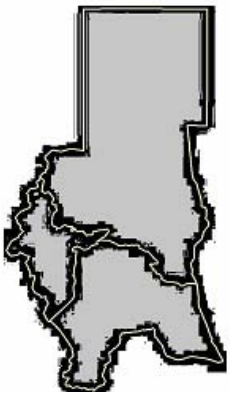
EMERGENCY
FOOD SECURITY AND NUTRITION ASSESSMENT
IN DARFUR, SUDAN 2006

Final Report





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Those involved in the assessment are deeply grateful to the individuals, households and communities of Greater Darfur for their time and hospitality. This assessment report is the culmination of months' worth of effort of many individuals and organizations.

The assessment was truly an inter-agency food security and nutrition assessment, and many organizations were involved in its design, the collection of data and the production of this report.

The main agencies involved in the assessment were World Food Programme (WFP), United Nations Chidren's Fund (UNICEF), the Food and Agricltural Organization of the United Nations (FAO), the Ministries of Health (MOH) and Agriculture (MOA) of the Government of Sudan and the United States Center for Diesease Control and Prevention (CDC). We also appreciate our gratitude to the Humaintarian Aid Commission (HAC) who provided full-time staff.

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Please see annex 2 for the full list of enumerators, supervisors and team leaders who ensured the data collection in the field.

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Acronyms and Abbreviations

ACF	Action Contre la Faim
AHA	African Humanitarian Agency
AU	African Union
CDC	Center for Disease Control (Atlanta)
CO	Country Office
CMR	Crude Mortality Rate
CRS	Catholic Relief Services
CSB	Corn-Soya Blend
DPA	Darfur Peace Agreement
EFSNA	Emergency Food Security and Nutrition Assessment
FAO	Food and Agriculture Organisation
GAA	German Agro Action
GoS	Government of Sudan
HEB	High Energy Biscuits
HH	Household
ICRC	International Committee of the Red Cross
IDP	Internally displaced person
IGA	Income Generating Activity
IMC	International Medical Corps
IPM	Integrated Pest Management
MoH	Ministry of Health
NFI	Non Food Item
NGO	Non-Governmental Organization
NSS	Nutritional Surveillance System
PDM	Post Distribution Monitoring
PPS	Probability Proportional to Size
SC-US	Save the Children USA
SUDO	Sudanese Office
U5MR	Under-5 Mortality Rate
UNICEF	United Nations Childrens Fund
UNOCHA	United Nations Office for the Coordination of Humaritarian Affairs
WFP	World Food Programme

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Chapter 1: EXECUTIVE SUMMARY

1.1 Background to the assessment

In September 2006, an Emergency Food Security and Nutrition Assessment (EFSNA) was conducted by the Food and Agriculture Organisation (FAO), the United Nations Childrens Fund (UNICEF) and the World Food Programme (WFP) in crisis-affected Darfur with the support of the Ministries of Health and Agriculture of the Government of Sudan (GoS), the Center for Disease Control (CDC-Atlanta) and several international and national non-governmental organizations (NGOs). This assessment was undertaken in order to update knowledge on the food security and nutritional situation of internally displaced persons (IDPs) and residents in Darfur affected by three years of conflict. This data allows a comparison with the situation in 2005 and 2004. It also aims to re-assess access to services and coverage of assistance programmes among the crisis-affected population and offers recommendations for immediate, medium and longer term interventions to save lives and support livelihoods.

The Greater Darfur region of Sudan consists of 3 states (North Darfur, West Darfur and South Darfur) covering an area of 511 412 km^2. The total population in 2005 has been estimated at 6.76 million, of which approximately 81% reside in rural areas. This assessment covered crisis-affected areas of North, South and West Darfur States, as defined by the humanitarian community. The sample frame included 3.74 million people in Greater Darfur.

The conflict in Darfur began in February 2003 with an insurgency campaign launched by the rebel Sudan Liberation Movement/ Army (SLM/A) and counter-insurgency action by the Government of Sudan (GoS). It quickly generated into widespread insecurity and displacement. The conflict results from several long-held grievances and underlying causes including[1]: the perceived marginalisation and neglect of Darfur by the central government for decades as well as the marginalisation of non-Arab nomad tribes within Darfur; national and international strategies of arabisation; drought and competition over limited natural resources within Darfur; disagreements on land tenure rights; and previous tribal conflicts between Fur and Arab, Zagahwa and Arab, and Masalit and Arab in the late 1980s and 1990s, largely linked to the above factors.

The conflict has resulted in in major population displacements and severe disruptions to livelihoods[2]. Looting of remaining livestock, violence and the restriction of movement of IDPs and some residents has been almost continual since 2003. The success of the African Union mission launched in 2005 in contributing to a secure environment and the protection of civilians has been limited. A Humanitarian Ceasefire Agreement was adopted in May 2004, and one-year later, the Darfur Peace Agreement was signed by some factions of the rebel movement and the GoS on 5 May 2006. Despite the signing of the DPA, the security situation in Darfur has deteriorated.

1.2 Assessment Objectives and Methods

For the purposes of this assessment, households were interviewed to assess their socio-economic and food security situation. Specific information was collected on each mother of children under 5 years of age including their participation in income generating activities and decision-making, maternal antenatal care, child feeding practices and child health. Anthropometric measurements were taken on mothers (mid-upper arm circumference) and children under 5 years of age (mid-upper arm circumference, weight, height and oedema) to assess nutritional status. Key informant interviews were conducted in every community and focus group discussions on gender issues were held with men and women separately in each Darfur state. Information was collected on access to services, including health structures, water and sanitation services, cooking fuels access, agricultural markets, income generating opportunities and labour markets.

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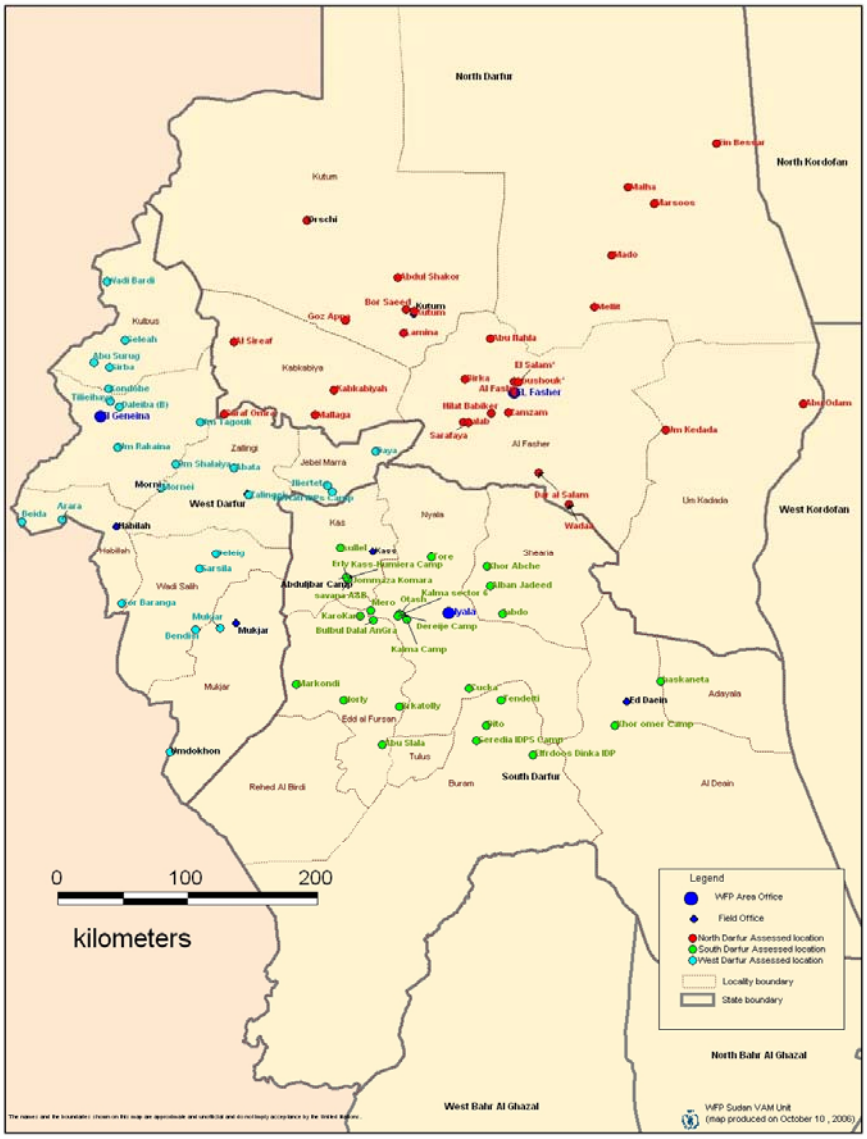
[1] V. Tanner. '*Rules of lawlessness. Roots and repercussions of the Darfur crisis*'. Inter-agency paper of the Sudan Advocacy Coalition, January 2005

[2] M. Buchanan-Smith, S. Jaspars: '*Conflict, camps and coercion: the continuing livelihoods crisis in Darfur*', WFP, June 2006

The survey included 2,155 households of which slightly more than half were IDPs. The displaced in camps represented 39% of the sample, of whom 9% were IDPs living in communities where they outnumbered residents and 5% were IDPs living in the minority. Residents living in communities with no IDPs represented 11% of the sample, 30% were residents in communities where IDPs are in the minority and 7% were residents in communities where IDPs outnumber residents.

Assessment Survey Sites in North, West and South Darfur



1.3 General results

Security is clearly the main constraint impeding both residents and IDPs to conduct their usual livelihood activities, including food production (cultivation and livestock raising) and income-earning activities (sale of own production, seasonal migration, remittances). The presence of large numbers of IDPs is putting a serious strain on the availability of land, grazing areas, water for animals and humans and the labour market. This affects both residents and IDPs living in these communities.

There are no indications that the conflict will recede in the foreseeable future. The Darfur Peace Agreement has not succeeded in bringing about peace and on the contrary, heightened tensions, particularly in North and West Darfur. Attacks on humanitarian workers have also increased since May 2006, severely jeopardizing the ability of humanitarian agencies to reach the most vulnerable people in need of assistance.

The impact of the ongoing conflict was reflected in the assessment results: IDPs displaced for less than a year were found in North (38%), South (17%) and West Darfur (8%). Displacements during the past year had occurred in about half of the communities in North and West Darfur, compared to a quarter of communities in South Darfur, reflecting the more intense conflict in those regions. At the same time, more than two thirds of communities in Darfur reported the limited return of former IDPs, though the number of households concerned was low, at 10% of all residents.

There were slightly more female-headed households among IDPs (25%) than residents (19%). Female-headed households were found to be worse off in terms of income generation, security (for water, food and firewood collection) and ability to cultivate or own livestock. Female-headed households, and households whose head was illiterate, were more likely to have poor food consumption patterns[3]. About 64% of the male heads of household were literate compared to only 13% of the female heads. Male-headed households owned, on average, twice as many animals as female-headed households. A similar proportion of male- and female-headed households received food aid since January 2006, however.

Accordingly, there were slightly more female-headed households among those severely food insecure and at high risk to lives and livelihoods (24%), than in the food secure/low risk households (18%). In addition, more than half of the female-headed households were severely food insecure and less than one quarter were food secure, compared to 45% and 30% respectively of male-headed households.

The average size of the household in Darfur was 6.2 members.

1.4 Mother/ Child Health and Nutrition

1.4.1 Mother/ Child Health and Nutrition Results

The prevalence rate of global acute malnutrition (GAM) and severe acute malnutrition (SAM) showed no significant differences from the 2005 survey. GAM rates were highest in North Darfur (16%). They did not differ from 2005 in North and South Darfur but were significantly increased in West Darfur although the level remained below the emergency threshold of 15% and was the lowest of the three states. There were no differences in results between boys and girls except in South Darfur where boys were more likely to be acutely malnourished than girls. The prevalence of acute malnutrition was significantly higher amongst children aged 6-29 months compared to children aged 30-59 months.

With regard to the nutritional status of residents and IDPs in Greater Darfur, there was no significant difference in GAM prevalence. In North Darfur, however, residents had a significantly higher rate of malnutrition than IDPs. This may be linked to the higher proportion of residents in North Darfur, and to differences between conditions in the camps and those in the open population, particularly with regard to access to safe sources of water and improved waste disposal facilities.

Stunting, reflecting chronic malnutrition, was high at 36.6% overall. Results showed that this is probably due to the poor health status of children caused by diarrhoea related to limited access to safe water and sanitation. Wasting prevalence was 15.6% for those consuming unsafe drinking water and 11.5% for the others, however it should be noted that overall there was a 10% increase in the proportion of households reporting access to a safe source of drinking water compared to 2005. There was a slightly higher prevalence of wasting in households using traditional latrines compared to improved latrines. Less than one quarter of

[3] Based on dietary diversity and food consumption frequency.

all households were using improved latrines. Traditional latrines were more frequently used in North Darfur than in South or West Darfur. Residents are more likely to obtain water from unsafe sources and use traditional latrines than IDPs, which may explain trends observed of higher prevalence of child malnutrition among residents as compared with IDPs. IDPs also benefited from better coverage by supplementary and therapeutic feeding programmes, particularly in camps.

Importantly, household food consumption patterns and the overall household food security situation were not statistically associated with child malnutrition. Food insecure households were more likely to depend on food aid for consumption and it may be that food aid contributed to protect children's dietary intake. The results indicate that a high dependence on selling food aid for income generation was *not* associated with higher risks of acute malnutrition. However *chronic* malnutrition tended to be more widespread among children of these households – i.e. children of displaced, settled, food aid-reliant (poor) households. *Acute* malnutrition was higher in households with resident characteristics – households with higher numbers of animals, reliance on selling crops. This corresponds with the seasonal timing of the survey, which was carried out during the hunger gap: residents would still be feeling these seasonal effects whereas IDPs do not with the regular supplies of full rations of food aid. These results also reflected State differences: a higher proportion of acute malnutrition was recorded in North Darfur, where there are higher numbers of resident households, and where there have been problems with low rainfall, livestock disease and insecurity affecting market/ safe water access. South Darfur (mainly IDPs in camps) recorded the highest rates of chronic malnutrition. In West Darfur, however, the results show there are the highest number of households at risk to lives and livelihoods, a probable consequence of the high insecurity experienced by IDPs and residents alike.

The prevalence of reported illness in children (fever, cough, bloody/ watery diarrohea) was lower than in 2005. Measles vaccination coverage results were similar to those in 2005 and are insufficient to ensure community-level protection. Vitamin A supplementation had been received by almost 40% of children aged 6-59 months. The primary caretaker of children below 2 years of age was their mother, with about 10% inadequately cared for (by young siblings or by no one). Breastfeeding rates for babies less than 6 months of age was very high although only 60% of these mothers were breastfeeding exclusively.

According to key informants, Supplementary Feeding or Therapeutic Feeding Programmes could be accessed in 30% of the communities. Their availability was much higher in West Darfur (56% SFP, 52% TFP) than in the North (23% SFP, 29% TFP) and South Darfur (17% SFP, 20% TFP). Camps and communities with an IDP majority had much better access to feeding programmes than areas without IDPs. Both the availability of selective feeding programmes and enrolment of malnourished children in SFP or TFP were much lower than in 2005 in the three states.

Based on assessment results, an average of 10% of pregnant and lactating women were malnourished. Rates were highest in North Darfur at 14.5%. About 16% of mothers of children 6 to 59 months of age in the sample were pregnant at the time of the survey. More than half of all mothers interviewed were breastfeeding. Only 19% of mothers had received vitamin A following the birth of their last child. There were no differences in results between IDPs and residents. Iron-folate supplementation during pregnancy was reported by 31% of women overall. A slightly higher number of IDPs had received iron-folate than residents. Bed net usage by mothers (to combat malaria) was 44% (48% for pregnant women) overall, but there were significant differences between IDPs (37%) and residents (61%), possibly because of smaller IDP houses or because IDPs were unable to carry their bed nets with them when they were displaced.

Physical access to health facilities was found to be better in West Darfur than in South and especially North Darfur. More than half of the communities in North Darfur were located more than 2 hours walk from a health facility. As expected, IDPs living in camps with access to free healthcare were generally dedicating less of their monthly expenditures on health than residents.

1.4.2 Mother and Child Health and Nutrition Recommendations

Programmes aiming to reduce and/or prevent malnutrition must focus on increasing access to safe water and sanitation, and reducing disease incidence, particularly diarrhoeal disease, respiratory infections and fever. Health and hygiene promotion should be strengthened to include all populations, resident and non-resident, and be supported by provision of appropriate non-food items such as water containers, blankets, mosquito nets, where needed.

Nutrition programmes should focus mostly on children under the age of three years, since this is where the majority of acute malnutrition is found. Caring practices are a key factor in young child nutrition and health status: exclusive breastfeeding must be promoted and fully explained to mothers and midwives. Education on child caring practices should include other family members, particularly fathers, grandmothers and eldest daughters.

Routine immunisations and supplementation of vitamin A for all children should be strengthened, and health clinics supported to provide these vital services. Campaigns to maintain high levels of measles and polio immunisation are also necessary in situations of conflict such as Darfur.

Outreach and early case finding of malnourished children in the communities should be strengthened where possible, to improve coverage of therapeutic feeding programmes, especially in North Darfur. Supplementary feeding programmes should focus more on education for caretakers and be used as an opportunity to raise awareness of appropriate health, hygiene and caring practices, rather than simply as a distribution of food. Outreach should also be expanded to ensure early detection and treatment of moderately malnourished children and women.

Interventions to increase supplementation of pregnant women with iron/folate and to provide post-partum vitamin A to new mothers should be supported and expanded to include resident as well as displaced groups.

Routine surveillance activities should be strengthened to allow early detection of changes in nutrition and health status, and to remove the need for large annual surveys. Such surveillance systems should be integrated into government structures and include food security monitoring indicators.

1.5 Food availability, security and food/ non-food targeting results

1.5.1 Food availability results

Assessment results showed that there was no significant difference between the number of households who cultivated this year compared to 2005. Just over half of all households had cultivated in 2006, a low result given that more than 75% of the population normally rely on agricultural production in Darfur. Only 24% of IDPs cultivated this season compared to 80% of residents. IDPs living in communities cultivated more than those in the camps. The average area cultivated by households during this season was less than half the area of last year. By comparison, trends in vegetable production showed an increase. Less than half of the households owned a home garden (*jubraka*), however. Vegetable production by residents was more frequently undertaken in communities where many IDPs were present. A similar proportion of IDPs and residents were cultivating cash crops (groundnuts, watermelon and other vegetables), reflecting the preferences of IDPs with limited acreage at their disposal for income generation.

With regard to crop production constraints, insecurity, limitations in accessing agricultural inputs such as seeds, tools and animal traction and problems with weeds, pests and crop diseases were cited. Additionally, poor rainfall/ dry spells were a problem in North Darfur where rains were late and in some places, badly distributed.

Access to markets for agricultural inputs and produce was much better in West Darfur than in South Darfur, and worse in North Darfur, reflecting differences in size and population density

between the three states. Most communities indicated that trade for agricultural inputs and produce has decreased compared with 2005, particularly in North and South Darfur. About 30% of households cultivating or gardening were located more than 2 hours walk from agricultural markets.

The proportion of households engaged in livestock production was similar to 2005 except for the ownership of donkeys, which increased. Livestock Tropical Units (LTU) ownership was found to be lower than the average of 3-5 LTU per household considered sufficient to support livelihoods and food security. More than half of the households in South Darfur, a quarter of households in North Darfur and a third of households in West Darfur did not own any animals. Residents owned on average a larger number of animals than IDPs living in communities. As expected, IDPs in camps owned the lowest number. IDPs displaced between 1 and 3 years ago were the least likely to own animals compared to those displaced before the conflict and those displaced less than one year ago.

The main constraints to raising livestock were linked to insecurity and violence, including looting. This problem was particularly acute in West Darfur, and slightly less in North Darfur. In North Darfur, low pasture quality and quantity as well as animal disease were problems most frequently mentioned. Most reported that the situation has got worse since 2005.

