Food Security Assessment amongst Returnee population

Kurmuk County, Blue Nile State, Sudan
19-24 April 2008

Content

Summary

The total population in Kurmuk County is estimated at approximately 200,000. During the 21 years of war it is believed that some 75 percent of the population was displaced. Since the peace agreement was signed in 2005 and people began to return a total of 26,500 people have returned to date that are known to the UN and the authorities. It is estimated that another 12,000 people will return to Kurmuk but due to poor availability of services in the county it is not clear when, if ever, these households will return to their place of origin.
Returnees arriving in Kurmuk receive on arrival a three months full ration from WFP. Depending on when they arrive there might be a gap in food assistance until the following summer (May through September), which corresponds with the lean season, during which those households who have arrived that year receive a full ration whilst those households who arrived the year before receive a 50 percent ration whilst waiting for the harvest.

It was not clear whether the initial three months ration is enough to support a family in re-establishing their livelihood and it is not clear whether the 50 percent ration during the lean season is sufficient, hence the need for an assessment, which would look into the returnees' livelihood situation and their coping strategies.

The objectives for the assessment were to;

- Identify the prevalence and the degree of food insecurity in the returnee population who arrived in 2006, 2007 and 2008
- Describe the coping strategies utilised by the food-insecure households in the three returnee groups, and identify any that may have a negative impact on lives or livelihoods
- Understand how markets functions in a war-affected locality where thousands of IDPs and refugees have returned to their home villages.
- Describe the food-insecure population in terms of their individual and socio-economic characteristics and livelihoods.
- Establish the reasons why people are food-insecure.
- Determine whether food insecurity and nutritional problems are chronic or transitory

The crucial time for returning has been the beginning of the year before the planting season in early June (see seasonal calendar in Annex 2).

As the land has been in fallow for some 20 years and overgrown by bushes and small trees the clearing and preparation of agricultural land is a daunting undertaking, very time consuming as well as labour intense; thus cleared land is a clear limiting factor to a household food access situation. FAO estimated that the **average land cultivated per household is 0.5-1 Feddan**. This was confirmed by the assessment findings and theoretically gives household enough cereals to last for 1 to 2 months per year.

The level of asset ownership is very low. Twenty percent of households do not own any productive assets, some 50 percent have one or two assets and 29 percent have three assets or more. The main two assets that household with assets have are axe/hoe and/or a manual grinding mill. Very few households have more than one axe/hoe thus limiting the agricultural work that can be undertaken by one family. **Seventy two (72) percent of all households have no livestock at all** (livestock is often used as an indicator in wealth ranking exercises).

The Rolling Assessment of 2006 reported that while the food security outlook in the northern part of the Blue Nile state was relatively good, the southern part of the state – the primary destination for returnees – had little infrastructure and few opportunities for casual and agricultural labour. Little has changed since then and this assessment confirms that the scopes for income generating activities are extremely limited. Most households tend to rely on the same type of unreliable income sources, such as sale of grass, firewood and food aid. The market section of

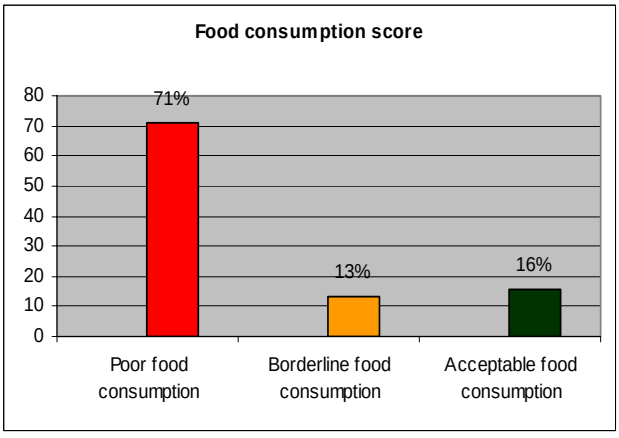
this assessment confirms that people have very limited access to cash and the item that they do purchase from the market is restricted to sorghum in most cases.

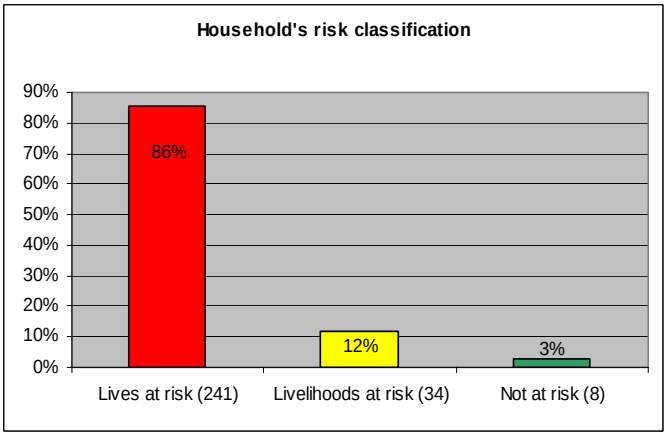
Moderate malnutrition was clearly observed amongst children by an experienced nutritionist who was part of the team and GOAL confirmed that they treat more malnourished children now amongst the arriving returnees than previously reported in Multi Indicator Cluster Survey (MICS). Samaritan's Purse who is in charge of the Kurmuk hospital also confirmed that they treat more severely malnourished cases now than in previous years.

The GAM rate from the MICS survey in February included relatively few returnees in the sample and does not allow for separate analysis of the group. GOAL agrees that it is however very likely that the GAM rate for the returnees is higher than the average 10 percent in the MICS 2008.

The lean season usually begins at the end of May (see annex 2), however it is evident from the consumption scores that the lean season amongst the returnee population has already started. What is not known from this assessment is the consumption score during the rest of the year. One contributing factor may be that the distribution of seeds and tools last year arrived approximately 1-2 months after planting season but also the poor prospects for income activities. The resilience of households in particular during the lean season is limited and many have adopted coping strategies that put their health at risk e.g. reduce food consumption to only one meal per day for adults or go entire days without eating.

Considering all the above factors, cross tabulations have been made using consumption score, a set of food access indicators and coping strategies as per new Emergency Food Security Assessment (EFSA) analytical guidelines. **The overall result show that 86 percent of the households are in a food security situation where their lives are at risk.** Considering that this is the beginning of the lean season, the situation in the coming six months is not likely to improve but get worse due to little food production combined with isolation during the rainy season that makes transportation almost impossible.





Recommendations

- The poor level of food intake found among the returnee population can not be fully addressed with the current practice of providing only half rations during the lean season. Rather a full monthly ration of 2,100kcal during the lean season should be considered, including CSB targeted for children. Food aid is confirmed to be necessary as the markets' ability to supply is insufficient to meet demands.

- The minimal difference in food security situation between those who arrived in 2006, 2007 and 2008 indicate that the three months ration given at arrival coupled with lean season support is not sufficient to re-establish livelihoods and it is recommended that the assistance at arrival is extended to a full year.

- The possibility of launching school feeding with a take home ration in combination with onsite feeding should be explored. This would improve the food security situation at household level as well, rather than only the short term hunger of pupils. A take home ration could consist of pulses and/or cooking oil to improve the food intake (variety) at household level.

- The apparent malnutrition levels amongst the returnees call for a supplementary feeding programme in connection with GOAL's nutritional education programme. It is recommended that a blanket supplementary programme is set up for children two years and younger and that CSB is included in general ration.

- Cash based interventions are needed and one direct intervention could take place by providing vouchers for paying part or all cost of sorghum milling. This would help poor households to fully make use of their food aid ration and at the same time increase the volume of cash money circulating within the economy.
- Food For Work is recommended where WFP could find a way to provide food aid e.g. for clearing more agricultural land as this could lead to a considerable expansion of areas cultivated if supported with sufficient agricultural inputs such as seeds and tools and proper technical advice from FAO and Ministry of Agriculture..
- Digging more hafirs (water collection ponds) and arranging training sessions with partners on means to increase local produce are possible indirect interventions.
- Monitoring of the situation is needed, especially the nutritional status of children under 5.
- Improve the coordination and collaboration between agencies and government working in Kurmuk in Rehabilitation and Re-integration efforts. Who is the lead agency?
- Restocking of livestock should be considered as a livelihood support activity.

1. Background

On January 9, 2005, the Sudan People's Liberation Movement (SPLM) and the Government of Sudan (GoS) agreed to a series of peace agreements, culminating in the Comprehensive Peace Agreement (CPA) that would end the 21-year conflict between northern Sudan and southern Sudan. The CPA established a six month pre-interim period and a six year interim period at the end of which a referendum on self-determination for southern Sudan and the Three Areas will be held. The protocols agreed to by the GoS and the SPLM establish the status of the state and religion, the right of self-determination, security arrangements, agreements on wealth and power sharing and specific arrangements for the resolution of conflict in Southern Kordofan the **Blue Nile State** and the Abyei Area (the Three Areas).[1]

Geographically, the Three Areas lie along the divide between the North and the South. This made the Areas the site of concentrated fighting during the conflict and resulted in massive population displacement. Contributing to the complexity is the vast mineral wealth in the areas. The removal of gold, oil and gum Arabic without compensation to local people was a key driver of the conflict, and these resources are of continued importance to both sides.[2]

Kurmuk in the Blue Nile fell to the Sudan Peoples Liberation Army (SPLA) in 1987. The mountainous area just over the Sudanese border in Ethiopia was used to train new recruits and to prepare offensives. This SPLA strategy resulted in extensive mine fields being laid all along the border area, either by the Government of Sudan to restrict SPLA access into Sudan or by the SPLA as a defensive measure. The majority of battles were fought in the SPLA 'home land' of Kurmuk and thus the landmine impact survey (LIS) identified Kurmuk as the most affected locality which is also where the largest number of refugees are expected to return to[3].

The Rolling Assessment of 2006 reported that while the food security outlook in the northern part of the Blue Nile state is relatively good, the southern part of the state – the primary destination for returnees – has little infrastructure and few opportunities for casual and agricultural labour.

The signing of the CPA and the end to major hostilities between North and South Sudan has precipitated various changes in Southern Blue Nile. Economically, there has been an increase in the movement of goods and people between Damazine (to the North of Blue Nile State) and Kurmuk as well as increased employment opportunities in both areas. Goods are available in local markets from North Sudan (through Damazine) and from across the border in Ethiopia.[4].

The Rolling assessment in April 2007 indicated that the proportion of households owning livestock had steadily increased over the previous 2 years. Over the same time, the proportion of households relying on private production as their main food source decreased, while the proportion of households relying on market purchase as their main food source increased. The percentage of households planting was largely unchanged over the 2 years.

1.1. Returnee Population

The total population in Kurmuk County is estimated at approximately 200,000.

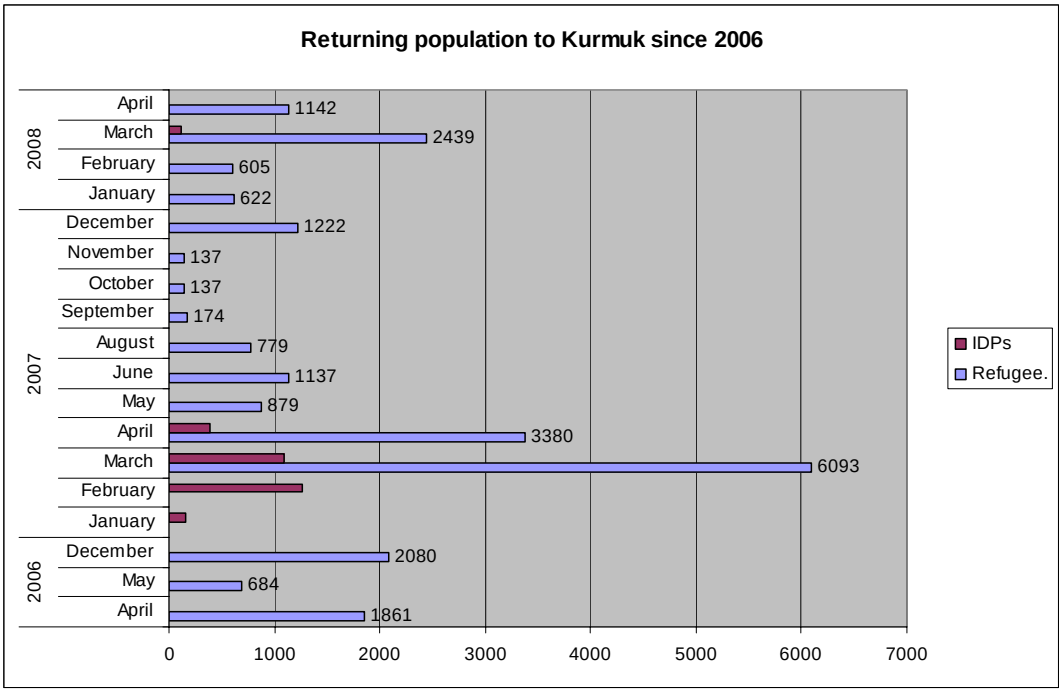
In 2006 some 4.600 people returned, these were organised refugee returnees. In 2007 some 16.800 people returned, both organised and spontaneous, the large majority being refugees from Ethiopia. To date nearly 4.000 people have returned during 2008. (See the breakdown by category and arrival time in the graph below). This is far less than what was projected by UNHCR and the Government. It is believed that the relatively slow pace of return is mainly due to the lack

[1] Mercy Corps Conflict Assessment 2006
[2] Lost in the middle of peace NDI Feb 2007
[3] Land mine impact report Blue Nile March 2007
[4] MICS, April 2007, GOAL

of basic services such as health and education in the areas of return. A total of some 26,500 people have returned to date. It is estimated that another 12,000 people will return but due to poor availability of services it is not clear when, if ever, these households will return to their place of origin.

The crucial time to return is at the beginning of the year before the planting season in May (see seasonal calendar in Annex).

As the land has gone un-used for years the preparation and clearing of the land is very time consuming and labour intense.



