

Emergency Food Security Assessment (EFSA)

South Kordofan SUDAN

October 2010



World Food Programme

Contents

Executive summary	3
1. Background	4
1.2. Social Economic background	4
2. Objectives	5
3. Methodology.....	5
4. General and demographic findings	6
5. Food availability and markets	7
5.1. Production.....	7
5.2. Markets.....	7
6. Households' access to food	8
6.1. Income and expenditures	8
6.2. Household agricultural production	9
6.3. Livestock	11
7. Food consumption, utilization, nutritional and health status	11
8. Food security	12
8.1. Profiling of Food Insecure Households	13
9. Coping Strategies	14
10. Humanitarian assistance coverage	15
11. Scenarios.....	15
12. Response and targeting options	16
12.1 Response options.....	16
12.2 WFP plans	17
13. Recommendations	17

Annex 1: Forecast Analysis

Annex 2: Assessment Team Members

Annex 3: Seasonal Calendar

Executive summary

South Kordofan is a state in central Sudan consisting of two regions, Nuba Mountains and the Western Section, where the key economic activities are agriculture and livestock production. Civil war has created large scale displacement in the state, and after the signing of the CPA South Kordofan has experienced large scale influx of returnees who have put pressure on already limited basic services.

A state level Food security assessment was carried out in October 2010, partly to feed into the 2010 Crop and Food Security Assessment Mission (CFSAM) planned for November and December but also to assist WFP and other stakeholders in determining 2011 level of needs and thus humanitarian assistance. The assessment was a joint by HAC, State Ministry of Health and Ministry of Agriculture.

The general objective of the assessment was to;

- Assess the food security situation of the urban and rural population in South Kordofan.

Analysis of the food security situation indicates that a total of 38 percent of the households are either moderately or severely food insecure. Rural households are more food insecure than rural households with 5 percent being severely food insecure, and as many as 43 percent being moderately food insecure. 5 percent severely food insecure in rural areas is equivalent to 48,000 people or 7,000 households.

	Severely food insecure	Moderately food insecure	Food secure
Rural	5%	43%	52%
Urban	0	29%	71%
Overall South Kordofan State	2%	36%	62%

These food security results reveal a poor food security situation even during a time of year when the food security situation usually improves, and the food-security situation in South Kordofan reflected chronic poverty rather than a transitory situation.

The ethnic complexity of the population, conflicting interests arising from disputes on migration routes, in addition to the denial of access to the nomadic groups to water and pasture in the South will continue to create conflicts in the state in the coming months. In addition to possible repercussions arising from the Referendum of South Sudan, conflict is expected in large areas of South Kordofan and may result in large scale displacement.

Life saving interventions is needed for a maximum 220,000 IDPs for approximately two months in connection to possible referendum conflict. In addition, some 7,000 rural households are severely food insecure. Due to the chronic and structural causes of food insecurity, the interventions needed to assist these households are long-term and could include Food for Training and School Feeding.

Livelihood protection interventions are needed for approximately 76,000 households during the lean season in 2011. This should mainly be done through self targeting projects such as Food for Work and Food for Training (literacy classes and health/nutrition awareness training).

1. Background

Southern Kordofan is a large state in central Sudan inhabited by 1.4 million people¹. It lies between North and South Sudan and borders the states of Upper Nile to the east, Unity to the south, North Kordofan to the north, Darfur to the west and the Abyei region to the Southwest.

South Kordofan consists of two regions. One is the Nuba Mountains to the east and the other is the Western Sector, in the west. The Nuba Mountains are inhabited by more than 50 tribes composed of Nuba as well as a minority of cattle-raising Arabs. The Nuba are farmers, while nomads traverse the Nuba Mountains area seasonally, herding cattle from North to South during the dry season from November to May and from South to North during the wet season. In the Western Sector, the majority of the population is Arab. Both areas, in particular the Western sector, are underdeveloped while a prolonged civil war has worsened the situation, causing large scale displacement, especially in the Nuba Mountains. Since the signing of the CPA, displaced populations have started to return to Southern Kordofan, which received a total of 397,000 returnees as of August 2010, with the largest wave returnees in 2008.

South Kordofan has fertile soil, plentiful rainfall (ranging from about 350 mm in the north to about 800 mm in the south), and dense vegetation. The share of agriculture and natural resources in State income has been estimated at 57% and agriculture and livestock production are the main livelihood sources for most of the population. An estimated 65% of households are sedentary farmers, while about 23% are nomadic pastoralists, around 12% are urban and semi-urban dwellers.

Sorghum, sesame, groundnuts and maize are grown in most areas of the State, while millet is grown mainly in the northern parts of Dilling and Lagawa. Other crops, such as cowpeas and *karkadeh* (hibiscus) are locally important.

According to FAO reports, about 80% of the population lives in rural areas.

1.2. Social Economic background

Large areas of the South Kordofan are occupied by traditional agricultural smallholders, often living on marginal land of low productivity (2.5 sacks or 90 kg per feddan). The Nuba ethnic groups occupy the central highland areas of the Eastern and Western Jebeles and all are farmers and agro pastoralists, while Arabic groups are pastoralist in the west, central and eastern portions of the state.

Socio-economic livelihoods in South Kordofan are influenced by:

- The lingering impact of decades of North-South conflict;
- Poor economic development (underdeveloped infrastructure, weak or non-existent institutions, underdeveloped markets; limited economic opportunities outside agriculture;).
- Subsistence-oriented mixed agriculture that dominates the economy and generates most employment;

¹ 2008 Census

- The presence of a substantial returnee population. Almost 400,000 returnees have returned since August 2010. This influx has stretched the livelihood capacities of the host population and overburdened the already limited socio-economic and governance infrastructure.

2. Objectives

The overall assessment objective was to assess the food security situation of the urban and rural population of South Kordofan State.

The specific objectives were:

- To identify the food security situation and degree of food insecurity at household and state level;
- To describe the coping strategies utilized by the food-insecure households, and identify any that may have a negative impact on lives or livelihoods;
- To identify the food-insecure population and the vulnerable groups;
- To establish the reasons why people are food-insecure;
- To determine whether food insecurity and nutritional problems are chronic or transitory;
- To determine community priorities.

3. Methodology

The food security assessment was conducted in the State from 3rd - 24 October 2010.

The assessment gathered both qualitative and quantitative information from household interviews (300) and community focus groups (20). Secondary information was gathered from the literary review of a number of reports referenced in this assessment.