Food prices on rural markets were said to have increased compared to last year at this season, even though this was not confirmed by market prices collected from the three main state town markets. The number of traders seems to have decreased, reflecting lower market activity. Physical access to markets is particularly difficult in North Darfur, and easier in West Darfur.

IDPs and residents living in communities with many IDPs were less likely to access income earning opportunities, a reflection of the pressure caused by the IDP influx on host communities. The primary source of income was waged labour for 45% of the IDPs and 29% of the residents. Other income sources cited included selling firewood, cereals and food aid and petty trade. The main constraints to income generation for over half of households were cited as insecurity and limited employment opportunities.

1.5.2 Food Security results

The main coping mechanisms of the population are a combination of: (i) reliance on food aid both for direct consumption and as a source of income; (ii) expanding the sources of income and the level of income, by diversifying the income-earning base and sending members out in search of labour and income; (iii) indebtedness to relatives, neighbours and traders, mainly to purchase food; and (iv) decreasing the amount of food consumed. These mechanisms can be considered as relatively efficient in maintaining the *status quo* but they have a cost and short- and longer-term implications on nutrition and economic security.

Three household groups were defined on the basis of their current food consumption pattern (dietary diversity and food consumption frequency), their dependence on food aid for their food intake, and their level and share of food expenditures. These three categories were defined as severely food insecure, moderately food insecure and food secure.

Compared to 2005, the proportion of households with a poor food consumption pattern is twice as high. Residents living in communities with a majority of IDPs were less likely to have acceptable food consumption than the other residents. Almost half of the households (46%) were severely food insecure and at high risk to lives and livelihoods in the short-term, 24% moderately food insecure and at medium risk and 30% food secure and at low risk.

The food security situation and livelihoods of IDPs are worse than the residents, particularly for IDPs in camps and in communities where they outnumber the residents.

- 58% of the IDPs were severely food insecure and at high risk in the short-term, 25% moderately food insecure and at medium risk, and 17% food secure.

- 34% of the residents were severely food insecure and at high risk, 24% moderately food insecure and at medium risk, and 42% food secure and at low risk.

IDPs face more severe limitations with regard to food security constraints. A significant proportion of residents are also affected by food insecurity and risk to their livelihoods however, especially those living in communities where IDPs are in the majority. This is due to increased competition for limited natural and economic resources. Insecurity is clearly the biggest constraint to the livelihoods of both residents and IDPs, including crop cultivation, livestock production and waged labour.

1.5.3 Food targeting results

Of the households who did *not* receive food aid in August, almost 30% were food insecure and at high/medium risk to lives and livelihoods *at that time*. This can be taken as an approximation of the exclusion error of the food aid programme, but caution is required as food aid distributions coverage in August 2006 was particularly low due to insecurity impeding access to several hundred thousand beneficiaries in North and South Darfur. Moreover, due to insecurity, beneficiaries in some locations received double rations in July.

Of the households who *did receive* food aid in August, 77% were food insecure. This can be taken as an approximation of targeting efficiency, but again this is valid only for *that point in time*. The high proportion of food insecure beneficiaries also confirms that food aid alone is not sufficient to improve their food consumption and that it cannot be expected to resolve food insecurity if it is not accompanied by additional interventions in the political, economic, health, education and other social domains.

Accordingly, 23% of the households who *received* food aid in August 2006, were food secure. While this could be interpreted as an inclusion error for *at that time*, it should not be concluded that these food secure beneficiaries do not need food assistance. The assistance may be essential to protect food security and livelihoods, especially if unpredictable changes caused by the conflict and/ or environmental conditions impede current livelihood strategies.

1.5.4 Non-Food Aid/ Agricultural targeting results

About 20% of households reported that they received farming tools and 36% seeds, but less than 2% benefited from veterinary services. Residents were more likely to have received these services than IDPs, except in communities with no IDPs where fewer residents benefited from such support. Only one quarter of the households regularly cultivating benefited from seed distributions, but 68% of those with a *jubraka* (home garden) received seeds. The seed distribution had a positive effect, doubling the area cultivated in those households.

About 40% of households received soap, 30% blankets, jerry cans, plastic sheeting or sleeping mats, 23% buckets, 15% mosquito nets, and 7% cooking utensils. IDPs were more likely to benefit from this assistance than residents, especially those in camps. Residents living in communities with a majority of IDPs were more likely to have received non-food items than the other residents.

1.5.5 Food availability, security and targeting of food/non-food recommendations

General food distributions remain the best option to assist food insecure households considering (i) the current security situation that prevents the implementation of recovery programmes on a large-scale, (ii) the limited livelihoods options of the people, and (iii) the potential of food in-kind to improve the poor/borderline food consumption of more than half of the households. However food aid alone is not sufficient to ameliorate significantly and on the longer-term the diet and food security situation of affected households, especially given that a large part of the ration is being sold to acquire other foods or cover other essential expenses. To compensate for this, the levels of food assistance could be increased (though this is probably not cost-efficient) or food aid be complemented with cash/vouchers transfers and other assistance (agricultural inputs in particular) wherever the security conditions allow.

In accordance with expressed community priorities, consideration should also be given to the provision of food aid as food/cash/vouchers-for training for skills building and development of human capital, improvement of child feeding and care practices, and food/cash/voucher-for-work for the restoration of basic infrastructures such as roads, houses, and schools. Options for these programmes should be explored on a continuous basis and implemented on a pilot basis as soon as conditions allow, including in camps and in communities with large numbers of IDPs.

In terms of targeting, adjustments of the assistance should be made to: (i) account for the improvement of the food security situation that will take place with the forthcoming harvest; and (ii) minimize exclusion errors (priority) and inclusion errors. On an 'administrative' basis, targeting priorities are: (1) IDP camps, (2) communities where IDPs out-number the residents, (3) communities (with or without IDPs) facing security problems or suffering from specific climatic, pests/diseases or agro-ecological difficulties, (4) communities with small numbers of IDPs, and (5) communities with no IDPs and no major security problems.

Household targeting is currently not recommended in view of the potential internal and external security risks and low cost-benefits expected, however some criteria can be suggested should the conditions allow at a later stage.

There should be some flexibility to adjust the level of the ration at some periods of the year to account for changes in the food security situation linked to the harvest or to the security situation enabling or impairing households to carry out their livelihood activities.

The participation and membership of women in Food Aid Communities should be enhanced, in accordance with WFP's gender policy.

School feeding is already envisaged for up to 150 000 children, as a substitute to general food distributions in communities where the overall food security situation has significantly improved. Assessment results indicate that implementation of school feeding would have a strong impact in North Darfur where nutritional results indicated that children are more malnourished than in other States but where the households are generally considered more food secure in terms of food access and self-sufficiency. Close monitoring of the food security situation in the targeted communities is recommended. In addition, considering that 10% to 30% of food aid beneficiaries were selling part of their ration to meet education costs, the possibility to expand school feeding programmes to communities where households do benefit from general food distributions should also be considered.

Agricultural support should target categories of food insecure households according to specific needs and livelihoods. The agricultural response should prioritise appropriate interventions on crop and vegetable production, livestock services and supplies, income generation and natural resource management, and take into consideration cross-cutting issues such as gender aspects, environmental and natural resource protection and rehabilitation, and local capacity building. Beneficiaries from agricultural and other food security and livelihoods assistance projects should be involved in the design, implementation and impact evaluation of interventions.

1.6 Recommendations for Monitoring and Evaluation

Costly, large-scale staff- and time-intensive annual EFSNAs in Darfur should be replaced by more regular and consistent monitoring of the food security and nutritional situation, complemented by punctual, purposive assessments for cross-checking and/or improved understanding.

Monitoring systems and punctual assessments should:

- Integrate political factors and assess their implications for operations and objectives, including on the longer-term (e.g. compensations for the damage incurred during the conflict, land occupation issues, free population movements);

- Collect information on the impact of local food purchases on market prices and local production, transportation infrastructure and transporters;
- Monitor changes in food and income sources, purchasing power and food consumption patterns, as well as on market cereal prices and harvest.

1.7 Conclusions

At the time of the survey, 2.65 million people in Greater Darfur, including about 1.64 million IDPs and 1.01 million residents, were severely or moderately food insecure and at high or medium risk to lives and livelihoods. The number of people requiring assistance is not expected to vary significantly even after taking into account the prospects of the forthcoming harvest, due to the limited number of *food insecure* households who have planted a significant acreage of cereals this season.

Assuming an '*optimistic*' scenario by which only a third of farmers may be unable to harvest properly due to poor access to their fields and/or damage to their cereal crops, or a 'pessimistic' scenario by which half of the farmers may be unable to harvest properly, there will still be between 2.33 and 2.52 million food insecure people requiring immediate assistance. An additional 110,000 to 300,000 food insecure people may be eligible for a reduced level of support during the lean season.

In addition, 290,000 to 310,000 food secure people who have not planted much acreage for cereals this season (less than 2 ha) or who may be unable to harvest or conduct their livelihood strategies properly due to insecurity, may require support later on in the year, and contingency plans should be prepared to respond to a possible degradation of their food security situation.

The estimations of the proportions and numbers of IDPs and residents in need for full or decreased food rations, according to their place of residence (camps, communities with a majority of IDPs, communities with a minority of IDPs), are shown in the tables in Annex 6 taking into account: (i) the prevalence of food insecurity, and (ii) the proportions of households expected to harvest a significant acreage assuming a '*pessimistic*' scenario (half of the farmers able to harvest properly).

Food aid is currently a crucial resource for both IDPs and residents. While food aid is essential, improving security, establishing and maintaining peace, is the number-one priority to improve food security and protect lives and livelihoods of the population.

It has also become urgent to address the high risk of environmental degradation of natural resources, given that the main source of income for 15% of households is the sale of firewood.

An estimated 460,000 vulnerable households (IDPs and resident/ host communities) need support to resume their productive staple crop and vegetable production, restore and protect livestock assets, diversify their sources of income and rehabilitate natural resources bases. Agricultural support should be coordinated and complementary to other sectors' interventions to maximize the impact on the beneficiaries and programmes' cost effectiveness.

Chapter 2: BACKGROUND

2.1 Background to the Darfur conflict

The Greater Darfur region of Sudan consists of 3 states (North, West and South Darfur) covering an area of 511 412 km^2. The total population in 2005 was estimated at 6.76 million, of which approximately 81% reside in rural areas. The conflict in Darfur began in February 2003 with an insurgency campaign launched by the rebel Sudan Liberation Movement/ Army (SLM/A) and counter-insurgency by the Government of Sudan (GoS). It quickly generated into widespread insecurity and displacement. As of August 2006, the international community estimated the total number of conflict-affected people at 3.74 million.

The conflict results from several long-held grievances and underlying causes including[4]:

- the marginalisation and neglect of Darfur by the central government for decades;
- the marginalisation of Arab nomad tribes within Darfur;
- national and international strategies of arabisation;
- drought and competition over limited natural resources within Darfur, contributing to the impoverishment of the population;
- disagreements on land tenure rights; and
- previous tribal conflicts between Fur and Arab, Zagahwa and Arab, and Masalit and Arab in the late 1980s and 1990s, largely linked to the above reasons.

As described in a Livelihood study[5] commissioned by WFP in June 2006, the conflict has resulted in severe disruptions to livelihoods. Looting of remaining livestock, violence and the restriction of movement of IDPs and some residents has continued over 2004 and 2005. The success of the African Union (AU) mission launched in 2005 in contributing to a secure environment and the protection of civilians has been limited.

A Humanitarian Ceasefire Agreement was adopted in May 2004, and one-year later, the Darfur Peace Agreement (DPA) was signed by some factions of the rebel movement and the GoS on 5 May 2006. Despite the signing of the DPA, the security situation in Darfur has deteriorated.

2.2 The food security and livelihood context in Darfur

Most households in Darfur depend on agriculture and livestock raising[6] for their survival. For agro-pastoralists, the hunger season occurs during the rains between late June and late September when labour requirements are highest but food availability the lowest. The main harvest takes place during October and November. In “normal” years, although yields are relatively low (due to unreliable rainfall, poor soils and low-input agriculture), many households are able to cope with “expected” seasonal stresses.

Nearly all households attempt to diversify their incomes by engaging in trading, long-distance labour migration, remittances, gathering and consumption of wild foods, and hunting. The disruption of households’ livelihoods and coping mechanisms as a result of the current conflict has contributed to increased food insecurity and malnutrition.

[4] V. Tanner. ‘*Rules of lawlessness. Roots and repercussions of the Darfur crisis*’. Inter-agency paper of the Sudan Advocacy Coalition, January 2005
[5] M. Buchanan-Smith, S. Jaspars: ‘*Conflict, camps and coercion: the continuing livelihoods crisis in Darfur*’, WFP, June 2006
[6] ‘*Markets, livelihoods and food aid in Darfur: a rapid assessment and programming recommendations*’, FAO/EC/USAID Assessment Report, May 2005

Chapter 3: OBJECTIVES AND METHODS

Emergency Food Security and Nutrition Assessments (EFSNAs) were conducted in Darfur in September 2004 and September 2005. This report contains the results of a similar assessment carried out in September 2006 in the three States of Darfur.

3.1 Main objectives

The main objectives of the 2006 EFSNA were to:

- Provide updated information on the food security and nutritional situation of the IDP and resident populations affected by 3 years of conflict in Darfur;
- Compare the food security and nutrition situation among the conflict-affected populations to that of 2004 and 2005
- Re-assess access to services and coverage of assistance programmes among the conflict-affected population in Darfur; and
- Recommend immediate and medium/ long-term interventions to save lives and support livelihoods.

3.2 Specific objectives

As in 2004 and 2005, the 2006 EFSNA was specifically designed to provide statistically representative results on the food security and nutritional situation of children aged 6-59 months and households in each of the three Darfur states as well as for the overall conflict-affected populations in Darfur. For some indicators, particularly food security-related, comparisons between population groups such as residents, IDPs in camps, and IDPs outside camps were also desired.

Specific objectives included:

3.2.1 Nutritional objectives

- To estimate the prevalence of acute and chronic malnutrition among children 6-59 months of age;
- To estimate the coverage of vitamin A supplementation among children 6-59 months of age;
- To estimate the coverage of supplementary feeding programmes (SFPs) and therapeutic feeding programmes (TFPs) for malnourished children in communities;
- To estimate the prevalence of maternal malnutrition using the mid-upper arm circumference (MUAC) among women of reproductive age;
- To identify the main food security and livelihood factors related to malnutrition;
- To recommend interventions to improve the nutritional situation;

3.2.2 Health and public health environment objectives

- To estimate the prevalence of child illness (acute respiratory infection, diarrhoea, measles and fever) among children 6 to 59 months of age;
- To estimate the coverage of measles immunization among children 6 to 59 months of age;
- To estimate the proportion of households with access to improved water sources and sanitation;
- To identify possible constraints to water and firewood collection;
- To estimate the Under-5 Mortality Rate (U5MR) and the Crude Mortality Rate (CMR), and main causes of death;

3.3.3 Food Security Objectives

- To forecast the 2006 cereal harvest at Darfur state and crisis-affected Darfur levels, based on different climatic and security scenarios;
- To assess the crop cultivation patterns at household level among IDPs and residents, and main difficulties encountered with farming;
- To estimate livestock ownership by IDPs and residents, and main difficulties faced with animal raising;
- To assess economic access to food at household level, and in conjunction with changes in market prices and market performance;
- To describe the current food consumption patterns and estimate the proportion of households at short-term risks to lives and livelihoods;
- To identify the main factors associated with household food and economic insecurity in the short and longer-term;
- To estimate the coverage of food and non-food assistance programmes;
- To determine needs for immediate food and non-food assistance and suggest modalities of delivery and targeting criteria;
- To recommend medium-term interventions to improve the food security and livelihoods of the conflict-affected populations.

3.3.4 Gender

- To examine the different impacts of the emergency situation and the humanitarian operation on women and men.

3.3 Partnership

The EFSNA was conducted by a number of partners, including WFP, UNICEF, FAO, the United States Center for Disease Control and Prevention (CDC) and the GoS (Ministries of Health and Agriculture and the Humanitarian Aid Commission). Several NGOs seconded staff for the household and community surveys, including Action Contre la Faim (ACF), African Humanitarian Agency (AHA), Catholic Relief Services (CRS), Concern, German Agro Action (GAA), GOAL, International Medical Corps (IMC), Practical Action, Relief International, Save the Children USA (SC-US), the Sudanese Office (SUDO) and Tearfund. The International Committee of the Red Cross (ICRC) provided logistical support in some areas.

3.4 Assessment Methodology

Field data was collected from 2 to 24 September 2006. The timing of the fieldwork coincided with the two previous EFSNAs so as to enable comparisons. The month of September represents the peak of the hunger season and disease incidence in Darfur.

3.4.1 Sampling

3.4.1.1 Sample size and sampling process for the household survey

Sample size estimates were made to ensure that key indicators would be statistically representative at the individual Darfur state and/or overall population level. Sample size was calculated with 0.05 statistical significance (95% confidence interval-CI), for key indicators (see table 1 below). Based on the EFSNA 2005 and NGO surveys, assumptions were made that each household would have an average of one child aged 6 to 59 months, a household size of six members and one mother. Prevalence estimates were based on previous surveys carried out by various agencies in Darfur. The estimate for acute malnutrition of 20% was based on recent surveys conducted in Darfur and was chosen to ensure an adequate final sample size.

Because two-stage cluster sampling was used, it was necessary to increase the sample size by a factor that would allow for the design effect. Design effects were estimated using the

EFNSA in Darfur in 2005, and previous surveys conducted in Darfur in 2005. The desired precision was based on the estimated prevalence, as well as consideration of relevant cut-offs for programmatic action.

The primary objectives of the household survey were to measure the nutritional status of young children, to examine coverage of essential nutrition and health programmes and to measure the level of household food consumption. Additionally as recommended by the Ministry of Health (MoH) National Nutrition Survey Guidelines, the survey also included an objective to estimate the crude mortality rate with as much precision as logistically feasible.

Table 1: Nutrition Sampling Process

Indicator	Target Group	Estimated prevalence	Design Effect	Precision	Required sample size		
					Individual	+ 10% non-response rate	Households
Nutrition							
Acute malnutrition	6 to 59 months	20%	2	±5%	492	546	546
Vitamin A	6 to 59 months	50%	2	±7%	392	435	435
Measles vaccination coverage	6 to 59 months	60%	2	±10%	185	205	205
Mortality							
Crude mortality rate	All household members	0.9/ 10,000 per day	1.6	±5%	1033	1147	191
Under-5 mortality rate	All children 6 to 59 months	2/10,000 per day	1.32	±1%	473	526	526

Based on a CMR of 0.9 per 10 000 per day, a CI 95%, a precision of 0.05, a design effect 1.6 and calculation of rates for a 214-day recall period (Eid Al Adha), a total of 191 households per state were required. The number of households required assumes a household size of 6 persons. The CMR estimate for sample size calculations was based upon the 2005 EFSNA and various surveys conducted by NGOs in 2006. Additionally, the design effects for both CMR and U5MR, 1.6 and 1.3, respectively, were based upon the EFSNA 2005 survey. The U5MR was estimated to be higher at 2 per 10 000 per day, based upon surveys conducted in 2006 and the increased vulnerability of this population. A sample size of 526 households per state would have been required based on a rate of 2 per 10,000 per day. Due to the extended recall period, it was feasible to estimate the U5MR at the state level. The recall period exceeded the originally intended recall period of 180 days (six months) due to the difficulty of finding a specific reference date widely recognized across all states of Darfur.

The size of the household sample required for the statistical comparisons of the food security situation between states could not be calculated in the same way, because there is no single food security indicator that can represent the multiple dimensions of food security and be used as a basis. However, considering that a minimum of 250 households is generally recommended for the purpose of food security analysis, the sample size of 750 households per state was deemed sufficient to allow food security comparisons between states and even at lower levels of disaggregation (between population groups).