Source: WFP

1.2. Assessment Background

Returnees arriving in Kurmuk receive on arrival a three months full ration from WFP. Depending on when they arrive there might be a gap in food assistance until the following summer (May through September), which corresponds with the lean season, during which those households who have arrived that year receive a full ration whilst those households who arrived the year before receive a 50 percent ration whilst waiting for the harvest.

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1.3. Assessment Objectives

- Identify the prevalence and the degree of food insecurity in the returnee population who arrived in 2006, 2007 and 2008
- Describe the coping strategies utilised by the food-insecure households in the three returnee groups, and identify any that may have a negative impact on lives or livelihoods

- To understand how markets functions in a war-affected locality where thousands of IDPs and refugees have returned to their home villages.
- Describe the food-insecure population in terms of their individual and socio-economic characteristics and livelihoods.
- Establish the reasons why people are food-insecure.
- Determine whether food insecurity and nutritional problems are chronic or transitory.

1.4. Methodology

The locations included in the assessment were purposively sampled based on their population of returnees (IDPs and refugees) and on security limitations. Kurmuk county has a high level of landmines and thus many areas were not accessible to the team.

The locations selected were: Chali, Korbody, Belatuma, Belila and Mayak. (see map in Annex 1).

A stratification of the sample was made to ensure statistical comparison between the three returnee groups identified in the objectives. The EFSA guidelines recommend a minimum of 100 households per strata and thus 300 households were randomly selected from a returnee list including both returned IDPs and refugees.

The data collection took place between 19-24 April 2008 with a two day training of enumerators in Damazine, prior to the field work.

A market study was also part of the overall assessment looking at the market functions and their limitations.

A coping strategy index was developed through focus group discussions using the Coping Strategy Index Manual developed by WFP and CARE, in order to facilitate the analysis of household coping information collected from the 300 household interviews (see annex 4).

1.5. Limitations

The assessment began two days after that two buses crossing the Ethiopian boarder were attacked and all passenger in the second bus were killed. This lead to increased security measures as well as boarder closings for several days. As Ethiopia is a vital player for the market functions in Kurmuk a visit to see the Ethiopian traders would have been valuable, however, this was not possible for the reasons mentioned above.

It is highly suspected that the information given by the refugee returnees in terms of assistance received is greatly under-reported possibly caused by a belief that households would receive more food aid in the future if they said that they had received little or no food and/or non-food items in the past.

2. Results

2.1. Demographics of the sample

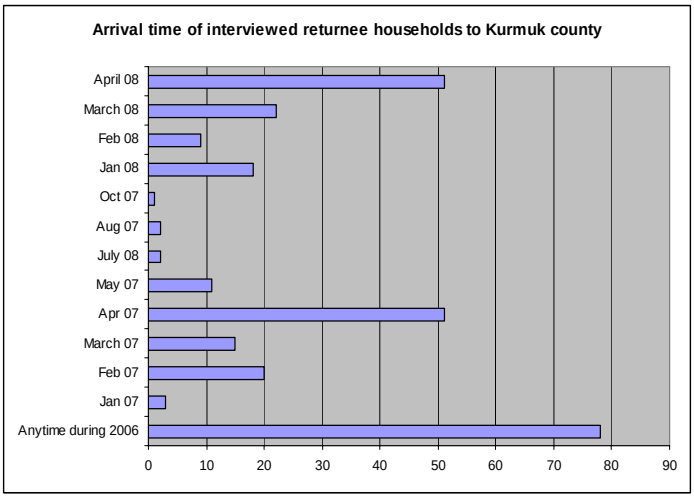
The total number of households included in the assessment was 283. The breakdown show that there was a slightly lower inclusion of households who arrived in 2006 due to the difficulties to properly sample out these households in a random manner as reliable lists were not always available. This, however, has a minimal impact on the overall findings.

Fifty six (56) percent of the sampled households were returning refugees and 44 percent were returning IDPs.

Seventy two (72) percent of sampled households report having returned organised and the remaining 28 percent have returned spontaneously.

Year the household arrived at location	Frequency	Valid Percent
2006	78	27.6
2007	105	37.1
2008	100	35.3
Total	283	100.0

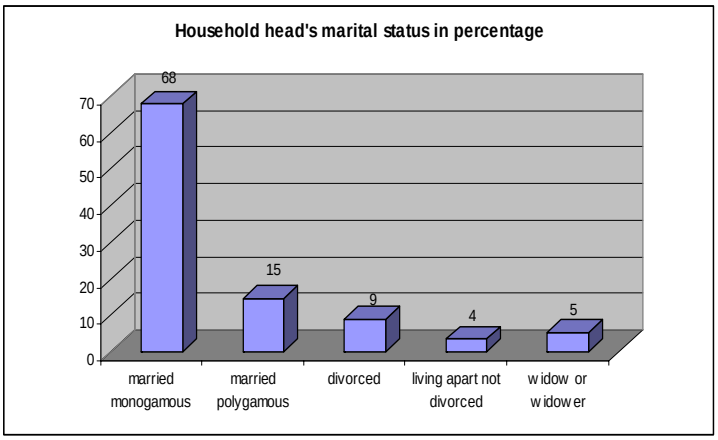
Was a Household IDP or refugee?	Frequency	Valid Percent
IDP	124	44.3
Refugee	156	55.7
Total	280	100.0
Missing	3	
Total	283	



Some 28 percent of the interviewed households arrived in 2006. The peak period for arrivals has been the month of April each year. The ideal time to arrive would have been January which would have given households enough time to prepare the land for cultivation as well as construct a house before the rainy season. Only ten households reported still having family members that remain displaced. Five percent of the interviewed households have not yet returned to their final destination.

Twenty percent of the interviewed households were female headed. The average age of the all household heads were 37 year with a spread between 18 to 78 years of age.

The **average household size was 6.4 members** spreading from one to 26 members. The family with the largest number of family members was a polygamous household. The majority by far were married in monogamous marriages (see graph below).



The average dependency ratio was 1.9 (based on calculation of independents ranging from 16-60 years of age) with 18 households having no adults in the independent age group.

2.2. Assets

2.2.1 Household assets

The graph below indicates that returnees carry little assets with them on arrival. On average, a household owe 1.8 assets. The assets that they do acquire when settled is a hoe/axe.
The second most common household asset is a manual grinding mill. Households that do not own a manual grinding mill borrow from neighbours rather than going to a mechanic mill, as the prices are too high.

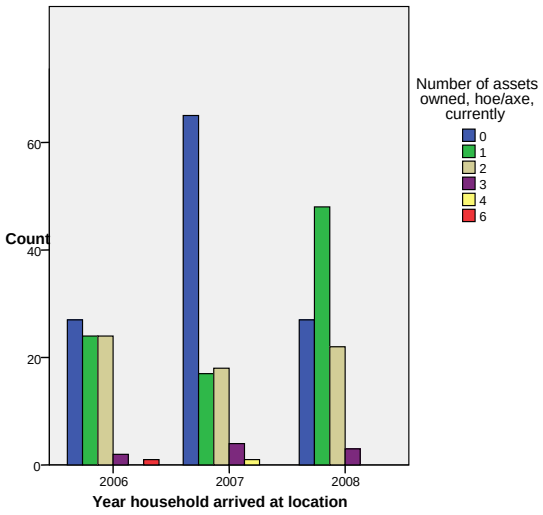
The graphs below indicate that households who arrived in 2006 have not acquired much household assets during the nearly two years that they have been back. There are far less households who returned in 2006 and 2007 who have an axe/hoe compared to those who have arrived in 2008. This can be explained by the fact that new arrivals often do receive tools but they are of poor quality and thus usually only last one season.

There are also more households returning in 2008 who have a manual grinding mill.

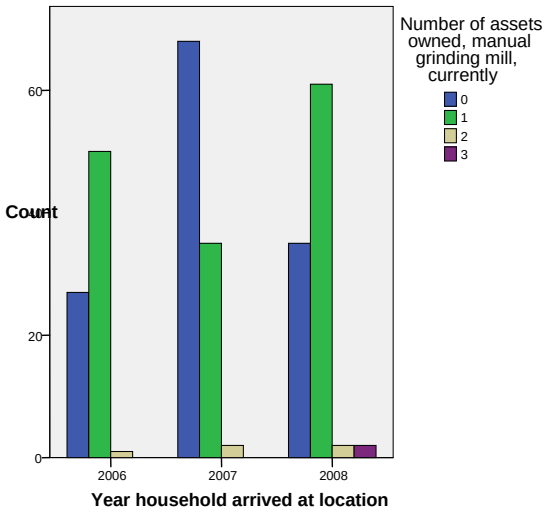
The only asset where the arrivals in 2006 are slightly better off is radio. There are however only 16 percent of interviewed households who do have a radio. The assessment team found that USAID distributed radios in 2006, which could explain why this group have radios but not the others. From the graphs below as well as the average number of assets that households owe, it does seem that those who arrived in 2007 are slightly worse off.

		total assets (Mean)
Year household arrived at location	2006	2.23
	2007	1.50
	2008	1.87

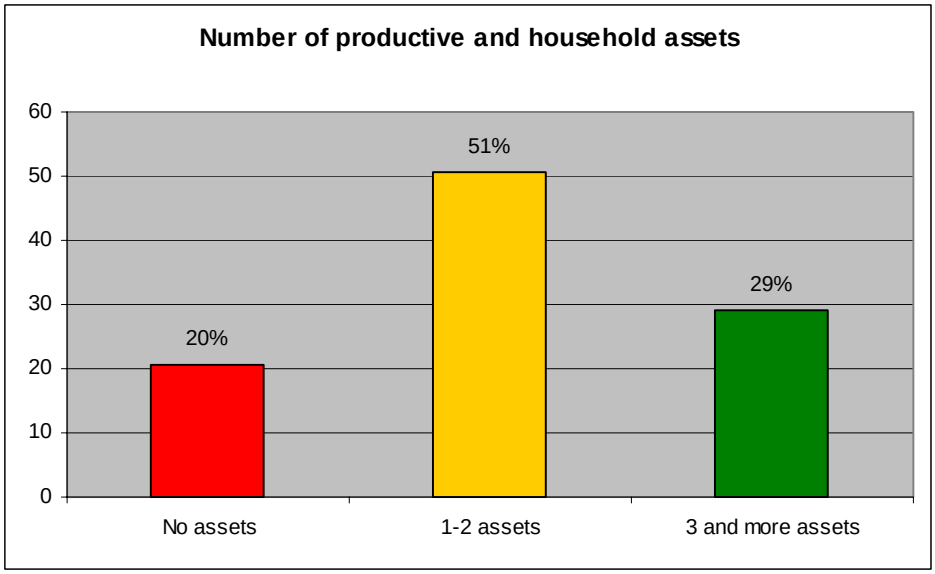
Ownership of axe/hoe



Ownership of manual grinding mill

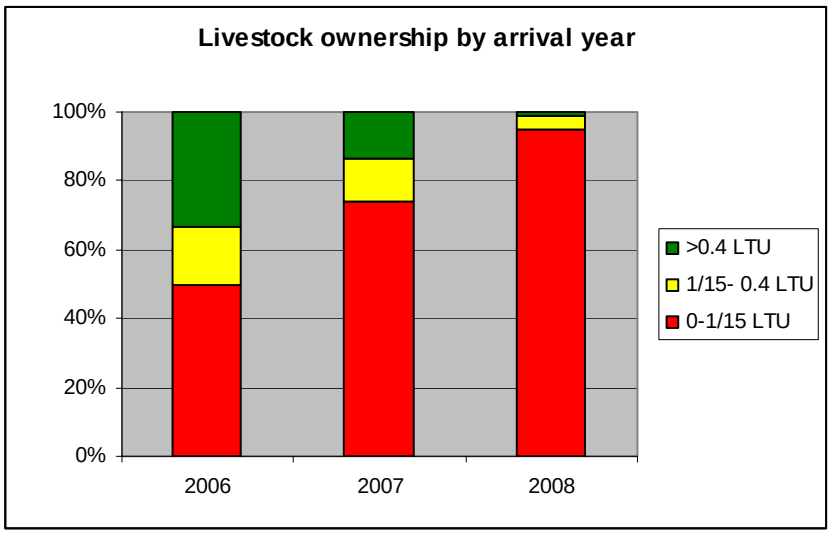


The graph below show the number of households with no assets (as per list in the questionnaire, see annex 5). Half of the households have between one or two assets and 29 percent have three or more assets.



2.2.2 Livestock assets

Seventy two (72) percent of all households have no livestock at all. Only 17 percent have chickens, the same numbers of households have a goat, six percent have pigs, six percent have a donkey and less than two percent have sheep. It was also reported in the income activity section that no one is engaged in raising and selling livestock of the sampled households. The graph below show the difference in ownership of livestock between the returnee groups..Those who arrived in 2006 have more livestock than the other returnees; however the type and number of animals are still very limited. The LTU value of 1/15 in the graph corresponds to two chickens.



2.3. Food Availability and the Market

2.3.1 General Observation

In all rain-fed agricultural economies of Sudan, one should expect a gradual increment in demand for grains from the beginning of rainy season and until new agricultural crops are on the market. Such increment is normally accompanied by relatively high prices and high profit margins.

