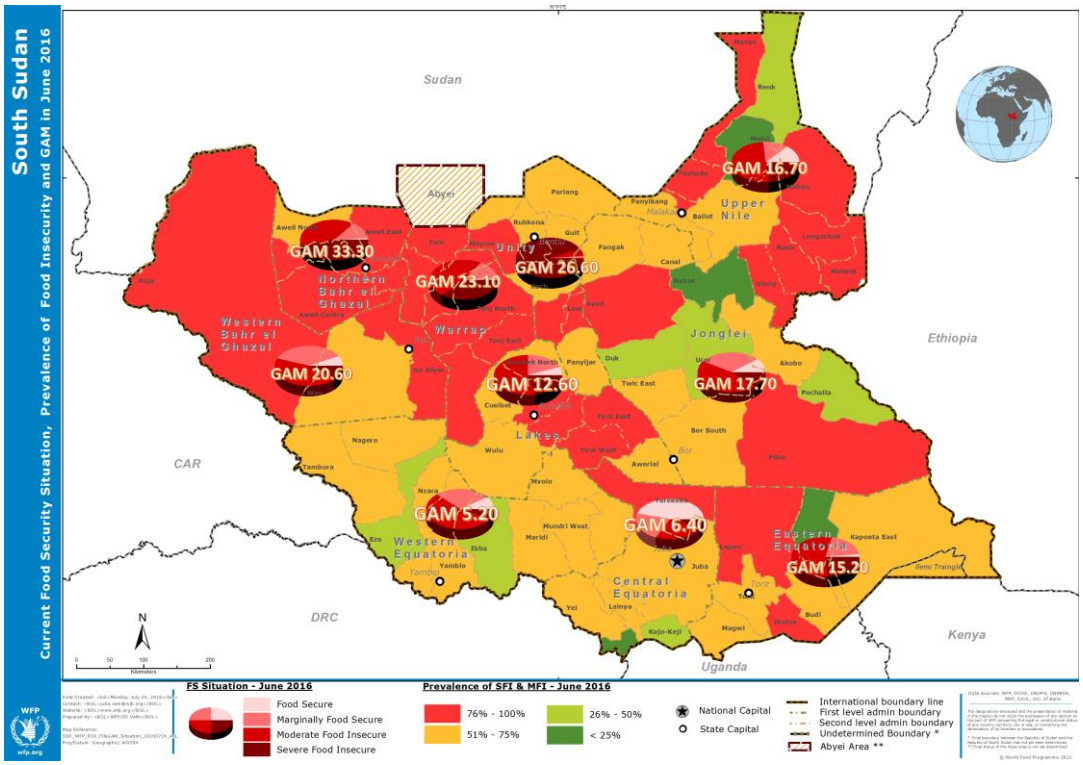
WFP South Sudan

Food Security and Nutrition Monitoring Report (FSNMS) – Round 18 July 2016

Food Insecurity and malnutrition rates – June 2016



Food Security Outlook

The food security and nutrition situation in South Sudan is likely to worsen between July and August/ September before the new harvest comes in. A number factors are attributed to this deterioration: continuing economic crisis currently compounded by spiral price increases; the household stocks that are dwindling; continued population displacements resulting from renewed localized conflict; insecurity that hampers trade flows, disrupting usual livelihood activities, impeding investments and therefore revenue generation; The affected households continue asset stripping and using negative coping mechanisms, delaying recovery of the already vulnerable livelihoods. The continued loss of value of the Sudanese pound against the dollar and the lack of the oil revenue will continue affecting ability of traders to move commodities into the market. In addition, poverty and food insecurity will continue to grow in urban areas and will be further worsened off by insecurity, economic meltdown and disruption of livelihoods putting pressure on an upward spiral of needs in the country.

For additional information, please contact Juba.VAM@WFP.org

The FSMS partners

WFP South Sudan

Food Security and Nutrition Monitoring Report (FSNMS) – Round 18 July 2016

BULLETIN # 18

This bulletin present results of the FSNMS Round 18. The data for this round was collected from 3,942 households in June 2016. The bulletin is an input to the IPC August 2016 analysis. This report focuses on the changes

SUMMARY IN NUMBERS

21 percent increase in food insecurity compared to June 2016.

17.9 percent global acute malnutrition (GAM) prevails in children, an increase of **5 percent** from November/ December 2015.

75 percent in Unity, **65 percent** in Jonglei and **28 percent** in Upper Nile states received food assistance.

50 percent of households who planted crops in 2015 had exhausted their stocks.

MAIN FINDINGS

Overall food security is at its worst since the outbreak of the conflict in 2013, the severely food insecure has more than doubled compared to June 2015. Food insecurity is at critical levels in Northern Bahr el Ghazal (NBS), Warrap, Western Bahr el Ghazal (WBS), Upper Nile, and Lakes Region.

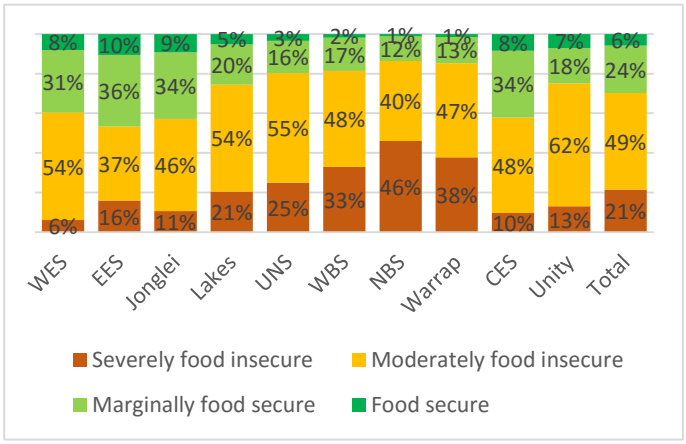
Malnutrition rates measured through GAM has increased to above emergency thresholds in all states, except Central Equatoria and Lakes states. GAM in WBS, Warrap, Unity were above 20 percent with Northern Bahr el Ghazal former state hitting a catastrophic level.

Food Security

Current Food security

The high proportion of severely food insecure households in the affected states is of great concern. At least 70 percent of the population is food insecure, of which 21 percent are severely food insecure across the states.

June 2016 Food Security by State



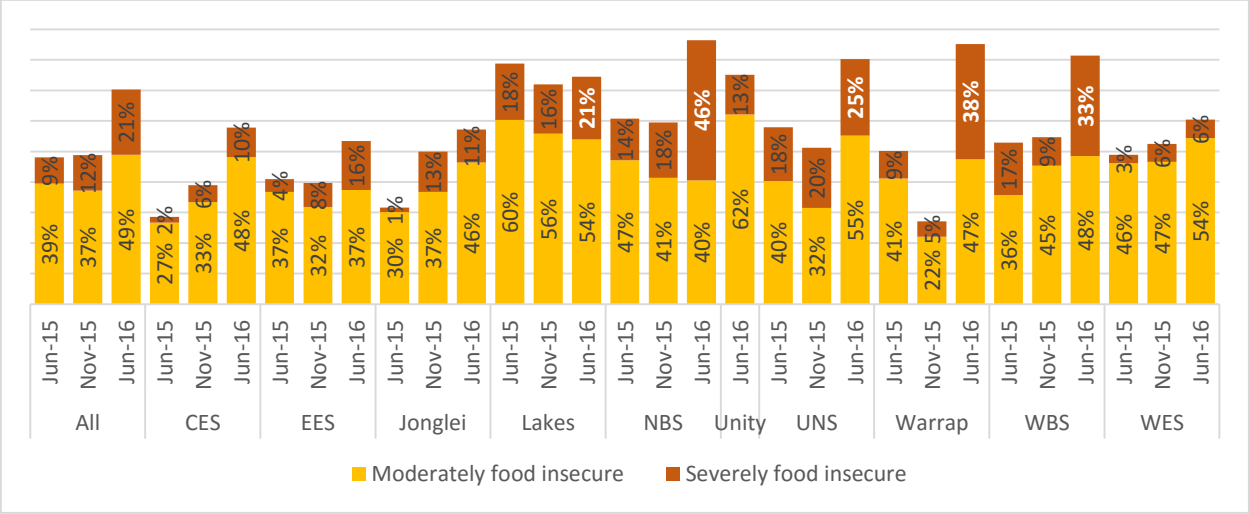
More pronounced food insecurity is in Northern Bahr el Ghazal (NBS) with 46 percent severely food insecure and another 40 percent moderately food insecure, Warrap and Western Bahr el Ghazal (WBS). The states with the least food insecure population are Eastern Equatoria (EES), Western Equatoria (WES) and Central Equatoria (CES). Within the Greater Upper Nile (GUN) states, food insecurity is highest in Upper Nile (UNS) followed by Unity and then Jonglei. Food insecurity was similar for both male and female headed households, those with disabled or chronically ill members and those without. Food insecurity in child headed households was more than double those headed by other groups.