3.4.1.2 Sampling procedure for the household survey

Sampling universe

The sampling universe for this survey consisted of approximately 3.74 million people residing in 400 locations in all three states of Darfur identified as crisis-affected by the UN, and WFP

beneficiary data from August 2006. The list was augmented by additional data from ICRC. The list comprised IDPs in camps, IDPs in host communities and residents considered crisis-affected.

It is important to emphasize that the survey does not represent the whole of Darfur, as some populations (unaffected populations, nomadic populations and others) were not included in this sampling frame. For a detailed map of survey sites in North, West and South Darfur, please see annex 5.

Selection of primary sampling units (clusters)

Conditions among the crisis-affected population selected for this survey in Darfur would be expected to vary within each state, particularly given the inclusion of residents, IDPs living in camps, and those not living in camps in the sample. Given the potentially high intra-state variability in the outcomes of interest for the survey, it was decided to include 30 clusters from each of the three states in the sample (to reach a total of 90 clusters for the overall estimate).

Five additional clusters per state were selected from the remaining locations after the initial 30 clusters were drawn. These clusters were only to be assessed in the event that the initial clusters were inaccessible due to insecurity. CDC prepared the list of the 90 clusters plus the 15 replacement clusters selected for the survey on the basis of probability proportional to size (PPS).

Population data were updated at the field level in each state at the time of the survey.

Second stage: selection of sampling (cluster location within chosen community)

Once survey teams arrived in each state, they met with NGOs and local officials to try to obtain additional information about the populations included in the sample.

To determine the actual location of clusters within the selected locations, a sampling proportional to size (PPS) method was used. The goal was to reach a population size of 100 to 200 households from which to choose the final 25 households. In towns and large camps, several stages were sometimes required. Two main methods were used to achieve PPS sampling, depending on the situation:

- Geographical segmentation: This method involved the creation and use of a map of the area and the division of that population into multiple segments. A cumulative population list by sector was compiled, and a random number table used to select the cluster location. If each sector was of equal size, one sector was chosen using a random number table.

- Population density: In some areas, particularly semi-urban areas and very dense camps, it was difficult to get accurate population estimates within the local areas. In such cases, through consultation with local leaders or NGO staff, the relative density of population/ area was plotted on a map of the area. Using these densities, sections of the village were then selected using PPS methods. Once a manageable unit was selected, systematic random sampling was used to select the households.

If the selected area was small, less than 100 households, it was combined with an adjacent area to ensure an adequate sample.

Selection of the basic sampling unit (household)

To ensure that the required number of children to estimate the prevalence of acute malnutrition (546) was met, a decision was made to select 25 households in each of the 30 clusters.

Once the cluster location was selected, the Team Leader walked its boundary with a community leader. The sampling interval was determined by dividing the total number of

households in the cluster by 25. The team leader then identified each selected household, and after obtaining consent, marked the household with tape or chalk.

All chosen households were selected, whether or not they contained a child 6–59 months of age. If household members were not present, community members were asked to bring them to the house. Households were visited at least three times in an effort to identify household members, unless security or logistic constraints prohibited the amount of time spent in a cluster. Basic demographic information was taken from an adult household member, if available. If the members had departed permanently or were not expected to return before the survey team had to leave the village, the household was skipped and not replaced. Where possible, survey teams visited the cluster location on two successive days.

3.4.2 Definitions

- *Household*: A group of people who routinely ate out of the same pot[7].
- *Internally Displaced Persons (IDPs):* those persons not residing in their usual place of residence, and considered themselves as displaced in a camp setting or residing within a larger community. Refugees from Chad were also included within this category.
- *Residents*: persons who reported that they were living in their usual place of residence. Returnees were also classified as residents.
- *Malnutrition:* Z-scores were used in most analyses of anthropometric data on children. However, percent of median is used in many situations where a simpler calculation is needed, such as screening for admission to feeding programs. Therefore, for purposes of comparing the results of this survey to other data, the prevalence rate of acute malnutrition is also presented as percent of median. Relevant definitions are presented in Table 2 below. Z-scores and percent of median were derived from a comparison of children in the survey sample to the NCHS/CDC/WHO reference population.
- *Mid-upper arm circumference (MUAC) of women*: Some supplementary feeding programmes in Darfur use mid-upper arm circumference as a screening tool for feeding women. Although the cut-offs used for targeting vary, the main cut-off used in Darfur is 21.5 cm. Child MUAC tapes were used due to unavailability of adult tapes, and measurements were taken only for women with MUAC less than 25 cm.

Table 2: Definition of malnutrition

Type of malnutrition	Anthropo-metric index	Degree of malnutrition	Definition using Z-score	Definition using percent of median
Acute	Weight-for-height	None	≥ -2.0	≥ 80%
		Moderate	≥ -3.0 but < -2.0	≥ 70% but < 80%
		Severe	< -3.0 or edema	< 70% or edema
Global acute (GAM)		Moderate + severe	<-2.0 or edema	<80% or edema
Severe acute (SAM)		Severe	<-3.0 or edema	<70% or edema

3.4.3 Consent

All household members received a verbal explanation of the survey for both the household questionnaires, including anthropometry. At the beginning of each questionnaire was a paragraph requesting consent from the interviewee. Consent or refusal was recorded on the form by the interviewer. Households were informed that the survey was confidential and that their answers would not affect food distributions. Participation was voluntary and household members had the right to refuse to answer any or all questions, as well as anthropometric

[7] Some household members may have lived in different physical structures within the same compound. If they were not eating together, they were recorded as separate households. Members of a household were also not necessarily relatives by blood or marriage.

assessments. Household and mother/child consents were recorded on each questionnaire (see annex 3).

The questionnaire was administered to any adult household member (above 18 years of age, or *de facto* head of household or mother if younger than 18) present and willing to be interviewed, preferably the head of household and/or the mother of the child 6 to 59 months of age.

3.4.4 Information collected from households and communities (household questionnaire (See Annex 3))

3.4.4.1 Questionnaire sections

The household questionnaire[8] comprised four main sections:

- *Household demographics and data*
  - demographic data on the household's head and membership, and current status (IDP, resident, pastoralist);
  - deaths over the previous 8 months[9] and causes of deaths (to estimate the Crude Mortality and the Under-5 Mortality Rates);
  - movement of household members;
  - current living status (IDP, resident, pastoralist);
  - sources of water and firewood, responsibilities and constraints for their collection;
  - sanitation facilities;

- *Food security and livelihoods*
  - income sources;
  - constraints faced with animal raising, land cultivation and income-generation activities;
  - ownership of physical assets and of animals;
  - land cultivation;
  - indebtedness;
  - food expenditures over the previous week, and share of monthly food, health and other expenditures;
  - dietary frequency and diversity over the previous week, and main sources of food consumed;
  - coping strategies in front of food shortages; and
  - receipt of food and non-food assistance.

- *Maternal Health*
  - pregnancy and breastfeeding status
  - receipt of vitamin A and iron/folate (showing actual capsules or tablets)
  - feeding practices of infants below 6 months,
  - literacy level
  - income-generation activities
  - participation to decision-making on the use income
  - nutritional status (MUAC)

- *ChildHealth*
  - child feeding practices
  - health status
  - enrolment in therapeutic or supplementary feeding programmes
  - recent illness
  - measles and vitamin A coverage
  - anthropometric measurements (weight, height, oedema and MUAC).

[8] Questionnaires were translated from English to Arabic and administered in Arabic, the most commonly spoken language.
[9] The recall period of 8 months is longer than usual (6 months) for mortality surveys but was retained because it enabled to refer to the well-known festive event of *Eid* in the 3 states.

3.4.4.2 Mortality, child feeding practices and anthropometric measurements

Mortality

Mortality was assessed using the retrospective household census method. Respondents were asked to list all members living in the household at the time of the previous *Eid Al Adha*. This religious event occurred around January 11, 2006 in the Gregorian calendar. This event was chosen as it was well known to the population, even in isolated rural areas. Firstly, all household members living in the household at that time were listed by age and sex, with the head of the household listed first. The respondent was then asked where each person was at the time of interview. Possible choices were: alive and living in the household, alive and living elsewhere, missing, and dead. Births and deaths occurring in each household between this time and the date of the survey were recorded along with month of occurrence. Individual state-based local calendar of events were developed and used to determine ages of household members and dates of death (Annex 8). Cause of death was collected from the respondent.

Child feeding practices

Survey workers asked questions of each mother with a child 6 to 59 months of age in the household regarding breastfeeding practices, pregnancy, mother's enrollment in supplementary feeding, night-blindness during the most recent pregnancy and illness in the two weeks prior to the survey. For mothers with children 0 to 24 months of age, questions were asked regarding breastfeeding initiation and duration and infant and young child feeding practices.

Information was also gathered on each child 6 to 59 months of age from an adult household member (preferably the mother). Questions were asked regarding enrollment in selective feeding programs (therapeutic and supplementary), vitamin A supplementation, measles vaccination and recent illness. Vaccination records were reviewed where available. However, mothers' reports were also taken as evidence of vaccination against measles and receipt of vitamin A supplementation. To assist mothers and avoid confusion with polio vaccination, vitamin A capsules were shown.

Anthropometric measurement

Survey workers measured children's weight, height/length, and assessed the presence of oedema. Children were weighed to the nearest 100 grams with a UNICEF Uniscale. For children younger than 2 years of age or less than 85 centimeters (cm), length was measured to the nearest millimeter in the recumbent position using a standard height board. Children 85 to 110 cm were measured in a standing position. Oedema was assessed by applying thumb pressure to the feet for approximately 3 seconds and then examining for the presence of a shallow print or pit. MUAC was measured on all mothers in the survey using a MUAC measuring tape. Where facilities existed malnourished children and women were referred to therapeutic feeding centers for treatment of severe malnutrition (<70% weight-for-height percent of median) or to supplementary feeding programs for treatment of moderate malnutrition (>70% to <80% weight-for-height percent of median). A seasonal calendar was developed for each Darfur state in order to estimate child age as accurately as possible.

3.4.4.3 Community questionnaire/checklist

The community questionnaire was filled through discussions with community representatives including, to the extent possible, women and representatives of key groups (e.g. IDPs) and institutions (e.g. schools or health services). It focused on:

- population size and movements (departures, returns, arrivals);
- cultivation and animal raising patterns of residents and IDPs, and the main difficulties faced;
- current agricultural stage of millet, sorghum and groundnuts;

- changes in the number of local markets and traders involved in agricultural and livestock trade;
- access to health facilities and to primary school in the dry and in the rainy seasons;
- access to therapeutic or supplementary feeding programmes;
- food, livestock, fodder, firewood and water market prices (current and one year ago);
- levels of daily wages for unskilled labour;
- access and modalities of food aid distributions, including women's participation;
- short- and long-term priorities of residents and IDPs.

3.4.5 Gender focus group discussions

Taking into account extensive gender information collected in 2005, as well as logistics constraints, a total of 10 gender focus group discussions took place in 3 clusters in each state, and were limited to communities or camps where food distributions had taken place.

The topics focused on:
- Food Aid Committees and degree of participation of women;
- Women in decision-making and women's involvement in community or camp-based activities;
- Effects of WFP's food rations cuts on men and women, and coping mechanisms used;
- Changes in the proportions of polygamous and of women-headed households, and implications for women;
- Gender-based violence and protection issues; and
- Fuel-efficient stoves and food-for-training activities as potential solutions to firewood collection difficulties.

3.4.6 Darfur states and Greater Darfur cereal availability estimates

The time available for the survey did not permit extensive visits of cultivated areas to forecast the next harvest of sorghum and millet. Pending the joint FAO/WFP Crop and Food Supply Assessment Mission for Darfur in November 2006, tentative estimates were made by an experienced FAO staff who conducted interviews of MoA local staff on harvest prospects (areas planted, crop growth, rainfall pattern, expected yields) and visited central town markets in each of the 3 states to review price trends. The results of a pre-harvest rapid assessment[10] carried out in North Darfur by the Food Security and Livelihood Working Group from 15 August to 7 September 2006 were also used.

This information was complemented with satellite and market price data regularly gathered by the WFP Vulnerability, Analysis and Mapping Unit in Khartoum and used to estimate the forthcoming cereal harvest, losses and non-food uses, and the resulting "food availability gap" at the level of the Darfur states and Greater Darfur.

3.4.7 Enumerators, training and data collection

Four to 5 teams of enumerators were formed per state. Each team included a supervisor, a team leader, a community interviewer, 5 household interviewers, and 2 to 3 persons for anthropometric measurements. The WFP Gender Focal Point for Sudan and an assistant joined the teams for the gender-based focus group discussions.

The training had two components: a joint two-day training of the team leaders, followed by a four-day training of the team members in each of the three Darfur states. A total of 127 staff were trained. The training was conducted in English with translation in Arabic.

Emphasis was placed on sampling procedures for the team leader training, as they were responsible for this activity. Additionally, this training included piloting of the draft Household and Community questionnaires in the field and finalization of the versions that were used for the subsequent enumerators' training at state level. Training of the enumerators included a general presentation on food security and nutrition and their linkages. The individual

[10] "North Darfur Pre-Harvest Rapid Assessment Report". Food Security and Livelihood Working Group, September 2006

questions were reviewed for understanding of the rationale and possible answers through a classroom-based activity on the household and community questionnaires. Anthropometry was reviewed during a half-day training session. Field-testing occurred over two and a half days and was followed by extensive debriefing. Minor adjustments were made before the questionnaires were finalized and printed for the actual survey.

3.4.8 Data entry and analysis

Data entry clerks and supervisors participated in the enumerators' training in order to familiarize themselves with the questionnaires. Twelve staff (4 to 5 clerks and a supervisor per state) underwent an additional one-day training on data entry using specially designed Microsoft Access-based data entry software. Data entry took place simultaneously in the 3 states. Data entry was completed 2 days after the completion of the fieldwork, with an additional six days for data cleaning. The data files and questionnaires were transferred to Khartoum and merged for analyses.

Analyses of anthropometric indices were conducted in EpiNut, a module within Epi Info™. Analysis of all other variables from the maternal and child sections of the household survey was carried out in SAS version 9.1. Indicators of the precision of prevalence estimates, such as confidence intervals, for major health outcomes accounted for the cluster sampling used in selecting the sample for this survey. Tests of statistical significance included in this report were done using a chi-square test. A p-value <0.05 was considered to be statistically significant. A sample weight was associated with each record to account for the probability of selection and a post-stratification adjustment based on the population size of each camp/village. Analyses of the household and community variables were carried out using SPSS software.

3.4.9 Limitations

3.4.9.1 Population figures and sampling frame

All population-based sample surveys have potential limitations and biases. In emergency contexts, uncertainty usually exists about population estimates. As the conflict has become protracted and its effects (particularly on agriculture and trade) have spread much beyond the areas directly impacted, the definition of who and which communities are 'conflict-affected' is increasingly difficult to establish and somewhat arbitrary. This was the case in Darfur, however the potential bias introduced by such uncertainty is difficult to ascertain.

Population data were extracted from WFP and ICRC beneficiary lists but their accuracy is uncertain. The figures for both IDPs and 'conflict-affected' residents has kept increasing since 2003 due to continued clashes and displacement. The findings of this survey can only be generalized to the 3.74 million conflict affected people categorized as 'vulnerable' by the UN and whom the survey was designed to represent. While the survey used the most up to date population estimates from lists constructed by UNOCHA, WFP, and ICRC, survey findings cannot be extrapolated to other potentially vulnerable groups not included on those lists.

3.4.9.2 Security and physical access

At the time of the survey, many areas in Darfur were considered off limits to UN personnel due to the resurgence of conflict. Areas within each state were inaccessible under UN security rules and clusters could not be accessed in these locations[11]. The majority of inaccessible clusters were in West Darfur (3), North Dafur (3) as well as one cluster in South Darfur. When possible, these clusters were replaced by the designated replacement clusters drawn before the start of the survey (See Annex 7).

[11] For example, in North Darfur the sampling did not include any clusters in the triangle-shaped area north of Kutum, which is the most problematic area, both in terms of security and operationally. This may have impacted on the results obtained.

Insecurity forced almost all clusters in West Darfur to be accessed by helicopter, as well as a few in North Darfur. The use of helicopters posed logistical challenges and limited the mobility of teams and data collection time in the cluster. While most clusters were accessible by road in North and South Darfur, the curfews imposed by the UN security rules limited the time available in each cluster. Additionally, one cluster in West Darfur refused to participate in the survey.

3.4.9.3 Timing and duration

The EFSNA was timed in September in order to allow comparison with the previous EFSNAs in 2004 and 2005, and because it coincides with a particularly difficult period for household food security (pre-harvest) and health (rainy season). In order to minimize any changes in typical household consumption and expenditure patterns, data collection was completed before the start of *Ramadan* (the Muslim fasting season) on 25th September.

3.4.9.4 Nomads

Because of their low proportion relative to the total population (4%), the 2-stage cluster sampling process did not enable the collection of information on a sufficiently large number of nomads to be representative of this particular group (only 4 of the sampled households were pastoralists).

3.4.9.5 Enumerator and respondent bias

To minimize potential enumerator bias and measurement error, interviewers and anthropometrists underwent extensive classroom training and participated in field tests. Recall bias is important to consider in any retrospective survey of mortality. Due to the lack of a date that could be easily recognized across all three states towards the beginning of the previous 6 month recall period, a decision had to be made to use *Eid Al Adha*, a religious holiday approximately 8 months prior to the survey as the starting point for the recall date for the mortality section. This was longer than desired, but to help minimize the potential recall bias, and to help respondents remember when deaths occurred, specific local calendars were developed for each of the three states prior to the survey (Annex 8).

Cause of death was collected through self-reporting. There may be inaccuracies in the causes of death reported by respondents, influenced by the local perception of disease or the perception of health workers. The estimation of child's age in months also required close attention by the enumerator using the seasonal calendar.

Assurances were made during the introduction of the survey at both community and household level that information provided regarding household composition and recent deaths would not affect rations or receipt of non-food items. However, we cannot discount the possibility of respondent bias. Enumerators were instructed to introduce the assessment as a survey of the nutritional status of children and mothers and of the general living conditions rather than a 'food security' assessment in order to avoid influencing respondents' answers in the hope to receive food assistance or for fear that food aid would be removed. Despite this precaution, the visibility of WFP and other agencies staff and vehicles may have influenced respondents' answers. In some communities, the interviews included members from different ethnic or ideological groups, potentially making it difficult for some individuals to speak openly about issues.

With regard to food security, some questions may not have covered the full range of possible answers (for example simply having no land as a main constraint to cultivation). Proportional piling exercises on the 3 income sources may have caused difficulties when more than 3 answers were provided by the respondents.

Chapter 4. NUTRITION, FOOD SECURITY, HEALTH AND MORTALITY

4.1 Nutritional and Health Status of Children: Main Results

4.1.1 **Sample size**

Anthropometric measurements were taken from a total of 2,180 children, broken down as follows:

Table 3: Anthropomorphic Measurements

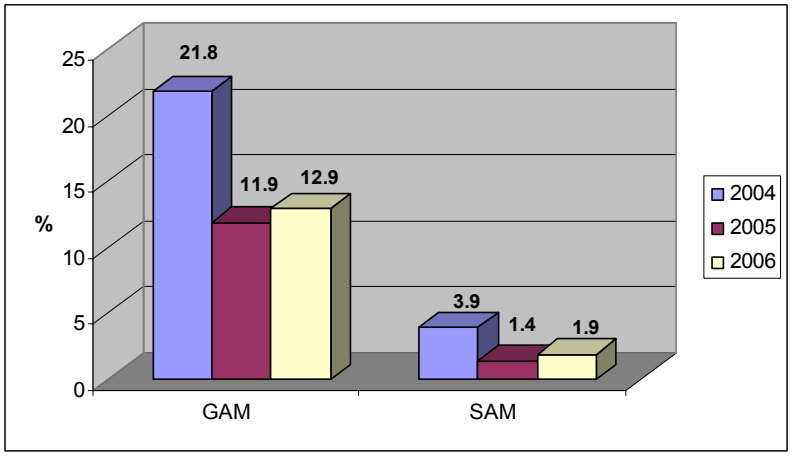
State	Boys	Girls	Boy:Girl ratio	6-11 months	12-23 months	24-35 months	36-47 months	48-59 months	Total
North	325	385	0.84	73	153	165	171	148	**710**
South	342	291	1.18	54	116	149	143	171	**633**
West	434	403	1.08	77	187	178	186	209	**837**
Total	**1101**	**1079**	**1.02**	**204**	**456**	**492**	**500**	**528**	**2180**

4.1.2 Acute malnutrition

The prevalence rate of Global Acute Malnutrition (GAM) was found to be **12.9%** [95% CI 11.1-14.8] and the prevalence rate of Severe Acute Malnutrition (SAM) was **1.9%** [95% CI 1.3-2.5]. All results are according to weight-for-height Z-scores and/or oedema. The mean weight-for-height Z-score was **-0.98**. There were 12 cases of oedema, or **0.5%** of the sample. Oedema constituted 29.3% of the identified severe malnutrition.