Close monitoring of four markets in Kurmuk locality, namely Kurmuk, Wadag, chali and Khorbody for a week revealed many signals of deviation from normal trends (problems in both supply and demand). The following observations were recorded from these markets:

- The prevailing high prices of food commodities (sorghum and meat) are accompanied by very low profit margins.
- **Very low flow of sorghum (main cereal) into and out of markets**.
- Low stocks of sorghum on traders' hands.
- Relatively high cost of market services (grain transportation and milling).
- Very **low supply of livestock** on all markets accompanied by high prices.
- **Very low demand for causal labour** (high unemployment rate among men).
- No middlemen/agents with the exception of currency exchange service providers (3 -5 middlemen who exchange Sudanese currency for Ethiopian Birr in Kurmuk market).
- Limited pass of commodities from one owner to another.
- Limited supply of many forest products especially charcoal, accompanied by relatively high supply of dry grasses and ropes on all markets. Grasses and ropes are widely used by returnees for building their new houses.
- No or very few numbers of wholesale traders (grain).
- **Low circulation of cash money.** Both Sudanese and Ethiopian currencies are used for exchange of goods. The Ethiopian Birr is the dominant one (1 SDG = 4 Birr).
- Fresh vegetables or fruits are found on none of the markets except Kurmuk (very limited supply of both commodities on this market).
- No commercial banks in the locality.
- Women do not own any shops and are not wholesale traders.
- Traders tend to avail a wide range of commodities in small quantities instead of being specialized in a few commodities. This is mainly to attract many rural buyers who may exchange sorghum or oil for small quantities of sugar, tea, dry tomatoes, soap etc.

2.3.2 Market Structure and Function

All visited markets are characterized by minimal regulatory entry constraints: No government restriction of any type was reported during the assessment period. However, the lack of many basic market services like a credit facility has reduced the scale of commercial transactions. In fact, the lack of these services in addition to the widespread landmines and low effective demand for grains seem to discourage big traders from entering the local markets (directly or indirectly through agents). Accordingly, the four visited markets are highly dominated by small local traders who are originally farmers.

Kurmuk town market	Wadaga	Khorbody & Chali
• Principal market of the assessed area. • Located in a relatively high-populated area. • Relatively large market that operate 7 days a week.	• Presence of many sellers and buyers on the market day (once a week). • Relatively large market once a week (market day).	• Very limited number of buyers and sellers on daily basis. • No wholesale market. • Traders do not own or rent stores (sorghum is

• Reasonable level of specialization (grain, livestock and forest products). • Presence of many sellers and buyers on daily basis in addition to a weekly market day on Sunday. • Presence of wholesale market (sorghum). • Connected to El Damazine market most of the year. El Damazine is the main source of sorghum to the whole locality during the hunger period. • Small-scale border trade with Ethiopian Kurmuk (Mainly sugar, coffee, and soap are imported from Ethiopia). • All wholesale traders own and/or rent stores • Good availability of transportation means from Kurmuk to El Damazine and from Kurmuk to neighbouring villages.	• Presence of small livestock market near the main market. • Market is well connected to Kurmuk market most of the year. • No wholesale market. • Well connected to a group of villages most of the year. • Traders do not own or rent stores (sorghum is stored inside shops). • Most of the sellers and buyers come to the market on foot or riding on animals. • Availability of limited transportation means on market days.	stored inside shops). • No livestock market. • Limited access to other markets. • Very low level of specialization.

Based on the above characteristics, Kurmuk market could be considered as a developing urban market, Wadaga is a typical rural market while both Khorbody and Chali are village markets.

Kurmuk market looks similar to many markets located within small towns throughout the rain-fed agricultural sector of Sudan. It is the main market for sorghum coming from surplus areas (El Damzine locality). In spite of the importance of this market, only a small group of wholesale traders seem to control the whole grain market. This is mainly because those traders have the ability to purchase sorghum from El Damazine while others lack financial capabilities to do so. In the coming years when many returnees resume their normal agricultural activities, a considerable expansion of wholesale trade market could be expected.

It is worth mentioning that the five traders who control the grain wholesale market in Kurmuk do not seem to practice any kind of price manipulation. In fact the scarcity of cash circulated within the locality had minimized their ability to do so. Retailers and/ or owners of grain millers do control the sorghum trade in Wadaga, Chali and Khorbody markets.

Each of the five wholesale traders in Kurmuk market sell 5-50 sacks of sorghum per day while a daily volume of 1-10 sacks are sold on other markets. This wide variation in traded volumes within markets is due to high demand for sorghum during the lean period compared with other times of the year. Moreover, relatively higher quantities of sorghum are sometimes sold on the market day, compared with the other days of the week.

2.3.3 Market Prices

Market data collected from the four markets indicate that sorghum is the main cereal crop available on all markets. Currently, sorghum prices are higher than last year (Table X). A similar trend is also observed in Damazine market (See Figure X). Wholesale traders in Kurmuk closely monitor sorghum prices in Damazine and they expect sorghum prices to maintain an upward trend during the coming months.

The lowest sorghum price was reported in Kurmuk market (Table X). This is mainly because sorghum flows from Damazine to Kurmuk and from Kurmuk to other markets within the locality.

Similar price to Kurmuk was reported in Chali market. This may be **attributed to the exceptionally low demand for sorghum in that area.** In fact, no single retail trader was found to sell sorghum in Chali while very limited quantities of sorghum are sold daily by two owners of grain mills. They obtain sorghum from two sources, through direct purchase from Kurmuk market or from local people who barter sorghum for milling cost (payments in kind). Parts of the sorghum (mainly food aid) obtained from the second source were sold at lower prices.

Costs of sorghum milling are relatively high and comparable with Darfur' costs (SDG[5] 10 per sack in Kurmuk and up to SDG 15 in Chali). Approximately 25 percent of grain is taken in kind from households who do not have cash to pay milling cost. A mill owner in Mayak reported to the assessment team that as much as 50 percent of the grain was taken as payment.

Wholesale traders in Kurmuk pay from 10 – 25 SDG for transporting one sack of sorghum from El Damazine with the higher cost being paid during the rainy season. Within locality cost of transportation ranges from SDG 5 -10.

Quantities of sorghum stored by wholesale traders in Wadaga and Kurmuk markets are around 80-1000 bags (90kg/bag) respectively.

Very limited access of households to cash income was observed in all areas. This is mainly due to low demand for wage labour and forest products. A large number of households are engaged in firewood collection as an income however, due to a general lack of cash there is a very limited scope to generate any money from this activity. Accordingly, very low prices were reported in all assessed markets (Table 2).

Table (X): Sorghum Retail Prices in Kurmuk Locality

Market	**Current Price (SDG/Sack)**	**Same time Last Year Price (SDG/Sack)**
Kurmuk	70	40
Wadaga	75	50
Chali	70 - 75	45 - 50
Khorbodi	75	50
Average price (21 villages)♣	77	NA

[5] SDG= Sudanese Pounds, approximately US$1= 2SDG

♣ From a recent assessment in Kurmuk locality by International Rescue Committee assessment (IRC).

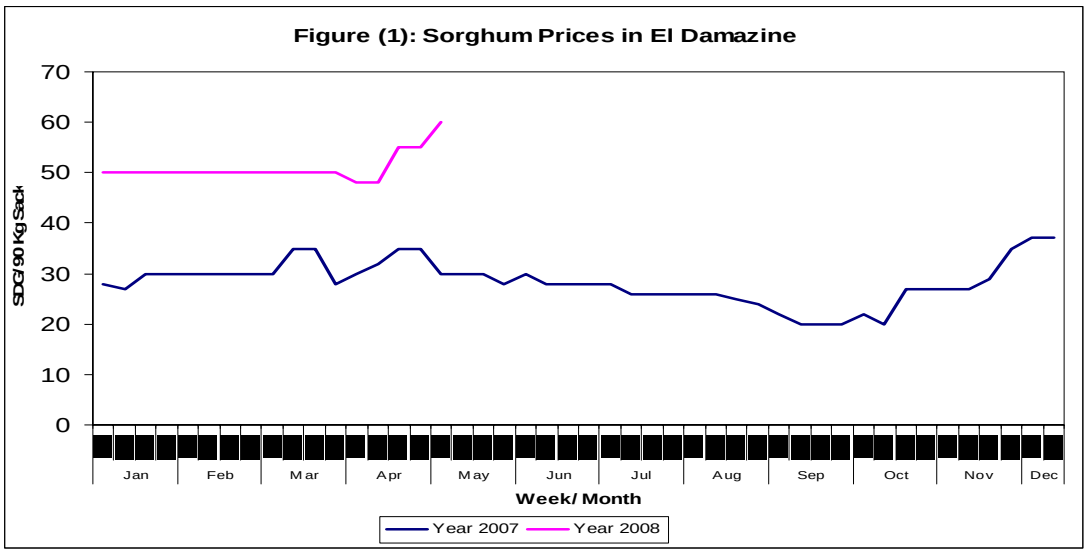


Table (X): Market prices in selected locations assessed in SDG

Item	Unit	Kurmuk	Wadaga	Chali	Khorbody
Male goat	2 year old	NA	40.00	85.00	100.0
Casual Labour	SDG/ day	7.00	5.00	NA	5.00
Charcoal	Large sack	20.00	15.00	15.00	12.50
Firewood	Bundle	2.00	2.00	2.50	NA

2.3.4 Main market and trading constraints

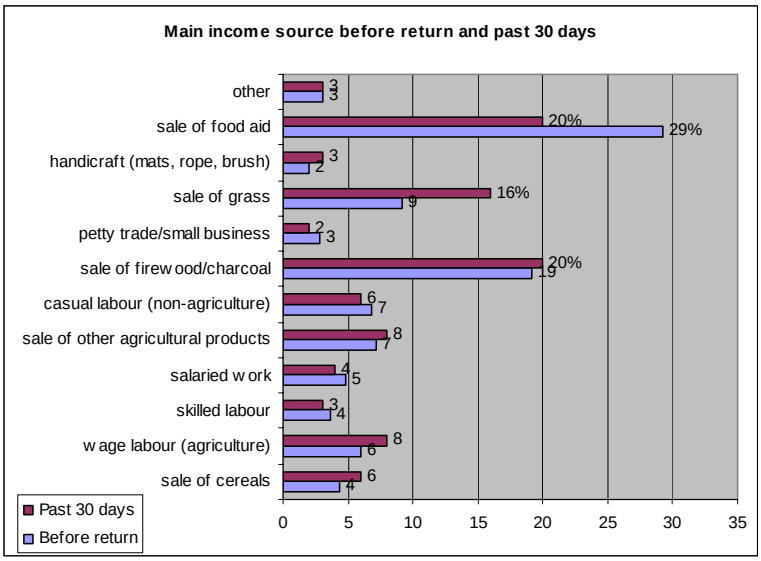
The interviewed traders were asked to mention the main constraints in relation to the overall food security situation. The following points summarise their main points:

1) **Low supply of local sorghum**. Many returnees were not able to clean part or all their land last season.
2) High sorghum prices. (Traders were unable to purchase and store large quantities when prices were relatively low. Households can not afford buying what needed at the current high prices.)
3) Considerable portion of irrecoverable debts.
4) **Scarcity of cash money**. Sales on credit are very common among relatives and sometimes barter is used instead of money especially for grain milling and buying sugar, coffee and soap.
5) **Low profit margins**.
6) Non-existence of commercial banks (limited capacity to extend their transactions).
7) Rough roads and **high transportation costs**, especially during rainy season,

2.4. Food Access

2.4.1. Income sources/Livelihoods

The GOAL MICS survey found that 69 percent in Kurmuk county are farmers. Even though agriculture is their livelihood, the information collected about main income sources in the 30 days prior to the EFSA show that in order to obtain cash to purchase different goods and services there are three activities that are used by a large majority of the households: Twenty percent have sale of firewood/charcoal as the main source, an equal share of households report sale of food aid as main income source and a slightly smaller percentage, 16 percent, are say their main income source is collecting and selling grass for house construction material. None of these activities are particularly sustainable and reliable. The four percent with salaried work are military personnel.



Families adopted very similar income activities before returning to Kurmuk,. The main change is in selling of food aid, which has reduced now compared to before. This is however not surprising as only households who arrived in the past three months have received food aid. Those who arrived in 2007 will however also receive lean season ration starting from end of April until September (50% of nutritional requirements).

Seventy six percent of the households have only one person engaged in an income activity and 16 percent have two people from the same household engaged.

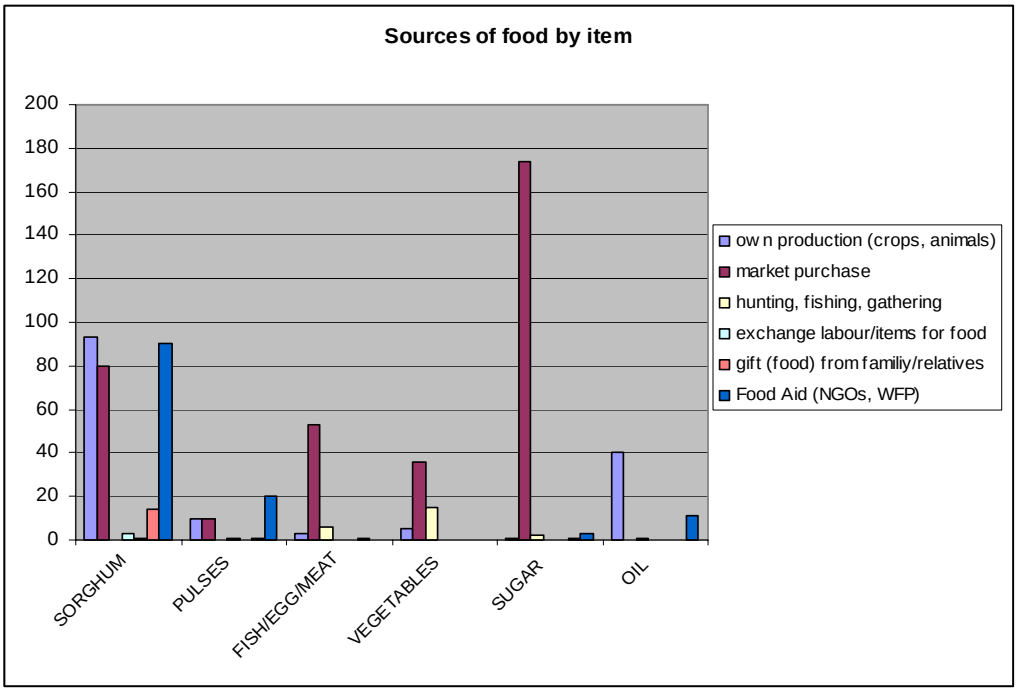
Five percent have currently no one engaged in an income generating activity, the majority of these households have just arrived (2008) and are mainly engaged in constructing shelters before the rainy season begins at the end of April.