Trends in Food insecurity

Overall, food insecurity has continued to deteriorate in June 2016 from June and November 2015 and is higher than previous lean seasons. The food security situation without increased humanitarian assistance is expected to worsen off until the coming in of green harvest end of August/September.

Food insecurity is at critical levels in NBS, Warrap, WBS, Upper Nile, and Lakes Region. NBS has the highest population that is food insecure of which more than half are severely food insecure. Warrap is second state with the largest food insecure population with 4 out of 10 people severely food insecure. WBS 1 in every 3 persons, UNS 1 in every 4 persons and Lakes 1 in every 5 people are severely food insecure.

Food insecurity in June 2016 by state compared to 2015



Food Consumption

There has been a tremendous decline in acceptable consumption and an increase in poor consumption compared to the same time last year except in Jonglei and EES (see table).

The shift of households into poor food consumption maintain a falls stability in the borderline consumption group. Improvement in acceptable food consumption increased in EES and Jonglei states. Food consumption is determined by food availability and access that is seasonal, hence at harvest time (November) households usually have better consumption. The consumption decrease is attributed to increased food prices that is partly explained by the economic meltdown.

Percent households Food Consumption Score - June 2016 and an increase /decrease from June 2015

	Acceptable		Borderline		Poor	
	June 2016	Change from June 2015	June 2016	Change from June 2015	June 2016	Change from June 2015
All	22%	-4%	29%	3%	49%	1%
CES	15%	-	44%	8%	41%	-8%
EES	42%	18%	25%	2%	34%	-20%
Jonglei	32%	20%	30%	10%	38%	-30%
Lakes	22%	-35%	20%	-4%	58%	38%
NBS	14%	-14%	32%	11%	55%	3%
Unity	21%		32%		47%	
UNS	17%	-13%	22%	-6%	61%	19%
Warrap	16%	-14%	20%	-1%	65%	15%
WBS	19%	3%	30%	-1%	52%	-2%
WES	19%	-15%	38%	-4%	43%	19%

Number of days of food consumption

There is generally a decline across most states in the number of days of consumption for at least four out of seven food groups in June 2016 compared to June 2015. The number of days of consumption of oils and fats decreased in all the states with an exception of Unity. This unseasonal decrease indicates poor dietary diversity and partly explains the deterioration seen in overall food security.

On average, cereals and tubers consumption is better in CES, EES, Jonglei and NBS, but far below expectations of at least 7 days per week, given the energy dense based household diet. An increase in number of days of food consumption was observed in Unity for most commodities. More days of vegetable consumption were observed in WES, Lakes, CES and EES (Table below). The states with better vegetable consumption depend more on own production and markets for the commodity compared to the other states that depend mainly on gathering. The abnormally below normal number of days commodities are consumed, is a clear indication that households may be going days without food. It is therefore not surprising that 76 percent of the households had moderate to severe hunger based on the household hunger scale (see Annex 1).

Average days of consumption by commodity June 2016 compared to June 2015

State	Cereal and tubers	Legumes /nuts / pulses	Milk and other dairy products	Meat, fish, eggs	Vegetables	Fruit	oil, fat butter	sugar or sweet	condiments, spices
CES	5.9	1.5	0.5	0.5	2.5	0.4	1.5	2.1	4.6
		(0.6)	0.0	0.2	(1.1)	(0.3)	(0.7)	(1.3)	
EES	5.8	1.0	2.7	1.2	3.4	0.3	2.3	0.8	5.6
		0.6	(0.1)	0.1	(2.2)	0.2	(0.4)	(0.1)	
Jonglei	5.0	1.2	2.1	0.7	1.2	0.0	2.7	0.7	0.8
		0.1	(1.2)	0.2	(0.7)	0.0	(0.0)	(0.6)	
Lakes	3.6	0.8	1.6	0.7	2.7	0.0	0.4	1.8	2.5
		0.3	0.6	0.5	0.6	(0.1)	(0.3)	0.4	
NBS	5.3	0.8	0.7	0.9	1.7	0.0	0.5	3.4	3.3
		(0.3)	(1.2)	0.5	(0.4)	(0.1)	(0.4)	0.5	
Unity	3.4	0.8	2.0	1.0	0.6	0.2	3.0	1.3	1.6
		0.8	2.0	1.0	0.6	0.2	3.0	1.3	
Upper Nile	3.2	0.3	1.3	1.5	0.8	0.0	1.3	1.3	0.8
		(0.3)	(0.8)	1.0	(1.6)	(0.0)	(0.4)	(0.3)	
Warrap	3.5	0.6	1.6	0.4	1.3	0.3	0.1	0.7	4.5
		0.6	1.6	0.4	1.3	0.3	0.1	0.7	
WBS	4.2	1.0	0.7	1.3	1.9	0.3	0.7	2.8	4.5
		0.1	(2.7)	1.0	(0.6)	(0.1)	0.1	1.5	
WES	4.3	1.9	0.3	0.7	3.2	1.1	2.2	0.7	2.9
		1.6	(0.4)	0.0	(1.6)	0.6	(0.6)	(2.4)	

(x.x) a decrease in days | x.x an increase in days | x.x a small change in days

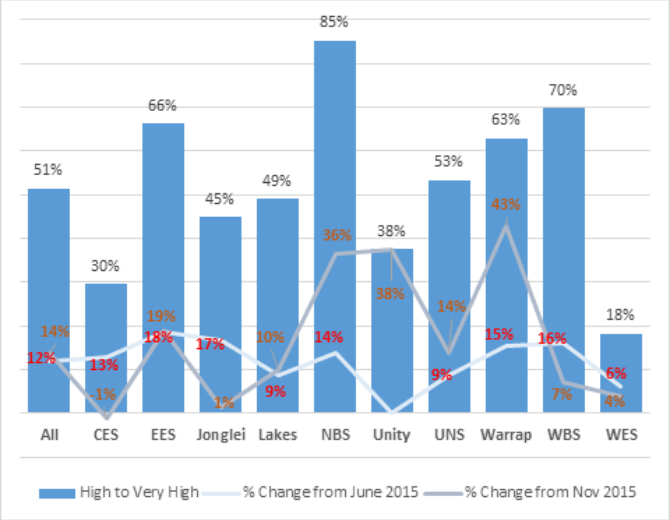
Food Expenditure

There is a general increase in the proportion of households with high to very high expenditure on food compared to November and June 2015. This trend is not surprising given the continued devaluation of the SSP against the dollar, the continuous increase in food commodity prices and livelihoods erosion resulting from the economic meltdown.

The Consumer Price Index (CPI) increased by 310 percent year-on-year, with food inflation at 374 percent in June - the highest in the world and historic ever recorded in the country.

Overall there is a 12 percent increase in the households with high to very high food expenditure compared to June 2015. An increase in the proportion of households was also observed from November 2015. The proportion of households with high expenditure on food (spend more than 65 percent of household budget on food) averages only 11 percent whilst that with very high (spend more than 75 percent of the household budget on food) was around 41 percent. High to very high food expenditure means less income available for other livelihood activities.

Proportion of households with high to very high Food expenditure in June 2016 and an increase from 2015



On average, a household spend 1,400 SSP per month, of which about 60 percent (855 SSP) goes to food. Sixty -eight percent of the total food budget was on cereals and tubers. The highest household expenditure of 2,825 SSP was in Unity followed by WBS and Lakes with an expenditure of 1,670 and 1,540 SSP respectively. The least household expenditure was in WES at 990 SSP per household per month followed by Jonglei and EES with 1,080 and 1,060 SPP respectively. Food security status is not only driven by the proportion of the budget allocated to different commodities in the household basket among other factors.