These results show no significant differences from the survey of 2005, and the Darfur-wide rates of malnutrition remain significantly lower than they were in 2004. See figure 1.

Figure 1: Acute malnutrition prevalence amongst children 6-59 months old, Darfur 2004-2006



By Darfur state, the acute malnutrition rates were as follows:

Table 4: Acute malnutrition rates (by State)

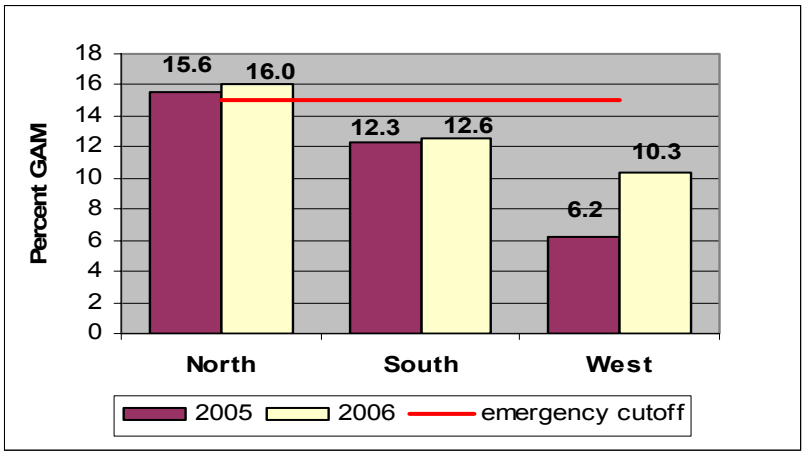
	North Darfur (n=710)		South Darfur (n=633)		West Darfur (n=834)	
	%	95% CI	%	95% CI	%	95% CI
GAM	16.0	12.3 -19.8	12.6	8.6 - 16.6	10.3	8.0 - 12.6
SAM	2.5	1.3 - 3.7	1.9	0.9 - 2.9	1.3	0.5 - 2.1
Oedema (% of children)	0.3	0 – 1.3	0.4	0 - 1.6	0.3	0 - 0.8
Mean WFH Z-score	-1.17		-0.92		-0.88	

Comparing these figures with the findings of the 2005 survey (figure 2 below), there was no significant difference in malnutrition at the crisis-affected Darfur level (p=0.2), nor in North Darfur (p=0.3) or South Darfur (p=0.4), but the increase in global acute malnutrition in West Darfur was significant (p<0.001).

While this is potentially a worrying trend, the rate of malnutrition in West Darfur is still below the emergency threshold of 15%, and it remains the lowest of the three states.

North Darfur has historically had the higher rates of malnutrition, due to its vast area, highly nomadic population and scarcity of services. It remains the highest of the three states, at 16.0% GAM, unchanged from 2005.

Figure 2: Global Acute Malnutrition by State, Darfur 2005 - 2006



By sex the acute malnutrition rates did not differ significantly overall (p=0.2), which is a change from 2005 when a significantly higher proportion of boys were malnourished than girls. In South Darfur however, again more boys (16.1%; 95% CI: 11.5 – 20.6) were malnourished than girls (8.6%; 95% CI: 4.6 – 12.6) (RS $\chi 2$ p=0.0001).

By age, all three states showed significantly higher malnutrition amongst children aged 6-29 months compared to children aged 30-59 months. This pattern was also seen in last year's survey and is commonly found in localised nutrition surveys as well (see table 5 below). The survey included simple questions about young child caring practices to investigate possible contributing factors.

Table 5: Global acute malnutrition by age group, Darfur September 2006

GAM	Age (months)	Number/Total	Percent	95% CI	RS $\chi 2$ Pvalue
Crisis-affected Darfur level	6-29	166/963	17.3	14.6-20.0	RS $\chi 2$=31.2
	30+	114/1214	9.5	7.5-11.5	P <0.0001
North	6-29	62/326	19.0	13.9-24.1	RS $\chi 2$=4.6
	30+	52/384	13.5	9.4-17.7	*P=0.03**
South	6-29	49/283	17.3	12.1-22.5	RS $\chi 2$=10.8
	30+	31/350	8.8	4.7-13.0	P=0.001
West	6-29	55/354	15.5	11.5-19.5	RS $\chi 2$=18.9
	30+	31/480	6.4	4.1-8.8	P<0.0001

** barely significant*

By residential status, there was no significant difference in the prevalence rate of global acute malnutrition between IDPs and residents overall (11.6% [9.6 – 13.5] and 14.7% [11.4 – 18.0] respectively), neither in South Darfur (12.7% [7.6-17.9] and 12.5% [5.7-19.3]

respectively) nor in West Darfur (10.9% [8.3 – 13.3] and 8.9% [4.5 – 13.2] respectively). However in North Darfur, residents had a significantly higher rate of malnutrition than IDPs (11.6% [7.9 – 15.3] in IDPs compared to 19.0% [13.7 – 24.3] in residents, p=0.004).

This result should be interpreted with caution because the survey was not designed to assess this relationship at state level with precision - note the wide confidence intervals - and the sample was not evenly split between IDPs and residents (64% of the population of North Darfur were residents). This may be merely a reflection of the distribution of the population. However, there may be a difference between conditions in the camps and those in the open population, particularly with regards to access to safe sources of water and improved waste disposal facilities (see paragraph 6.3).

The numbers of children with *severe* acute malnutrition were too small to make useful comparisons between states and IDP/resident status.

4.1.3 Percentage of the median and mid-upper arm circumference (MUAC)

Weight-for-height percentage of the median (WHM) and MUAC are normally used for admission and discharge from feeding centres. To assist programme planning, the rates of malnutrition using these indicators are shown in tables 6 and 7:

Table 6: Acute malnutrition (percentage of the median) – Darfur, September 2006

	North (n=710)		South (n=633)		West (n=834)		Overall (n=2177)	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Global Acute Malnutrition (<80% WHM and/or oedema)	**9.7**	7.1 – 12.3	**8.5**	5.2 – 11.8	**6.9**	5.0 – 8.9	**8.3**	6.9 – 9.8
Severe Acute Malnutrition (<70% WHM and/or oedema)	**0.8**	0.1 – 1.6	**1.3**	0.3 – 2.2	**0.9**	0.4 – 1.5	**1.0**	0.6 – 1.4
Oedema (% of children)	**0.3**	0 - 1.3	**0.4**	0 – 1.6	**0.3**	0 - 0.8	**0.5**	0.9-1.2
Mean WHM	89.6		91.9		95.2		92.4	

Table 7: MUAC of children 6-59 months old, Darfur, September 2006

MUAC	North (n=710)		South (n=633)		West (n=837)		Overall (n=2180)	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Severe (<11.0cm)	**6.2**	3.3 – 9.0	**1.3**	0.5 – 2.0	**1.4**	0.5 – 2.4	**3.1**	2.0 – 4.1
Moderate (11.0-12.4 cm)	**7.6**	5.8 – 9.4	**6.2**	4.0 – 8.3	**5.7**	3.7 – 7.7	**6.5**	5.4 – 7.6
Global (<12.5cm)	**13.8**	10.9 – 16.7	**7.4**	5.1 – 9.7	**7.2**	4.6 – 9.7	**9.6**	8.1 – 11.0

The rate of low MUAC is proportionally higher in North Darfur, at 6.2%. If MUAC is also higher among resident children, this result could explain the higher prevalence in North Darfur where a large proportion of residents is found. A MUAC below 11 cm is a strong predictor of increased mortality risk [12] regardless of the weight for height of the child.

4.1.4 Chronic malnutrition

The survey also estimated prevalences of stunting (low height-for-age), which reflects chronic malnutrition, and underweight (low weight-for-age) which reflect both acute and chronic malnutrition (see table 8 below). All efforts were made to record the age of the children as accurately as possible, as described in the methodology section. Even so it is difficult to collect precise age data due to the lack of a universal system for birth certification and registration in Darfur.

[12] Briend A, Zimicki S, Validation of arm circumference as an indicator of risk of death in one to four year old children, Nutr Res, 1986;6:249-261

Stunting, at 36.6% overall, is lower than the average rate for North Sudan which in 2000 was found to be 43% (MICS, 2000).

Table 8: Prevalence of chronic malnutrition amongst children 6-59 months old, Darfur Sept 2006

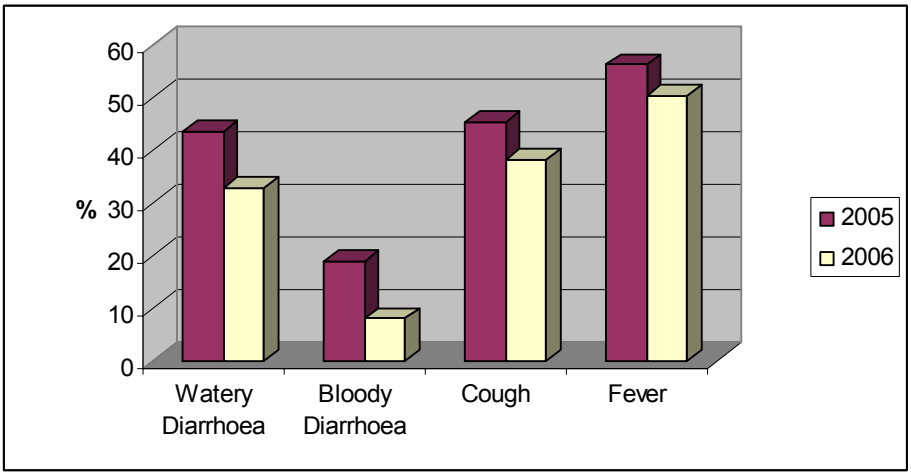
	North (n=710)		South (n=633)		West (n=834)		Overall (n=2177)	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Global stunting (<-2 z s-scores height for age)	**33.2**	27.5 – 38.9	**39.2**	33.4 – 44.9	**37.9**	33.0 – 42.7	**36.6**	33.6 – 39.6
Global Underweight (<-2 z-scores weight for age)	**40.1**	36.3 – 43.8	**38.4**	34.3 – 42.4	**39.6**	35.5 – 43.7	**39.4**	37.2 – 41.7

4.1.5 Child health

Caretakers were asked if the child had been ill during the two weeks prior to the survey. The survey specifically asked about diarrhoea (watery and/or bloody), cough, fever and measles. Fever was the most commonly reported problem, with half of all children having suffered from it in all three states. Cough affected 38% [95% CI: 35.2 – 41.3] of children and 33% had suffered from diarrhoea in the fortnight before the survey. Of these, 8% were reported to have had bloody diarrhoea (this was not verified by the survey workers or health practitioners).

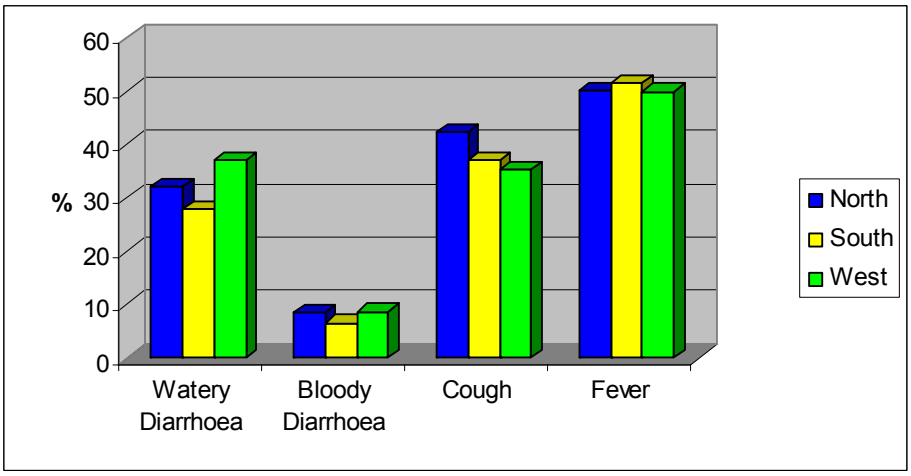
Overall, the rates of illness reported were substantially lower this year than at the same time last year, as compared with the 2005 Darfur-wide survey (see figure 3 below). This finding is somewhat surprising given the ongoing outbreak of Acute Watery Diarrhoea (AWD) that was in progress during the time of the survey in all three states.

Figure 3: Prevalence of common illnesses amongst children 6-59 months old, Darfur, September 2005 – September 2006



Rates of illness did not vary greatly from state to state (see figure 4 below) although diarrhoea was somewhat higher in West Darfur, and cough was slightly higher in North Darfur.

Figure 4: Prevalence of common illnesses amongst children 6-59 months old by state, Darfur, September 2006



4.1.6 Use of mosquito nets

According to the survey results, 41% of children reportedly slept under a bednet the night before the survey - 36% of IDP children and 47% of non-IDP children. This pattern of more residents than IDPs using bednets was found amongst mothers as well and is discussed below.

There was no relationship between reported fever in the previous two weeks and bednet use the night before the survey. Fever was not specific to malaria, though this may be reflected in the lack of association. Additionally, bednet use may not be consistent among the households in the survey.

4.1.7 Measles vaccination coverage

Overall, 67.3% [95% CI: 62.1 – 72.5] of children aged 9-59 months had received a measles vaccination, including those with a marked health card and verbal history reported by the caregiver. In 2005, the rate of measles vaccination uptake was found to be 69.8% [95% CI: 64.5 – 75.0]. A small percentage (3%) of caretakers did not know whether the child had been immunized; more caretakers in West Darfur (5%) did not know the child status compared to South and North Darfur (2%).

Table 9: Measles immunisation coverage among children, Darfur, September 2006

	Number	%	95% CI
Measles immunisation (9-59 months) (n=2057)			
Yes – all	1385	67.3	62.1-72.5
Yes – card	753	36.4	32.0-40.8
Yes – caretaker	632	30.9	27.3-34.4
No	606	29.5	24.5-34.4
Unknown	66	3.2	1.8-4.6
Measles immunisation (6-59 months) (n=2134)			
Yes – all	1425	66.7	61.5-72.0
Yes – card	781	36.4	31.9-40.8
Yes – caretaker	644	30.3	26.8-33.9
No	641	30.1	25.1-35.1
Unknown	68	3.2	1.9-4.5

A measles 'mop-up' campaign was carried out in August 2006 in selected low-coverage localities in each of the three states, which may have boosted the immunisation coverage. However, the coverage remains too low to ensure community-level protection.

4.1.8 Coverage of vitamin A supplementation

Overall, vitamin A supplementation had been received by 38% of children aged 6-59 months, verified either by a health card or the caretaker's recall. This varied from 33% [27.0 – 39.6] in South Darfur, to 35% [28.0 – 42.6] in West Darfur and 44% [34.8 – 54.0] in North Darfur.

These figures are well below the 90-95% supplementation rates reported from campaigns (vitamin A is distributed at the same time as polio vaccine) however the reliability of campaign coverage figures may be doubtful. The survey looked at supplementation in the previous 6 months, however the most recent supplementation campaign was conducted in February 2006, seven months prior to the survey. Therefore, coverage may have been higher immediately following the campaign.

No significant difference was detected for either measles vaccination or vitamin A supplementation between IDP and resident populations.

4.2 Infant and young child feeding practices

4.2.1 Child Caregivers

This survey was not specifically designed to investigate the care and feeding practices of infants and young children. In order to assist the interpretation of the nutritional findings however, questions regarding care practices of children under the age of two years were included.

Overall, the primary caregiver for almost 87% of children under two years old was the mother. This was similar in all states – 82% in North, 87% in South and 89% in West Darfur. In North Darfur there was a higher proportion of children being left alone to look after themselves (7%) compared to South (2%) and West (1%). Six percent of under-twos in North and West Darfur were looked after by a sibling, while in South Darfur this rate was eight percent. The remaining were cared for by either another family member or another person.

Leaving a child under the age of two years alone during the day increases the risk for negative health outcomes such as malnutrition and illness. Even when infants and young children are cared for by siblings, the inherent risks are similar as the sibling responsible for the child (often an older sister) is only 6 or 7 years old and therefore does not properly understand what the child's needs or their own needs are. Grandmothers serve an important role, and are most frequently those who were classified as "other family members" caring for the child. There may be traditional practices which are potentially detrimental to the health and development of the child and education campaigns may benefit this particular group.

4.2.2 Breastfeeding Practices

Breastfeeding status was based upon maternal recall. Mothers were first asked if they were breastfeeding any child. If a child younger than 6 months of age resided in the household, a series of questions regarding exclusive breastfeeding were posed. Overall, 56.5% (95% CI: 53.6-59.3) of mothers were currently breastfeeding a child. Variations by state did not exist (see table 10 below).

Breastfeeding among children younger than 6 months of age was very high in all three states, at 96% overall [95% CI: 93.6-98.4]. However, 37% [95 % CI: 30.2-43.9] of these children were also receiving fluids other than breastmilk. Additionally, 15% [95 % CI: 10.3-20.0] had received solid food in past 24 hours. Small differences were noted at state level (North Darfur had the lowest proportion of children receiving other foods/ fluids, followed by South then West), although none were significant.

Table 10: Breastfeeding rates, Darfur, September 2006

	Crisis-affected Darfur	North Darfur	South Darfur	West Darfur
	Number (%) [95 % CI]			
Breastfeeding a child	806 **(56.5)** [53.6-59.3]	222 **(57.2)** [52.3-62.1]	305 **(55)** [49.7-60.4]	279 **(57.4)** [52.2-62.6]
Breastfeeding a child < 6 months of age	238 **(96)** [93.6-98.4]	56 **(94.9)** [89.1-100]	93 **(93)** [88.0-98.0]	89 **(100)** [100-100]
Other fluids in past 24 hours	92 **(37.1)** [30.2-43.9]	10 **(17.2)** [6.1-28.3]	37 **(37.4)** [26.7-48.0]	45 **(50.6)** [38.6-62.5]
Other solids in past 24 hours	37 **(15.2)** [10.3-20.0]	7 **(12.1)** [2.4-21.7]	16 **(16.8)** [8.8-24.9]	14 **(15.7)** [6.9-24.5]

These results indicate that the respondants are introducing complementary foods earlier than the recommended 6 months of age. While breastfeeding is commonly practiced by the vast majority of mothers, exclusive breastfeeding is practiced at a lower level.

4.3 Availability and coverage of supplementary and therapeutic feeding programmes

According to key informants at community level, there was a Supplementary Feeding Programme (SFP) or a Therapeutic Feeding Programme (TFP) in 30% of the communities. However, their availability was much higher in West Darfur (56% SFP, 52% TFP) than in North (23% SFP, 29% TFP) and South Darfur (17% SFP, 20% TFP).

Camps and communities with a majority of IDPs had much better availability of feeding programmes than areas without IDPs. See table 11.

Table 11: Availability of supplementary and therapeutic feeding centers per type of community:

Nutrition programme facilities	Type ofcommunity			
	IDP camps	Communities with majority of IDPs	Communities with minority of IDPs	Communities with no IDPs
% with a supplementary feeding center in the community	38%	58%	14%	0
% with a therapeutic feeding center in the community	42%	42%	19%	9%

When caretakers at household level were asked whether their children were enrolled in a SFP or TFP, slight differences between the three states were noted:

- North Darfur: 7% of the malnourished children (weight-for-height < 80% median and/or oedema) were enrolled in a SFP or TFP;
- South Darfur: 9% of the malnourished children were enrolled in a SFP or TFP;
- West Darfur: 29% of the malnourished children were enrolled in a SFP or TFP.