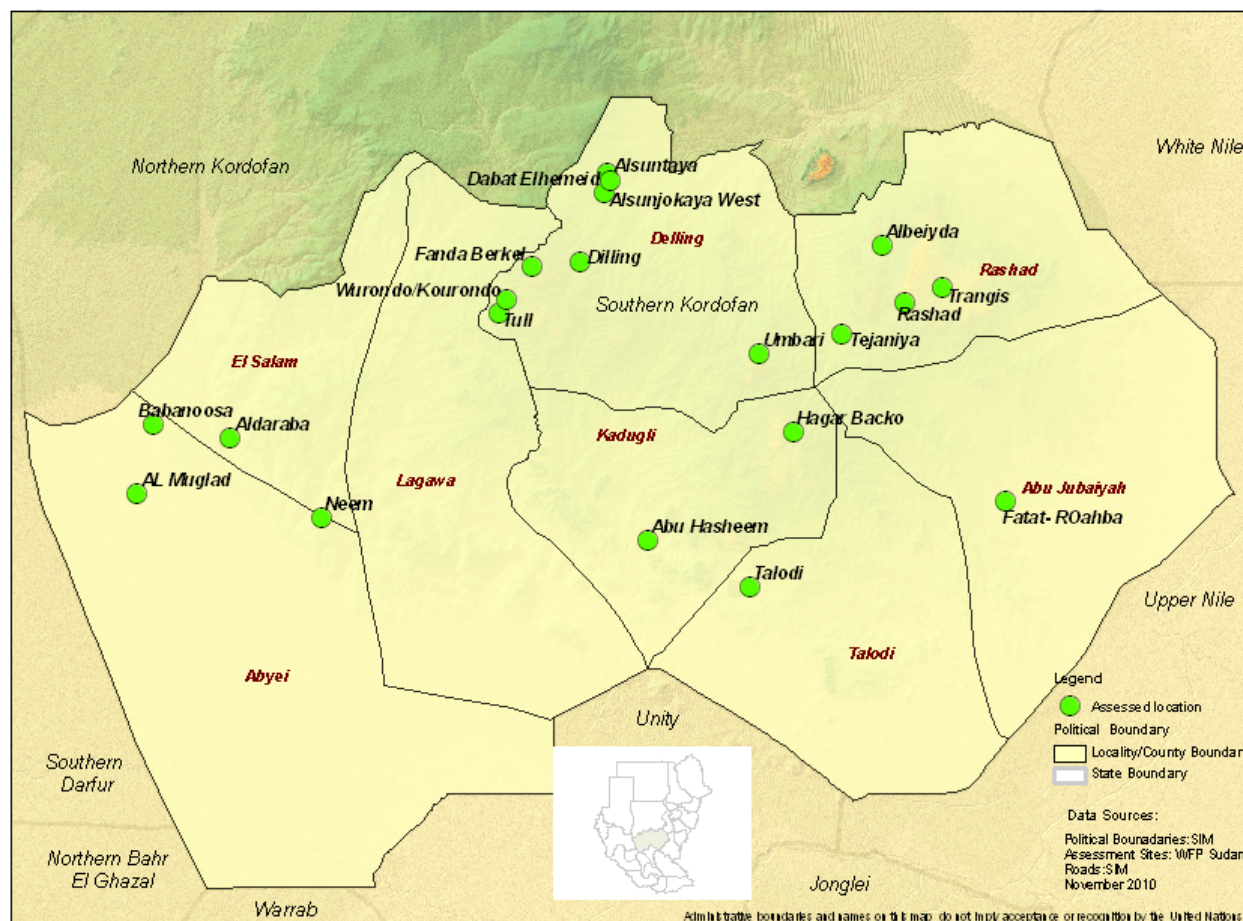
The sampling methodology was two stage random sampling. A stratification was first made to ensure sufficient statistical coverage from both urban and rural locations allowing for results with 95% confidence and 7% error margin. An exhaustive list of villages and towns was compiled and used as a population frame for the survey sampling. Selection was done proportional to population size. Fifteen rural locations were randomly chosen and 5 urban locations.

Households were also selected randomly. The number of households interviewed per location was 15 and thus 300 households across the State were interviewed in total.

The assessment team in the field consisted of WFP, FAO, IOM, HAC, MoH, MoAg, SCF-Sweden and FAR. All enumerators underwent a four day training prior to the data collection that included field testing the questionnaire. The MUAC measurement section was led by an experienced WFP nutritionist. Personal Digital Assistants (PDA) were used for the first time and required some extra training to familiarize the enumerators with the technology instead of using paper questionnaires. WFP was responsible for data analysis using SPSS software.

A one day workshop was held at the end of November with all stakeholders and the main findings were presented and discussed. Responses, scenarios and planning were also part of the workshop and developed through a consultative process.

South Kordofan Food Security Assessment



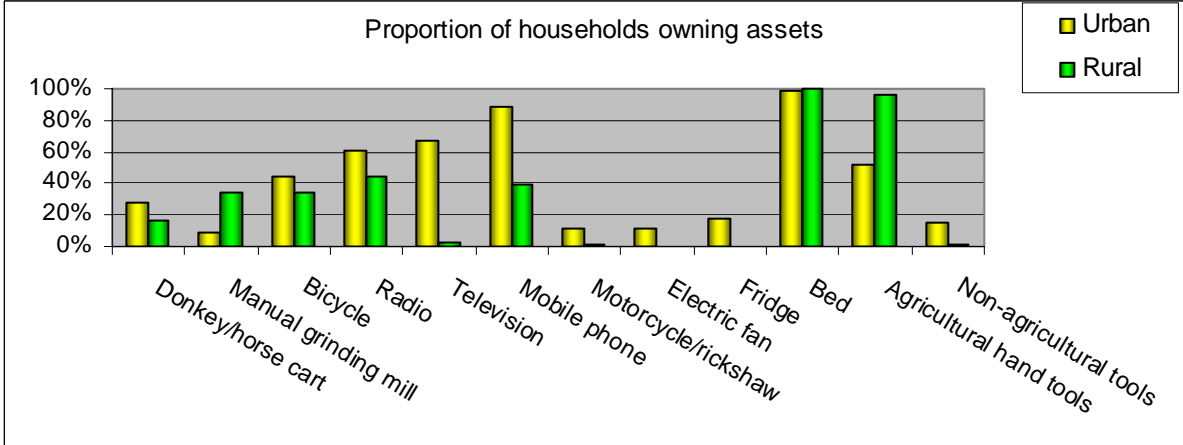
4. General and demographic findings

Findings from the household assessment show that urban head of households are on average one year older than the rural heads. Households are larger in urban locations by one member and there is a much higher proportion of female headed households in urban locations (28 percent in urban compared with 12 percent in rural areas).