On per capita basis, WES, CES and Jonglei had the least expenditure on food at 70, 85 and 83 SSP per month, whilst the highest per capita food expenses were in Unity, WBS, NBS and Upper Nile with 206, 198, 187 and 173 SSP per month. A greater proportion of the budget was on energy rich foods with only 13 percent used for meat, fish and pulses. Exception to this was WES and CES with 34 and 26 percent respectively of the food budget allocated to meat, fish and pulses. Low allocation of protein rich foods in the budget explains the high food insecurity and malnutrition rates in the affected states.

Percentage of household budget spent on food items

State	% total household budget on food	Distribution share of Food Budget: cereal and tubers	vegetables and Fruits	meat and fish	beans and pulses	Cooking oil	sugar and honey	other food items
WES	39%	38%	1%	18%	16%	12%	6%	9%
EES	70%	79%	0.4%	4%	4%	7%	3%	2%
Jonglei	53%	58%	1%	10%	4%	14%	9%	4%
Lakes	54%	71%	0.5%	5%	12%	1%	8%	2%
Upper Nile	60%	65%	3%	9%	1%	9%	9%	4%
WBS	71%	67%	2%	8%	5%	2%	13%	3%
NBS	81%	81%	1%	6%	3%	1%	6%	2%
Warrap	65%	85%	0.1%	1%	7%	0.5%	3%	2%
CES	48%	48%	1%	11%	15%	8%	11%	6%
Unity	55%	62%	2%	7%	1%	10%	11%	6%
All	59%	68%	1%	7%	6%	6%	8%	4%

Food Sources

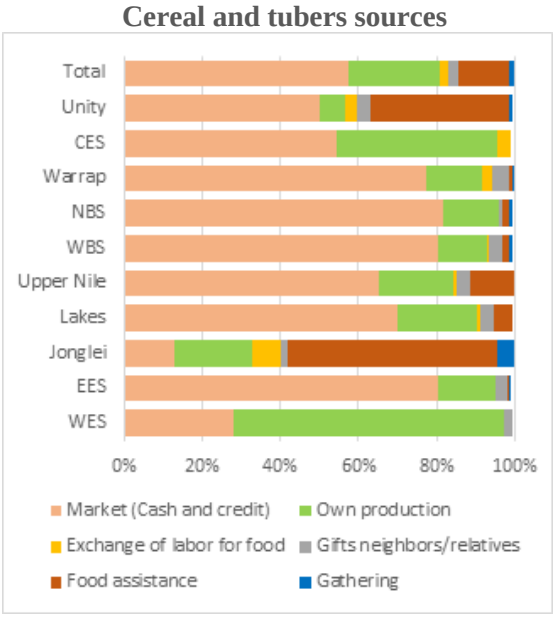
On average, at least 60 percent of the cereals and tubers, pulses and legumes, meat and fish, oils and fats, and sugar comes from the market with a variation across states. More than half of households buy cereals from the market, with most of the balance coming from own production, except in WES, Jonglei and Unity. Households' heavy reliance on the commodity markets means the recent economic meltdown coupled with a significant disruption on markets reported across most states will negatively affect household food access (see WFP June markets report and Annex 3).

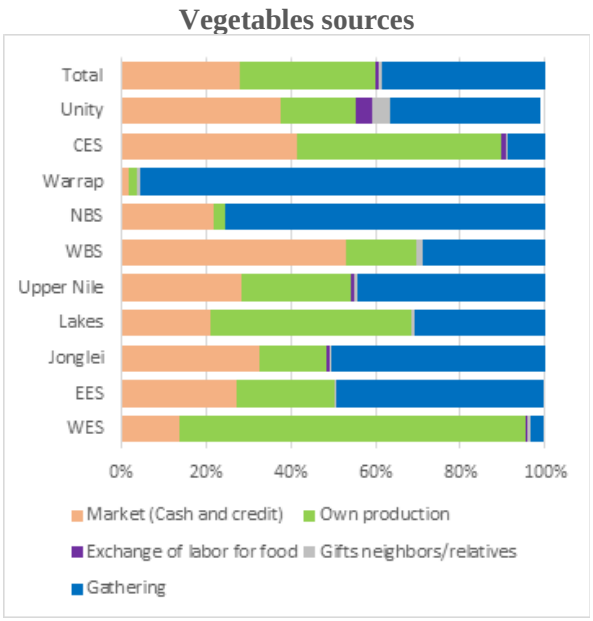
In WBS, NBS, EES and Warrap, at least 80 percent of the households buy cereals from the market and the balance comes mainly from own production. The states with greatest proportion of households' sourcing cereals and roots from own production are WES (69 percent), CES (41 percent), Jonglei, Lakes and Upper Nile each at 20 percent. Food aid as the source of cereals is important in Jonglei (53 percent), Unity (35 percent) and UNS (11 percent). Food aid is also the main source of pulses in these three states at 76, 26 and 45 percent respectively. Markets are the main source of pulses for the remaining states.

Pulses are obtained in exchange for labour in EES (25 percent), Lakes (24 percent) and WBS (36 percent). Own production is the main source for pulses and legumes in CES and WES for 37 percent of households, this is followed by Lakes (24 percent) and Warrap (18 percent).

Most households buy cooking oil and fats from the market except from those states that have benefited from food assistance- Jonglei (65 percent), Unity (37 percent), Upper Nile (10 percent) and Lakes (22 percent).

The sources of vegetables for most households is mainly from gathering, own production and markets with variation across the states. Warrap, NBS, Jonglei and EES predominantly depend on gathering. In WES, Lakes and CES, majority of the households depend on own production as source of vegetables.



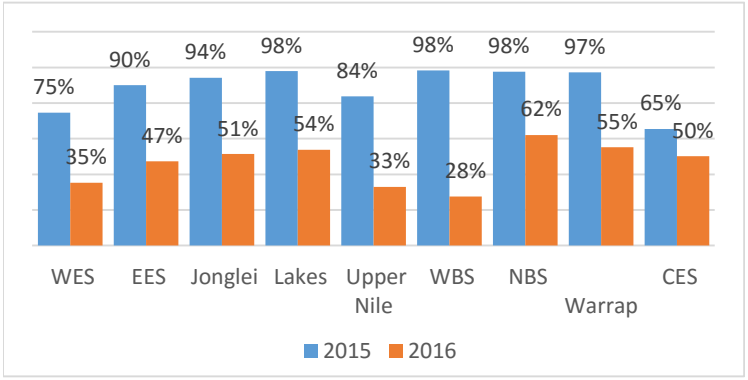


Food stocks

The level of stock holding at household level was reported low, with less than 50 percent of the households still holding maize, sorghum and other commodity stocks. The stock holding in June was much less compared to normal. The stocks held were on average about a 50kg bag of either sorghum or maize and close to a bag for other commodities. Given the large family sizes were more than 40 percent of the households have more than 8 family members, these stocks will not last until the next harvest.

Compared to the lean season of 2015, a lower proportion of households had consumed all their stocks from the previous harvest (48 versus 89 percent). Maize was the main stock held by households in Unity, UNS and WES. Sorghum was the main commodity in stock in the other states. NBS, is the only state that held one type of commodity, with 38 percent holding only sorghum stocks. In particular, 62 percent of the population in NBS and over 50 percent in Lakes, Jonglei, Warrap and CES had consumed all stocks of cereals. Surprisingly, only 26 percent of those who planted in Unity state had already exhausted their stocks.

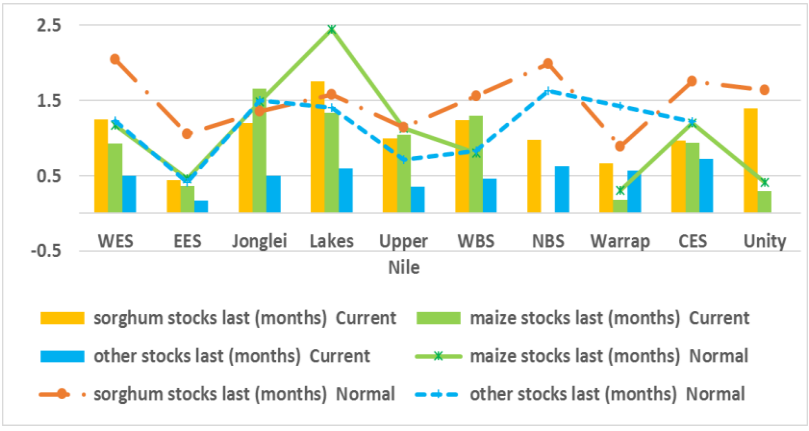
Proportion of Agricultural households who exhausted stocks



There was no major difference in food consumption patterns between those who planted and still had stocks (47 percent with poor food consumption) as opposed to those who already exhausted their stocks (48 percent). The availability of stocks affects significantly **dietary diversity**. Only 34 percent of those who planted still with stocks had low dietary diversity against 44 percent with no stocks and 36 percent of those who did not plant at all. No relevant differences between availability of stocks and sex of HH head was observed.