Both the availability of selective feeding programmes and enrolment of malnourished children in SFP or TFP were much lower than 2005 in the three states.

4.4 Nutritional status of mothers

Mid-upper arm circumference (MUAC) was collected on 1025 pregnant and lactating women who were also mothers of children less than five years of age. Using a cut-off of less than 22.5 cm, 11.6% (95% CI: 9.6- 13.5) were classified as malnourished. The results vary by state, with North and South Darfur having more malnourished mothers: 14.5% (95% CI: 11.0-18.1) and 11.0% (95% CI: 6.7-15.3) respectively, while West Darfur had a lower percentage

with 9.6% (95% CI: 7.3-11.8) classified as malnourished. There were no differences in nutritional status between IDPs and residents at regional level.

4.4.1 Breastfeeding and micronutrient supplementation of pregnant women

Overall, 226 (15.8% [95% CI: 13.9-17.7]) mothers of children 6 to 59 months of age in the sample were pregnant at the time of the survey. More than half of all mothers (56.5% [95% CI: 53.6-59.6]) were breastfeeding a child at the time of the survey. There were slight differences by state, although not significant.

Vitamin A supplementation following the birth of their last child was reported by 19.1% [95% CI: 15.8-22.6] of women. There was some variation at the state level with South Darfur having a higher coverage (see table X). There were no differences in supplementation between IDPs and residents at crisis-affected Darfur level. The numbers are too small to perform such analysis at the individual state level.

Table 11: Vitamin A supplementation of mothers post-delivery, Darfur September 2006

	Vitamin A supplementation		
	N	**%**	**95% CI**
North Darfur (n = 395)	60	15.2	9.4-21.0
South Darfur (n= 564)	135	23.9	16.6-31.3
West Darfur (n=489)	86	17.6	12.9-22.3
Crisis-affected Darfur (n= 1448)	281	19.1	15.8-22.6

Iron-folate supplementation during pregnancy was more common and reported by 30.8% [95% CI: 26.4-35.2] of women overall, with little variation between states (see table 12 below). At crisis-affected Darfur level, there was a larger proportion of IDPs (34.4%) reporting receipt of iron-folate than residents (25.6%), (*p= 0.02*). As with vitamin A, slight variation at state level was noted although not significant. This question was not asked in the 2005 survey but the data can be used as a baseline for future iron/folate supplementation programmes.

Table 12: Supplementation of pregnant women with Iron/Folate, Darfur, September 2006

	Iron / folate supplementation during pregnancy		
	N	**%**	**95% CI**
North Darfur (n=394)	116	29.4	21.0-37.9
South Darfur (n = 566)	169	29.8	21.3-38.4
West Darfur (n = 488)	161	33.0	25.3-40.7
Crisis-affected Darfur (n= 1448)	446	30.8	26.4-35.2

4.4.2 Mosquito net usage by pregnant women

Bed net use was recorded based upon whether or not the mother reported sleeping under a net the previous evening. Overall, bed net usage was 44% (95% CI: 38.5-49.7). Coverage was slightly higher when only pregnant women were included in the analysis, at 48% (95% CI: 39.1-56.6).

A significant difference was detected in bed net usage among IDPs and residents: 37.0% versus 60.7%, respectively (*p=0.001*). Possible explanations put forward by field workers for this rather surprising finding are that: (a) the IDP houses are too small to erect the mosquito nets, therefore they are not used – in the villages each mother normally has her own hut which is much more spacious; and (b) that there may be other, traditional types of mosquito nets being used as well as the agency-distributed ones, which are more likely to be owned by residents who have not had to move or had their possessions looted / destroyed.

At the state level for both non-pregnant and pregnant mothers, South Darfur reported the highest usage of bednet: 49% [95% CI: 39.6-59.1] and 56% [95% CI: 41.9-70.5] respectively. West and North Darfur were slightly lower: West Darfur non-pregnant: 42% [95% CI: 30.8-

53.2], pregnant 44% [95% CI: 27.4-60.8]; North Darfur non-pregnant: 40% [95% CI: 30.4-49.9], pregnant 42% [95% CI: 25.6-58.4].

4.5 Main causes of child malnutrition

4.5.1 Relationship between child malnutrition, disease and the health environment

4.5.1.1 Relationship between nutritional status and illness

Malnourished children were significantly more likely to have been sick in the previous two weeks compared to the non-malnourished ($p = 0.0008$).

There was a strong relationship between children suffering from fever and being malnourished – 63.2% of the malnourished children had suffered from fever in the two weeks prior to the survey ($p< 0.0001$). However, almost half of the children in the survey reported fever, so this association may be a reflection of high prevalence. Fever was self-reported by the caregiver and not clinically verified; the survey did not record cases of diagnosed malaria separately.

The means weight for height, height for age and weight for age Z-score were significantly associated with having suffered from watery diarrhoea in the two weeks prior to the survey ($p<0.0001$). 16.3% of children who had had diarrhoea were acutely malnourished, compared to 7.2% of those who had not had diarrohea. The same was observed for cough ($p<0.01$), with wasting prevalences of 14.9% among children who had suffered from cough and 10.9% for the others. Chronic malnutrition is a long-term process and therefore this recent bout of diarrhoeal illness is not directly related to stunting

4.5.1.2 Relationship between nutritional status and source of water

Wasting (mean weight for height Z-score) was significantly associated with the type of drinking water source ($p< 0.01$). Malnutrition prevalence was 11.5% for those consuming water from a safe source and 15.6% for those using unsafe sources.

4.5.1.3 Relationship between nutritional status and type of latrine

There was a slight association between wasting and the type of latrines used by households (significant at $p<0.05$ based on mean Z-score). The prevalence of wasting in households using traditional latrines was 13% compared to 12% with improved latrines.

4.5.2 Relationship between nutritional status and household food security

4.5.2.1 Household food consumption patterns

Food consumption patterns at household level were not associated with malnutrition (wasting or stunting) among children under-5 years old. However, dietary diversity and food consumption frequency at household level may not be sufficient to capture dietary intake at individual level, particularly for young children, as it does not inform on intra-household food distribution practices. It may be that in households with poor or borderline food consumption patterns, children receive a preferential share of the limited food available. The indicator also does not provide accurate information on the actual amounts consumed.

4.5.2.2 Overall household food security situation

Household food security (defined as a combination of food consumption, food expenditures and level of dependency on food aid - see Chapter 11 for details) was not significantly associated with child malnutrition, whether acute (wasting) or chronic (stunting). This does not mean that no malnourished children were found in severely or moderately food insecure households, but it indicates that other factors than food security seemed to play a stronger role as determinants of malnutrition.

Most of the food insecure households were IDPs and beneficiaries of food aid, whereas many of the 'food secure' households (in terms of access to food) were found to have malnourished children. While it cannot be concluded that food aid is protecting against malnutrition, the findings indicate that problems of access to food (as identified by low food expenditures and

high dependence on food aid) and food consumption were not the main determinants of malnutrition in Darfur at the time of the survey.

4.5.2.3 Food access, proxied by the number and type of income sources

The number and type of income sources influence food access, one of the components of food security. The highest prevalences of wasting were found among households relying on sales of cereals or livestock/animal products (around 17%) as their main income sources, while the lowest prevalences were observed among those relying on petty trade or on the sale of food aid (around 10%).

The differences in the mean Z-scores for wasting were significant between children living in households relying mainly on the sales of livestock/animal products compared to those in households relying on waged labour ($p< 0.05$) or on the sales of cereals ($p=0.001$). The mean wasting Z-score of children living in households relying on food aid was also significantly better than those in households depending on wage labour ($p<0.05$).

On the other hand, stunting was significantly higher among children living in households relying mainly on waged labour or on the sale of food aid compared to those living in households relying on the sales of livestock/animal products (based on the mean Z-score, $p<0.05$ and $p<0.01$ respectively).

It is important to note that linkages between the income source type and acute malnutrition may be compounded by other factors. In particular, sales of cereals or livestock/animal products were mostly performed by residents, who were also more likely to obtain their water from unsafe sources and use traditional latrines. Similarly, IDPs were more likely to rely on the sale of food aid for their income, and the majority were living in camps where they had better access to safe water sources and improved latrine facilities, as well as to nutrition programmes.

The results indicate that a high dependence on selling food aid for income generation was not associated with higher risks of acute malnutrition. However chronic malnutrition tended to be more widespread among children of these households – i.e. children of displaced, settled, food aid-reliant (poor) households. Acute malnutrition was higher in households with the characteristics of residents – higher number of animals, reliance on selling crops. This fits in with the seasonal timing of the survey, which was carried out during the hunger gap: residents would still be feeling these seasonal effects whereas IDPs do not with the regular supplies of full rations of food aid.

4.5.2.4 Food availability, proxied by cultivation, home gardening and animal raising

Crop cultivation

The mean weight for height Z-score was significantly higher for children in households having cultivated more than 2 ha of cereals this season compared to those having planted less or not at all ($p<0.001$ in both cases). There were no significant differences in wasting (mean Z-score) between children living in households who had not planted cereals and those in households who had planted less than 2 ha.

Residents were more likely to plant large acreages than IDPs. The lower wasting prevalence associated with high cereal acreage is interesting to note as it does not seem influenced by other factors such as the poorer access to safe water sources and latrines of residents compared to IDPs.

Stunting (mean Z-score) was also higher among children of households who had not planted cereals compared to children of households having cultivated more than 2 ha ($p<0.05$).

There was no relationship between acute child malnutrition and access to a home garden.

Animal raising

The mean weight for height Z-score was lower for children living in households with a large number of animals compared to those in households with no or with small numbers of animals. The difference was almost significant when considering LTUs ($p=0.06$) and significant when considering the ownership and numbers of sheep/goats ($p<0.01$).

The mean Z-score for stunting was higher for children living in households with a large number of animals (3 LTUs) compared to those in households with 1 or 2 LTUs ($p<0.01$ and $p<0.05$ respectively). When looking at the animal species, better mean Z-score for stunting was noted for children in households with 1-5 sheep/goats compared to those in households with no sheep/goats ($p=0.001$).

These results are consistent with the association found between the reliance on the sale of livestock/animal products as a main source of income and wasting (higher) and stunting (lower) compared to some other income sources. They may illustrate an effect of the consumption of animal products on linear growth but other factors must also be taken into account because owners of animals were generally residents with less access to safe water sources and latrine facilities.

4.5.3 Relationship between malnutrition and household demographic and social characteristics

4.5.3.1 Sex and literacy of the head of household and child malnutrition

The household data did not indicate associations between the sex of the head of household and the prevalence of child malnutrition. Stunting was significantly associated with the literacy level of the head of household, with a slightly higher prevalence of stunted children in households with illiterate heads (40.9%) compared to literate heads (38.3%). Most literate household heads were men.

4.5.3.2 Displacement timing

Wasting (mean weight for height Z-score) was lower among children of households never displaced compared to children of households displaced, whether recently (less than 1 year ago) or for a longer period (1 to 3 years ago) ($p<0.01$). Stunting (mean height for age Z-score) was higher among children of households displaced, particularly those recently displaced (less than 1 year ago), than children of households never displaced ($p<0.05$).

4.6 Health Services, Access and Expenditures

4.6.1 Health services coverage and access

NGO clinics were the most commonly used facilities in all three states, followed by Government clinics. Mobile clinics were only reported in South Darfur, while no key informant in South Darfur mentioned the use of hospitals. No key informants in West Darfur mentioned the consultation of village health workers (See table 13 below). Physical access to health facilities was best in West Darfur and worse in North Darfur in dry and rainy seasons alike. More than half of the communities in North Darfur were located more than 2 hours walk from the nearest facility, compared to about 10% of the communities in South and West Darfur.

Table 13: Availability and physical access to health facilities

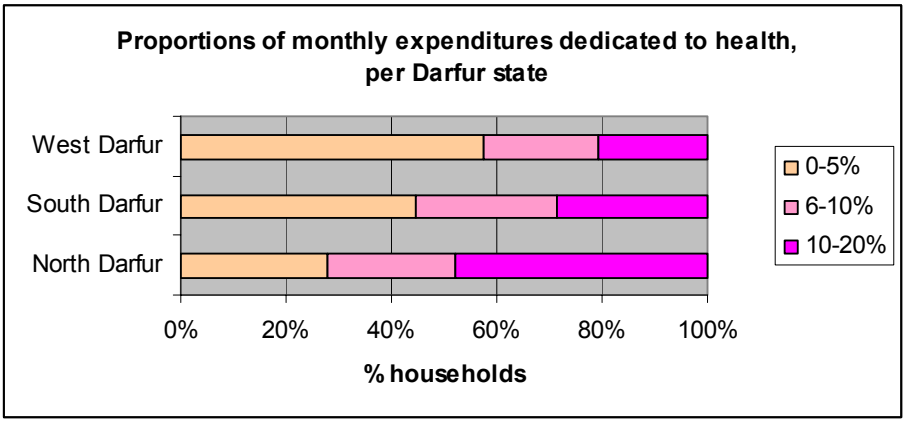
Health facilities	States			Crisis-affected Darfur
	North Darfur	South Darfur	West Darfur	
Health facility most used by the community:				
Hospital	21%	0	8%	**10%**
Government clinic	21%	21%	40%	**27%**
NGO clinic	48%	62%	52%	**54%**
Mobile/ outreach clinic	0	10%	0	**3%**
Village health care worker	3%	7%	0	**3%**
Private clinic	0	0	0	**0**
Traditional practice	3%	0	0	**1%**

Health facilities	States			Crisis-affected Darfur
	North Darfur	South Darfur	West Darfur	
Pharmacy	3%	0	0	**1%**
Time required to reach the nearest health facility:				
Average time in **dry** season (hours)	7.1 hrs	1.3 hr	0.5 hr	**3 hr**
Average time in **rainy** season (hours)	7.8 hrs	1.6 hrs	0.7 hr	**3.4 hrs**
Distance time in dry season				
% communities at less than 1 hour walk in **dry** season	45%	80%	88%	**71%**
% communities at 1 to 2 hours walk in **dry** season	0	10%	4%	**5%**
% communities at more than 2 hours walk in **dry** season	55%	10%	8%	**24%**
Total	**100%**	**100%**	**100%**	**100%**
Distance time in rainy season				
% communities at less that 1 hour walk in **rainy** season	48%	73%	84%	**68%**
% communities at 1 to 2 hours walk in **rainy** season	0	10%	4%	**5%**
% communities at more than 2 hours walk in **rainy** season	52%	17%	12%	**27%**
Total	**100%**	**100%**	**100%**	**100%**

4.6.2 Health expenditures

Health expenditures represented an average of 14% of household expenditures during the month preceding the survey. The share was higher in North Darfur (19%) than in South Darfur (14%) and West Darfur (9%). Reasons for this variation were not investigated but the higher proportion of IDPs (who do not pay for health care, unlike in villages where cost sharing schemes operate) in West and South Darfur would explain much of the variation.

Figure 5: Health expenditure per state, Darfur September 2006



IDPs allocated on average, a lower proportion of their monthly expenditures for health than residents, except for IDPs living in communities where they are a minority: 60% of IDPs dedicated less than 5% of their expenditures to health, while 19% dedicated 10-20%. Thirty-three percent of residents dedicated 0-5% of total expenditures to health, while 40% dedicated 10-20%.

In absolute terms, the average amount spent for health during the month preceding the survey in North Darfur (1,900 dinars) was twice as high as in South Darfur (990 dinars) and more than three times as high as the expenditure in West Darfur (550 dinars).

IDPs spent 40% less on health during the month before the survey (890 dinars), compared to residents (1,410 dinars). Health expenditures were particularly low among IDPs in camps (790 dinars), and higher among IDPs in communities where they are a minority (1,610 dinars). This is most likely a reflection of the free NGO clinical services provided to IDPs, however given that they are not supposed to pay for health services, it is interesting to note that they still do pay, and a substantial amount in relative terms.

There was no relationship between the sex, literacy, presence/absence or other demographic characteristics of the household heads, and percentage expenditure on health. The only strongly associated factor was displacement – reinforcing the fact that displaced people spend less on health because it is part of the aid agencies' strategy not to charge camp populations for health care.

The average share of household health expenditures out of total monthly expenditures was higher in communities where households were resorting to traditional healers or pharmacies compared to hospitals or clinics, and lower when they were served by village health care workers. This may be explained by differences in the fees charged by the various health services (such as gratuity in hospitals/clinics/village workers, and against payment for private health providers).

4.7 Mortality

4.7.1 Mortality rates

The analysis of mortality rates was based on 13,171 individuals included in the survey for who all information was recorded. This included 2,490 children aged 0- 59 months, 402 of whom were newborns. In addition, 654 individuals had moved during the recall period, i.e. were coded as alive, living elsewhere.

The recall period was 8 months, from the previous Eid-ul-Adha (11th January 2006). A total of 142 deaths were recorded during this time, including 42 children under five and 100 people over five years of age.

It should be noted that the survey was not able to access five different locations because of the ongoing conflict/insecurity, and therefore does not represent the mortality rates in those areas.

The point prevalence estimate for the crude mortality rate (CMR) across crisis-affected Darfur as a whole was 0.35 deaths per 10 000 per day [95% CI: 0.27 – 0.44]. The under-5 mortality rate (U5MR) was 0.77 deaths per 10 000 per day [95% CI: 0.5 – 1.05]. Both of these are below the emergency thresholds of 1 and 2 respectively, and show a progressive decline over the past three years. See tables 14, 15 and 16 below.

Table 14: Crude and under-5 mortality rates (deaths per 10 000 per day) for Darfur, September 2006

	Whole population	IDP	Resident
CMR	0.35 [95%CI: 0.27 – 0.44]	0.46 [95%CI:0.33 – 0.59]	0.25 [95%CI: 0.14 – 0.36]
U5MR	0.77 [95%CI: 0.5 – 1.05]	0.78 [95%CI: 0.39 – 1.16]	0.78 [95%CI: 0.38 – 1.2]

Table 15: Crude and under-5 mortality rates (deaths per 10 000 per day) by state, September 2006

	North Darfur	South Darfur	West Darfur
CMR	0.15 [95%CI: 0.07 – 0.22]	0.48 [95%CI: 0.27 – 0.68]	0.48 [95%CI: 0.3 – 0.65]
U5MR	0.43 [95%CI: 0.13 – 0.74]	0.97 [95%CI: 0.39 – 1.55]	0.95 [95%CI: 0.43 – 1.48]

Table 16: Comparison of mortality rates (deaths per 10,000 per day) Darfur, 2004 - 2006

	2004	2005	2006
CMR	0.72 [95%CI: 0.45 – 0.99]	0.46 [95%CI:0.36 – 0.55]	0.35 [95%CI: 0.27 – 0.44]
U5MR	1.03 [95%CI: 0.38 – 1.68	0.79 [95%CI: 0.5 – 1.1]	0.77 [95%CI: 0.5 – 1.05]

North Darfur showed a significantly lower CMR than South and West Darfur, but the U5MR was not significantly different. The difference in CMR between IDPs and residents was almost significant at the overall Darfur level. This is different to the findings from 2005, which found almost identical CMRs in IDPs and residents. The difference this year is in the older groups, since the U5MR is exactly the same across the two groups. This suggests that adults or older IDPs are at higher risk of mortality than adult or older residents, at the Darfur-wide level. The survey did not have the power to do this analysis at state level with a useful precision.

4.7.2 Causes of death

The leading causes of death for the whole population were "other" (28%), fever (23%) and watery diarrhoea (20%). In the under-5s, the leading causes of death were watery diarrhoea (35%), fever (19%) and other (19%). "Violence" and "accident" together accounted for approximately 15% of the total deaths – all the "violence"-related deaths were in people over 5 years of age.