Basic demographics

	Age of household head	Number of household members	Proportion of female headed households
Rural	46	7.3	12.4
Urban	45.1	8.5	28

When comparing asset ownership as an indicator of wealth in urban and rural households, analysis shows that urban households have more assets than rural. The only exception is agriculture hand tools, where almost all rural households own an agricultural tool.



5. Food availability and markets

5.1. Production

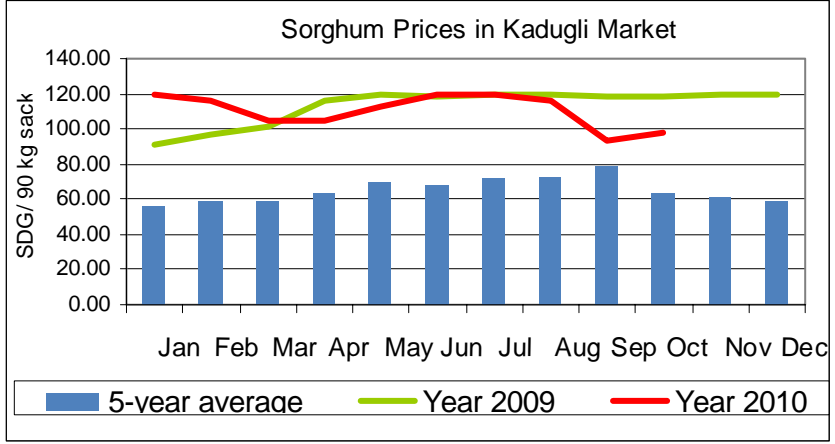
The major findings of the 2010/2011 agricultural season pre-harvest report from the State Ministry of Agriculture of Southern Kordofan estimate that 5,718,390 feddans are cultivated land (both traditional & mechanized) of which the majority, 3,593,857 feddans are traditional agriculture. There was a 56 percent increase in the cultivated land under traditional farming this year compared with last year.

The rainfall started in May and lasted up to October. All localities reported a very good distribution this season. The majority of farmers reported very good and sufficient crop performance as well as good and sufficient expected production. The grazing lands for livestock are also reported to be in good condition.

Major problems facing agricultural production this season are pests (41 percent), lack of cultivating machines (21 percent), animals (18 percent), lack of finances (9 percent). Fire, weeds and lack of labour were other problems that farmers had encountered.

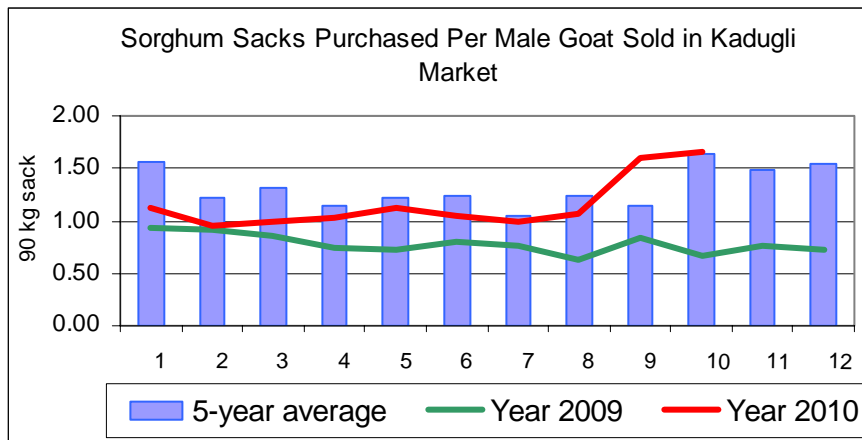
5.2. Markets

No new crop was observed on the market. Sorghum harvesting has not yet started in the main catchment areas (mechanized farms of Habila). The current drop



in sorghum prices could be attributed to a significant reduction in demand. This reduction was caused by the ongoing harvest of early maturing varieties in traditional farms. A supply-led drop in sorghum prices is, however, expected during the coming months when the harvest of mechanized rain-fed farms starts.

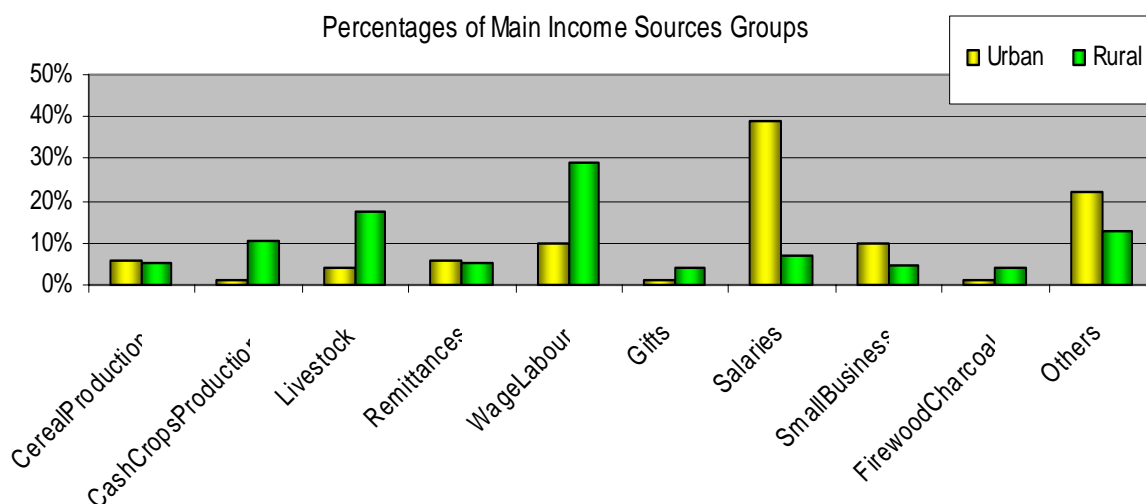
Good pasture conditions during this season have led to an improvement in the terms of trade between herd owners and farmers. More improvement in the terms of trade in favour of herd owners is highly possible if sorghum prices continue to decline with the progress of the harvesting season.