Most agricultural households in June had stocks lasting for approximately 1.4 to 2 months. The projected situation through August-September suggests that the situation might be similar if not worse to last year as by then most households will have run out of stocks. Many of these households did not plant due to seed unavailability. This factor, combined with high prices due to macro-economic impact of protracted conflict, suggest that economic access to food for most families in South Sudan will be very difficult in the few months to come.

Months' stocks last as of June 2016 compared to normal



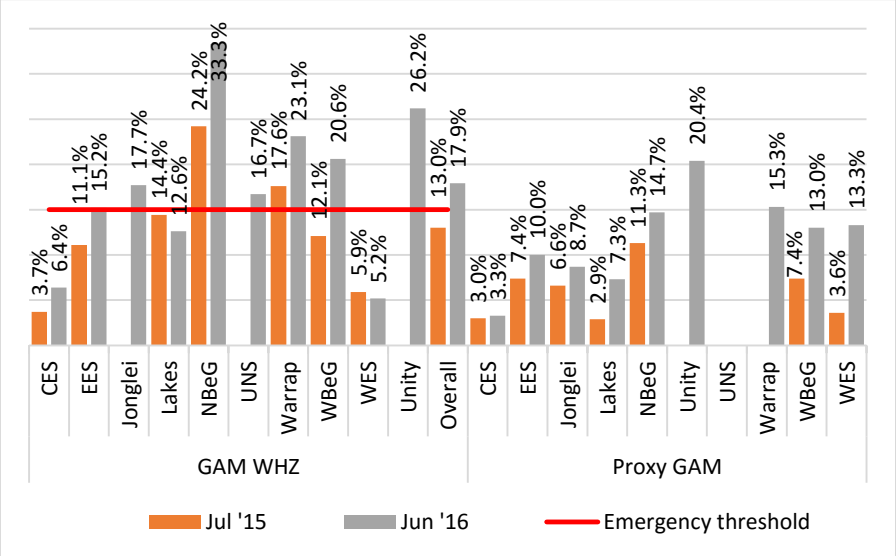
A massive difference in stocks availability compared to a normal year was observed in NBS state (2 months cumulative cereal stocks difference), WES (1.8 months) and Lakes (1.7 months). Insecurity was the main cause of limited stocks in WES (71 percent of the households mentioned it as the main cause) and in Lakes (47 percent), suggesting that only a small part of planted crops were actually harvested. In NBS state, the main problem seemed related to lack of funds to lease land.

Nutrition status of Children 6 to 59 months and Women 15 to 49 years

Child Nutrition

The current level of acute malnutrition in South Sudan is unprecedented. Out of a total of 4,837 children 6 to 59 months included in the analysis, the global acute malnutrition (GAM) prevails in 17.9 percent of the children. This represents a drastic increase in malnutrition since the last FSNMS conducted in November/December 2015 that registered a GAM of 13 percent. The GAM is above the 15 percent emergency threshold in seven out of ten of the former states, while in all previous assessments, five in ten of the states tended to have GAM>15 percent. In all the historically high malnutrition burdened states, an increase in GAM was noted (see graph and Annex 4).

GAM changes in current versus previous lean seasons



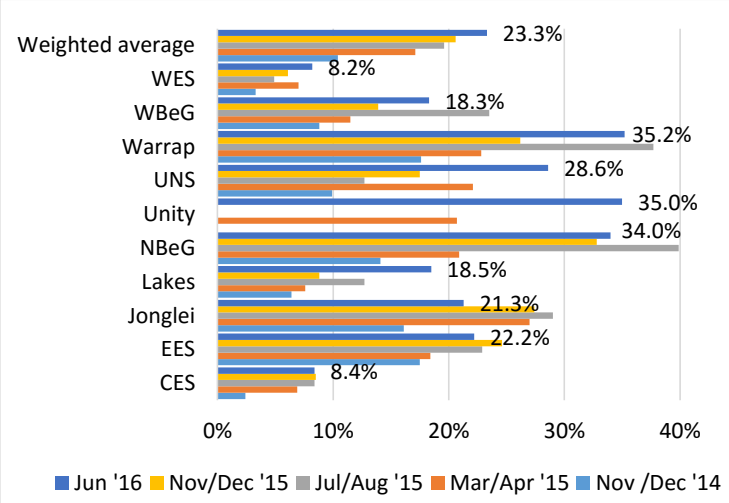
The GAM in Northern Bahr el Ghazal former state has hit a catastrophic level at 33.3 percent, indicating that one in every three children 6 to 59 months in NBS is acutely malnourished. In Western Bahr el Ghazal where the acute malnutrition was previously 8.5 percent in December 2015, the GAM was reported at 20.6 percent denoting a nearly two and a half increase in malnutrition in the last six months. Similarly, in Eastern Equatoria where GAM was below 13 percent in previous rounds of the FSNMS, June 2016 registered a level of 15.2 percent. The situation in Unity and Upper Nile has persisted above the emergency threshold. In Unity, a GAM of 26.2 percent was observed while 16.7 and 17.7 percent GAM was reported in Upper Nile and Jonglei respectively.

Increase in GAM levels fluctuate with season in many parts of South Sudan. While the GAM is expected to increase in the lean season (June to August), the June 2016 results indicate abnormal increases when compared to GAM in the lean season of 2015. The proxy GAM (based on MUAC) shows similar unusual spikes, the implication of which is that the risk of death of children due to malnutrition, malnutrition among younger children and prevalence of severe malnutrition have increased. The deterioration in the nutrition situation is primarily due to physical insecurity, the effects of the economic crisis and depleted stocks from the last harvest. In the Greater Upper Nile, while conflict subsided in most of the areas, it persists in some pocket areas. Furthermore, the economic crisis coupled with persistent violence notably in Wau and some parts of the Greater Equatoria further aggravate the malnutrition situation.

Women Nutrition

Wasting based on MUAC (<230cm) was prevalent in 23.3 percent of the women, depicting persistently high levels of under nutrition among women of reproductive age (Annex 5). Consistent with previous FSNMS, former states with the highest prevalence of wasted women coincide with those with the highest levels of under nutrition among children 6 to 59 months, including; Warrap (35.2 percent), Unity (35 percent), NBeG (34 percent), and Upper Nile (28.6 percent).

Trend of Wasting in women 15 to 49 years (<23cm)



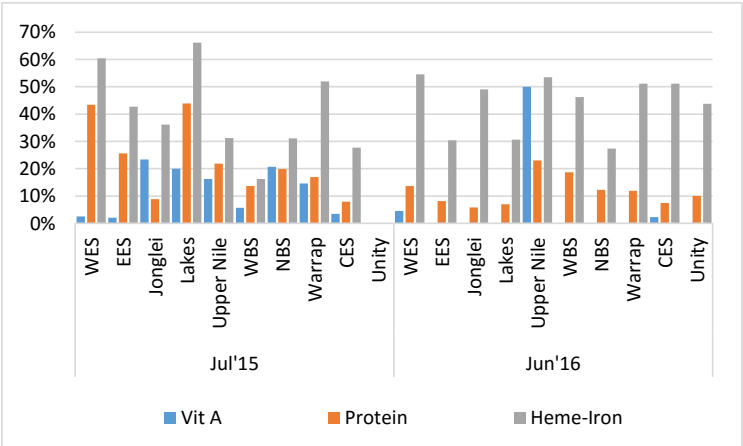
Wasting was 23.9 percent among the pregnant and lactating women and does not differ significantly from wasting among the non-pregnant non-lactating women (22.5 percent), implying that programmes that address women nutrition need to target all women of reproductive age.

Household consumption of Vitamin A and protein rich foods

The consumption of animal protein (heme-iron) rich foods remains deplorable in many parts of South Sudan.

Poor consumption of protein rich foods is an indication that more vulnerable households continue to grapple with food access particularly of the high nutrient value. Furthermore, even among households that own livestock, consumption of protein rich sources was not significantly higher than among households that own livestock, emphasizing the ornamental rather than food consumption role of livestock among the South Sudan population.