When analysing how reliable a specific income activity is in terms of providing the household with a steady income to cover food and non-food needs, that are not produced by the household, the categorisation outlined in the table to the right was made. This categorisation is later used in the analysis of the overall food access situation of a household.

Level of sustainability and reliability	Income activity
good	salaried work
moderate	skilled labour
moderate	sale of cereals
moderate	sale of other agr.products
moderate	sale of animal production
moderate	petty trade/small business
moderate	gold mining
moderate	Fishing
moderate	brewing
poor	wage labour (agriculture)
poor	casual labour (non-agriculture)
poor	sale of firewood/charcoal
poor	kinship
poor	borrowing
poor	remittances
poor	sale of grass
poor	handicraft (mats, rope, brush)
poor	begging
poor	sale of food aid

2.4.2. Food Sources

The graph below indicates that the majority of households get their food from the market. The only exception is sorghum where an almost equal amount of households have own production and food aid as their main source of cereals. Looking at the seasonal calendar (annexed) the own production can be explained by the lazy sorghum harvest in February, thus some household may have some of those stocks left. Observations of little stocks in the field, combined with the small areas of cultivation and historical low yield levels in the area, makes it unlikely that households will be able to depend on own production for much longer.



This would mean that in order to consume a balanced diet in terms of calories, fat and protein a household would have to earn an income that would allow them to purchase the food on the market.

Using a WFP balanced food basket of 2,100kcal consisting of sorghum, lentils, oil and sugar as a reference, the monthly cost for this basket in Kurmuk at the time of the assessment would cost 29.7 SDP/ capita.

The table below shows the percentage of households who received food aid from January to April this year. The 2006 and 2007 arrivals receiving food aid receive it in the form of school feeding.

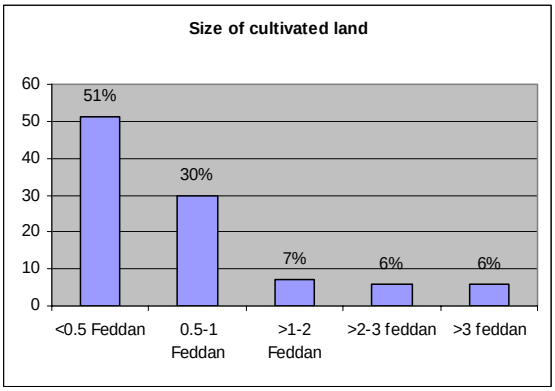
		Food aid recipiency (Jan-Apr)	
		Households not receiving food aid	Household receiving food aid
Year household arrived at location	2006	76	2
	2007	77	28
	2008	58	42

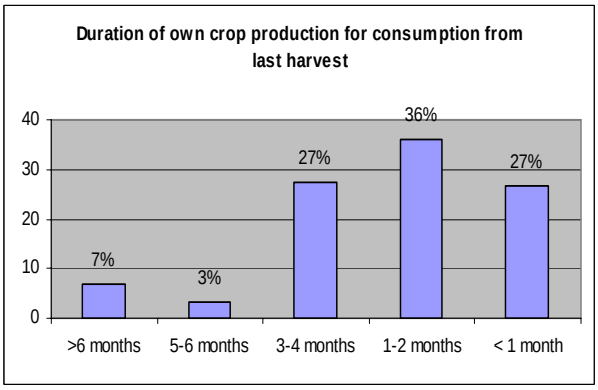
2.4.3. Agricultural production

Even though the soil is fertile in Kurmuk the yield is very low. This is caused by a number of factors such as poor agricultural practices (such as growing the same crops year after year), pests and uncontrollable weeds that take over the fields.

The average sorghum yield per Feddan[6] is 90 kg[7]. The average cultivated land estimated by FAO for Kurmuk households is approximately 0.5-1 Feddan. An average household would thus harvest maximum 90kg of sorghum. For a family of six members, this translates to a self sufficiency of cereals for approximately 1.5 months per year.

This assessment confirms FAO's estimation as 51 percent of cultivating households only cultivate less than half a Feddan. The number of months that the harvest contributes to the household's food intake is limited as shown in the graph below: over 60 percent get a harvest that lasts two months or less.

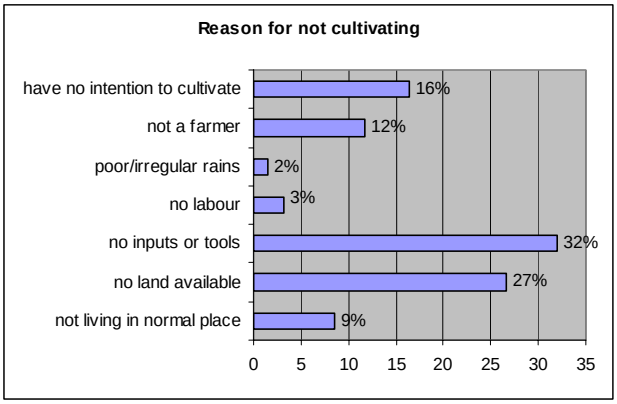


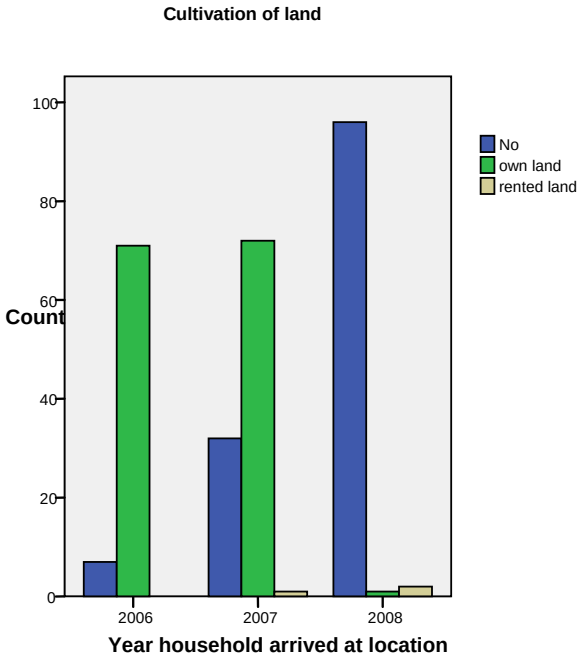


Only 52 percent of interviewed households are planning to cultivate this coming season. Of the households who arrived in 2006 however, very few of them do not cultivate. Amongst the returnees who have arrived in 2008 a large majority answered that they were not planning to cultivate during the coming season, as they have not been able to clear enough land. This is mainly caused by late arrangements of convoys that have taken place in April instead of January. Therefore families are first engaged in shelter construction before the heavy rains begin instead of preparing land for cultivation.

The main reasons for not cultivate this coming season is lack of inputs and tools and as reported in the asset section many households do not owe hoes and axes for clearing land. The second most common reason is no available land. As there are no real limitations to land access this information is probably more related to access to cleared land than access to land itself. Land is available in abundance and there are no legal processes that hinder anyone from cultivating as much land as they can. Access to labour and agricultural inputs are indeed the limiting factors.

[6] One Feddan= 4,200 m2 thus 1Hectare (Ha)= 2.5 Fedan
[7] FAO Dalmazine office





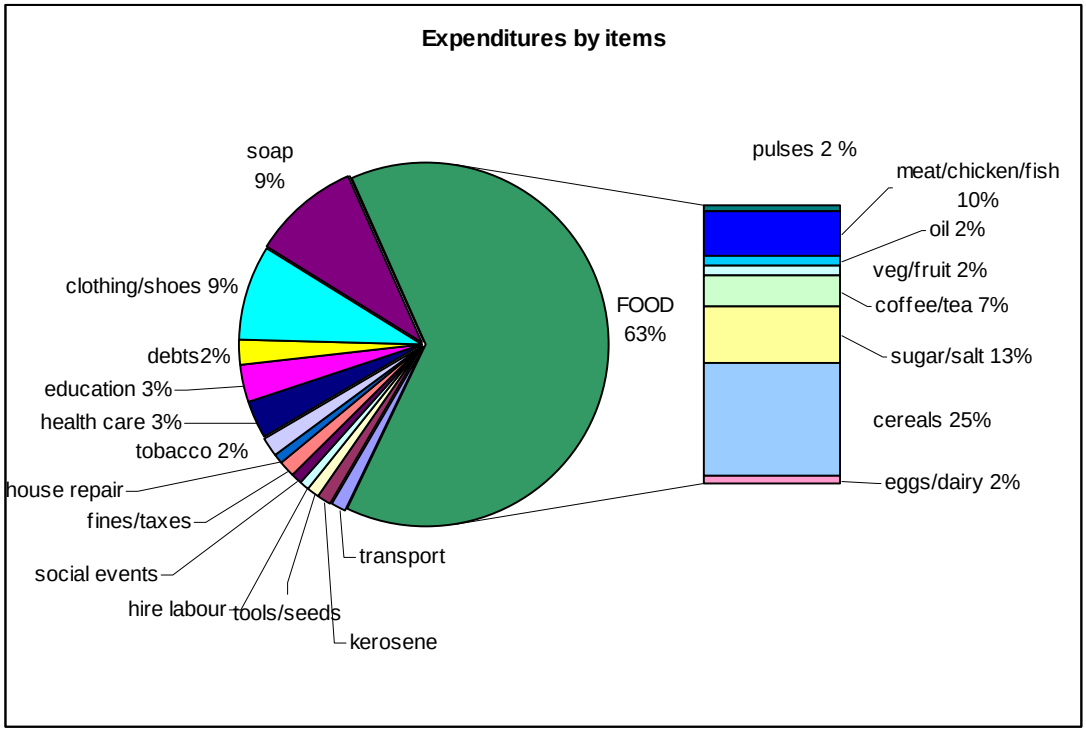
2.4.4. Expenditures and Food purchase

A lack of cash was noticeable during the field work which also was confirmed by traders' interviews (see market section above). There are very few markets around Kurmuk, with very long distances from most villages. The villages visited did have some form of a market place but the activities were extremely limited to one or two shops. No vegetables were found in any of the villages outside Kurmuk town apart from onions and garlic. The limited commerce was based on sale of salt, sugar and soap.

The ex-refugees spend a higher percentage of their income on food than the ex-IDPs and the households who arrived in 2006 spend relatively more of their income on food than those arriving in 2007 and 2008. This might not be such a surprise as the the way the question regarding expenditures was formulated was based on a one month recall and thus reflect the period when households who arrived in December 2007 as well as those arriving in 2008 still received food aid.

By different categories		Proportion of expenditure spent on food of total expenditure.
Household gender	Male	63%
	Female	61%
Returnee status	IDP	58%
	Refugee	**68%**
Arrival year	**2006**	**67%**
	2007	60%
	2008	62%

As mentioned above, the majority of the income is spent on food and specifically on cereals and sugar. Soap and clothing are the largest expenditures amongst non- food items.



2.4.5. Food Access classification

In order to classify the population into groups with poor, average or good food access a number of indicators were looked at that would have a relatively large impact on people's food access. The selection of indicators is context specific to Kurmuk. These indicators are asset ownership, sustainability of income generation, expenditures on food and year of arrival.

Asset ownership was chosen as it in addition to being a precondition for agricultural production also is a wealth indicator (and that wealth is a factor influencing a HH's ability to secure food).

Type of income generating activities employed by the households is important due to very low agricultural production. The income sources were categorised earlier in this report into three groups based on their sustainability and reliability to provide the household with cash.

The market is an important source of food as previously shown. For households who do not receive food aid the absolute expenditure on food becomes more important for survival and in order to purchase enough food for an acceptable food intake. The estimated cost of such a food basket was found to be 29.7 SDG per capita based on local market prices at the time of the assessment. Any household who have food expenditures above 29.7 SDG is considered to be better off.

Taking into account that some households have their own stocks of cereals the threshold for borderline expenditure was set between 15 and 29.7.

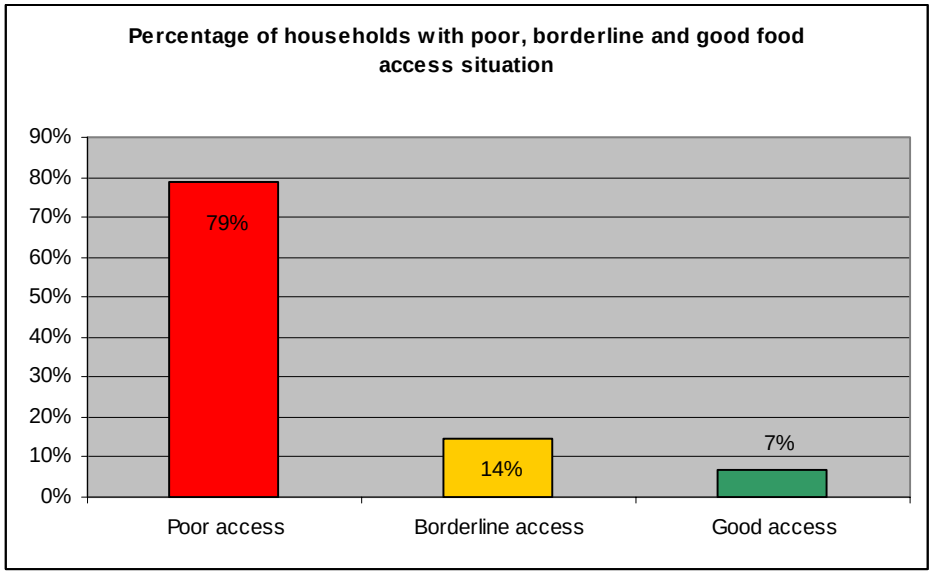
If a household is purchasing approximately 50 percent or less of what they theoretically need they are classified as having poor market access.