6. Households' access to food

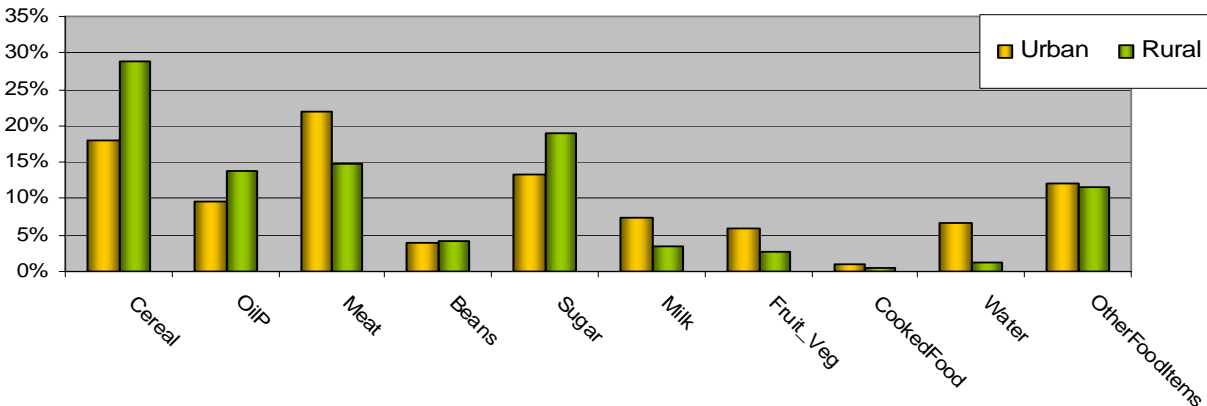
6.1. Income and expenditures

This section indicates the importance of different income sources by presenting how much each of them contribute to the total household income. The main income sources for urban households are salaried work (nearly 40 percent) and others. For rural households, the most important sources in terms of income contributions are waged labour (nearly 30 percent), selling livestock (approximately 15 percent) and sale of cash crops (10 percent).



Urban households spend a slightly lower proportion of their income on food than rural households (54 percent compared with 61 percent). Rural households spend more on

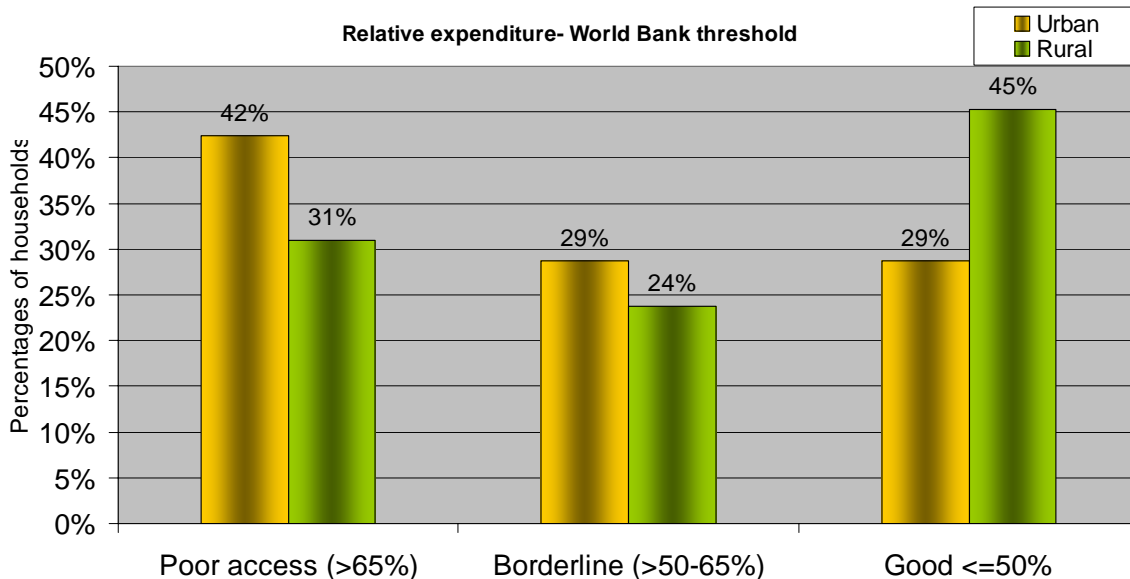
Breakdown of Household expenditures on food items



cereals and sugar while urban households spend more on meat, milk, water and vegetables..

The World Bank thresholds for estimating vulnerability to shocks in terms of food access are set at 50 and 65 percent of expenditures spent on food. Below 50 percent is regarded as good and over 65 percent of a household's income spent on food is poor where any change in food prices could have a detrimental outcome.

When breaking down the households' relative expenditure on food into World Bank thresholds, results show that for urban households, 42 percent spend more than 65 percent of their income on food, while 31 percent of rural households spend more than 65 percent of their income on food.



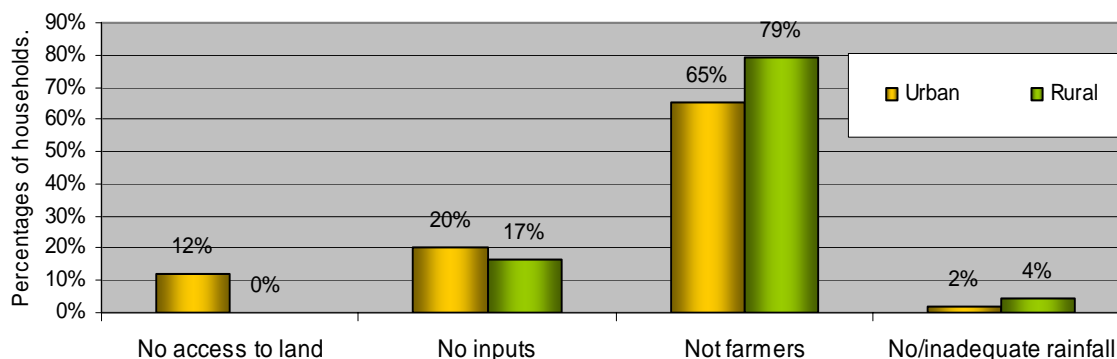
6.2. Household agricultural production

A large majority of rural households are cultivating this season (89 percent) and a relatively small proportion of the urban population is cultivating (31 percent). Land access

for the average rural household is 2.8 mukhamas while the few urban households that do cultivate have larger land, an average of 4.7 mukhamas. This is the same size of land that cultivating urban households used last year.

