past 3 months how much money have you spent to acquire each of the following items or services?

Use the following table, indicate in NEW POUNDS the amount spent last 3 months. Write 0 if no expenditure. Round up the figures (no comma)

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>4.17</td>
<td>Construction, house repair</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>4.18</td>
<td>Fines / Taxes</td>
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<tr>
<td>4.19</td>
<td>Agricultural tools, seeds</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>4.20</td>
<td>Hiring labor</td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>4.21</td>
<td>Household assets (knives, forks, plates)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4.22</td>
<td>Medical expenses, health care</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>4.23</td>
<td>Education, (school fees/uniforms)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.24</td>
<td>Celebrations, social events, funerals, weddings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.25</td>
<td>House rent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.26</td>
<td>All other non-food expenditures, totaled over the last 3 months</td>
<td></td>
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</tbody>
</table>

SECTION C) Bartering – ask the household if any bartering took place in the last 30 days.

If yes, ask the household to list the items that were bartered, and then try to estimate together the monetary value of these items in pounds

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4.27</td>
<td>Estimated value of all bartered goods last 30 days</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
### 5. COPING STRATEGIES

**5.1** Before returning to South Sudan, were there times when you did not have enough food or money to buy food?  
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>Yes</th>
<th>2</th>
<th>No</th>
</tr>
</thead>
</table>

**5.2** In the past 7 days were there times when you did not have enough food or money to buy food?  
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>Yes</th>
<th>2</th>
<th>No</th>
</tr>
</thead>
</table>

**ONLY if yes to 5.2**  
Has your household done any of the listed things, and how frequent were they done in the past 7 days:

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Rely on less preferred and less expensive food</td>
</tr>
<tr>
<td>B</td>
<td>Borrow food, or rely on help from friends or relatives</td>
</tr>
<tr>
<td>C</td>
<td>Limit portion size at meals</td>
</tr>
<tr>
<td>D</td>
<td>Restrict consumption by adults in order for small children to eat</td>
</tr>
<tr>
<td>E</td>
<td>Reduce number of meals eaten in a day</td>
</tr>
<tr>
<td>F</td>
<td>Skip entire days without eating</td>
</tr>
<tr>
<td>G</td>
<td>Collect any unusual amounts of types of wild foods for this season</td>
</tr>
<tr>
<td>H</td>
<td>Sell more animals than usual</td>
</tr>
<tr>
<td>I</td>
<td>Consume seed stocks held for the next season</td>
</tr>
</tbody>
</table>

### 6. AGRICULTURE

**6.1** Do you have access to a land that can be used to crop cultivation?  
|   | 1 | Yes | 2 | No |

**6.2** If yes, how much could you cultivate (in feddans)?  

**6.3** Please describe us what is the ownership of your cultivated land  
- Own land  
- Borrowed for free  
- Rented  
- Other

**6.4** Which crops would you be interested in cultivating?  
- Sorghum  
- Maize  
- Groundnuts  
- Sesame  
- Vegetables  
- Other, specify

### Section 7: HOUSEHOLD ASSETS

Please tell us about the type of assets the household owns. These include both production and other types of assets.

<table>
<thead>
<tr>
<th></th>
<th>Type of Asset</th>
<th>7.1 Do you own any of these assets?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ox-drawn ploughs</td>
<td>1 = Yes 2 = No</td>
</tr>
<tr>
<td>2</td>
<td>Cattle</td>
<td>1 = Yes 2 = No</td>
</tr>
<tr>
<td>3</td>
<td>Goats</td>
<td>1 = Yes 2 = No</td>
</tr>
<tr>
<td>4</td>
<td>Sheep</td>
<td>1 = Yes 2 = No</td>
</tr>
<tr>
<td>5</td>
<td>Other livestock (chicken etc)</td>
<td>1 = Yes 2 = No</td>
</tr>
<tr>
<td>6</td>
<td>Hand hammer mill</td>
<td>1 = Yes 2 = No</td>
</tr>
<tr>
<td>7</td>
<td>Radio</td>
<td>1 = Yes 2 = No</td>
</tr>
<tr>
<td>8</td>
<td>Bed</td>
<td>1 = Yes 2 = No</td>
</tr>
<tr>
<td>9</td>
<td>Table</td>
<td>1= Yes</td>
</tr>
<tr>
<td>---</td>
<td>-------</td>
<td>--------</td>
</tr>
<tr>
<td>10</td>
<td>Chair</td>
<td>1= Yes</td>
</tr>
<tr>
<td>11</td>
<td>Lantern</td>
<td>1= Yes</td>
</tr>
<tr>
<td>12</td>
<td>Bicycle</td>
<td>1= Yes</td>
</tr>
<tr>
<td>13</td>
<td>Cart</td>
<td>1= Yes</td>
</tr>
<tr>
<td>14</td>
<td>Hoe</td>
<td>1= Yes</td>
</tr>
<tr>
<td>15</td>
<td>Axe</td>
<td>1= Yes</td>
</tr>
<tr>
<td>16</td>
<td>Television</td>
<td>1= Yes</td>
</tr>
<tr>
<td>17</td>
<td>Generator</td>
<td>1= Yes</td>
</tr>
<tr>
<td>18</td>
<td>Motorbike</td>
<td>1= Yes</td>
</tr>
<tr>
<td>19</td>
<td>Mosquito net</td>
<td>1= Yes</td>
</tr>
</tbody>
</table>