Figure 6: Causes of death amongst the over-5s, Darfur September 2006

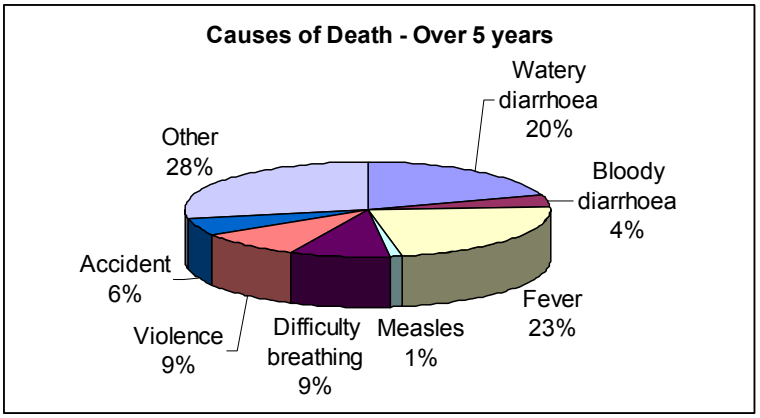
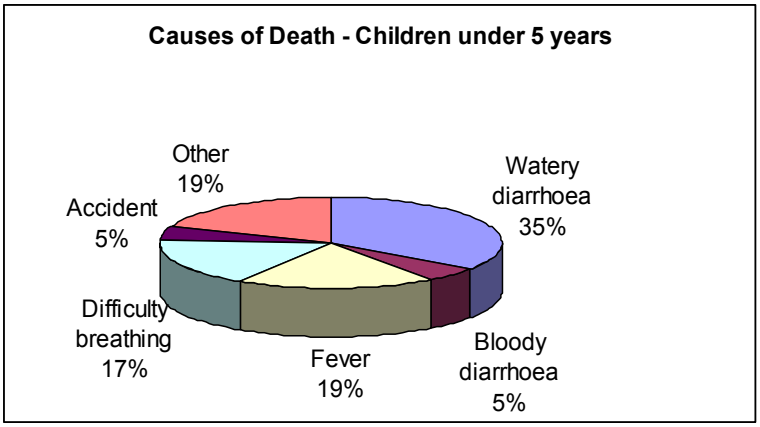


Figure 7: Causes of death among chidren under 5, Darfur September 2006



Chapter 5. WATER AND SANITATION

5.1 Access to safe water

For Darfur overall, there was a 10% increase in the proportion of households reporting access to a 'safe'[13] source of drinking water compared to 2005. The biggest increase was in South Darfur where the rate increased from 58% to 76% over 2006. Ninety percent of IDPs in camps and in communities where they are a majority obtained drinking water from a safe source compared to 57% of residents. This is an increase amongst both groups from 2005 where the figures were 79.4% and 40.1% respectively.

5.1.1 Source of water

Table 17: Proportion of households with safe source of drinking water, Darfur 2005 - 2006

Safe source of drinking water	2006 (n=2149)			2005 (n=2090)		
	N	%	95% CI	N	%	95% CI
North n=709	473	66.7	61.5-71.6	418	61.3	47.9-74.8
South n=723	552	76.3	71.6-80.6	229	58.2	41.9-74.4
West n=717	551	76.8	72.1-81.1	461	70.9	58.1-83.2
Overall n=2149	1576	73.3	70.6-79.9	1108	63.0	54.9-71.0

As shown in table 17 above, South and West Darfur recorded similar levels of access to safe water, at 76 and 77% respectively. The lower proportion of households having a safe source of drinking water in North Darfur is linked to the fact that the majority (64%) of the population surveyed in North Darfur were residents, and residents had a much lower access to safe sources of water as defined in the survey than IDPs.

A higher proportion of IDPs (86% overall; 90% of those in camps) had a safe source of drinking water than residents (57%). Residents living in villages with a high proportion of IDPs had a similar rate of access to safe water (80%) to the IDPs. There has been an increase in access to safe water, as defined in this survey, in both groups since 2005 – from 79.4% to 86.0% amongst IDPs and from 40.1% to 57.0% amongst residents. The difference between IDP and resident water consumption patterns is expected because the focus of the water provision from relief agencies has been on the IDP camps as higher density population settlements and those most at risk from water-borne disease.

This assessment is only a snapshot of the situation at a point in time however, and these figures should not be taken to reflect year-round water access.

5.1.2 Factors linked to access to safe water

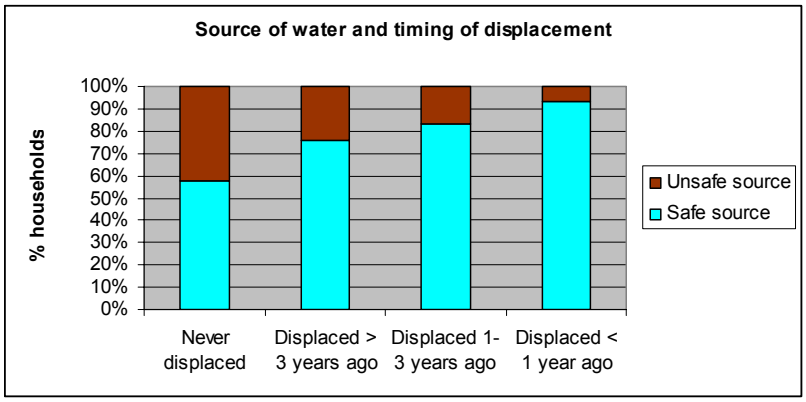
There was no association between the size of the household, the sex or presence of the household head, number or type of income sources or any other demographic factors, in terms of access to safe sources of drinking water. Slightly fewer households that were food secure/at low risk to lives and livelihoods (see Section 11 for definitions) reported using a safe source of drinking water (63%) than food insecure households (75-79%). This is related to the fact that the "food secure" are mainly residents, who as shown above reported using a safe source less often. Also there are other strategies that they may use - for example, field

[13] For the purpose of the assessment, a "safe source" of water included a household connection, public standpipe, borehole, protected dug well, protected spring, UN/NGO tanker truck; an "unsafe source" included rainwater collection, unprotected spring, unprotected well, river/pond, vendor-provided water. The definition of "safe water" usually includes aspects of quality, quantity and sustainability, whereas in this survey it was used only to represent the quality aspect. Secondly, in different locations, the coding of safe or unsafe could be misleading – e.g. vendor-provided water can be very good where it is gathered from the main distribution network (e.g. Mornei in West Darfur); but in areas where vendors use dirty containers to collect water from a protected dug well, the water can be unsafe.

workers report that people often drink with their animals rather than waiting in a queue at a hand pump.

The only factor associated[14] with access to safe water was the timing of displacement - a higher proportion of those displaced less than a year ago – 93% - had a safe source of water compared to those displaced over 3 years ago - 76%. Whether better access to water and/or other facilities is a potential 'pull' factor for IDPs to move into camps cannot be answered with the data collected in this assessment.

Figure 9: Timing of displacement and use of safe source of drinking water, Darfur, September 2006



5.2 Treatment of drinking water at household level

Overall, 5.2% [95% CI: 3.9-6.7] of the households reported that they either chlorinate or boil their water at home. Of these, 72.8% chlorinated and 27.2% boiled. South and West Darfur had a higher rate of household level treatment (5.7% [95% CI: 3.7-8.8] and 7.9% [95% CI: 4.5-13.4] respectively) compared to North Darfur (1.7% [95% CI: 0.7-3.8]). Fifteen percent of those families displaced less than a year ago were either chlorinating or boiling their water, compared to 2% of residents never displaced.

These findings may reflect firstly the scarcity of firewood (see below) or other forms of power / fuel in Darfur, and households' prioritisation of using that fuel for cooking and light. They also reflect the fact that household level chlorination programmes have only been introduced since the crisis, and have only targeted IDP camps where the chlorine is provided free of charge. In several locations, the water supply is treated at source and the whole water network distributes chlorinated water, therefore people might not need to do additional household-level chlorination. Also there are other methods of making water safer than just boiling or chlorinating, e.g. adding a local seed / grain that acts as a flocculating agent, or filtering with a cloth – field workers report that both are commonly used in rural areas but would not have been recorded in this survey.

5.3 Water collection

5.3.1 Household members responsible for water collection

Women (63%) and girls (16%) were mainly responsible for water collection, especially in West Darfur. This is traditional in Darfur tribal culture. Amongst IDPs, women were mainly responsible for collecting water in 69% of households, compared to 57% of resident households. Men were more frequently involved in resident households (14%) especially where there were no IDPs in the community (20%), compared to IDP households in general and in camps (6%). This perhaps reflects the higher proportion of households in resident communities that own livestock, which are men's responsibility.

[14] Pearson 2-tailed correlation significant at 0.01 level

There was little variation in this by state, apart from a slightly higher proportion of women and girls responsible for water collection in West Darfur (87%) than in South (76%) and North (74%), perhaps related to the slightly higher proportion of female-headed households in West Darfur.

It has been observed that men are responsible for watering the animals, and may have been confused by the question which did not specify the reason for collecting water (domestic / livestock / other).

5.3.2 Time taken to collect water and other constraints

The average time needed to go, fetch water and come back was 4 times higher in North Darfur (more than 2 hours) than in South and West Darfur (about half an hour). The time needed for water collection was lowest for IDPs in camps and in communities where they represent the majority (less than 1 hour) compared to the other IDPs and to the residents. This is consistent with their better access to safe water sources. The main constraint for two thirds of the IDPs and more than half of the residents was the low quantities of water.

Insecurity issues were more frequently mentioned by IDPs (25%) and residents (11%) living in communities where they are a minority, compared to those living in other communities (5%). Male- and female-headed households mentioned the same constraints for water collection. Insecurity in particular did not seem more an issue for female-headed than for male-headed households. Insecurity, time required for water collection, cost of water and shortages of manpower were more often mentioned by households with an absent head not sending support, compared to those receiving support.

To collect water, including travel and queuing time, took much longer in North Darfur (over 2 hours) than in South and West Darfur (just over half an hour). This can be explained by the wider dispersion of the population and lower proportion of families living in IDP camps in North Darfur.

The average time taken for IDPs to collect water was about 50 minutes, compared to 85 minutes for residents. There was no difference between IDPs in camps and IDPs in general. Given the density of population in areas where IDPs tend to live, and the focus of water and sanitation services on these areas, this result is to be expected.

Table 18: Time to collect water by State and residential status

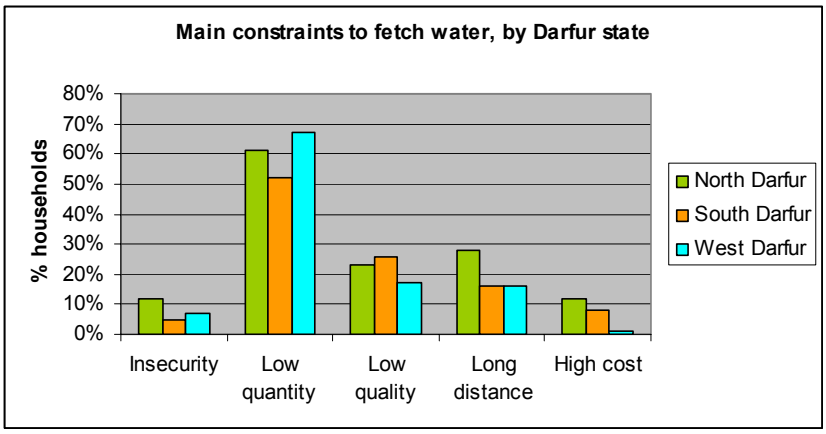
Time for water collection	Average time (hours)	Proportion of households (%) according to the time taken for water collection				
		< 0.5 hour	0.5 - 1 hour	1-2 hours	2-3 hours	> 3 hours
Per State:						
North Darfur	2.2	43%	17%	17%	9%	14%
South Darfur	0.6	78%	11%	5%	2%	3%
West Darfur	0.6	73%	13%	9%	3%	1%
Total (crisis-affected Darfur)	**1.1**	**65%**	**14%**	**11%**	**5%**	**6%**
Total IDPs	**0.8**	**71%**	**11%**	**9%**	**5%**	**4%**
Total residents	**1.4**	**59%**	**16%**	**12%**	**5%**	**9%**

The survey did not ask about the frequency of water collection – i.e. how many times per day households collect water. It should also be noted that people's perception of time can vary widely and most women (who do most of the water collection) do not wear watches. Therefore while the patterns or trends may be accurate, the precise timings may not be.

5.3.3 Constraints to water collection

Overall, the most frequently mentioned constraint to water collection, 59.9% [95% CI: 56.9-62.8] of households, was insufficient water. This was followed by low quality (21.6% [95% CI: 19.2-24.2] and long distance/time to collect (20.0% [95% CI: 17.7 – 22.5]. There was little variation in this by state, as shown in Figure 10.

Figure 10: Constraints to water collection, Darfur, September 2006



No information was collected on the reasons behind the main constraints – for example, within "quantity" it is not possible to tell from these results whether the issue is lack of water at the source, or lack of containers in which to collect water, or lack of containers in which to store water in the house. With the "long distance/time" response, it may similarly have been an issue of each journey taking a long time, or the household having to make many journeys – which have very different implications for programming.

Insecurity issues were mentioned by 7% of IDPs and 9% of residents. Cost was more of a problem for resident households (10% cited it as a constraint) compared to IDPs (4%) who are not supposed to pay for water particularly in camps. Cost-sharing schemes operate outside camps.

Table 19: Constraints to water collection by residential status, Darfur September 2006

Constraints to water collection mentioned	Proportion of households (%)					
	Insecurity	Low quantity	Low Quality	Long distance and time	High cost	Lack man-power in household
Total IDPs	**7%**	**66%**	**13%**	**15%**	**4%**	**4%**
IDPs in camps	5%	68%	12%	15%	3%	3%
IDPs outside camps with majority (>50%) IDPs	5%	69%	10%	11%	7%	4%
IDPs outside camps with minority (<50%) IDPs	25%	49%	29%	26%	9%	10%
Total residents	**9%**	**53%**	**31%**	**25%**	**10%**	**6%**
Residents with many IDPs	11%	52%	17%	27%	1%	2%

There was very little difference in the constraints faced by food insecure households, compared to the food secure.

From interviews with key informants during this assessment (see Chapter 12), drinking water ranked 2nd of the immediate priorities of the residents (22% mentioned it, after security), and 4th of the immediate priorities of the IDPs (9% mentioned it, after security, food and health services).

5.4 Sanitation

Less than one quarter of the households were using improved latrines. Traditional latrines were more frequently used in North Darfur (almost half of the households) than in South or West Darfur (about 30%). Latrine facilities were more accessible for IDPs in camps and for IDPs and residents in communities with many IDPs. This may reflect the higher support received for sanitation services in these locations, compared to communities with small numbers of IDPs or without IDPs. On average, half of the households had access to private (not shared) latrines. The proportion of residents with access to private latrines (77%) was more than twice the proportion of IDPs (31%), particularly IDPs in camps (23%).

Female-headed households, illiterate heads of households, and households whose absent head was not sending support were more likely to use open air/ bush for defecation, compared to male-headed, literate heads or households receiving support from the absent head.

Overall, 35.8% [95% CI: 33.0-38.8] of households used a traditional latrine, 24.3% [95% CI: 21.8-27.1] used an improved latrine; and 39.8% [95%CI: 36.9- 42.8] did not use a latrine. Only one household in South Darfur reported using a flush toilet. There were slight variations between the states in terms of the type of latrine used, but the proportion of families using a latrine of whatever sort was consistent across the whole of Darfur at about 60%.

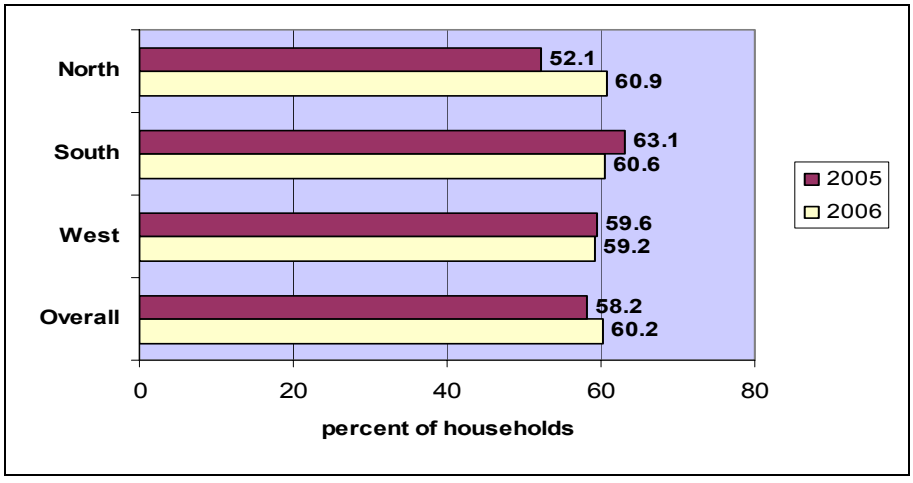
Table 20: Use of toilet facilities, Darfur, September 2006

	Proportion of households (%)			
	Type of latrine used			
	Traditional	**Improved**	**Flush**	**None**
North Darfur	47.4	13.5	0	39.1
South Darfur	29.6	30.9	0.1	39.4
West Darfur	30.7	28.5	0	40.8
Total IDPs	30.0	39.0	0	31.0
IDPs in camps	26.0	47.0	0	27.0
Total residents	43.0	9.0	0	48.0
Overall	**35.8**	**24.3**	**0.1**	**39.8**

(*) for households who are using latrines

These figures are not significantly different from the situation in 2005: see Figure 11 below.

Figure 11: Proportion of households using a latrine, Darfur September 2005 – September 2006



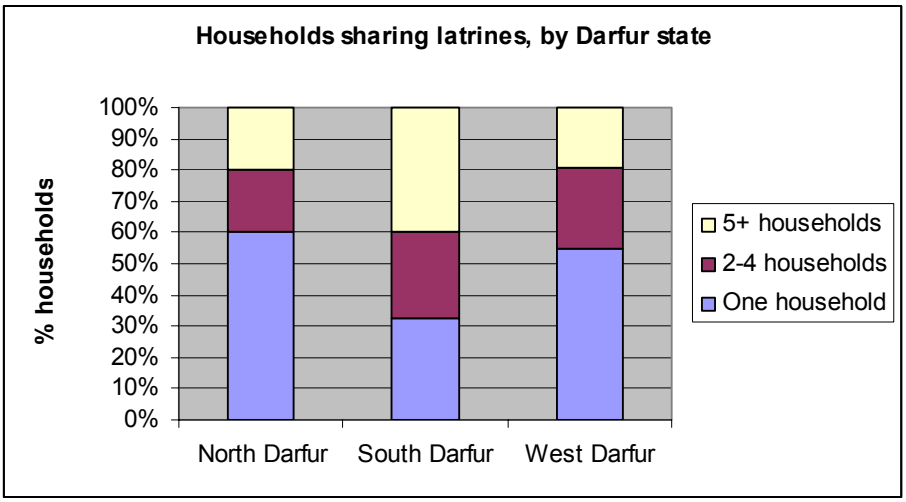
The usage of any latrine (73%) and particularly improved latrines (47%) was higher amongst IDPs in camps compared to any other category – this is expected because of the focus of aid

agencies' sanitation programmes (which provide the cement slabs that define an "improved latrine") in IDP camps.

Field workers report that in many small, scattered villages, people have developed fairly sophisticated excreta disposal mechanisms based on their knowledge and experience of disease causation. Usually each village will have a defined defecation area for men and one for women, which are used only for that purpose. Given the high temperatures and population dispersion, this is unlikely to pose a high risk to health. Even before the conflict, sanitation was low on the list of priorities for many communities and it remained so after the crisis when compared to food, water and health services.

Sphere standards indicate a maximum number of 20 people per toilet. Based on an average household size of 6 members in Darfur, that would translate into a maximum of 3-4 families sharing latrines. On average, this survey found that of those who used latrines, half of the households had access to private (not shared) facilities. Access to private latrines was more common in North (60%) and West Darfur (55%) than in South Darfur (33%). Almost 40% of the households who used latrines in South Darfur were sharing them with 5 or more other households, compared to 20% in North and West Darfur. See figure 12 and Table 21, below.