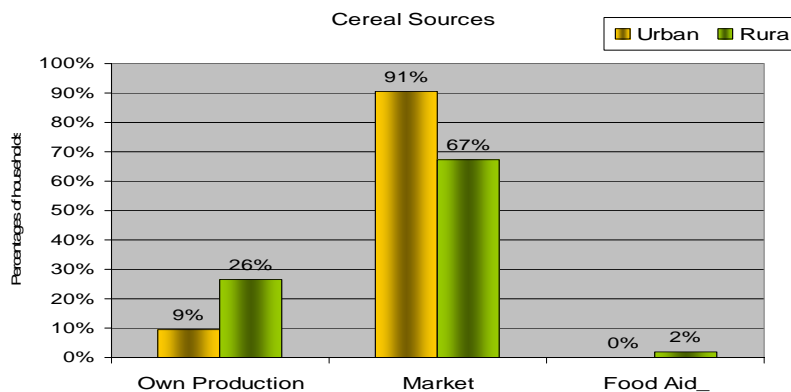
The main reason urban households did not cultivate this season was that they are not farmers. In addition, 20 percent of households did not have enough inputs and another 12 percent of urban households did not have access to land.

Reasons for not cultivating out of the proportion not cultivating



The average area cultivated by rural farmers (2.8 Mukhamas) is equivalent to 4.9 feddans. The estimated yield of the Ministry of Agriculture this season is 270kg (three 90kg bags) per feddan, so the total yield per farmer is 15 bags (1,350kg). This should cover more than 12 months of cereal consumption for an average size household of 7 members².

The large majority of consumed cereals in the week prior to the assessment came from the market. However quite a substantial proportion came from own production among farmers, indicating that the early crop varieties were harvested.



² FAO cereal consumption estimations per person per year is set at 146kg.

6.3. Livestock

Livestock numbers have increased substantially in the past years in South Kordofan. Many people who returned after the CPA was signed have begun to rebuild the livestock holdings they lost during the war. The relatively stable security situation has encouraged livestock owners from other areas including Darfur to move into the state. As this increase in livestock numbers has coincided with an increase in the area under cultivation, this has led to increased conflict over natural resources between farmers and pastoralists.

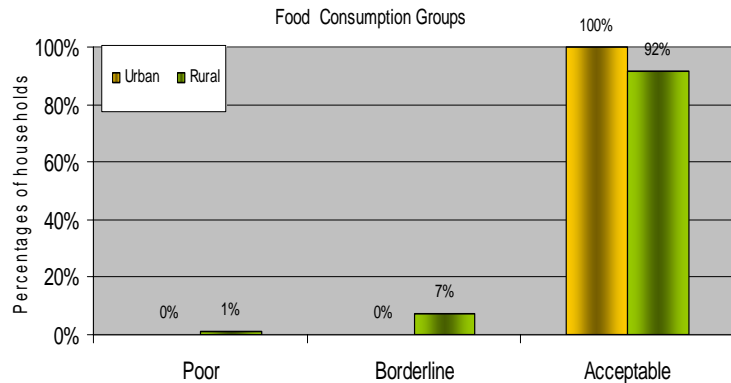
As shown below, the large proportion of households, both urban and rural, own animals and the proportion is very similar between urban and rural locations.

Percentages of households ownership	Urban	Rural
Cattle	8%	5%
Horse/ Donkey	67%	76%
Sheep and goats	72%	72%
Poultry	57%	58%

7. Food consumption, utilization, nutritional and health status

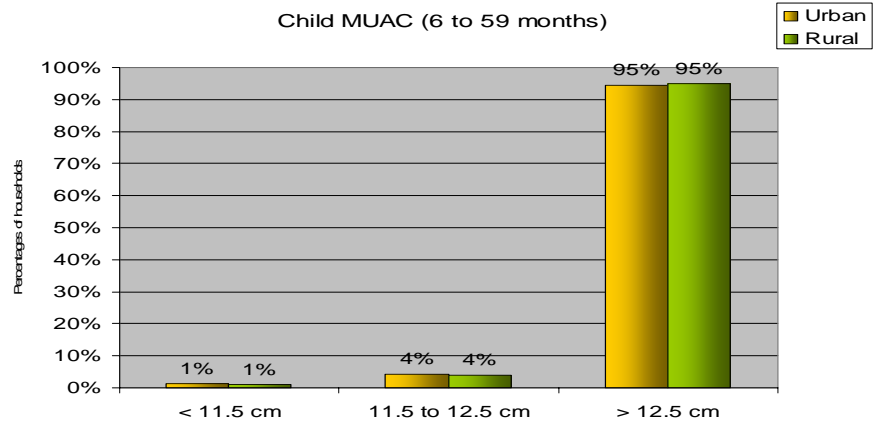
Consumption

The food consumption situation is currently very good based on seven day recall. Only one percent of rural households have poor food consumption and 7 percent of rural households have borderline consumption. The rest (92 percent) have acceptable food consumption. Urban households have 100 percent acceptable food consumption.



MUAC

352 children under five years of age were measured. Of urban and rural children, 5 percent had a MUAC equivalent to severe (1 percent) or moderate malnutrition.

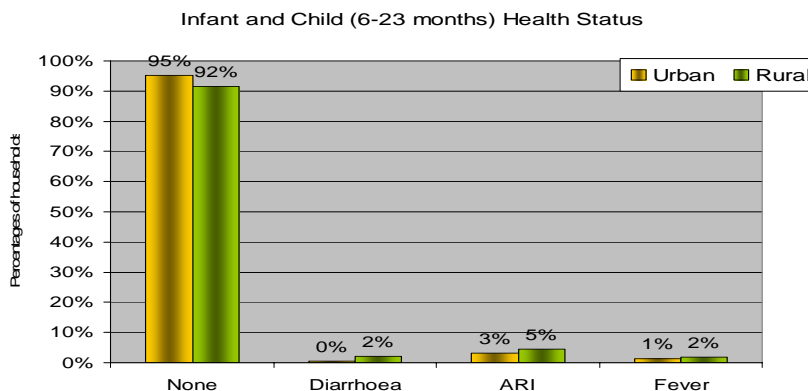


The last state-wide nutritional assessment survey took place in 2009. This assessment reported prevalence of global and severe acute malnutrition in z scores of 16.5 percent and 2.6 percent respectively. This is above the international threshold of 15 percent for emergency levels.