The time of arrival could potential affect a household's food access and particularly whether food aid is received or not, thus this variable has also been cross tabulated with assets, income sources and food expenditure in the below table.

ACCESS CLASSIFICATION BASED ON FOUR INDICATORS

Absolute food expenditures, monthly, per capita, categorized		Assets now, categorized		Year of arrival		Sustainability/reliability of major income source: Poor	Medium	Good
	0-15 SDGs		No assets		2006	3	4	0
					2007	12	5	1
					2008	13	0	0
			Medium assets (1-2)		2006	26	4	1
					2007	15	9	0
					2008	56	1	1
			More assets (3 and above)		2006	11	8	1
					2007	7	1	0
					2008	18	7	0
	15-29.7		No assets			7	1	0
			Medium assets			13	2	1
			More assets			7	4	0
	29.7-		No assets			8	3	1
			Medium assets			9	5	0
			More assets			8	6	4

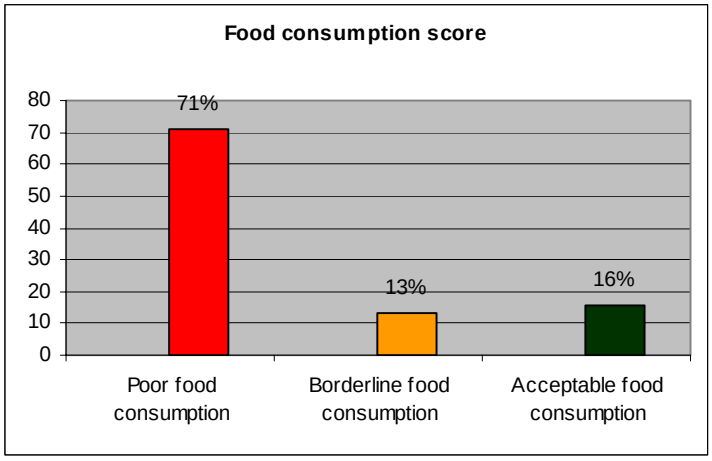
The results of the above cross tabulations are shown in the table below. Seventy nine (79) percent have poor food access, 14 percent have borderline access and 7 percent have good access.



2.5. Utilisation

2.5.1. Food Consumption Score

An overwhelming majority, 71 percent of the households have poor food consumption.



The standard 7 day dietary recall question (households being asked about their food intake in the 7 days prior to the assessment) was used to define the three categories (poor, borderline and acceptable food consumption), with threshold of 21 and 35 food consumption points and standard WFP weight given to the different food groups (see annex 5)

Households categorized as having poor food consumption (71 percent) consume on average sorghum seven days a week and sugar twice a week (cereal is consumed daily in the form of kisra[8]). Thus this diet is seriously lacking in vitamins and minerals, protein and fat and most likely in caloric value as well.

The 13 percent households who have a borderline score consume on average sorghum daily, another type of cereal one day per week, eggs/meat/fish and vegetables twice a week and sugar four times a week. This diet is lacking in vitamin and minerals.

There are 16 percent of the households with an acceptable food intake. They consume in a week on average the food items displayed in the table below. Even the acceptable diet is questionably low in vitamin and minerals and fruit and vegetables are only consumed occasionally.

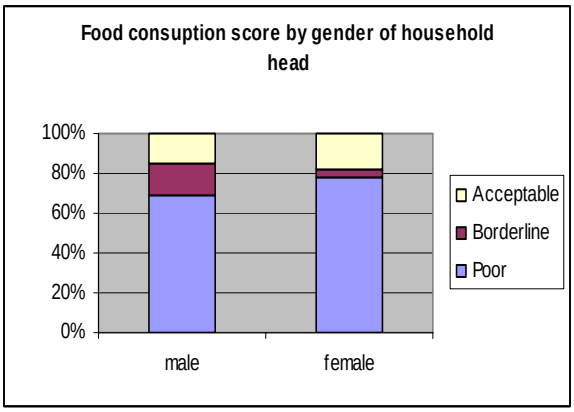
Cross checks were done through interviews with children who often are a reliable source in terms of the food they consumed that day and the day before. Their information did not differ from the picture given by the adults.

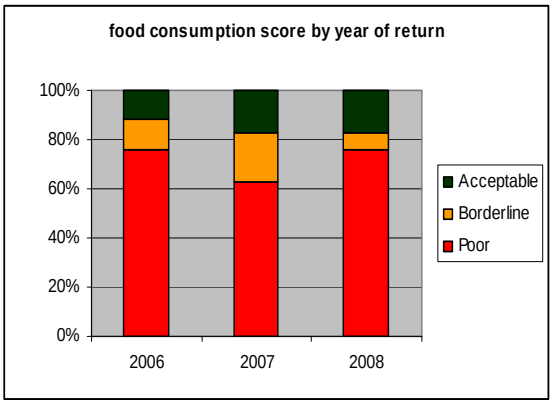
Acceptable food consumption score	**Number of days consumed, 7 days prior to the interview.**			
Food items	Always (6-7 days)	Often (4-5 days)	Sometimes (2-3 days)	Rarely/never 0-1 day
Sorghum				
Other cereal				
pulses				
Groundnuts/sesame				
Meat/fish/egg				
Vegetables				
Fruit				
Sugar				
Dairy				
oil				

[8] Kisra is a type of local pancake like bread, similar to Ethiopia's Injera.

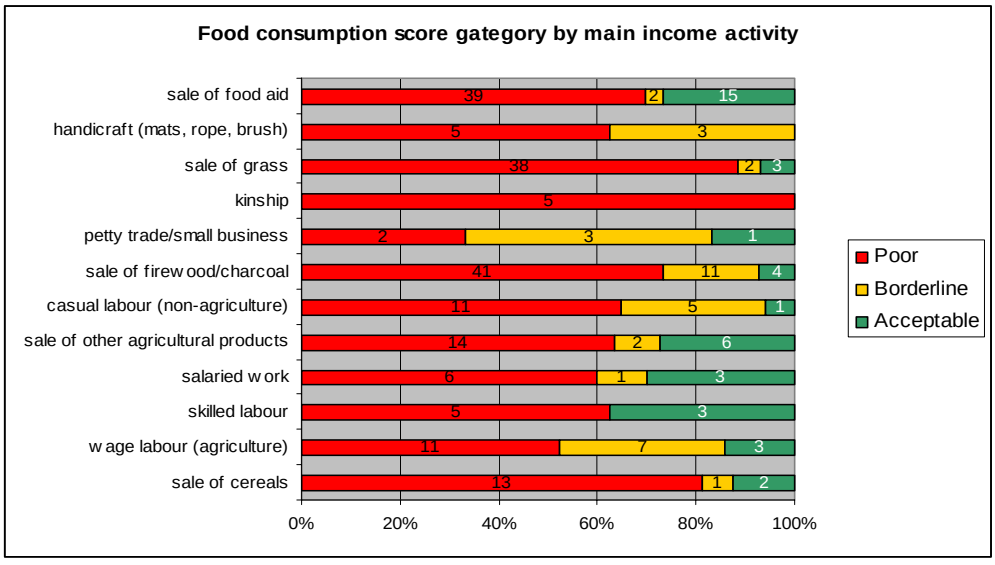
There is not much difference between the returnees in terms of their food consumption. The returnees that arrived in 2007 have slightly lower percentage of its households in the category of poor food consumption and there is slightly less households with an acceptable intake amongst 2006 returnees.

Of the female headed households there are slightly more in the poor consumption score category than the male headed households and there are more borderline households amongst the male headed households.





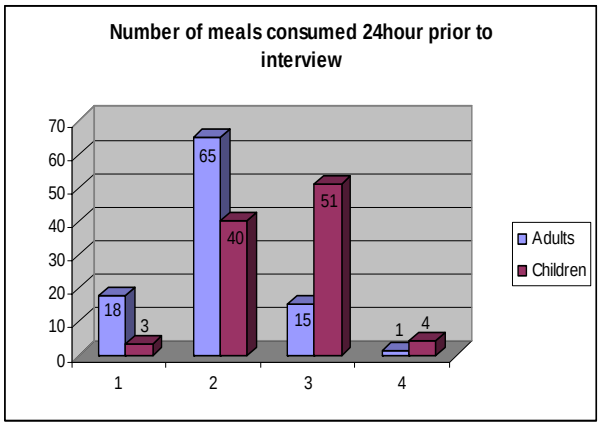
Households who live of selling grass have proportionately more households with poor food consumption. Eighty five percent of these households have a very poor food intake. Those depending on kinship all have poor food intake but they represent only five households out of the total 283. Sale of cereal does not seem to be a strong income source either as eighty percent of these households also have poor intake. Petty traders, even though not many, have by far the best food intake.



2.5.2. Meal pattern

Sixty five (65) percent of the adults consume two meals per day a small majority of the children (51 percent) eat three meals per day, which is regarded as acceptable.

However, as many as 40 percent of the children consume only two meals and nearly one in five adults consumed only one meal per day. Such a low meal frequency in combination with the low food consumption score greatly questions the possibility to consume adequate quantities to meet nutritional requirements.



2.5.3. Health and Nutrition

Four annual nutrition surveys have been conducted by GOAL in Kurmuk County, Blue Nile State, since 2005. The below are findings from the recent survey in February 2008. The sampling frame is different than the EFSA as it does not include only returnees, therefore direct conclusions about the returnee population based on the MICS findings should be drawn with caution. **The EFSA assessment at hand did not include any nutritional measurements but relied on secondary data from the MICS**.

GAM rate

The prevalence of global malnutrition went up slightly by 0.8 percent as compared to last year (9.4 percent) however the 95% CI covers the result from last year so whether there has been a real increase or not cannot with confirmed with confidence . The rate of severe acute malnutrition though remained the same as last year.

Table 1: Prevalence of acute malnutrition[9]Source GOAL

Nutritional Indicator	Kurmuk County, February 2008		
	(n=551)	Percent	95%CI
Global Acute Malnutrition	56	**10.2**	7.3 – 13.2
Severe Acute Malnutrition	6	**1.1**	0.3 – 1.9
Bilateral pitting oedema	3	**0.5**	-

Morbidity

Almost a quarter of the children (24 percent) suffered from diarrhoea in the 2 weeks prior to the MICS survey; diarrhoea was the leading cause of illness, followed by acute respiratory infection and malaria/fever.

[9] Kurmuk preliminary results, MICS 2008, GOAL

While the majority of mothers (62 percent) said they had taken their child to the clinic during this illness, over a quarter (31 percent) had sought no treatment at all, and 7 percent reported using traditional medicine. Other illnesses reported included skin infection (n=9), abdominal pain (n=5) and vomiting (n=3).

Table 2: Breakdown of morbidities two weeks prior to the assessment, source: GOAL

Illness	Number	Percentage of morbidities	Percentage of children
Diarrhoea	130	39.1	23.6
ARI	94	28.2	17.1
Malaria / FUO	67	20.1	12.2
Eye Infection	19	5.7	3.5
Other	23	6.9	4.0
Total	**333**	**100**	**60.4***

Mortality

Mortality rates were estimated in the MICS using a recall period of 90 days. The Mortality rates in 2008 are slightly lower from those found last year but both are within the WHO acceptable thresholds.

The leading cause of death amongst under-5's was diarrhoea (30% of U5 deaths) followed by Malaria and ARI at 20% each.

Table 3: Mortality rate- Kurmuk country, source: GOAL

	CMR/10,000/day	U5MR /10,000/day
Mortality rate	0.87	2.05
95% Confidence Interval	0.45-1.3	0.13-3.97

Current situation-observations during the EFSA
Moderate malnutrition was clearly observed amongst children during the field work, by experience nutritionist who was part of the team, and GOAL confirmed that they treat more malnutrition now with the returnees arriving than previously reported. Samaritan's Purse who is in charge of the Kurmuk hospital also confirmed that they treat much more severely malnourished cases now than in previous years. The numbers are still too small for a proper Therapeutic Feeding Centre in the hospital but the severe cases that do come in are treated with F-100 and F-75[10] provided by UNICEF on an ad hoc bases.

The GAM rate from the MICS survey in February included relatively few returnees in the sample and does not allow for separate analysis of the group. GOAL agrees that it is however very likely that the GAM rate for the returnees is higher than the average 10 percent in the MICS 2008.

No supplementary feeding programme exists in Kurmuk County.

2.6. Food Security

2.6.1. Household Food Security

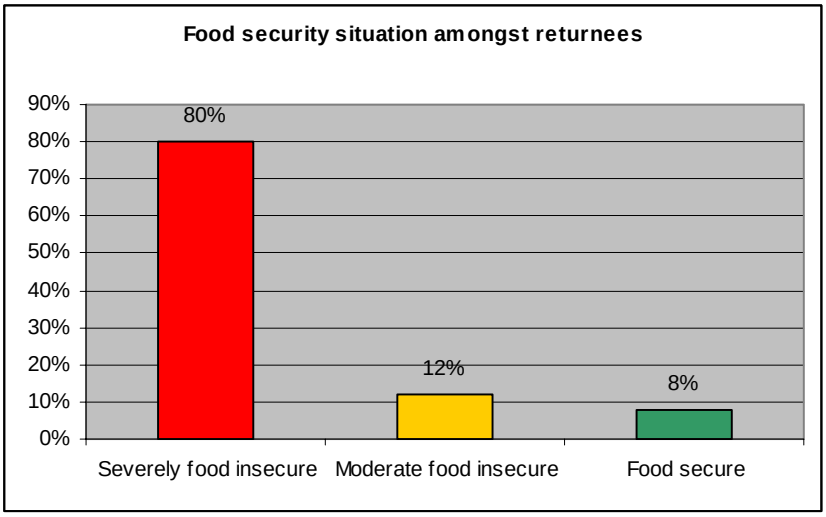
The defined access indicators outlined in the access section was cross tabulated with the food consumption scores in order to determine the food security situation.