8. SHOCKS

What are the main shocks currently faced by the household?

Tick MAX 3 main shocks, but you can also tick less. Don’t list the shocks, but let the household name them.

<table>
<thead>
<tr>
<th>1= Insecurity/violence</th>
<th>7 = Returnees/IDPs living with household</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 = Food too expensive</td>
<td>8 = Late food aid distribution</td>
</tr>
<tr>
<td>3 = Lack of access/movement</td>
<td>9 = Social Event</td>
</tr>
<tr>
<td>4 = Livestock diseases</td>
<td>10 = Access/ownership of land</td>
</tr>
<tr>
<td>5 = Loss of livelihood</td>
<td>11= Increased community population</td>
</tr>
<tr>
<td>6 = Human sickness</td>
<td>99 = Other</td>
</tr>
</tbody>
</table>

If other, specify:

9. ASSISTANCE RECEIVED

Has any of your household member received any [FORM OF ASSISTANCE] since your return to South Sudan?

If “no”, move to section 10

| 1 | Yes | 2 | No -> move to 10 |

Food assistance (General food distribution, school meals, supplementary food etc) | 1 | Yes | 2 | No |
Seeds and/or tools for agricultural purposes | 1 | Yes | 2 | No |
Non-food items | 1 | Yes | 2 | No |
Other, specify | 1 | Yes | 2 | No |

10. NUTRITIONAL STATUS OF CHILDREN 6-59 MONTHS

Please let me measure mid-upper arm circumference (MUAC) from your children 6-59 months.

Record the age of the child in months for each child in ascending order and circle the color of the tape for MUAC measurement for each child on the table below. Record first the children who are less than 24 months old.

<table>
<thead>
<tr>
<th>1st child:</th>
<th>2nd child:</th>
<th>3rd child:</th>
<th>4th child:</th>
<th>5th child:</th>
</tr>
</thead>
<tbody>
<tr>
<td>months</td>
<td>months</td>
<td>months</td>
<td>months</td>
<td>months</td>
</tr>
<tr>
<td>GREEN</td>
<td>YELLOW</td>
<td>RED</td>
<td>GREEN</td>
<td>YELLOW</td>
</tr>
<tr>
<td>RED</td>
<td>GREEN</td>
<td>YELLOW</td>
<td>RED</td>
<td>GREEN</td>
</tr>
</tbody>
</table>

11. CHILD FEEDING AND HEALTH (ONLY FOR CHILDREN 6-24 MONTHS)

Please tell me everything that [NAME] ate yesterday during the day or night (whether at home or outside the home). Think about when [NAME] first woke up yesterday. Did [NAME] eat anything at that time?

Yesterday, during the day or night, did [NAME] drink/eat any (FOOD GROUP ITEMS)?

Write ‘1’ if respondent says YES, ‘0’ if NO in the box below.

Use the same coding for children as in the table above.