It should be noted that the MUAC findings and GAM rates of last year should not be compared as they do not measure the same measurement. The time of year was also different. It is well known that malnutrition rates peak during the lean season, which coincides with the rainy season when waterborne disease increases.

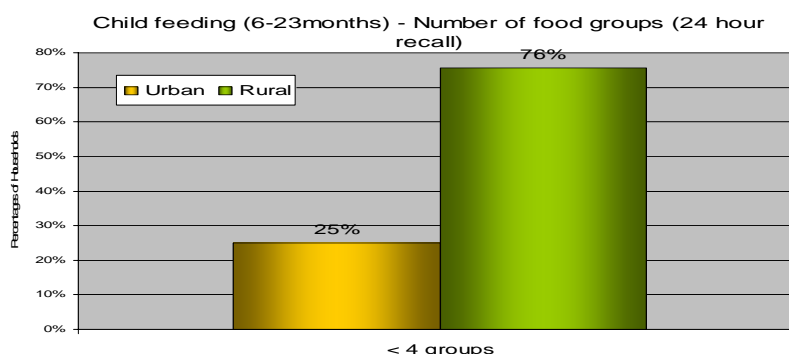
Illnesses

The morbidity picture from a 2 week recall period was positive with very few parents of children aged 6-23 months reporting illness. Eight percent of rural and 5 percent of urban children reported illness. This follows the seasonal pattern for some diseases.



Infant and young child feeding

Three in 4 children aged 6-23 months among rural households consume food from less than four food groups while only 1:4 urban children consume food from less than four food groups. Food from more than four food groups is necessary to ensure an adequate intake of nutrients.



These results indicate that there is a serious problem in child feeding practices that require awareness raising and education of care takers.

8. Food security

Food security in this assessment and as per the WFP handbook is established through a cross tabulation of the food consumption score and the access indicator (relative expenditure on food). The below table shows how different combinations result in three food security groups.

Food security categorization table- URBAN

		Food consumption score		
		Poor	Borderline	Acceptable
Food access	Poor	0	3	39
	Borderline	0	0	28
	Good	0	0	31

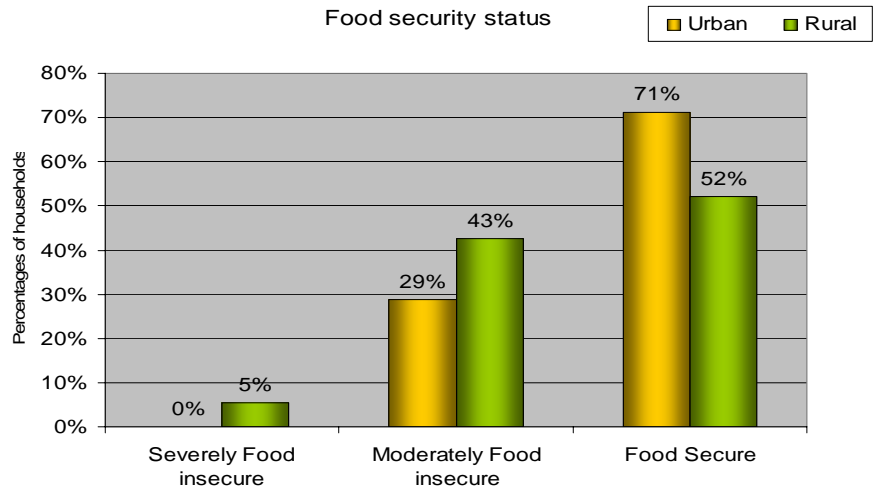
Red= severe food insecurity, yellow= moderately food insecurity, Green= food secure.

Food security categorization table- RURAL

		Food consumption score		
		Poor	Borderline	Acceptable
Food access	Poor	0	0	59
	Borderline	0	0	25
	Good	0	0	16

Rural households are more food insecure than urban.

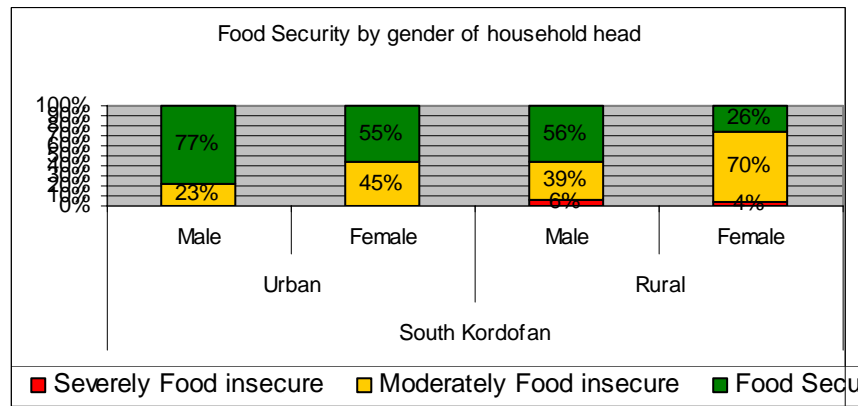
One out of two rural households is food insecure of which 5% are severely food insecure (equivalent to 48,000 persons or 7,000 households). No urban households are severely food insecure. One in three urban households is however, moderately food insecure even during the time of the year when food security improves. Most of these households are regarded as chronically food insecure.



As per seasonal variations in food security, it is expected that a small proportion of the currently food secure will become food insecure during limited periods of the year. This is a chronic problem that follows the same pattern year after year.