[10] F-100 and F-75 are specialist products for treatment of severely malnourished individuals

The table below show the results and consequently the food security classifications. **Eighty percent of the returning population are severely food insecure**, 8 percent are moderately food insecure and only 2 percent are classified as food secure.

		Food consumption		
		Poor 71% (200HH)	**Borderline 13% (37HHs)**	**acceptable 16% (45HHs)**
Food access (based on 4 indicators	**Poor 79% (223HHs)**	*175*	*26*	*22*
	Average 14% (41HHs)	*19*	*9*	*13*
	Good 7% (19HHs)	*7*	*3*	*9*

Red = severe food insecurity, Yellow = Moderately food insecure, Green = Food Secure. Numbers in the table represent number of households in each category.



2.6.2. Coping Strategy Index

A coping strategy index was developed through focus group discussions in the assessed communities. Severity classifications (1-4 where 4 is regarded as most severe) were assigned to each strategy used in the community. A consensus score was then developed for Kurmuk and used to calculate individual scores for each household included in the assessment. (See annex 4 for results from focus groups).

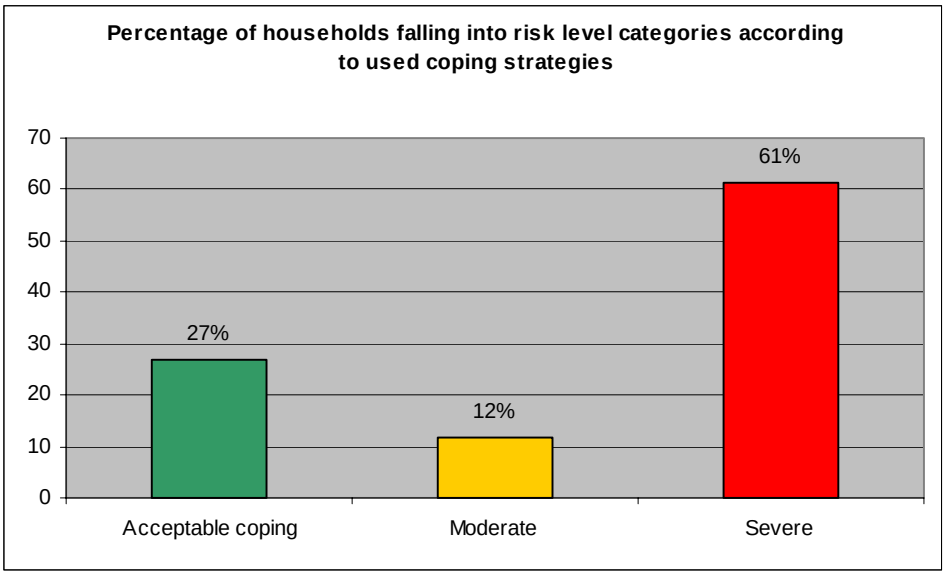
There is no difference in mean coping score between female and male headed households but as shown in the table below there is a difference households depending on their year of arrival, where those arriving in 2006 and 2008 have similar coping score (the higher score, the more severe is the situation). There are no existing standardized thresholds for categorizing households based on coping score, rather the rating and categorization are specific to a defined geographical area; the coping index can, however, be used to monitor a situations' evolvement over time.

		Mean coping strategy index
Year household arrived at location	2006	32
	2007	24
	2008	31

In order to analyse the possible impact of the coping strategies on the household members' health and nutrition status as well as the impact on livelihood the below categorization have been made.

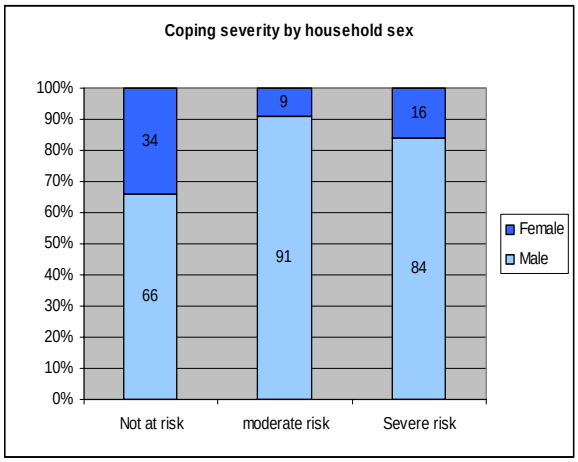
Consumption coping strategy responses	Severity classification based on strategy's potential risk to people's health and negative impact on livelihood.
1. Rely on less preferred and less expensive food	Low risk
2. Borrowed food, helped by relatives/friends	Low risk
3. Gather wild food that you would normally not eat	Low risk
4. Harvesting immature crop	Low risk
5. Consumed seed stock held for next season	Moderate risk
6. Skipped days without eating	Severe coping
7. Sent children to live or eat in another household	Low risk
8. Reduced expenditures on health and education	Moderate risk
9. Spent savings to purchase food	Low risk
10. Barter part of the food aid rations to buy more staple food of poorer quality?	Low risk
11. Begging	Less risk
12. Adults consuming only one meal per day	Severe coping
13. Children consuming two or less meals per day	Severe coping

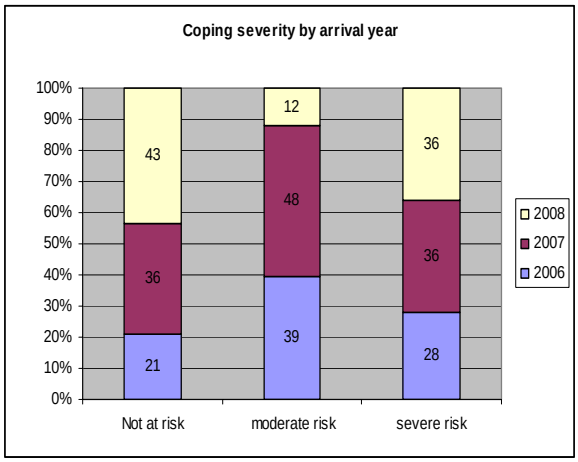
Based on the above categorisation the below graph shows that the majority **(61 percent) of households are using strategies that are putting their health and nutritional status at risk**. Some 12 percent are using strategies that are regarded as moderate but a risk to their future livelihood.

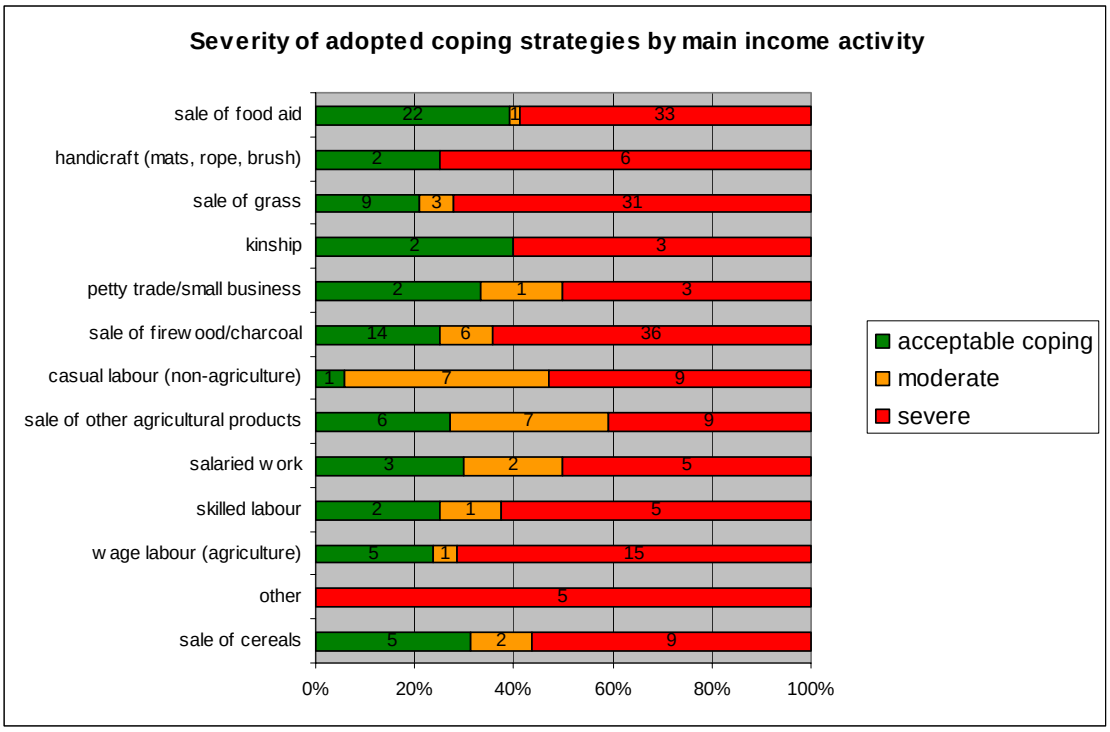


Results also show that the female headed households are using less damaging coping strategies than male headed households. The households that arrived in 2008 are also using less damaging strategies that those who arrived in 2006 and 2007.

For households that employ high risk strategies the proportion of households that rely on handicraft and sale of grass for their income is higher than for other income sources.







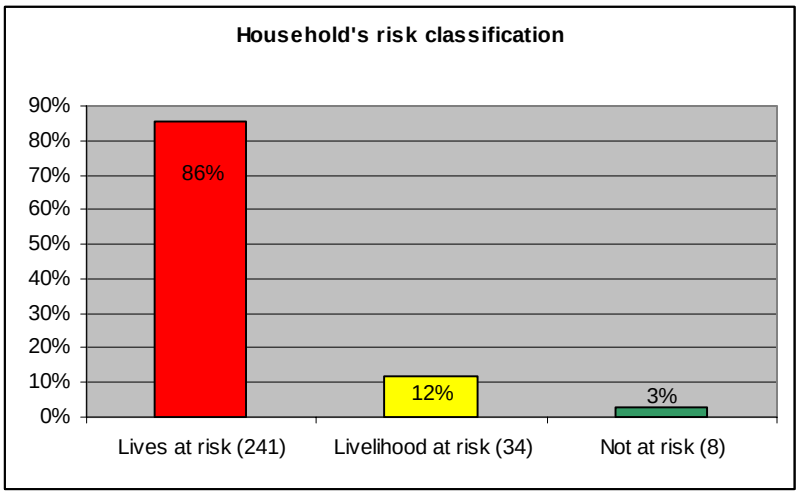
2.7. Lives and livelihoods at risk

A further cross tabulation was made between the Food Security categories and the coping strategies above in order to classify which households are putting their members' lives at risk and which households' livelihood are a risk. This classification is especially important for programming purposes.

Households who's lives and/or livelihood are at risk				Food access		
				Poor access	Medium access	Good access
Food consumption	Poor food consumption	Lives at risk		175	19	7
	Borderline food consumption	Coping	Not at risk	4	2	1
			Livelihood at risk	5	1	2
			Lives at risk	17	6	0
	Acceptable food consumption		Not at risk	14	3	4
			Risk to livelihoods	1	2	3
			Lives at risk	7	8	2

Legend: Red = lives at risk, yellow = livelihoods at risk, green = not at risk. Numbers represent number of households.

An overwhelming 86 percent of the assessed households have such a poor food consumption in combination with poor food access and currently adopt severe coping strategies that their lives are put at risk without assistance. Twelve percent of the households are at risk to livelihoods. Only three percent are not at risk.

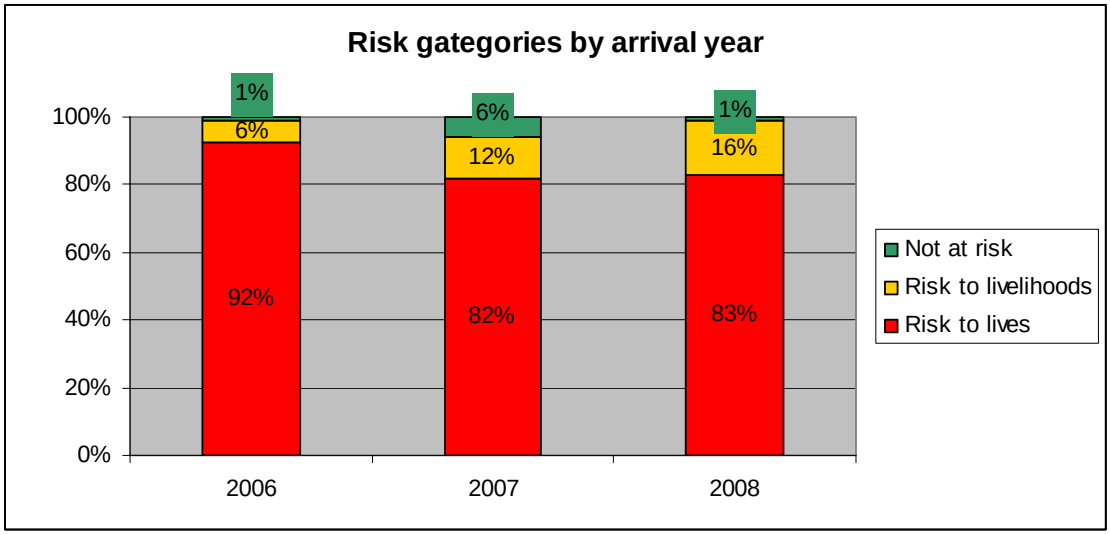


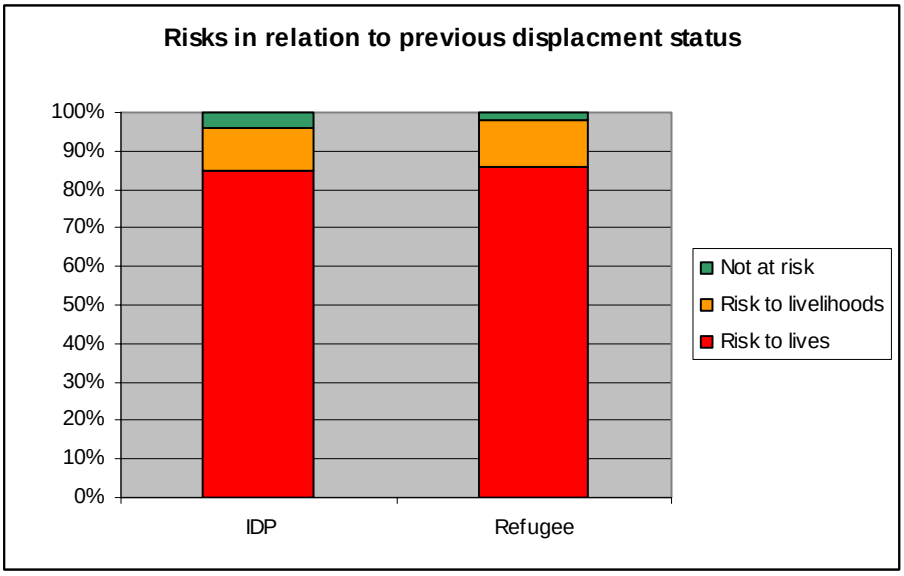
There is no significant difference in type of risk between gender of the household head. The graphs below show that there is a higher proportion of returning refugees putting their lives at risk than the returning IDP.