Figure 12: Sharing of latrines by state, Darfur September 2006



Seventy-seven percent of resident households had access to a private latrine, compared to 31% of IDP households. This is as expected, due to space limitations in the more densely-populated IDP settlements. Amongst IDPs in camps, 50% of families were sharing a latrine with 5 or more households. Residents in communities with no IDPs had the easiest access. This pattern is the same as last year, although slight increases were seen in access to private latrines amongst both IDPs and residents. The changes were not statistically significant.

Table 21: Sharing of latrine facilities, Darfur September 2006

Sharing latrines	**Proportion of households sharing latrines (%*)**		
	With 1 household	**With 2-4 households**	**With 5+ households**
North Darfur	60.2	19.8	20.0
South Darfur	32.6	27.6	39.9
West Darfur	55.0	25.7	19.3
Total IDPs	31	28	40
IDPs in camps	24	27	50
Total residents	77	20	3
Overall	**49.1**	**24.4**	**26.5**

** Of those using a latrine*

There was no clear link between household size, displacement timing, source of income, ownership of animals or food security status and the use of a latrine (of any type). There was a slightly stronger but still non-significant link between the literacy and sex of the household head, and whether or not absent household heads were sending remittances, and the use of a latrine. Households with a male head, a literate head or a head who was sending remittances were more likely to use latrines than female/ illiterate-headed households or those where the head was absent and not sending any support.

The proportion of households using a private latrine (not shared) was higher among the food secure (61% compared to 43-48% for the food insecure), reflecting the fact that these households are mostly residents.

5.5 Conclusions on the water and sanitation situation

Access to safe water has increased over the past year, but sanitation has remained more or less static. The differences in access between states have been minimized and now the three states have similar levels of access to latrines, and access to water points. South and West Darfur are very similar whereas because of the different demography and lower proportion of displaced families at the time of the survey, North Darfur shows a slightly different pattern when the data is disaggregated to assess specific latrines.

Chapter 6. COOKING FUELS

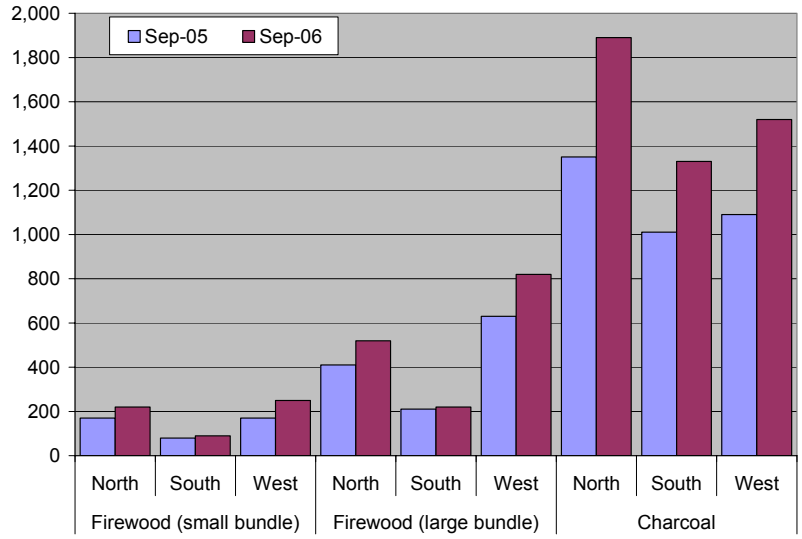
6.1 Access to firewood

More than 70% of the households were collecting firewood. The proportion of households buying firewood was higher in North Darfur (35%) than in South (31%) and West Darfur (23%). This may be related to the larger distances in North Darfur as well as prices (see below). IDPs in camps and households (IDPs or residents) in communities with large numbers of IDPs were more likely to purchase firewood (32-36%) than the other households. Almost a third of the IDPs in camps or in communities where they represent the majority purchased firewood compared to a fifth of the IDPs in communities where they are a minority. Less than one quarter of the residents purchased firewood except in communities with a majority of IDPs, reflecting the pressure on this resource due to the IDPs. In almost 75% of the households (IDPs or residents), women were responsible for firewood collection. Girls participated in 11% of the households, and men in 9%.

6.1.1 Firewood and charcoal market prices

The market prices for a small bundle of firewood were higher in West and North Darfur (about 230 dinars) than in South Darfur (93 dinars). The differences were even larger for a large bundle of firewood, which cost on average 820 dinars in West Darfur, 520 dinars in North Darfur and 220 dinars in South Darfur. Given that the security situation was worse in West Darfur than in North or South Darfur, the reasons for the higher firewood price in West Darfur may be related to higher demand and/or higher cost due to the risks people faced when collecting it.

Figure 13: Firewood price change from 2005 - 2006



Charcoal prices were higher in North Darfur (1 890 dinars per bag) than in South and West Darfur (about 1 340 dinars).

Compared to last year, firewood and charcoal prices increased in all the Darfur states. The biggest increases were for charcoal (+40% to +44% in North and South Darfur, +34% in West Darfur) and for firewood in West Darfur (+45% for a small bundle, +30% for a large one). The price increase is expected to benefit those who collect and sell firewood, but is disadvantageous to those who must purchase it. It may also explain the high proportion of households engaged in firewood collection despite the risks they may face.

6.1.2 Firewood Collection

6.1.2.1 Main household members collecting firewood

In almost 75% of the households, women were responsible for firewood collection. Girls participated in 11% of the households, and men in 9%. The proportion of women in charge of firewood collection was slightly higher in West Darfur (78%) than in South (72%) and North Darfur (70%). Girls represented 14% of those who collect firewood in North Darfur compared to 11% in West and 8% in South Darfur. Men tended to be more involved in South Darfur (12%) than in North (8%) and West Darfur (7%). These variations may reflect different security risks and opportunity costs faced by household members in the three states. Women's responsibilities for firewood collection were similar among IDPs and residents on average.

6.1.2.2 Main difficulties with the collection of firewood

The average time to collect firewood (round trip) was 5 hours. It was longer in North Darfur (approximately 7 hours) and shorter in West and South Darfur (3-4 hours). About 75% of the households reported difficulties with firewood collection due to long distances, and 60% due to insecurity. Insecurity was more frequently reported in West Darfur (74%) and less in South (69%) and North Darfur (43%), while low quantities of firewood and lack of manpower were more often mentioned in North Darfur than in South and West Darfur. These results reflect the different proportions of IDPs and residents in the three states. More IDPs (particularly in camps, 77%) than residents (46%) mentioned security problems, although residents living in communities with a majority of IDPs (66%) were also affected. Male- and female-headed households mentioned the same kind of constraints to collect firewood. Insecurity tended to be less frequently mentioned as a constraint when heads of households absent for the previous 6 months were sending support, compared to those not sending support.

About 75% of the IDPs mentioned insecurity problems (particularly IDPs in camps), compared to half of the residents on average. However, residents living in communities with a majority of IDPs were more likely to face security problems than the other residents. Constraints due to small quantities of firewood were reported mostly by both IDPs and residents living in communities with a minority of IDPs, or residents in communities with no IDPs.

Women are the main collectors of firewood and are at risk of attack and rape when they leave their community or camp to collect the wood. In the focus group discussions, both men and women mentioned that fuel-efficient stoves were useful since they reduced the need for firewood, however they did not solve the problem as wood was still required for cooking. In addition, firewood was also collected for selling as a source of income and cash by a significant proportion of households (8% of the households in South Darfur, 13% in North Darfur and 24% in West Darfur were relying on the sales of firewood as their main source of income.

The constraints mentioned by households to collect firewood were similar between male- and female-headed households, including insecurity (59% and 62% respectively).

6.1.2.3 Displacement timing and problems with firewood collection

Households never displaced were less likely to mention security problems for firewood collection (45%) compared to households who have been displaced in relation to the conflict (61%-79%). However, those never displaced mentioned more frequently difficulties with the amounts of firewood (42%) compared to those who have been displaced due to the conflict (31-34%). These results are consistent with the fact that residents (most of whom were never displaced) seem generally less seriously affected by security problems than IDPs, while in some communities the pressure on natural resources caused by the influx of IDPs has decreased the amount available for collection, especially in the vicinity of camps.

Chapter 7: FOOD AVAILABILITY: CROP AND ANIMAL PRODUCTION

7.1 Climatic conditions and overall effects on crop and livestock production

WFP and the Sudan Meteorological Authority are monitoring rainfall and vegetation development in the whole country including Darfur. Despite high August rainfall[15], West Darfur and western North Darfur presented signs of delayed vegetation and crop development. Significant late starts of the growing season were observed in northern West Darfur, western North Darfur and eastern South Darfur (El Daein/El Firdous). However, good rainfall throughout September enabled a recovery of vegetation and crop conditions. The delayed rains will thus have a lower impact on crop yields and pasture conditions than initially anticipated.

The majority of the respondents indicated that rains were better in South Darfur, less in North Darfur and nearly the same as last year in West Darfur.

Even under good climatic conditions, cereal production is limited in Darfur[16]. Only South Darfur might present a cereal surplus. Millet is the most widely produced and the most preferred cereal. Sorghum, almost non-existent in North Darfur because of its higher rainfall requirements, represents significant cultivated areas in South Darfur and West Darfur.

Although key informants indicated that seed availability was less than usual, except in West Darfur where it was better than usual, quantities of seeds distributed by FAO and the Ministry of Agriculture (3,376 tons) exceeded that of last year by 60%. The contribution from the Government was about 45% of the total amount of the humanitarian seed distribution. Nevertheless, the humanitarian assistance in seeds covered only the requirements for 20 to 25% of cropping areas.

An estimated 36% of the population received seeds while only 20% received tools. It was observed that the beneficiaries of the humanitarian seeds distribution were able to double their area cultivated compared to those not assisted.

7.2 Cereal balance at Darfur States level

According to the FAO/WFP post-harvest assessment mission[17] carried out in Sudan from 24 February to 12 March 2006, the aggregate 2005/06 cereal production was estimated at 5.46 million tonnes, about 59% higher than the previous year's very poor crop and 17% above the previous 5-year average.

The overall conditions for crop production were better this year compared to 2005/2006 cropping season although the population generally reported a decrease in the area cultivated. Some of the reasons mentioned were the late and insufficient rainfall in the northern part of North Darfur, insecurity at the time of sowing (as was the case in the Buram area of South Darfur), and insecurity along the border between Sudan and Chad in West Darfur state and in the area of Jebel Mara in West Darfur.

The cereal balance was established on the basis of interviews with key informants and taking into account factors like insecurity that may hamper the harvest.

The population figures and annual population growth rate were estimated from the 2004 assessment conducted by UNFPA and the Central Bureau of Statistics (CBS), and took into account the number of Darfur refugees in Chad and Darfur migrants in Central and Eastern Sudan.

[15] Sudan Seasonal Monitor, Issues 6 and 7, September and October 2006, WFP & Sudan Meteorological Authority
[16] A.R. Hamid, A.A.A. Salih, S. Bradley, T. Couteaudier, M. Jaafar El Haj, M.O. Hussein, P. Steffen: 'Markets, Livelihoods and Food Aid in Darfur: Rapid Assessment and Programming Recommendations". FAO, USAID and EC, May 2005
[17] Special report, FAO/WFP post-harvest assessment mission to Sudan, 25 May 2006

The food supply and the estimated cereal balance were calculated as follows:

- Estimated population in Sudan in 2007: 5,415 million;
- Annual human consumption in terms of cereals: 146 kg per capita;
- Post-harvest losses for several reasons: 10% of the production;
- Stock for livestock feed: 5% of the production;
- Reserves of the harvest for seeds for the following agricultural season: 2%.

Table 22: Projection of the population in Darfur based on UNFPA and Central Bureau of Statistics Population Data 2004

State	Annual growth rate (%)	2004 ('000)	2006[18] ('000)	Mid year 2007[19] ('000)
North Darfur	3.16	1655	1761	1789
South Darfur	3.41	3171	3391	3449
West Darfur	2.37	1734	1817	1851
Whole Darfur	**2.98**	**6560**	**6969**	**7089**

The total population in Darfur by mid-2007 was estimated at some 7,089 million. To ensure comparability of data, the study followed the same procedures of estimating the population in Darfur as the one applied in the 2005 survey, as follows:

- Extrapolated population – [estimated refugees in Chad + migrant population in central and eastern Sudan (16%) + estimated migrants in Libya + estimated mortality due to fighting).
- Estimated population in mid-2007 = 7089 – (200+ 1134 + 200 + 140) = 5 415 million.

The possible changes in the number of refugees in Chad and migrants to Central and Eastern Sudan compared to last year were considered small this year given that the security situation in Darfur did not allow for a substantial return. It was thus assumed that the situation had remained practically the same.

Table 23: Cereals Balance in Darfur 2006/07 - (sorghum and millet)

Item	Highest scenario ('000 Mt)	Lowest scenario ('000 Mt)
Human Consumption	791	791
Livestock	28	21
Seeds	11	8
Post Harvest Losses	56	42
Total Utilization	886	862
Expected Production	557	418
Deficit	**329**	**444**

An early forecast of production of cereals (millet and sorghum) in 2006/07 was estimated at 557 000 tons (high scenario) and 418 000 tons (low scenario). A deficit of 329 000 MT and 444 000 MT is expected respectively.

7.3 Crop cultivation and agricultural markets

7.3.1 Overall cultivation this season

7.3.1.2 Cultivation this season by residents and IDPs

Due to poor soils, unreliable rainfall and low yields, farmers in Darfur typically cultivate larger fields than in other parts of Sudan[20]. Fields are also scattered and far apart, taking advantage

[18] Projection figures from 2005
[19] Projection figures from 2006
[20] A.R. Hamid, A.A.A. Salih, S. Bradley, T. Couteaudier, M. Jaafar El Haj, M.O. Hussein, P. Steffen: 'Markets, Livelihoods and Food Aid in Darfur: Rapid Assessment and Programming Recommendations". FAO, USAID and EC, May 2005

of better soil and moisture conditions where they can be found. This explains why conflict and insecurity that prevent farmers from reaching distant fields reduce crop production drastically.

Key informants at *community level* indicated that both residents and IDPs were more likely to have cultivated this year in South Darfur communities than in North and West Darfur:

- 79% of the communities in South Darfur indicated that most of the residents had cultivated this season, compared to 61% of the communities in North Darfur and 38% in West Darfur; none of the communities in South Darfur mentioned that very few residents had cultivated, compared to about 13-14% of the communities in North and West Darfur.

- 52% of the communities in South Darfur reported that most of the IDPs had cultivated, compared to 44% of the communities in North Darfur and 12% in West Darfur; 37% of the communities in South Darfur indicated that very few IDPs had cultivated, compared to 44% of the communities in North Darfur and 67% in West Darfur.

Figure 14: Extent of Cultivation by Residents Per State

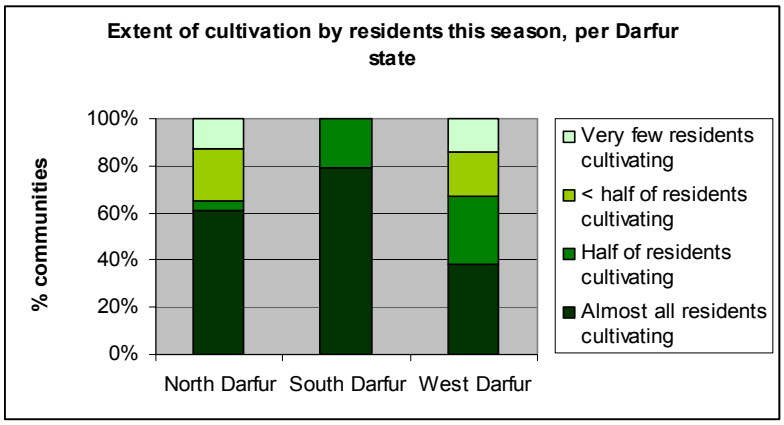
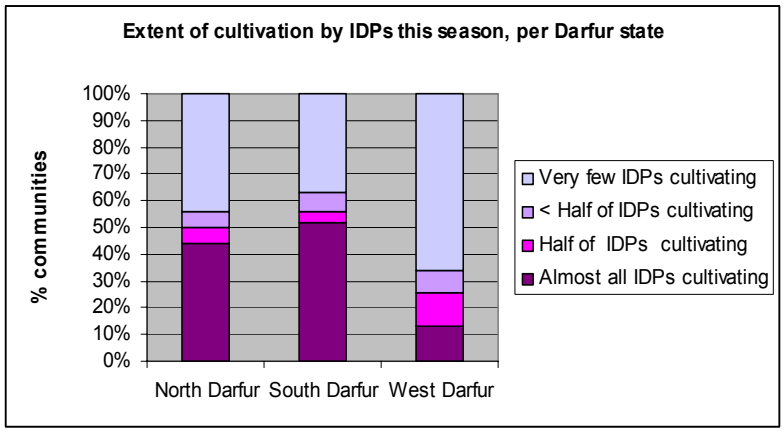


Figure 15: Extent of cultivation by IDPs Per State



The majority of the communities in all states reported a decrease in the area cultivated by residents this year compared to last year, especially in North Darfur: 75% of the communities indicated that residents had planted less in North Darfur, 60% of the communities in South Darfur and 57% in West Darfur. The decrease in the area cultivated was less pronounced with regard to IDPs: 42% communities indicated that they had planted less in North Darfur, 41% of the communities in South Darfur and 56% in West Darfur.

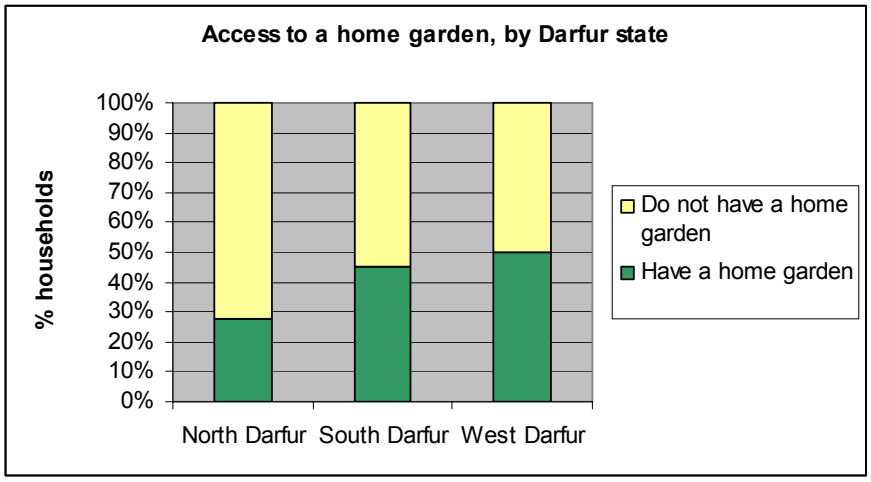
Few communities indicated an increase in the planted area. This was particularly for residents and essentially in South Darfur, followed by West Darfur and lastly North Darfur: 1/3rd of the

communities in South Darfur mentioned that the area planted by residents had increased, almost 1/4th of the communities in West Darfur, and only 8% in North Darfur.

At *household level*, 82% of the households indicated that they usually cultivate. The proportion of households cultivating was higher in South Darfur (90%) than in North (81%) and West Darfur (75%), possibly reflecting the differences in the agro-ecological and security situation as well as the higher proportions of IDPs in West Darfur than in the other two states.

Less than half of the households (41%) also owned a home garden (*jubraka).* However, the pattern was reversed land cultivation, with higher proportions of households having a home garden in West (50%) and South Darfur (45%) and lower in North Darfur (28%). Again, this may reflect agro-ecological and security issues.