Proportion of HHs that did not consume any Vitamin A or Protein rich foods

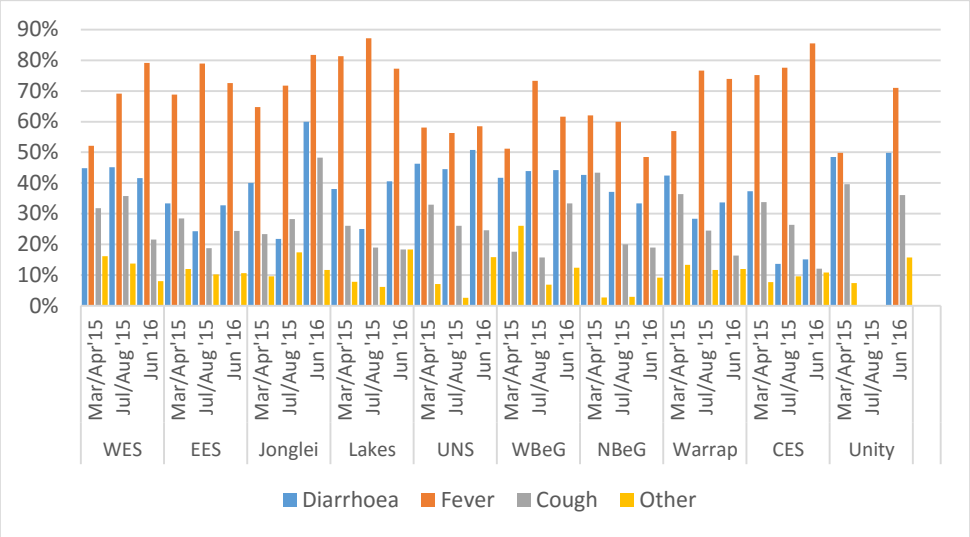


Child Morbidity

High levels of childhood morbidity prevail in the South Sudan population. Out of all the children assessed, 74 percent reported having suffered from fever, 41 percent from diarrhea, 27 percent from cough while 12 percent suffered from other infections (notably skin and eye infections) two weeks prior the assessment.

The levels of fever are always high, but increased significantly compared to almost the same time last year in WES, Jonglei, WBS and CES. Diarrhoea has also increased in EES, Jonglei and Warrap states.

Morbidity comparison for children 6 to 59 months



As noted in all previous assessments, child morbidity bears a strong and significant association with child wasting. Children that reported having suffered from at least one of the surveyed diseases had a significantly higher chance of being malnourished (MUAC<125). Therefore, strengthening disease prevention measures may contribute to improvement of the nutrition situation in South Sudan.

The nutrition and Food security linkages

A significant correlation was found between food security and nutrition; food insecure households were more likely to have a malnourished child; indicating the role that food security plays in ensuring child nutrition and vice versa.

Demographics: Households headed by females had an increased likelihood of being food insecure and having a malnourished child. This is a typical relationship and is attributable to resource imbalances between men and women and the gender constructs that increase vulnerability of women to food insecurity and malnutrition.

Assistance: Results indicate that food assistance may be alleviating food access issues. The assessment established whether households received food assistance in the last three months. When receipt of food assistance was correlated with food security status of households, households that reported to have received food assistance under the general food distribution and food for assets modalities were more likely to be food secure. It is therefore likely that targeting of vulnerable households prevented worsening household food security. Additionally, results also indicate that households with malnourished children were more likely to have received food for nutrition, which does not only enhance household food access but also demonstrates appropriate targeting.

Food consumption: Households which had no food in the week before the assessment as well as those that reported to have consumed less than three meals the previous day were significantly more likely to have a malnourished child and to be food insecure than households that did not; a clear indication that household access to food plays a critical role in the nutrition status of children and food security of households. Also, children from households that consumed diverse diets were less likely to be malnourished than their counterparts from households that did not consume diverse diets. The ongoing events related to insecurity and the economic crisis

have impacted food access issues which in turn has contributed to the deterioration of the nutrition and food security situation in the country.

Relationship between various nutrition and food security with demographics and food consumption.

	Indicator	GAM	Proxy GAM (GAM by MUAC)	Food Security
Demographics	Female household head	✓	✓	✓
	Size of household	x	x	x
	Disabled/Chronically ill member	x	x	x
	HH hosting orphans	x	x	x
	Age of HH head	x	x	x
	Child age	✓	✓	
Assistance	HH received any form of assistance	x	✓	✓
	HH received nutrition assistance	✓	✓	x
	HH received FFA assistance	x	x	✓
	HH received GFD assistance	x	✓	✓
Food Consumption	Children/adults received 3 or more meals	✓	✓	✓
	HH consumed Vitamin A rich foods	x	x	x
	HH consumed protein	x	x	
	HH consumed hemeiron	x	x	
	Adequate food consumption	✓	✓	
	Food expenditure share	x	x	
	Reduced CSI	x	x	✓
	Household dietary diversity	✓	✓	
	Income source reliability	x	x	✓
	HH experienced at least a day in the past week without food due to lack of resources	✓	✓	
	✓ Significantly associated		X Not significantly associated	

Livelihoods: Results reiterate the relationship between livelihoods and food security. Households who relied primarily on reliable livelihood sources and those the engaged in coping strategies to address short term food shortages were more likely to be food insecure. In the wake of the economic crisis, vulnerable households' resorting to unreliable income source is increasingly a norm. Owing to unsustainability of the income sources, their role in maintaining food security in households may not hold.

Agriculture and livestock: Relatedly, risk of malnutrition and or food insecurity in households that reported to have no stocks from the last season, did not plant, own no livestock was significantly higher than the households that reported otherwise.

Relationship between various nutrition and food security with agriculture and livestock

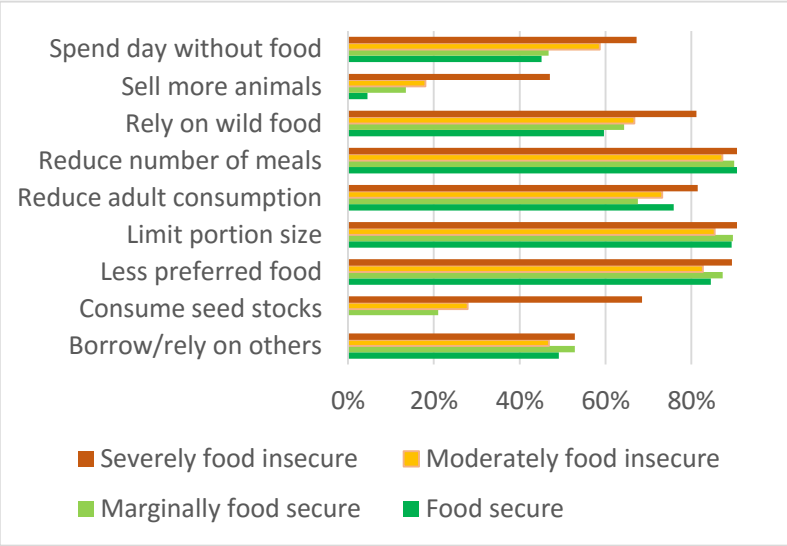
	Indicator	GAM	Proxy GAM (GAM by MUAC)	Food Security
Agriculture	Availability of maize stocks	x	x	x
	Availability of other stocks	✓	x	✓
	Access to farming land in the current season	x	x	x
	HH did not plant in the last season	✓	x	x
	HH planted maize	✓	x	x
	HH planted rice	x	x	✓
	HH planted beans	✓	✓	✓
	HH planted groundnuts	✓	✓	x
	HH planted any other crop	✓	✓	✓
Livestock ownership and Assets	HH own any livestock	✓	x	✓
	HH own cattle	x	✓	x
	HH own sheep	x	x	✓
	HH own goat	x	x	✓
	HH own poultry	✓	x	x
	HH own any other livestock	x	x	✓
	HH owns house	✓	✓	x
	✓ Significantly associated		X Not significantly associated	

Coping Strategies

Households use different coping mechanisms that vary across the states and level of vulnerability. More than two thirds of the households used consumption coping in the states irrespective of the food security status. Reducing number of meals, limiting portion size, reducing adult consumption for children to eat, and eating less preferred foods were the most commonly used coping mechanisms. Selling of more animals, consumption of seed stocks and spending a day without eating tend to increase with increased food insecurity status of the household (Annex 2). Emergency and crisis coping have been used mainly in the most food insecure state, an indication of asset stripping and use of negative coping mechanisms making it longer for the affected households to recover.