<table>
<thead>
<tr>
<th>Food items</th>
<th>1st child:</th>
<th>2nd child:</th>
<th>3rd child:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>months</td>
<td>months</td>
<td>months</td>
</tr>
<tr>
<td>Grains, roots and tubers (sorghum, millet, wheat, CSB, potatoes)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legumes and nuts (pulses, beans, lentils, nuts)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dairy products (milk, yoghurt, cheese)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh animal flesh (meat, fish, poultry and liver/organ meats)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eggs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitamin-A rich fruits and vegetables (carrots, sweet potatoes, capsicum pepper (red), mangoes, apricots, spinach, tomato)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Other fruits and vegetables (banana, watermelon, lettuce, grapes, lemon/lime, orange, grapefruit)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast milk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First child</td>
<td>Second child</td>
<td>Third child</td>
<td></td>
</tr>
<tr>
<td>Has [NAME] had any illness in the last 2 weeks?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Codes: 0=None, 1=Diarrhoea – any episode of more than three (liquid-like) stools per day, 2=ARI – any episode with associated fever and cough at least one of the following signs: sputum, wheezing. 3=Fever, 4=Measles
Annex 2: Community questionnaire

**COMPLETE BEFORE THE INTERVIEW- (ONE INTERVIEW PER LOCATION/SITE)**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Day</th>
<th>Month</th>
<th>2011</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Location ID:</th>
<th>County</th>
<th>Admin Unit/Payam</th>
<th>Village</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Coordinates:</th>
<th>Y-coordinate (latitude) N</th>
<th>X-coordinate (longitude) E</th>
</tr>
</thead>
</table>

**STATE CODES**

01=WES
02=EES
03=Jonglei
04=Lakes
05=Upper Nile
06=WBS
07=NBS
08=Warrap
09=CES
10=Unity

**Section 1 –demographic Information (approximately)**

**CURRENT POPULATION (COMMUNITY)**

<table>
<thead>
<tr>
<th>1.1</th>
<th>Number of Residents (population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2</td>
<td>Number of Returnees</td>
</tr>
<tr>
<td>1.3</td>
<td>Number of IDPs</td>
</tr>
<tr>
<td>1.4</td>
<td>Describe population changes since last February: 1. Increased 2. Decreased 3. Same</td>
</tr>
<tr>
<td>1.5</td>
<td>Is this discussion with a) Residents b) Returnees</td>
</tr>
</tbody>
</table>

**Section 2 –perception of livelihoods and overall wellbeing**

2.1 What are the three most important sources of livelihood in this community? (Ask the respondent to rank the three in the order of importance).

First: ___________ Second: ___________ Third: ___________

2.2 How would you compare the livelihoods and well-being in your community NOW and last year?

1) Better 2) Same 3) Worse

2.3 What are the income generating activities you may be interested in learning? (To start new income activity. Eg beekeeping, handicraft, carpentry, food preservation, sewing...)

Explain your observation

2.4 Does the community have a way to ensure peoples' access to credit? If yes, how.
## SECTION 3 – agriculture, LIVESTOCK and FISHERIES

### 3.1
**List major crops grown in order of IMPORTANCE (max. 3) grown in the area (specify kinds of crops, whether grown for food or income or both)**

<table>
<thead>
<tr>
<th>First</th>
<th>Second</th>
<th>Third</th>
</tr>
</thead>
</table>

### 3.2
**How many cropping seasons do you have in this area? (Tick one)**

- [ ] 1
- [x] 2
- [ ] More than 2

**Specify months of the cropping seasons:**
- **Season 1:**
- **Season 2:**
- **Season 3:**

### 3.3
**How many households (percentage) have access to land that can be used for crop cultivation?**

<table>
<thead>
<tr>
<th>Land used for rainy season cultivation</th>
<th>%</th>
<th>average land size _____ feddans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land used for winter season cultivation</td>
<td>%</td>
<td>average land size _____ feddans</td>
</tr>
</tbody>
</table>

### 3.4
**What are the main constraints the community normally face in crop cultivation?**

- (a) Lack/shortage of seeds (difficulties to access traditional seeds)
- (b) Shortage of improved seeds (no problems to access traditional seeds)
- (c) Poor soil fertility
- (d) Pests, weeds, crop disease
- (e) Water shortage (poor rains, lack of irrigation)
- (f) Lack of animal traction
- (g) Lack of plough
- (h) Lack of agricultural tools such as hoes, axes, etc
- (i) Shortage of labour
- (j) Insecurity (to go to the fields, displacement)
- (k) Lack of access or shortage of land to cultivate
- (l) Flooding
- (m) Other (specify)

### How is land ownership in this area?**

- (a) Community owned
  - i) by tribe
  - ii) by clan
- (b) Privately owned
- (c) Both communally and privately

Are there some members of the community who do not have access to land for cultivation? **Yes / No**

If yes, please specify who are these people

How can a person who has no access to land for cultivation be assisted?