Looking at the arrival years in the graph below, the households who arrived in 2006 have a greater proportion of households in the "risk to lives" category and only six percent are currently

putting their livelihood at risk whilst only one percent are doing well and are not of concern. Those who arrived in 2007 and 2008 have also a great majority of households in the “risk to lives” category but more households in the ‘risk to livelihood”... Whilst, the “no risk” category represents only three percent of the total households any conclusion should be drawn with caution, however the arrivals in 2007 have a lager representation.

There does not seem to be any relation between dependency ratio and level of risk and as shown in the graph below there is no difference in risk between ex-IDPs and ex-refugees.





3. Chronic versus transitory food insecurity

The food insecure households amongst the returnee population are suffering from chronic food insecurity that is caused by fundamental factors such as poor infrastructure, agricultural services and market availability. The most important direct causes are low agricultural production,

unsustainable or unreliable income sources with low cash earnings which lead to the immediate cause of poor food consumption and malnutrition.

4. Scenarios

The basic and underlying causes are chronic and require long term engagement to improve agricultural production, market facilities as well as the profitability of income generating activities. The most likely scenario in the short term, the coming six months, is a worsening situation as the lean season will tighten its grip on the returnee population. Damaging coping strategies are already being adopted and the half ration of food aid distributed during the lean season will not fill the gap at household level.

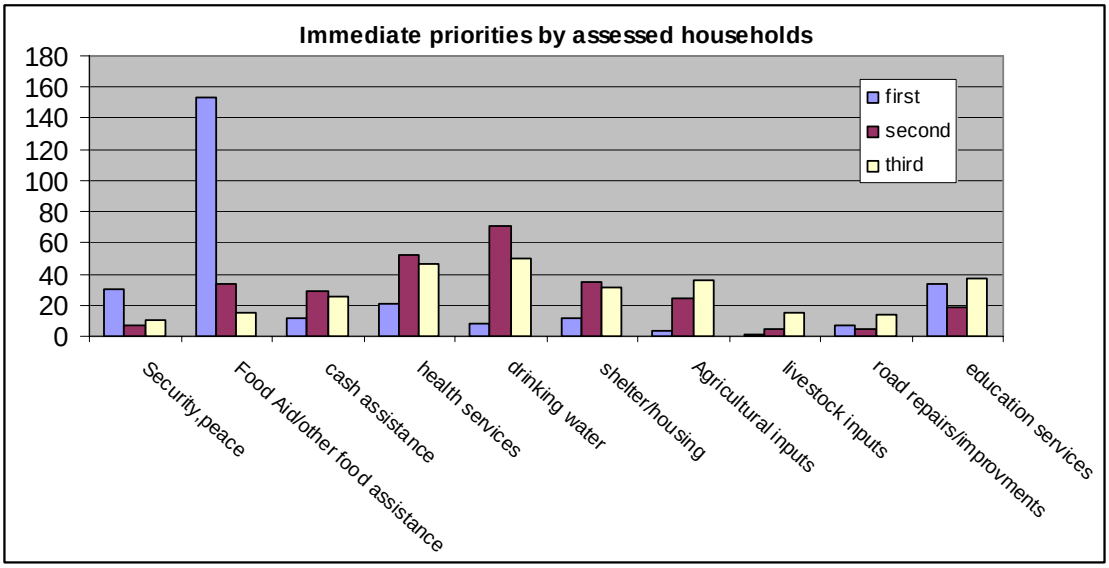
The situation analysis from the findings in this report indicate an early onset of the lean season and thus the food security situation is expected to get worse in the next coming months. Those households who will receive food aid during the lean season will partially cover their food requirements and thus hopefully their food intake will not worsen. Households who arrived before 2007 will however not receive any food aid and it is questionable if they can maintain the current poor food intake level or will worsen even further given the current poor scopes to earn an income. It is most likely that malnutrition rates will increase before the next harvest,

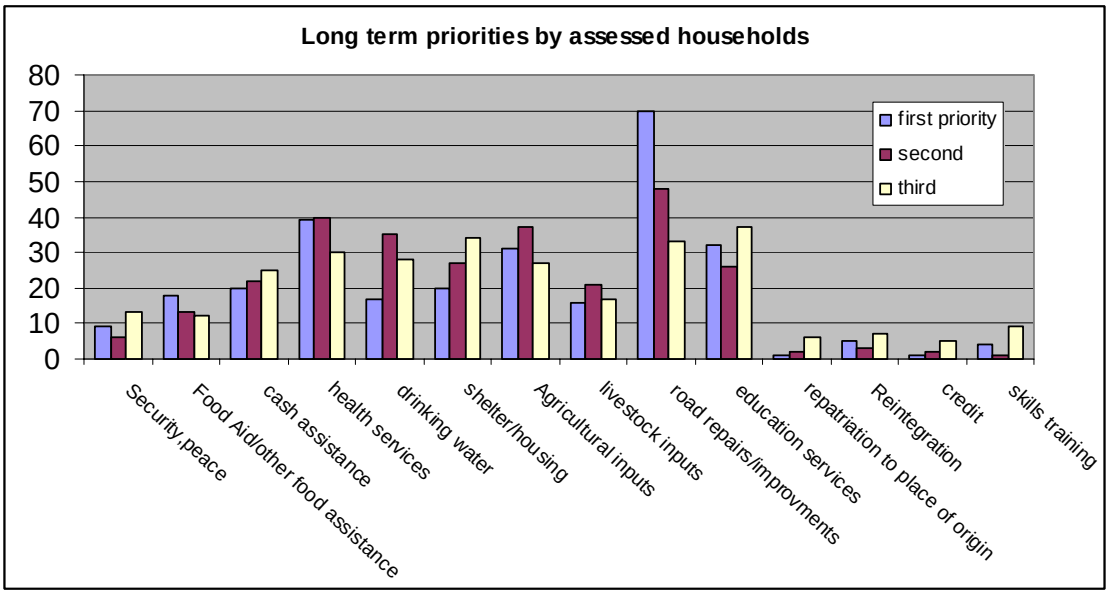
The harvest in October- December should temporarily improve the food security situation but its offsetting effect will depend on the coming weather conditions. There is however at present no factors observable that make an improvement of the long term food security situation very likely.

5. Populations' priorities

As shown in the graph below, the most immediate priority for the households is food assistance. Drinking water is a second priority which was stressed by many key informants as a major issue.

Road repairs are the highest long term priority with health care and education also being important priorities.





5.2. Humanitarian Assistance

5.2.1. WFP

General Food Distribution

Returnees have since 2006 been supported with a three months full ration (2,100kcal/person/day) at arrival, followed by full ration distribution April to September during the year they arrived. However, returnees who arrived in 2007 are entitled for half rations during the lean season April-September. Returnees arrived in 2006 are no longer assisted by WFP in the year 2008.

WFP is planning to assist 6,700 refugee returnees, 5,000 IDP returnees, 2,000 spontaneous returnees and 14,000 vulnerable people in the 2008 lean season distribution

Food for Recovery

A Recovery project was implemented in March and April 2007 through Food For Work with 2078 participants. During the two months the community in Chali rehabilitated classrooms, dug canals and water ponds, agricultural land clearance and preparations of seed beds.

During 2008, a community in Jorod, seven km from Kurmuk town, is constructing a dam which is still at its initial stage. It is planned that 500 people will have a job for 2 months in the construction of this dam. Lack of water is a big problem in Kurmuk and some village chiefs clearly stated that food is not their main concern but water.

Food for Education

A school feeding programme was started by WFP in 2007 in 16 schools in Kurmuk county. It is a so called wet feeding programme where the pupils receive a cooked meal. No take home ration is provided. To date some 6.900 students receive meals but the plan for 2008 is to expand the programme to 30 schools that previously were restricted due to landmines, reaching an additional 3100 pupils, totalling the number of students to 11.000.

Twenty three percent of the interviewed households reported having children in a school where they receive school feeding.

5.2.2. GOAL

Five health centres are operated by GOAL in the rural areas of Kurmuk county where Chali is the latest centre to have be opened, serving mainly a returnee population. Curative health is the primary focus albeit preventive health programmes and EPI also taking up a large part.

The nutrition activities are fairly new and a Growth Monitoring programme started some 5-6 months ago. Cooking demonstrations are given to mothers with moderately malnourished children as well as nutrition education focusing on breast feeding, nutrition in pregnancies, complementary feeding and balanced diets.

GOAL is currently field testing a recipe for a local supplementary food consisting on sorghum, sugar and milk powder.

In the area of WAT/SAN the construction of latrines in market places and hygiene messages conveyed through community health workers are important activities.

GOAL has also just started monitoring prices at Kurmuk market as well as in selected village markets.

5.2.3. FAO

Seeds and tools

Some 2000 households received seeds and tools in Kurmuk in 2006. In 2007 some 4000 households received inputs but they arrived late in July rather than for the planning season in May. Thus in terms of improving returning households' food security, the impact last year was minor.

The situation is much better for 2008, where seeds and tools are already being distributed. Some 7.500 households will be assisted in Kurmuk this year, which includes all returnees from 2007 and 2008 as well as some from 2006 and vulnerable residents.

The household kit comprises of sorghum (4kg) and maize (4 kg) seeds, as well as vegetable seeds such as pumpkin, okra, water melon, cucumber and tomatoes.

5.2.4. IRC

Ten clusters (villages) are supported by IRC in Kurmuk county. The main activities are WAT/SAN and primary health but there are also a number of so called Quick Impact Projects that are supported. Community Development Committees (CDC) have been formed in each cluster that submitted proposals to IRC for financial support for community projects. There are currently eight such projects supported during 2008, including grain mills, school furniture, farming etc. Each project costs maximum 4.000 pounds[11].

5.2.5. Samaritan's Purse

The largest project by far for SP is the support to the Kurmuk hospital which they have been supporting since 2002. SP is mainly working in Kurmuk town and its immediate surroundings and also has a water/sanitation programme with the construction of some 350 water sand filters. They

[11] 4.000 pounds is equivalent to US$ 2000

have a community centre in Kurmuk town which conducts teachers' training, adult literacy classes etc.

A livestock/livelihood project is ongoing in Demansure (some 25km from Kurmuk town) where they are operating a pilot farm where farmers come for various agriculture trainings. From 2003 to 2006 between 4,000 and 5,000 goats where distributed to households in a restocking project which has now ended. Improved species of milking goats are also being sold to farmers.

5.2.6. Mercy Corps

Mercy Corps have two main projects; Civil Society Programme and Economic Recovery.
The economic recovery unit is implementing three components in Kurmuk; Agriculture which consists of Agriculture Fairs. 1,600 households have been given vouchers to for which they can pick up locally produced seeds and tools from local farmers and black smiths at these fairs. The seeds that are available locally and thus included as options for the vouchers are sorghum, maize and sesame.

They also have a Cash for Work programme, mainly for feeder road constructions. During 2008 some 1.500 people will be engaged in work for approximately one moth, earning US$100 per person.

The villages supported by Mercy Corps are Wadaga, Mofu, Chali and Gindi.

There is also a Market Development project in MCs' portfolio. The two markets of Kurmuk and Yabus have established "Chambers of commerce" and these two committees decide on infrastructure improvements that are needed such as drainage of the market place etc.

6. Recommendations

- The poor level of food intake found among the returnee population can not be fully addressed with the current practice of providing only half rations during the lean season. Rather a full monthly ration of 2,100kcal during the lean season should be considered, including CSB targeted for children. Food aid is confirmed to be necessary as the markets' ability to supply is insufficient to meet demands.

- The minimal difference in food security situation between those who arrived in 2006, 2007 and 2008 indicate that the three months ration given at arrival coupled with lean season support is not sufficient to re-establish livelihoods and it is recommended that the assistance at arrival is extended to a full year.