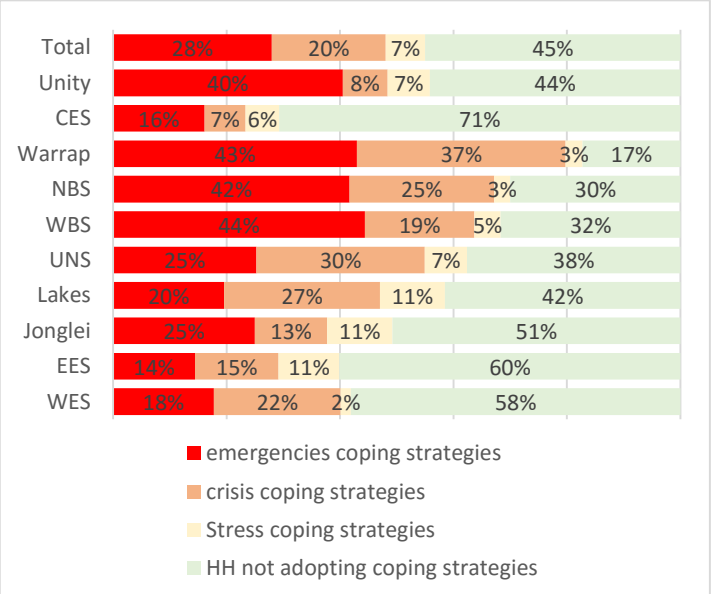
Compared to the same time last year, households' applied different coping mechanisms, with Western Equetoria having more households employing most of the coping strategies. WES have shown an increase in proportion of households consuming seed stocks (17 percent); limiting food portion at meal times (32 percent); reduction in number of meals and relying on wild foods (by 50 percent each) and reduce adult consumption increased by 60 percent. In NBeS, consumption of seed stocks increased by 17 percent, reduction in number of meals by 13 percent; selling more animals by 10 percent and relying on wild foods by 14 percent; In WBS, limiting food portion at meal times increased by 16 percent; reduced adult consumption (31 percent); reduce number of meals (17 percent); and relying on wild foods increased by 30 percent. In EES, reduction in number of meals increased by 18 percent; and relying on wild foods increased by 22 percent. Consumption of seed stocks in Warrap increased by 32 percent. Limiting food portion at meal times increased by 24 percent in CES. There was a significant decrease in the proportion of households selling more animals and borrowing or relying on others in Upper Nile state by 29 percent each (Annex 2).

Main coping mechanisms applied



Most households in the most food insecure states of Warrap, NBS, WBS and Upper Nile use emergency and crisis coping mechanisms. This is an indication that the food insecurity will remain fragile until such a time that affected households can rebuild their livelihoods.

Livelihoods coping



Livelihood coping strategies are classified into three broad groups, including stress, crisis and emergency strategies. ***Stress strategies***, such as borrowing money or spending savings, are those which indicate a reduced ability to deal with future shocks due to a current reduction in resources or increase in debts; ***Crisis strategies***, such as selling productive assets, directly reduce future productivity, including human capital formation; and ***Emergency strategies***, such as selling one's land, affect future productivity, but are more difficult to reverse or more dramatic in nature.

Assistance

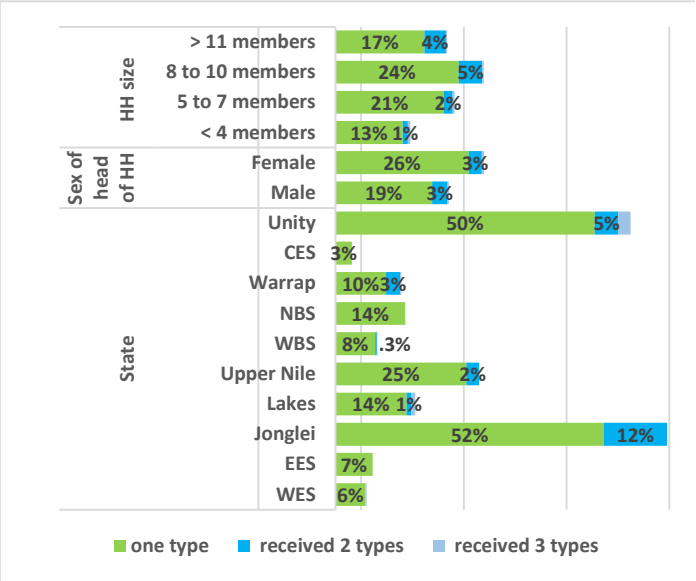
The greatest assistance was provided the GUN states, with 67 percent of the households in Jonglei, followed by 55 percent in Unity and 27 percent in UNS receiving assistance. Most households benefited from general food distribution compared to other programmes.

More female headed (29 percent) received assistance compared to the male headed (21 percent). The larger households tended to get more assistance compared to the smaller households. The least assistance went to WES, EES and CES. In general, most households only received one type of assistance, with a few households receiving two types of assistance (see Figure).

From the households that received assistance, majority benefited from general food distribution, followed generally by food for assets. EES had the largest proportion of households (41 percent) reporting Food for Asset creation programmes. However, Warrap and WBS had more households reporting 70 and 62 percent respectively receiving Nutrition for children programmes. Lakes also had 22 percent receiving Nutrition for children programmes. Slightly more (20 percent) male headed households participated in the Food for Asset creation programme compared to the 14 percent of the female headed counterparts.

Almost the same proportion of food secure and those severely food insecure households received general food distribution. This denotes that food assistance is contributing to the household food security, of which without it more households could have been severely food insecure. More of the marginally food secure and the food secure tend to participate in food for asset creation compared to those that are food insecure.

Proportion of households that received assistance



Distribution by food assistance type

		General Food	Food for Asset Creation	Nutrition Children	School feeding
States	WES	96%	4%	4%	4%
	EES	21%	41%	3%	34%
	Jonglei	84%	28%	7%	0.4%
	Lakes	65%	29%	22%	
	Upper Nile	96%	5%	8%	
	WBS	42%		62%	
	NBS	70%	9%	21%	
	Warrap	8%	23%	79%	15%
	CES	77%	23%		
	Unity	96%	2%	13%	5%
Sex of head of HH	Male	78%	20%	16%	3%
	Female	81%	14%	14%	3%
Household size	< 4 members	82%	13%	13%	6%
	5 to 7 members	76%	20%	11%	4%
	8 to 10 members	82%	15%	19%	2%
	> 11 members	79%	23%	18%	1%
Food security status	Food secure	76%	22%	9%	9%
	Marginally food secure	82%	22%	16%	3%
	Moderately food	79%	16%	16%	2%
	Severely food insecure	76%	12%	13%	4%

Agriculture and Livestock

No major differences in food insecurity are observed between households who planted (70 percent) and those who did not plant (72 percent). This could be explained by the fact that other activities else than farming might have enhanced adequate food access in rural areas. However, among those who planted as expected a slightly higher level of food insecurity was found among those who exhausted their stocks (72 percent against 68 percent of those with stocks). 73 percent of those who planted have acceptable food consumption against 68 percent with poor food consumption.

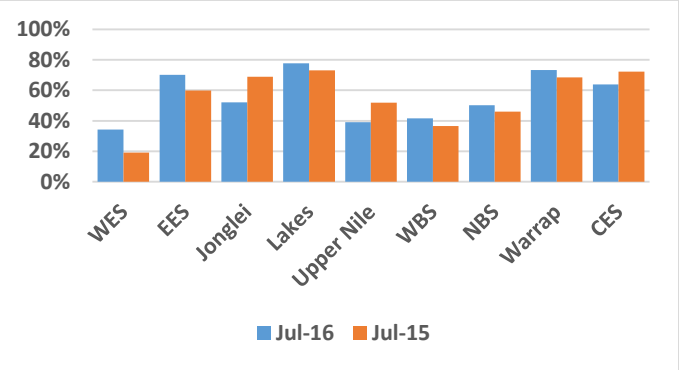
Almost 70 percent of the population declared having planted during the last season. The lowest proportion of population depending on farming was observed in the states most affected by conflict such as Unity (almost 50 percent did not plant), Jonglei (45 percent) and Upper Nile State (42 percent). Over 80 percent of the population in NBS state (84 percent), in WES (85 percent) and in EES (92 percent) planted during the last planting season.
Looking forward to the next cropping season, 73 percent of the interviewed population planted which is an increase of 3 percent compared to the previous season. The lowest levels of farming population were observed in WBS (55 percent) and Lakes (58 percent) where the number of farmers decreased by 10 percent and 9 percent respectively. A huge increase was observed in Unity (+24 percent), while NBS has decreased by 6 percent. On average, those who planted had access to a surface of 5.3 Feddans, with lowest records in Jonglei (2.4 feddans), NBS (3.7) and CES (3.9). The highest access to land was observed in Warrap (5.6 Feddans) and (Lakes (5.4) – Annex 6.