- (a) Through allocation by the chief and local traders
- (b) Borrowing from neighbor
- (c) Renting at a fee
- (d) Allowed to by
- (e) Other, specify
CURRENT livestock condition—How does the current livestock condition compare with LAST season (same time last year)?

Circle one: 1) Better 2) Same 3) Worse

Number:
1) Increased 2) Same 3) Decreased

Pastures:
1) Increased 2) Same 3) Decreased

Water:
1) Increased 2) Same 3) Decreased

How many times have your community animals/livestock been vaccinated in the past 12 months?

<table>
<thead>
<tr>
<th>Animal</th>
<th>Cattle</th>
<th>Goats</th>
<th>Sheep</th>
<th>Chickens</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td># of vaccinations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Explain your observation (Note any diseases, unusual migration patterns, insecurity which would affect livestock):

Do you have any fishing ground? Yes no

If yes, which is/are the fishing grounds? (possible multiple answer)

a) River
b) Lake
c) Swamps
d) Flooded ground

Roughly, how many fishing camps do you have within the fishing ground mentioned?

a) 1-3
b) 4-10
c) 11-20
d) >20

On average, how many fishermen do operate in one camp? ________________

Which period do you have highest, modest and least fishing activities in the area? (Enter months below)

a) Highest: from _____________ to _____________
b) Modest: from _____________ to _____________
c) Lowest: from _____________ to _____________

Availability of fish—How does the current condition compare with LAST season (same time last year)?

Access of fishing areas:
1) Increased 2) Same 3) Decreased

Fish Quantities:
1) Increased 2) Same 3) Decreased

Explain your observation:
### SECTION 4 – Health, Water, Sanitation and Nutrition

#### 4.1

What are the major health problems for people living in the community NOW?

#### 4.2

Describe the availability of health facilities in the community compared to period before referendum returns?

- Health facility available: 1) Yes 2) No

If none, what is the travel time to the nearest health facilities ______________________________

- Health services: 1) Better 2) Same 3) Worse

Explain your observations

#### 4.3

Describe the availability of water facilities in the community compared to last/normal year (main source of drinking water, queues at water points):

1) Better 2) Same 3) Worse

Explain your observations

#### 4.4

Number and use of sanitation facilities compared to last year

- Number: 1. Increased 2. Same 3. Decreased

- Use: Better 2) Same 3) Worse

Explain your observations

### SECTION 5 – Markets

Please obtain answers to these questions from traders/shopkeepers in one central market in the area.

<table>
<thead>
<tr>
<th>Market Information</th>
<th>a. Permanent Markets</th>
<th>b. Mobile Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5.1</strong> Number of markets NOW compared to last year <strong>THIS TIME</strong></td>
<td>1=0(none) 2= Same 3= Less 4= More</td>
<td>1=0(none) 2= Same 3= Less 4= More</td>
</tr>
<tr>
<td><strong>5.2</strong> Cereal Availability NOW compared to last year <strong>THIS TIME</strong></td>
<td>1 Same 2 Less 3 More</td>
<td>1 Same 2 Less 3 More</td>
</tr>
<tr>
<td><strong>5.3</strong> Number of Traders NOW compared to last year <strong>THIS TIME</strong></td>
<td>1 Same 2 Less 3 More</td>
<td>1 Same 2 Less 3 More</td>
</tr>
<tr>
<td><strong>5.4</strong> Cereal Prices NOW compared to last year <strong>THIS TIME</strong></td>
<td>1 Same 2 Less 3 More</td>
<td>1 Same 2 Less 3 More</td>
</tr>
<tr>
<td><strong>5.5</strong> Source of Cereal Supply NOW (tick all that apply)</td>
<td>1 Within Area 2 Within State</td>
<td>1 Within Area 2 Within State</td>
</tr>
<tr>
<td></td>
<td>3 Other states-South 4 Northern Sudan</td>
<td>3 Other states-South 4 Northern Sudan</td>
</tr>
<tr>
<td></td>
<td>5 Food Aid 6 Other countries</td>
<td>5 Food Aid 6 Other countries</td>
</tr>
</tbody>
</table>
7. COMMUNITY PRIORITIES

7.1 Are there needs for assistance in this community? Yes No (If answer is Yes, the ask 7.2—DO NOT PROMPT THE KEY INFORMANT FOR THE PRIORITIES)

7.2 Rank top three community priorities for assistance. (USE CODES BELOW). (e.g. Clinics, veterinary services, food assistance etc.)