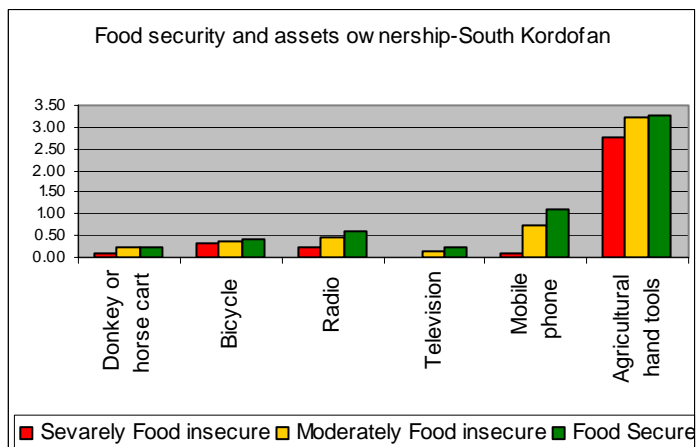
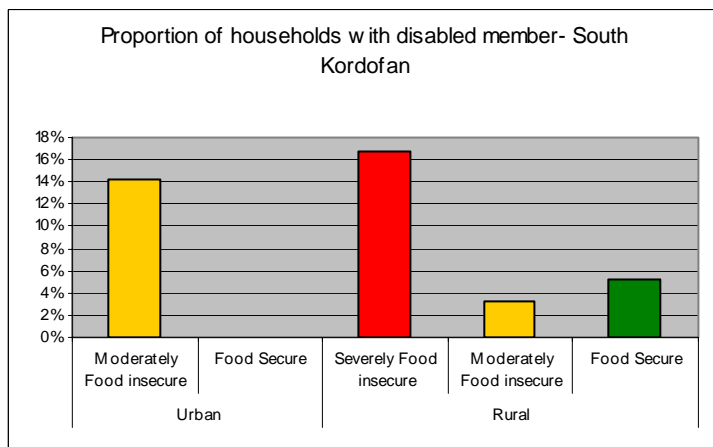
8.1. Profiling of Food Insecure Households

Analysis indicates that in both urban and rural areas, the sex of the household head has an effect on the food security situation of the household. Female headed households are significantly more food insecure than male headed households.



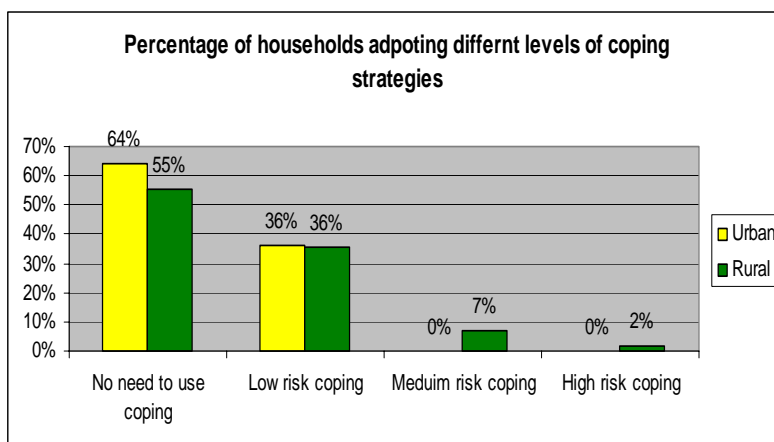
Disability status of the household head also impacts on the household food security situation. Among urban households, disabled households are found in the moderately food insecure group while in rural areas they are mainly severely food insecure.

Asset ownership, often used as a wealth indicator, confirms that the fewer assets a household has, the more food insecure it will be.

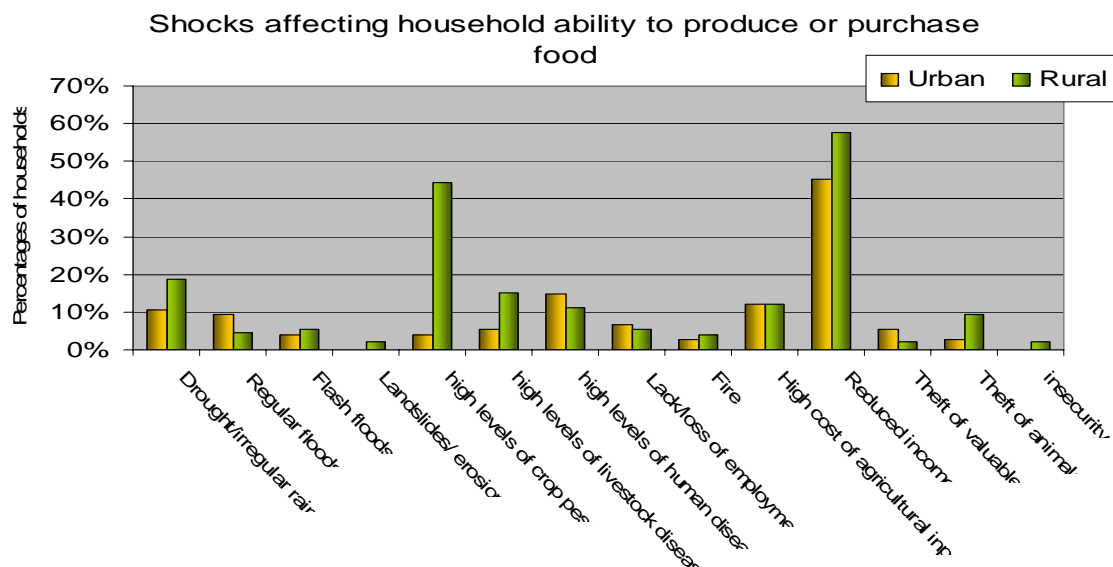


9. Coping Strategies

The majority of households were not using a coping strategy as they did not face food shortage or lack of money in the week prior to the assessment. Rural households use higher risk strategies than urban households but most (36 percent) of both urban and rural households are using low risk strategies that do not put their lives or livelihoods at risk.



The shocks experienced by the population in South Kordofan six months prior to the assessment are presented in the graph below. For the rural population, crop pests are by far the most experienced shock followed by reduced income. The shock most experienced by the urban households was reduced income.



10. Humanitarian assistance coverage

A relatively small proportion of households received food or non-food assistance in the three months prior to interview. Among urban households, the assistance reported most was school feeding at 11 percent. Of rural households, food distribution through food for work was reported most often, followed by school feeding.

	Urban	Rural
Percentage of households that received food or non food assistance during the past three months.	15%	37%
Food Aid and Other Humanitarian Assistance		
Food for Work	0%	28%
Food for Training	0%	0%
School Feeding	11%	12%
Seed distribution	0%	3%
Agricultural tools	0%	3%
Mosquito nets	5%	1%
Veterinary assistance	0%	0%

11. Scenarios

The most likely scenario for the coming six months was built from a shock and opportunity exercise during the one day workshop with all stakeholders in Kadugli (annex 1) and includes the following shocks with their expected outcomes.