Unavailability of seeds was a major limiting factor for the population in Unity (79 percent), UNS (75 percent) and CES (72 percent) which could be due to consumption of seed to cope with hunger in the current lean season period. Over 50 percent of seeds are procured through direct purchase, while 27 percent of households mainly recur to seed stocking from previous harvests.

Compared to August 2015, there was a general increase in farmers suffering from high cost of seeds (+6 percent approx.) with relative peaks in CES (+10 percent) and UNS (+8 percent). Pests and diseases affected one in three farmers in WES and one in five in Jonglei and UNS. Overall, there was a marked decrease of around 20 percent in households affected by shortage of rains, especially in Jonglei (-30 percent), WES, EES, NBS (-20 percent), CES and Warrap (-15 percent).

Over 57 percent of households owns at least one livestock head. This has gone down by 2 percent since July 2015. In general, households owning livestock are less exposed to food insecurity, as 63 percent of them is food insecure against 70.3 percent of the national average. Although the access to an acceptable diet is challenging across the board in South Sudan, households owning livestock have usually access to more frequent and diversified diet as 'only' 60.7 percent of them had poor or borderline food consumption against 78.1 percent of the national average.

Population who owns livestock



The Tropical Livestock Unit is highest in Unity and Eastern Equatoria State where approximately 70 percent of population have livestock accounting for over 4 TLUs. The lowest in WES, CES and WBS (Annex 6).

ANNEXES

Annex 1: Household Hunger Scale

	None	Slight	Moderate	Severe	Moderate to Severe HHS
WES	53%	10%	36%	2%	47%
EES	51%	10%	38%	1%	49%
Jonglei	13%	4%	82%	1%	87%
Lakes	6%	8%	75%	10%	94%
UNS	11%	6%	80%	3%	89%
WBS	36%	11%	49%	4%	64%
NBS	17%	5%	76%	3%	83%
Warrap	6%	6%	85%	2%	94%
CES	52%	16%	31%	2%	48%
Unity	16%	9%	73%	2%	84%
Total	**24%**	**8%**	**65%**	**3%**	76%

Annex 2: main Coping mechanisms

		Borrow /rely on others	Consume seed stocks	Less preferred food	Limit portion size	Reduce adult consumption	Reduce number of meals	Rely on wild food	Sell more animals	Spend day without food
All	Jun-16	50%	33%	86%	88%	74%	89%	70%	22%	58%
	% Change	-2%	11%	1%	6%	4%	7%	7%	-3%	-5%
CES	Jun-16	49%	16%	88%	91%	52%	83%	65%	10%	34%
	% Change	0%	8%	-2%	24%	-7%	4%	6%	5%	-15%
EES	Jun-16	36%	21%	71%	75%	52%	85%	73%	15%	33%
	% Change	-2%	12%	2%	10%	14%	18%	22%	-6%	0%
Jonglei	Jun-16	64%	18%	87%	89%	81%	90%	69%	9%	57%
	% Change	-2%	7%	-4%	-2%	6%	6%	-5%	-5%	4%
Lakes	Jun-16	50%	38%	88%	87%	75%	88%	64%	21%	58%
	% Change	-1%	-2%	-2%	0%	-12%	-4%	1%	-8%	-18%
NBS	Jun-16	42%	55%	86%	94%	71%	97%	83%	49%	51%
	% Change	-7%	17%	3%	8%	7%	13%	14%	10%	-9%
Unity	Jun-16	71%	21%	86%	87%	82%	84%	73%	35%	75%
Upper Nil	Jun-16	40%	42%	78%	91%	82%	91%	63%	21%	74%
	% Change	-29%	11%	7%	2%	1%	6%	-2%	-29%	0%
Warrap	Jun-16	46%	58%	95%	97%	88%	94%	73%	37%	79%
	% Change	4%	32%	2%	2%	-6%	-2%	3%	-7%	-11%
WBS	Jun-16	29%	41%	80%	69%	52%	83%	66%	17%	42%
	% Change	11%	-11%	1%	16%	31%	17%	30%	-4%	-1%
WES	Jun-16	46%	30%	81%	69%	71%	79%	66%	6%	37%
	% Change	19%	17%	-3%	32%	60%	50%	50%	5%	23%

Annex 3: Sources of major food commodities by state

		WES	EES	Jonglei	Lakes	Upper Nile	WBS	NBS	Warrap	CES	Unity	Total
Cereals and tubers	Own production	69%	14%	20%	20%	19%	12%	14%	14%	41%	6%	23%
	Exchange of labor for food			7%	1%	1%	1%		2%	4%	3%	3%
	Gifts from neighbors/relatives	2%	3%	2%	3%	3%	4%	1%	5%		3%	2%
	Market (Cash and credit)	28%	81%	13%	70%	65%	80%	82%	78%	54%	50%	58%
	Food assistance		1%	53%	5%	11%	2%	1%	1%		35%	13%
	Gathering		1%	4%			1%	1%	1%		1%	1%
Pulses and Legumes	Own production	37%	3%	2%	24%	6%	9%	13%	18%	37%	7%	19%
	Exchange of labor for food	3%	25%	7%	24%		36%		1%	1%	3%	8%
	Gifts from neighbors/relatives	6%	3%	1%		8%	4%	4%	10%		5%	3%
	Market (Cash and credit)	53%	65%	13%	45%	38%	49%	81%	69%	61%	54%	51%
	Borrowing/debts	1%	1%			2%					2%	0%
	Food assistance	0%	1%	76%	6%	45%	2%	3%			26%	18%
	Gathering	0%	3%	1%	2%	2%			1%		3%	1%
Meat, fish	Own production	9%	48%	12%	10%	7%	1%	6%	20%	10%	11%	13%
	Exchange of labor for food			5%	1%				1%		1%	1%
	Gifts from neighbors/relatives	4%	2%	3%	7%	3%	2%	2%	13%	1%	3%	4%
	Market (Cash and credit)	73%	39%	45%	62%	44%	94%	89%	47%	78%	59%	62%
	Borrowing/debts			1%				1%		1%	2%	1%
	Hunting/Fishing	13%	11%	33%	21%	45%	3%	1%	18%	10%	24%	20%
Vegetables	Own production	81%	23%	16%	47%	26%	17%	2%	2%	48%	18%	32%
	Exchange of labor for food			1%		1%				1%	4%	1%
	Gifts from neighbors/relatives	1%		1%	1%	1%	2%		1%		4%	1%
	Market (Cash and credit)	14%	27%	33%	21%	28%	53%	22%	2%	41%	38%	28%
	Gathering	3%	49%	50%	31%	44%	29%	76%	96%	9%	36%	39%
Oils and fats	Own production	13%	19%	10%	24%	9%	2%	2%	29%	6%	2%	9%
	Exchange of labor for food	1%		5%								1%
	Gifts from neighbors/relatives			2%	2%	1%	5%		4%		3%	1%
	Market (Cash and credit)	85%	80%	15%	47%	81%	70%	96%	61%	90%	55%	63%
	Food assistance		1%	65%	22%	10%	1%				37%	23%
	Gathering	1%	1%	3%	6%		21%	1%	7%	3%	1%	2%