<table>
<thead>
<tr>
<th>Priority 1</th>
<th>Priority 2</th>
<th>Priority 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = Security and peace</td>
<td>7 = Seeds</td>
<td>14 = Credit</td>
</tr>
<tr>
<td>2 = Food aid/other food assistance</td>
<td>8 = Tools</td>
<td>15 = Flood control structures (dykes)</td>
</tr>
<tr>
<td>3 = Cash Assistance</td>
<td>9 = Fishing equipment</td>
<td>16 = Veterinary services</td>
</tr>
<tr>
<td>4 = Drinking Water</td>
<td>10 = Education services</td>
<td>17 = Employment opportunities</td>
</tr>
<tr>
<td>5 = Shelter/Housing</td>
<td>11 = Return to original village</td>
<td>18 = Agricultural extension and training</td>
</tr>
<tr>
<td>6 = Health Assistance</td>
<td>12 = Road repairs</td>
<td>19 = Income generation activities</td>
</tr>
<tr>
<td></td>
<td>13 = Reintegration</td>
<td>20 = Health and nutrition training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21 = Animal Health Training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22 = Other ____________________</td>
</tr>
</tbody>
</table>
Annex 3: Calculation of Food Security Indicator

1) Food access indicators
Food consumption is alone unable to explain the complexities of household level food security, due to its short recall period and singular focus on eating habits. The sustainability to of this food consumption status has to be assessed by looking at a household’s ability to access food in the future.

An analytical process was followed by which a wealth of data was explored to find context-specific indicators of food access. The analysis employed state level aggregation to ensure that context sensitive vulnerability indicators were not hidden by national averages. In the end, two indicators were chosen:

a. Reliability and sustainability of income sources
Survey data on the three main income sources was analyzed to categorize households as having poor, medium or good sources in terms of reliability and sustainability. This was done through several steps:
   i. Each of the potential income sources was categorized as good (4), medium (2) or poor (1).
   ii. For each households, the rating of the three sources were summed to come up with a final income source rating. No source equals a rating of 0.

Example:

<table>
<thead>
<tr>
<th>Type of source</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main source</td>
<td>Sale of cereals</td>
</tr>
<tr>
<td>Second source</td>
<td>Grass sales</td>
</tr>
<tr>
<td>Third source</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td><strong>Total rating</strong></td>
</tr>
</tbody>
</table>

   iii. The total rating now incorporates both the type of sources, and the number of sources.
   iv. This total rating was then split in three categories after careful analysis of the meaning of the score. A score of 0-3 was categorized as poor, 4-5 as medium, and 6-9 as good.

b. Relative expenditure on food:
Relative expenditure on food is one of the core indicators of food security. Households that spend most of their income on food have generally little income and they do so at the expense of other essential posts, such as non-food items, clothes and education. The below categorization was used for this indicator.

<table>
<thead>
<tr>
<th>Relative expenditure on food</th>
<th>Poor</th>
<th>Medium</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;65%</td>
<td>50-65%</td>
<td>&lt;50%</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>Medium</td>
<td>Good</td>
<td></td>
</tr>
</tbody>
</table>

The two access indicators from step 2 were then consolidated into one measure of food access through a simple cross tabulation as shown below.
2) Analysis of food consumption

The foundation for any food security analysis in WFP is data regarding household eating habits in one week preceding the assessment. Based on this, a Food Consumption Score is constructed that incorporates both the dietary diversity, frequency of consumption, and nutritional value of different food groups. Based on this score, a household can be classified as having poor, borderline or acceptable consumption.9

Data collection module:

I. See attached household questionnaire (Section 5.1: Food Consumption)

Calculation steps:

II. Using the data collected from the household questionnaire, group all the food items into specific food groups:

<table>
<thead>
<tr>
<th>FOOD ITEMS (examples)</th>
<th>Food groups (definitive)</th>
<th>Weight (definitive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Maize, maize porridge, rice, sorghum, millet pasta, bread and other cereals</td>
<td>Main staples</td>
<td>2</td>
</tr>
<tr>
<td>2 Cassava, potatoes and sweet potatoes, other tubers, Beans. Peas, groundnuts and cashew nuts</td>
<td>Pulses</td>
<td>3</td>
</tr>
<tr>
<td>3 Vegetables, leaves</td>
<td>Vegetables</td>
<td>1</td>
</tr>
<tr>
<td>4 Fruits</td>
<td>Fruit</td>
<td>1</td>
</tr>
<tr>
<td>5 Beef, goat, poultry, pork, eggs and fish</td>
<td>Meat and fish</td>
<td>4</td>
</tr>
<tr>
<td>6 Milk yogurt and other diary</td>
<td>Milk</td>
<td>4</td>
</tr>
<tr>
<td>7 Sugar and sugar products, honey</td>
<td>Sugar</td>
<td>0.5</td>
</tr>
<tr>
<td>8 Oils, fats and butter</td>
<td>Oil</td>
<td>0.5</td>
</tr>
<tr>
<td>9 Spices, tea, coffee, salt, fish power, small amounts of milk for</td>
<td>Condiments</td>
<td>0</td>
</tr>
<tr>
<td>10 Corn Soya Blend</td>
<td>CSB</td>
<td>2.5</td>
</tr>
</tbody>
</table>

III. Sum all the values for each of the food groups, and multiply the value obtained for each food group by its weight (see weights in table above).

IV. Sum the weighed food group scores together, thus creating the food consumption score (FCS).

V. Using the appropriate thresholds (see below), group the food consumption scores into categories.

Once the food consumption score is calculated, the context-specific thresholds are determined based on the knowledge of the consumption behaviour in each country.

<table>
<thead>
<tr>
<th>FCS</th>
<th>Profiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-21</td>
<td>Poor consumption</td>
</tr>
<tr>
<td>21.5-35</td>
<td>Borderline consumption</td>
</tr>
<tr>
<td>&gt; 35</td>
<td>Acceptable consumption</td>
</tr>
</tbody>
</table>

9 For more information, validation of the indicator as a proxy of food security, and discussion of these thresholds, please refer to the Food Consumption Score Technical Guidance Sheet, WFP Vulnerability Analysis and Mapping Branch (January 2008).
Hence, a household with a score below 21 is categorized as having poor consumption, between 21.5 and 35 as borderline, and above 35 as acceptable.

3) Coping Strategies
A third dimension was added: Coping Strategies. Qualitative analysis from Focus Group Discussions revealed which coping strategies that were a sign of severe stress. This was combined with the household data on how often each coping strategy was employed. Together, the severity and frequency was combined to assign each household a Coping Strategies Index (CSI)\textsuperscript{10}.

- Thus, in this a high CSI indicates severe stress and the use of negative coping strategies that will undermine a households’ ability to fend for itself the future, or in extreme cases it will even put lives at risk.

Based on the CSI, household were then categorized in three:

- High Coping - Those that frequently employ many of the severe coping strategies at the same time
- Medium Coping – Those that from time to time use negative coping strategies
- Low – Those that used no coping strategies or only some of the less dangerous ones

4) Food Security
Finally, our three dimensions (consumption, access and coping) were combined to see which households are most at risk. 3 categories of people were found:

- Severely Food Insecure
- Moderately Food Insecure
- Food Secure

The table below shows how the three dimensions were combined to create the Food Security indicator.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|}
\hline
\textbf{Food Consumption} & \textbf{Poor} & \textbf{Borderline} & \textbf{Acceptable} \\
\hline
\textbf{Poor} & & & \\
\hline
\textbf{Coping Strategies Index} & High & Medium & Low \\
\hline
\textbf{Ability to access food} & Medium & & \\
\hline
\textbf{Coping Strategies Index} & High & Medium & Low \\
\hline
\textbf{Good} & & & \\
\hline
\textbf{Coping Strategies Index} & High & Medium & Low \\
\hline
\textbf{Totals} & & & & SeVEReLY Food insecure & \%
\textbf{Moderately Food insecure} & \%
\textbf{Food Secure} & \%
\hline
\end{tabular}
\end{table}

\textsuperscript{10} Coping Strategies that were rated very differently in terms of severity in various regions of South Sudan were excluded for this analysis. These are obviously context-specific and cannot be used in a uniform way in a common index with common thresholds. An example is to migrate in search for food or work. This is common in some parts of South Sudan, while it is a sign of severe stress other places.