- Conflict - The ethnic complexity of the population, conflicting interests arising from disputes on migration routes, the frustration in accessing basic services, in addition to the denial of access to the nomadic groups to water and pasture in the South will continue to create conflicts in the state in the coming months.

In addition to possible repercussions arising from the Referendum of South Sudan, conflict is expected in large areas of South Kordofan and may result in large scale displacement. This may lead to large concentrations of livestock in areas near to borders where pastoralists are hindered from migrating due to border closure and insecurity.

The areas that may witness displacement or conversely, where the local population will host IDPs are the following localities:

Displacement in high conflict localities: Lagawa, Dilling, Abye Muglad, Al Buram and Rashad.

Displacement in medium conflict localities: Keilak, Heiban, Habila and Dalami.

Host localities - Due to the presence of better security, proximity to localities with displacement and the presence of better basic facilities (including food and water), the following areas will host IDPs: Kadugli, Babanusa, El Salam (El Fula), part of Heiban and Abu Jibaih.

- Disease outbreak: Hygiene conditions in South Kordofan State are considered to be very poor due to a shortage of water sanitation facilities, clean water and health facilities. Even where these facilities exist, they are not usually located in the vicinity of the residences. Coupled with local superstition, the population tends to rely on natural, untreated water. This leads to disease outbreaks. The migration routes through South Kordofan encourage outbreaks of diseases that are transmitted through animals such as Rift-Valley Fever. The main diseases in South Kordofan are water-borne diseases and malaria. Each year there are outbreaks within the six-month time frame of the rains.

- High food prices - Low production coupled with poor infrastructure, taxes and insecurity have led to high food prices during the two past years. Even if cereal prices have reduced slightly as a result of the good harvest prospects it is envisaged that they will increase again during the lean season.

12. Response and targeting options

The list below underwent a SWOT analysis during the one day work shop and are thus part of overall recommendations to the humanitarian community and the government.

12.1 Response options

- Provision of food and non-food assistance to vulnerable groups during conflict.
- Peace building efforts to solve conflict over resources.
- Establishment of water points including *Hafirs*, water taps, hand pumps etc.
- Land management polices including demarcation to limit conflict over resources.
- Provision of agricultural inputs to increase productivity.
- Provision of mosquito nets to reduce malaria incidence.
- Health care interventions to mitigate and prevent disease.
- Expansion of water and sanitation services.
- Raise community awareness about hygienic practices.
- Provision of veterinary services to reduce disease among livestock.
- Improvement of the market network that may lead to reduced prices.

- Improvement of storage facilities at different levels and encouragement of reserve polices to improve access to cereals throughout the year and reduce prices.
- Advocate for food-tax reduction.
- Diversification of livelihoods and creation of jobs and employment opportunities.
- Creation of micro-credit system with attainable credit conditions to consider local community situation.
- Improvement of extension services with concentration on post-harvest awareness.

12.2 WFP plans

As part of emergency preparedness in Southern Kordofan for the referendum, 3,600MT of food has been repositioned to support 220,000 beneficiaries.

13. Recommendations

Life saving interventions are needed for a maximum 220,000 IDPs for approximately two months in connection with possible referendum conflict. In addition, some 7,000 rural households are severely food insecure and are mainly female headed households. Due to the chronic and structural causes of food insecurity, the interventions needed to assist these households are long-term and could include Food for Training to increase the income opportunities for households. School feeding is another intervention that would make a difference to the overall food security status of severely food insecure households.

Livelihood protection interventions are needed for approximately 76,000 households during the lean season in 2011. This should mainly be done through self targeting projects such as Food For Work in rural areas that are linked with environmental protection such tree and grass planting, *hafir* rehabilitation and Food For Training (literacy classes and health/ nutrition awareness training).

Annex 1: Forecast Analysis

State: SOUTH KORDOFAN					
Expected event	Recurrent/persistent or occasional	Probability of occurrence <i>1 = low 5 = high or ongoing</i>	Expected time of occurrence	Scale of severity or benefit	Population group most affected/impacted
Shocks					
Crop pest	Persistent	2	July-Dec	Low/medium	farmers
Flood/long rain duration	Occasional	1	(June) Aug-Oct	Low/medium	Farmers & herders
Referendum	Occasional	5	January 2011	high	Everybody
Livestock theft	Recurrent	2	Ongoing	medium	Livestock owners
Animal disease	Recurrent	2	Dry season (March-June)	high	Livestock owners
Drought	Recurrent	3	June-Oct	High	Farmers/livestock owners
High food prices	Persistent	5	All year	high	Everybody
Conflict	Recurrent	5	All year	high	Everybody
Returns	Recurrent	3	Nov-June 2011	low	Host communities
Human diseases (Malaria, water born, HIV etc)	Recurrent	3	All year	low	Elderly, children, pregnant women, chronically ill, military (HIV), vulnerable women
Opportunities					
High livestock prices	Occasional	Ongoing	End of 2011	medium	Livestock owners
Traditional gold mining	Occasional	Ongoing	Ongoing-throughout the year	low	Everybody, youths, petty traders
Good harvest	Occasional	Ongoing	Dec-march	high	Farmers, everybody
Improved basic services	Recurrent	3	Jan 2011	medium	Everybody, children, women
Improved agricultural inputs	Recurrent	3	June 2011	medium	Farmers, livestock owners
Expand of investments	Recurrent	3	June 2011	medium	Wage labour, host communities

Annex 2: Assessment team members

#	Name	Organization
1	Saad Yousif	WFP
2	Aida Ibrahim	IOM
3	Kununa Shanta	SRRC/HAC
4	Macca Said	MoH
5	Mohammed Hassan	FAR
6	Elsayed Miter	FAO
7	Mohammed Ibrahim	MoA
8	Fawzia Mohammed	WFP
9	Suha Ahmed	HAC
10	Zeinab Khatir	SC-SW

Annex 3: Seasonal Calendar

Seasonal calendar:													
	Activity	Jan.	Feb	March	April	May	June	July	Aug.	Sep.	Oct	Nov.	Dec.
Agricultural Seasons	Traditional					Planting			weeding/ cultivation/growing			Harvesting	
	Mechanized	Harvesting											
Livestock	Migration: North to South						End				Start		
	Migration: South to North						Start				End		
	Diseases												
Lean season													
Job opportunities		End										Start	
Diseases	Malaria												
	Chest infections												
	Diarrhea												
	Eye infections												