Annex 4: Rates of malnutrition by state

State	Nutrition Outcome (% 95%CI)				WHO Classification of GAM WHZ
	GAM WHZ	SAM WHZ	GAM MUAC	SAM MUAC	
CES	6.4 (4.3 - 9.2)	1.5 (0.5 - 4.4)	3.3(1.9 - 5.7)	0.8 (0.2 - 3.9)	
EES	15.2 (11.0 - 20.6)	2.8 (1.4 - 5.4)	10.0 (6.7 - 14.6)	2.0 (0.8 - 5.4)	
Jonglei	17.7 (14.1 - 22.1)	5.4 (3.3- 8.8)	8.7(5.8 - 12.9)	2.1 (0.9 - 5.0)	
Lakes	12.6 (8.5 - 18.3)	3.1 (1.6 - 6.0)	7.3 (4.4 - 12.0)	2.4 (1.0 - 5.8)	
NBeG	33.3 (27.8 - 39.4)	9.7 (6.6 - 14.2)	14.7 (11.3 - 18.9)	4.1 (2.5 - 6.5)	
Unity	26.2 (21.3 - 31.1)		20.4 (15.1 - 26.9)	5.9 (3.7 - 9.2)	
Upper Nile	16.7 (10.9 - 22.5		15.3 (11.2 - 20.6)	5.9 (3.6 - 9.5)	
Warrap	23.1 (17.9 - 29.3)	5.0 (3.0 - 8.4)	13.0 (9.1 - 18.1)	2.8 (1.5 - 5.0)	
WBeG	20.6 (15.9 - 26.3)	6.3 (4.1 - 9.6)	13.3 (9.0 - 19.4)	3.2 (2.0 - 5.1)	
WES	5.1 (3.2 - 8.1)	1.1 (0.4 - 2.9)	6.3 (4.0 - 9.8)	2.0 (1.1 - 3.6)	
Overall weghted	**17.9 (13.1 - 22.6)**	**4.5 (1.9 - 7.1)**	**10.9 (6.9 - 14.9)**	**3.0 (0.8 - 5.1)**	

Annex 5: Trend of wasting among women of reproductive age (ages 15 to 49 years)

	Nov /Dec '14	Mar/Apr '15	Jul/Aug '15	Nov/Dec '15	Jun '16
CES	2.4%	6.9%	8.4%	8.5%	8.4%
EES	17.5%	18.4%	22.9%	24.6%	22.2%
Jonglei	16.1%	27.0%	29.0%	27.4%	21.3%
Lakes	6.4%	7.6%	12.7%	8.8%	18.5%
NBeG	14.1%	20.9%	39.9%	32.8%	34.0%
Unity		20.7%			35.0%
UNS	9.9%	22.1%	12.7%	17.5%	28.6%
Warrap	17.6%	22.8%	37.7%	26.2%	35.2%
WBeG	8.8%	11.5%	23.5%	13.9%	18.3%
WES	3.3%	7.0%	4.9%	6.1%	8.2%
Weighted average	10.4%	17.1%	19.6%	20.6%	23.3%

Annex 6: Agriclture and Livestock

Annex 6a: Crop plantings

	Planted in the last cropping season	Did not plant in the last cropping season	no Access to farming land during the ongoing/current planting season	Reasons for not having access to farming land,				Unavailability of seeds during the planting season
				Insecurity	Do not have farming land	Could not afford to lease farming land	Other	
WES	85.2%	14.8%	9.6%	71.1%	18.4%	5.3%	5.3%	45.80%
EES	92.3%	7.8%	5.7%	39.1%	26.1%	13.0%	21.7%	62.40%
Jonglei	55.1%	44.9%	19.9%	64.1%	23.1%	6.4%	6.4%	62.70%
Lakes	67.1%	32.9%	18.4%	46.8%	10.4%	7.8%	35.1%	47.40%
Upper Nile	58.1%	41.9%	17.8%	58.3%	27.8%	6.9%	6.9%	74.70%
WBS	65.4%	34.6%	35.4%	44.7%	36.0%	7.0%	12.3%	58.20%
NBS	83.6%	16.4%	4.5%	0.0%	21.1%	36.8%	42.1%	31.90%
Warrap	72.8%	27.2%	2.2%	11.1%	22.2%	33.3%	33.3%	57.30%
CES	73.1%	26.9%	5.7%	52.2%	34.8%	0.0%	13.0%	71.60%
Unity	50.1%	49.9%	21.6%	38.7%	24.7%	18.3%	18.3%	78.60%

Annex 6b: area planted by type of crops

Area Planted in Feddans							
State	Maize	Sorghum	Rice	Beans	groundnuts	others other crops	Total
WES	1.3	0.9	1.1	1.4	1.0	1.1	6.9
EES	0.8	0.9	0.0	0.4	0.5	0.6	3.2
Jonglei	1.0	0.8	0.0	0.1	0.3	0.2	2.4
Lakes	0.9	1.5	0.0	0.7	1.3	1.0	5.4
Upper Nile	1.1	2.2	0.0	0.3	0.6	0.3	4.5
WBS	0.9	0.9	0.0	1.0	0.8	0.5	4.1
NBS	1.1	1.2	0.0		0.8	0.7	3.7
Warrap	1.0	1.9	0.0	0.7	1.2	0.8	5.6
CES	0.9	0.6	0.3	0.4	0.7	1.0	3.9
Unity	1.0	2.1	0.0	0.4	1.4	0.5	5.3
Total	**1.0**	**1.3**	**0.9**	**0.4**	**0.9**	**0.9**	**5.3**

Annex 6c: Proportion of farmers that planted by crop type

	Did you plant Maize	Did you plant Sorghum	Did you plant rice	Did you plant beans	Did you plant groundnuts	Did you plant any other crops	DID YOU PLANT ANY CROPS?
	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WES	73.9%	9.6%	2.5%	1.4%	48.9%	16.6%	79.4%
EES	29.9%	39.2%	0.0%	3.7%	9.8%	9.5%	63.1%
Jonglei	53.8%	49.0%	0.0%	2.5%	5.4%	2.5%	64.3%
Lakes	6.4%	51.8%	0.0%	2.6%	50.3%	2.0%	58.2%
Upper Nile	77.4%	8.1%	0.0%	2.7%	1.8%	5.4%	66.3%
WBS	17.8%	56.7%	0.0%	1.4%	49.5%	5.3%	54.7%
NBS	2.0%	77.6%	0.0%	0.0%	6.7%	4.2%	77.1%
Warrap	41.2%	76.0%	0.0%	1.3%	34.1%	2.8%	88.1%
CES	76.8%	24.5%	.5%	18.9%	63.7%	36.1%	87.3%
Unity	88.1%	21.1%	0.0%	8.0%	3.6%	3.9%	74.0%
Total	47.6%	43.1%	.3%	4.9%	26.0%	9.7%	72.6%

Annex 6d: Cropping challenges faced by farmers

2016 Farming challenges										
	WES	EES	Jonglei	Lakes	Upper Nile	WBS	NBS	Warrap	CES	Unity
Shortage of rain	20.9%	31.1%	21.7%	29.2%	23.8%	20.8%	29.9%	27.1%	26.7%	8.7%
Flooding	.9%	.8%	9.3%	1.0%	4.8%	.7%	1.4%	.4%	.2%	6.7%
Pests and diseases	32.9%	16.0%	21.7%	10.6%	21.1%	11.2%	11.3%	10.3%	12.8%	11.4%
Heavy weed and infestation	6.6%	3.7%	11.1%	8.2%	4.9%	6.2%	10.1%	2.8%	3.2%	15.3%
Shortage of seeds	12.9%	24.8%	18.5%	22.2%	24.0%	23.2%	23.2%	21.5%	26.8%	25.5%
High cost of seeds	17.8%	15.7%	6.7%	17.5%	12.6%	26.6%	20.0%	24.8%	17.1%	12.0%
Shortage of hand tools	8.1%	7.9%	10.9%	11.2%	8.7%	11.3%	4.1%	13.1%	13.2%	20.5%

Annex 6e: Livestock ownership

		TLU ownesrhip- total livestock				
		No livestock	Negligle holding (<0.5TLU)	Low livestock holding (0.5 to 1 TLU)	Medium holding (1 to 4 TLU)	High Livestock (> 4 TLU)
State	WES	0.0%	60.4%	17.2%	17.2%	5.2%
	EES	.7%	11.4%	6.1%	12.9%	68.9%
	Jonglei	1.0%	2.9%	7.8%	40.7%	47.5%
	Lakes	.3%	16.9%	9.8%	30.8%	42.2%
	Upper Nile	1.9%	8.9%	7.6%	31.0%	50.6%
	WBS	0.0%	30.8%	17.3%	29.3%	22.6%
	NBS	1.4%	24.2%	11.6%	32.4%	30.4%
	Warrap	0.0%	8.5%	5.5%	30.4%	55.6%
	CES	1.2%	41.4%	15.7%	24.1%	17.7%
	Unity	.8%	7.0%	4.7%	17.5%	70.0%
	Total	.8%	18.2%	9.4%	27.4%	44.1%