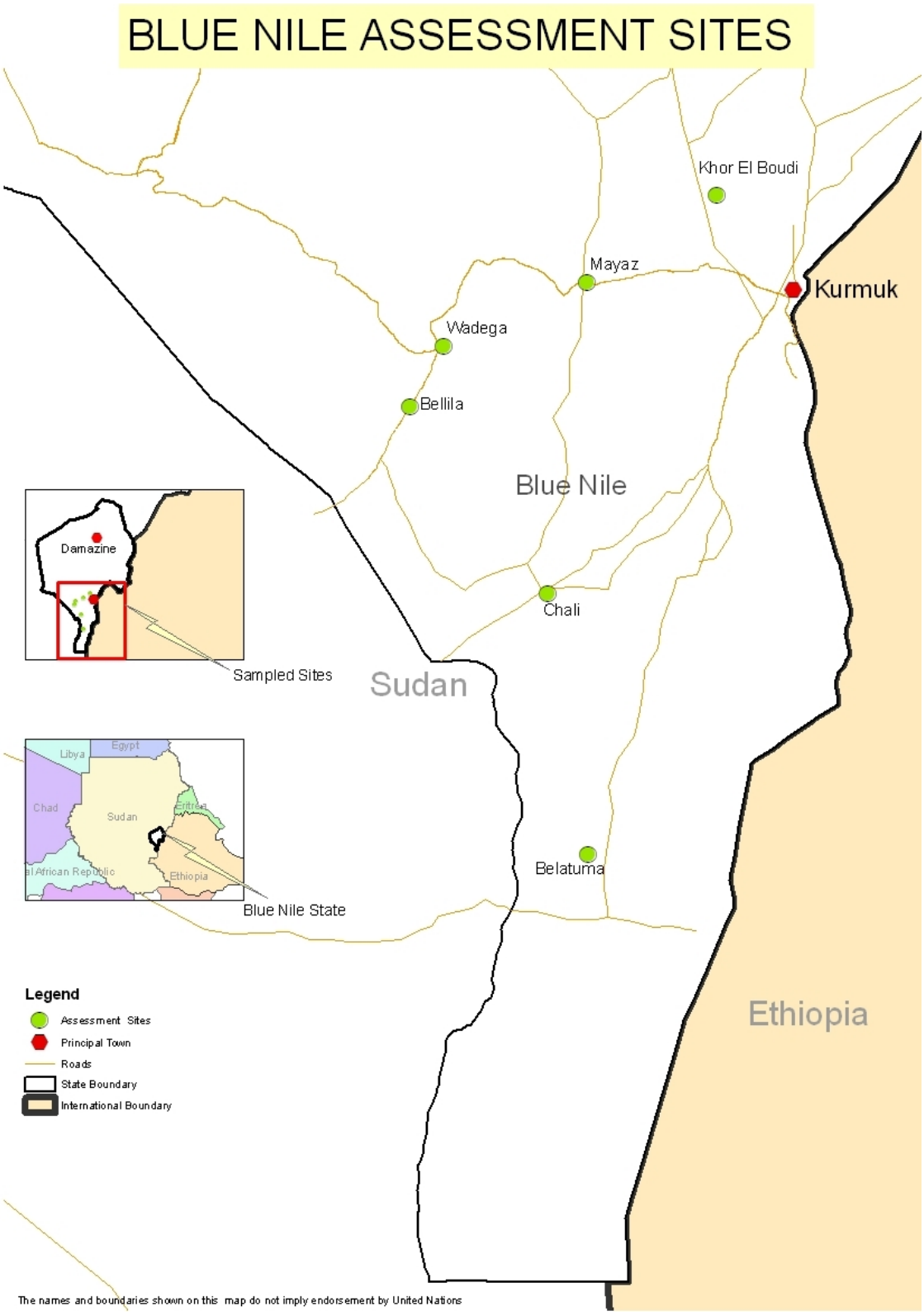
- The possibility of launching school feeding with a take home ration in combination with onsite feeding should be explored. This would improve the food security situation at household level as well, rather than only the short term hunger of pupils. A take home ration could consist of pulses and/or cooking oil to improve the food intake (variety) at household level.

- The apparent malnutrition levels amongst the returnees call for a supplementary feeding programme in connection with GOAL's nutritional education programme. It is recommended that a blanket supplementary programme is set up for children two years and younger and that CSB is included in general ration as mentioned above.

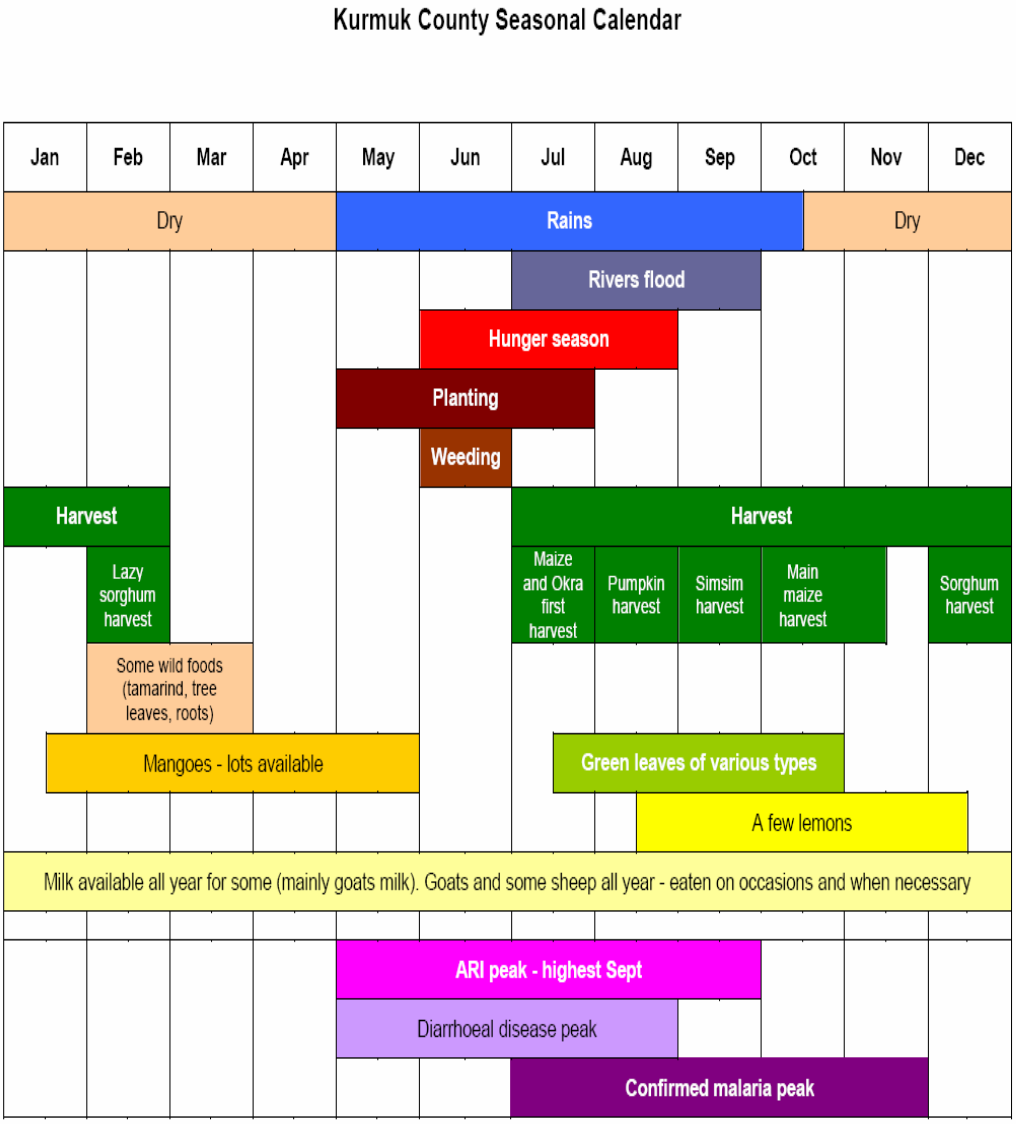
- Cash based interventions are needed and one direct intervention could take place by providing vouchers for paying part or all cost of sorghum milling. This would help poor households to fully make use of their food aid ration and at the same time increase the volume of cash money circulating within the economy.

- Food For Work is recommended where WFP could find a way to provide food aid e.g. for clearing more agricultural land as this could lead to a considerable expansion of areas cultivated if supported with sufficient agricultural inputs such as seeds and tools and proper technical advice from FAO and Ministry of Agriculture..
- Digging more hafirs (water collection ponds) and arranging training sessions with partners on means to increase local produce are possible indirect interventions.
- Monitoring of the situation is needed, especially the nutritional status of children under 5.
- Improved coordination and dialog between the agencies working in Kurmuk is highly recommended where different efforts can contribute to additional benefits if done in the same areas.
- Improve the coordination and collaboration between agencies and government working in Kurmuk in particular in Rehabilitation and Re-integration efforts. Who is the lead agency?
- Restocking of livestock should be considered as a livelihood support activity.
- .

ANNEX 1- Map


BLUE NILE ASSESSMENT SITES
Khor El Boudi
Mayaz
Kurmuk
Wadega
Bellila
Blue Nile
Damazine
Sampled Sites
Chali
Sudan
Libya
Egypt
Chad
Sudan
Eritrea
Ethiopia
Belatuma
Blue Nile State
Legend
Assessment Sites
Principal Town
Roads
State Boundary
International Boundary
Ethiopia
The names and boundaries shown on this map do not imply endorsement by United Nations

ANNEX 2- Seasonal calendar



	PLANTING		HARVEST
Sorghum	Jun - Aug	Most common crop - durable and can sustain drought and flood to some extent. There are 2 harvests - early and late ("lazy").	Dec, then Feb
Maize	Jun - Aug	Most people plant some maize - more vulnerable to drought or prolonged heavy rain	July - Oct
Simsim	Early	Planted by some	Sept
Groundnuts	Varies	Planted by some	End Jul
Cowbeans	May	Less common	Jul - Nov
Okra	Early	Planted by some, then dried and eaten by all throughout the year	Jul - Oct
Pumpkin	Mid May	Planted by some	Aug

ANNEX 3- Team members

Team leader:	Yvonne Forsen- VAM Khartoum
Market Analyst:	Al Agmed Beteik- VAM Khartoum
Co-team leader:	Gideon Thomson- WFP Damazine HAC/SRRC Kurmuk
Enumerators:	Elinana Kwaje Mensona Ahmed Abdallah Hussein Khalid Adam Kheirallah Mudather Hamid Abasher Abdel Aaty Mohammed Toum Mohammed Abakar Mohammed Mohammed Hassan Kabashi
Focus Group Discussions	Hind Abdelrahman- VAM El Obeid Tarig.Alsir- VAM Kassala
Analyst:	Anders Petersson: VAM Khartoum

ANNEX 4- Coping Strategy Index	SEVERITY RANKING FOR EACH STRATEGY												
Consumption coping strategy	FG1	FG2	FG3	FG4	FG5	FG6	FG7	FG8	FG9	FG10	FG11	average scoring	Consensus Ranking
01. Rely on less preferred and less expensive food				1	1	2	1	2	2	2	2	1.6	2
02. Borrowed food, helped by relatives/friends	1	1		2	2	3	2	2	2		2	1.9	2
03. Gather wild food that you would normally not eat	4	3	4	4	4	3	4	3	2	4	4	3.5	4
04. harvesting immature crops	3			2	2	1	2	2			3	2.1	2
05. Consumed seed stock held for next season		2	2	3	2	4	3	3	3	3	3	2.8	3
06. Reduced the proportions of the meals	2			2	2		2	2	2	2	2	2.0	2
07. Reduced number of meals per day	3	4	3	1	2	3	2	2	2	2	2	2.4	2
08. Skipped days without eating		4	4		4	4	3	4	4	4	4	3.5	4
09. Restricts consumption for adults so that children have enough	3	4	3	4	3	2	3	4	3	3	3	3.2	3
10. Sent children to live or eat in another household													
11. Reduced expenditures on health and education						4							4
12. Spent savings													
13. Barter part of the food aid rations to buy more staple food of poorer quality?							1		2	2	2	1.8	2
14. Begging	2						3						3
8.2 NON-FOOD coping strategies.	**FG1**	**FG2**	**FG3**	**FG4**	**FG5**	**FG6**	**FG7**	**FG8**	**FG9**	**FG10**	**FG11**		**Consensus Ranking**
1. Sold HH articles (utensils, blankets) or jewelry							1			2	2	1.7	2
2. Sold agricultural tools, seeds,…		3	1	2	3	4		3		2	2	2.5	3
3. Sold your own building materials			2							3			3
4. Sold HH furniture											3		3
5. Sold HH poultry	1	1	1	1	1	4	2			2	2	1.7	2
6. Sold small animals – goats, sheep	1	1	2	2	2	4	1			3	3	2.1	2
7. Sold large animals-cattle, camels			3										
8. Borrowing money from relatives/neighbours	1	4	2	1	2	3			2		2	2.1	2
9. Other, specify													

ANNEX 5- Food Consumption Score

EXTRACTS FROM HANDBOOK- **Calculation of the food consumption score**

In the household questionnaire

Households are asked to recall the **foods that they consumed in the previous seven days** (see the list of items in Table III.8). Each item is given a score of 0 to 7, depending on the number of days on which it was consumed. For example:

- If potatoes were eaten on three of the last seven days, they are given a frequency score of 3.
- If potatoes were eaten on three of the last seven days, even if they were eaten twice on each of those days, at two meals, they are still given a frequency score of 3.

In the analysis

Food items are grouped according to **food groups** (see Table III.8) and the frequencies of all the food items surveyed in each food group are summed. Any summed food group frequency value over 7 is recoded as 7.

Each food group is assigned a **weight** (see note* and Table III.8), reflecting its **nutrient density**. For example:

- Beans, peas, groundnuts and cashew nuts are given a weight of **3**, reflecting the high protein content of beans and peas and the high fat content of nuts.
- Sugar is given a weight of **0.5**, reflecting its absence of micronutrients and the fact that it is usually eaten in relatively small quantities.

For each household, the **household food consumption score** is calculated by multiplying each food group frequency by each food group weight, and then summing these scores into one composite score.

The household score can have a maximum value of 112**,** implying that each of the food groups was consumed every day for the last seven days.

The household score is compared with pre-established **thresholds** that indicate the status of the household's food consumption. WFP finds the following thresholds to be applicable in a wide range of situations:

- Poor food consumption: 0 to 21.
- Borderline food consumption: 21.5 to 35.
- Good food consumption: > 35.

These thresholds can be adjusted if there is clear justification for doing so.

If a previous study using this methodology has been carried out in the area, the food items surveyed and the thresholds used in that study should be applied to facilitate comparison.

* **Note regarding weights**: These weights are used by WFP, and have not been universally endorsed. Their use is recommended for WFP EFSAs to ensure that the food consumption analyses of different assessments are comparable.