Figure 16: Access to a home garden by State



Almost 75% of the IDPs and 90% of the residents usually cultivate. However, there may have been errors in the interpretation of that question, as a surprisingly high proportion of IDPs in camps (73%) also mentioned that they were usually cultivating. Their answer may have reflected their pre-displacement behaviour rather than current cultivation practices. Indeed, last year, less than half of the IDPs living in communities had cultivated, 19% of the IDPs in camps and 79% of the residents. It is quite unlikely that the IDPs' access to land has improved to such a significant extent since last year. The data on acreage (see below) also tends to indicate low areas planted by IDPs this year, particularly in camps.

Almost 30% of the IDPs and 60% of the residents had a home garden. However, only 25% of the IDPs in camps indicated having a home garden compared to 35% of IDPs in communities where they are a minority, and 43% in communities where they are a majority. Residents in communities with a majority of IDPs were more likely to have a garden than in communities with no IDPs. This may reflect better market opportunities for residents to sale vegetables linked to the presence of large number of IDPs.

7.3.1.2 Total acreage cultivated this season

The average acreage cultivated by households this season in crisis-affected Darfur was 1.25 ha (1.7 *mukhamas*), corresponding to 0.23 ha per capita. It was much higher in North Darfur (2.2ha) than in South (0.9ha) and West Darfur (0.7ha). However, this value was found much lower than the one quoted from other sources and estimated from direct observations, and must be taken with caution as households may have underestimated the actual area cultivated.

The average acreage cultivated per household this season is much lower than in 2005, which was reported to be 4.5 *mukhamas* per household.

These differences reflect the variations in the proportions of IDPs between the three states, as well as other factors related to the agro-ecological and climatic conditions as well as access and security issues.

As expected, IDPs in camps were less likely to have planted (85% did not), while 58% of IDPs in communities where they are a majority did not plant, and only 40% of IDPs living in communities where they are a minority. These proportions are similar to that of last year (81% of IDPs in camps and 52% of those outside camps did not cultivate).

Residents cultivated five times more hectares than IDPs: 2.09 ha (2.9 *mukhamas*) for residents compared to 0.5 ha (0.7 *mukhamas*) for IDPs, corresponding respectively to 0.38 ha/capita and 0.10 ha/capita. In addition, almost four times as many IDPs did not cultivate this season (76%) compared to residents (20%).

Most of the IDPs planted less than 2 ha this season.

- IDPs: 10% had cultivated between 0.1 and 2 ha, and 13% more than 2 ha.
- Residents: 21% had cultivated between 0.1 and 2 ha, and 36% more than 2 ha.

7.3.2 Cereal cultivation this season

7.3.2.1 Acreage cultivated on cereals

While in North Darfur 44% of the households did not plant any cereals this season, the proportions were 56-58% in South and West Darfur respectively.

On average households had planted 1 ha (1.3 *mukhamas*) corresponding to 0.17 ha/capita in cereals. The average cereal acreage was three times higher in North Darfur (1.8 ha, 0.31 ha/capita, 2.5 *mukhamas*) than South (0.6 ha, 0.11 ha/capita, 0.8 *mukhamas*) and West Darfur (0.5 ha, 0.09 ha/capita, 0.7 *mukhamas*). As mentioned previously, these values are much lower compared to other information sources and direct observations, and must be taken with caution as they may have been underestimated by the households.

As expected, the proportion of IDPs who did not plant cereals was much higher than the residents, and particularly high among IDPs in camps, and the acreage planted was lower. Compared to last year, there were no changes in the proportion of IDPs able to cultivate cereals.

The acreage cultivated in cereals was the highest amongst residents living in communities with no IDPs, and the lowest for residents in communities with a majority of IDPs.

- IDPs: 80% did not cultivate cereals; the average cereal acreage was 0.4 ha (0.08 ha/capita); only 5% cultivated more than 2 ha;
- Residents: 25% did not cultivate cereals; the average cereal acreage was 1.6 ha (0.29 ha/capita); 27% cultivated more than 2 ha.

7.3.2.2 Cereal crops growth status at the time of the survey

At the time of the assessment (end August until the third week of September), most of the millet and sorghum were at a vegetative stage in North and West Darfur, while they were already flowering in half of the communities surveyed in South Darfur.

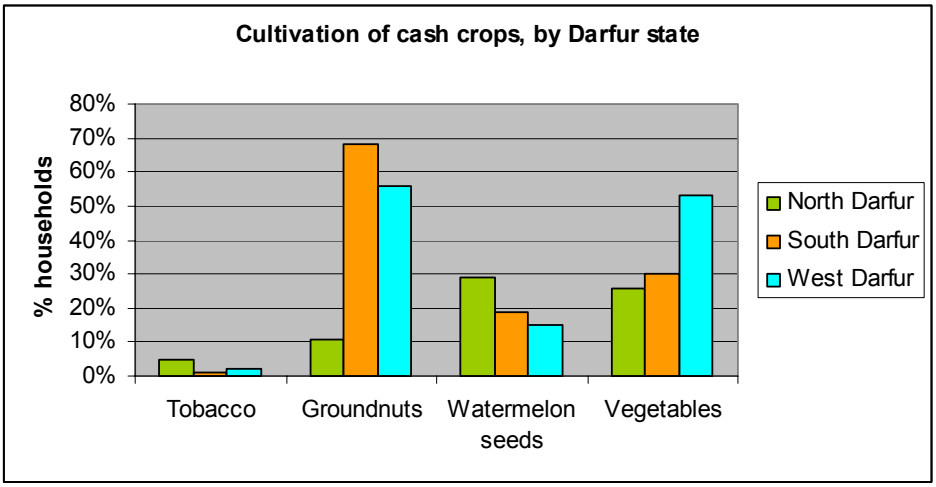
These variations reflect the overall pattern of late rains in North Darfur, as well as different agro-ecological conditions in the three states.

7.3.3 Cash crop cultivation this season

The cultivation of cash crops differed between the three states:

- Groundnut cultivation was concentrated in South Darfur and West Darfur and much lower in North Darfur;
- Watermelons were planted more frequently in North Darfur than South and West Darfur;
- Other vegetables were cultivated by more than half of the households in West Darfur but by only 30% of the households in South Darfur and 26% in North Darfur.
- Tobacco cultivation was low in all states.

Figure 17: Cultivation of Cash Crops, by State



At the time of the assessment (end of August/September), groundnuts were at a vegetative stage in most of the communities of North Darfur, while it was flowering in half of the communities in South Darfur and in most of the communities of West Darfur.

The proportions of IDPs cultivating cash crops were quite similar to those of residents.

- IDPs: 40% cultivated vegetables and/or groundnuts, 20% watermelon and 1% tobacco;
- Residents: 48% cultivated groundnuts, 38% vegetables, 26% watermelon and 3% tobacco.

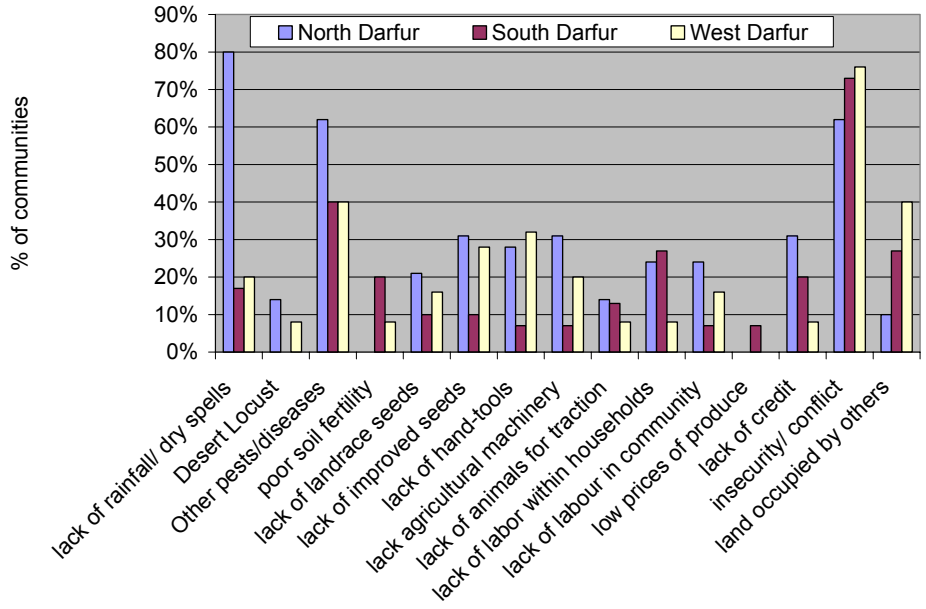
This relative similarity in the cultivation of cash crops may reflect the preferential use of the limited land and agricultural inputs available to the IDPs for crops that can provide income, including to IDPs in camps. IDPs in communities where they represent the majority of the households were slightly less likely to cultivate these crops than the other IDP groups, possibly due to a tighter access to land and agricultural inputs. Residents in communities with a majority of IDPs tended to cultivate more often cash crops, maybe because of the labour and market opportunities offered by the presence of large number of IDPs in the community.

7.3.4 Main constraints to crop cultivation

7.3.4.1 Community level

At *community level*, different constraints for crop cultivation were mentioned according to the Darfur states. While insecurity was reported by the majority of the communities in the three states, drought was more frequently mentioned than conflict in North Darfur:

Figure 18: Constraints to Crop Production



Iin 2005, insecurity and difficulties of access were also the main constraints mentioned by the households for crop cultivation.

The interpretation of the differences between states must take into account the large proportion of IDPs in West Darfur and lowest in North Darfur. The lack of rains and drought problems emphasized in North Darfur are consistent with the results of the Rapid Pre-Harvest Assessment undertaken at the end of August 2006 in this state.

Generally speaking, all the problems with cultivation were felt to be worse this year compared to last year in North Darfur. The patterns were less clear in the other two States where no changes, or improvements in some cases, were reported.

In the EFSNA, key informants were also asked about specific factors contributing to post-harvest losses:

- More than 80% of the communities reported infestations by pests and rodents (particularly in South and West Darfur),
- Almost 70% mentioned security problems, though more in West Darfur (85%) than in South (64%) and North Darfur (58%);
- Poor storage facilities were mentioned by more than half of the communities, but by twice as many communities in South Darfur (80%) as in North and West Darfur (about 40%).

7.3.4.2 Household level

At *household level*, insecurity was by far the problem most often mentioned by households (60%), followed by pests/ weeds (22%), shortage of landrace seeds (19%), lack of plough (17%), lack of water (16%), shortage of improved seeds (13%), lack of agricultural hand-tools

(13%), and shortage of labour (9%). However, differences were noticeable between the three States.

These differences can be related to the variations in the proportions of IDPs and residents between the three States. While a similar proportion of residents and IDPs mentioned the lack of landrace seeds (18%), lack of agricultural hand-tools (12-13%) or lack of animal traction (7-9%), the other constraints to cultivation differed between the two groups and according to the type of residence:

- Although important for both, insecurity was clearly more an issue for the IDPs (80%) than for the residents (39%);
- Pests/weeds, water shortages, lack of plough, shortage of improved seeds and shortage of labour were more frequently mentioned by residents than IDPs.

- IDPs in camps were more likely to mention insecurity problems (82%) than the IDPs living in communities;
- IDPs living in communities where they are a minority were more likely to mention problems of pests/weeds (30%), lack of water (26%), lack of plough (18%) and shortage of labour (11%) than the other IDPs;

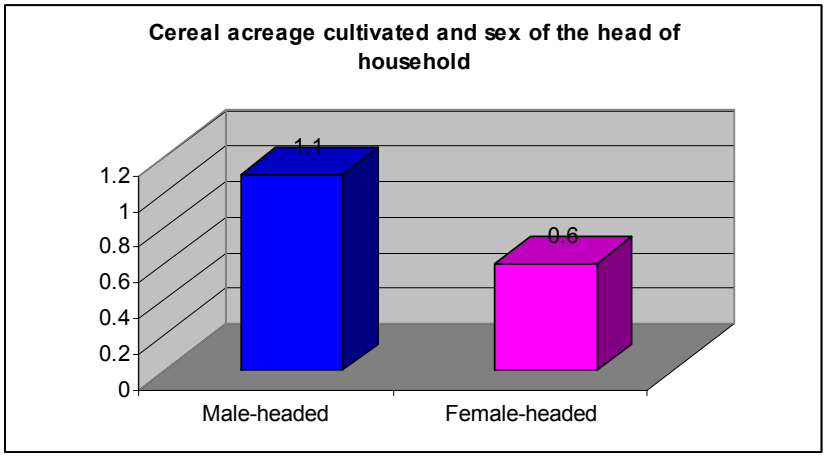
- Residents living in communities where IDPs are a majority reported more frequently insecurity problems (66%) shortages of improved seeds (29%) and lack of plough (30%), and much less frequently problems with pests/weeds or with labour shortages, than residents in other types of communities;
- Residents living in communities with no IDPs were much more likely to mention problems of water shortages (54%).

7.3.5 Gender and other social aspects with regards to crop cultivation

A slightly higher proportion of women head of household did not cultivate usually (22%) compared to men (16%). However, 63% of female-headed households owned a home garden (*jubraka*) and 58% of male-headed households.

The sex of the head of households influenced cultivation this season: a higher proportion of female-headed households (57%) than male-headed households (47%) did not cultivate. Furthermore, the average acreage cultivated was higher among male-headed households (1.4 ha or 2 *mukhamas*) than female-headed households (0.8 ha or 1.2 *mukhamas*). On a per capita basis, the difference was 0.23 ha/capita for male-headed and 0.21 ha for female-headed households.

Figure 19: Cereal Acreage cultivated and sex of the household



The proportion of households cultivating cash crops (some are also consumed) were similar between female- and male-headed households.

Similarly, there was a slightly higher proportion of literate heads of households cultivating groundnuts than illiterate heads (46% versus 39%). It may be that the production of this crop requires more resources and skills than the other crops.

The main constraints for cultivation reported by male- and female-headed households were similar. Slightly more male-headed than female-headed households mentioned shortages of improved seeds (19% versus 12%), poor soil fertility (9% versus 6%) and lack of water (9% versus 6%). Insecurity was an issue for more than 1/3rd of the households with no significant differences between male- and female-headed households.

7.3.6 Average household size and dependency ratio, and cultivation practices

Households who do not cultivate usually tended to be smaller in size (5.9 on average) than households who cultivate (6.3), however the dependency ratio was similar.

Smaller households tended to cultivate less acreage than larger households and with a higher dependency ratio. However, on a per capita basis, the acreage cultivated was lower in larger households (0.18 ha/capita) compared to smaller households (0.26 ha/capita).

The average size of households cultivating tobacco was larger than households cultivating other cash crops. There were no clear relationships between the dependency ratio of households and cash crops cultivation. Similarly, no strong relations were noted between the size and dependency ratio of the households and the main constraints mentioned for crop cultivation, even with regard to shortage of labour, animal traction or other tools.

7.3.7 Relationship between the number and type of income sources and cultivation

A description of the number and type of income sources is found in Section 9. Some linkages appear between income activities and cultivation practices of the households. In particular, the higher the number of sources of income, the higher the likelihood to cultivate and to own a home garden (*jubraka*).

Some differences were also observed according to the main source of income:

- As expected, the majority of households (96%) relying mainly on the sales of cereals or other crops were cultivating; between 60% and 70% of these households also had a home garden;
- The lowest proportions of households cultivating were those relying on gifts from relatives (67%) or on sales of food aid (71%); one possible factor contributing to this finding could be a poor physical capacity preventing access to any independent source of income; 28-29% of these households had a home garden however.

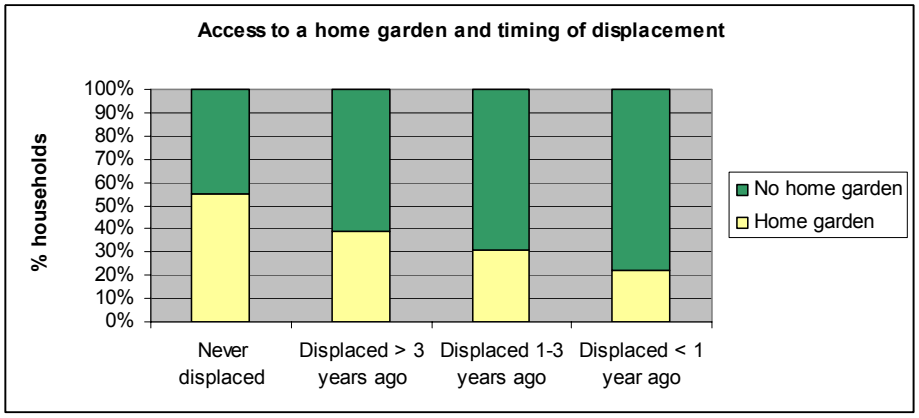
Cultivation was generally not the only income-earning activity of farming households:

- Among the households cultivating, more than 1/3rd were relying on wage labour as their main source of income, 14% on the sales of firewood, 10% on petty trade and 9% on the sale of food aid;
- Among the households not cultivating, almost half (45%) were relying on wage labour as their main source of income, and the rest was essentially depending on sales of firewood or sales of food aid (17% each).

7.3.8 Relationship between displacement timing and cultivation

More than 75% of the households who have been displaced still regularly cultivate. The more recent their displacement however, the less likely they were to have a home garden.

Figure 21: Access to a home garden and timing of displacement



Cultivation in general and the acreage cultivated this season by households who were displaced at some point was much lower than for those who had never moved. As expected, it was lowest for the recently displaced, but even the "old" displaced (more than 3 years ago) had cultivated less than half of the acreage of the residents.

While some differences between households in the cultivation of groundnuts or vegetables were observed according to the timing of the displacement, the reasons are unclear. A higher proportion of households who have been recently displaced (less than 1 year ago) were cultivating groundnuts, compared to the other households. Households displaced in relation to the conflict, between 1 and 3 years ago, were less likely to cultivate vegetables.

Table 24: Relationship between displacement time and cultivation of vegetables, groundnuts, tobacco, watermelon (for the household who have cultivated this season)

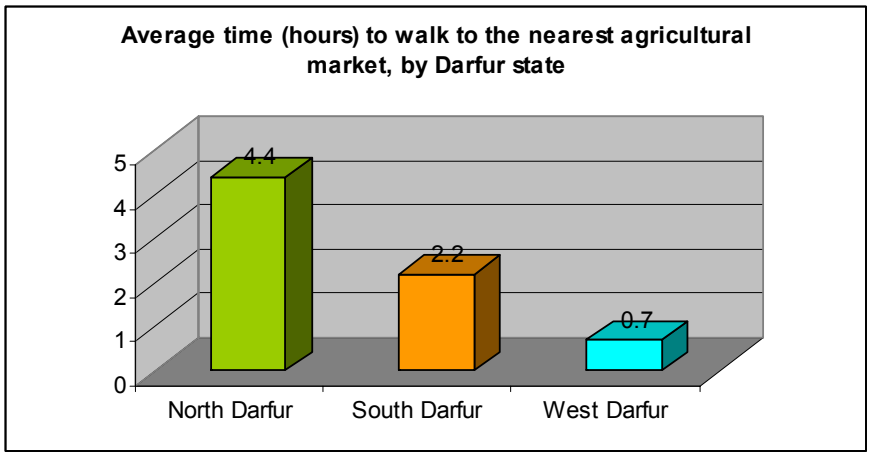
Non-cereal/cash crops	Proportion of households (%) who have planted			
	Tobacco	Groundnuts	Watermelon seeds	Vegetables
Never displaced	3%	42%	23%	35%
Moved before the conflict started	1%	43%	18%	21%
Displaced 1-3 years ago	3%	39%	18%	42%
Displaced less than 1 year ago	0	67%	17%	39%

The more recent the displacement, the more frequent was the mention of insecurity as a constraint to cultivation. After insecurity, lack of seeds was the main problem of the households displaced in relation to the conflict, while difficulties with pests and weeds, water shortages, lack of plough and lack of labour, were more often mentioned by the households who had never been displaced.

7.3.9 Access to markets and traders for agricultural inputs and produce

The average time to walk to the nearest market for agricultural inputs and produce was much higher in North Darfur (4 hours) than in South Darfur (2 hours) and shortest in West Darfur (less than 1 hour).

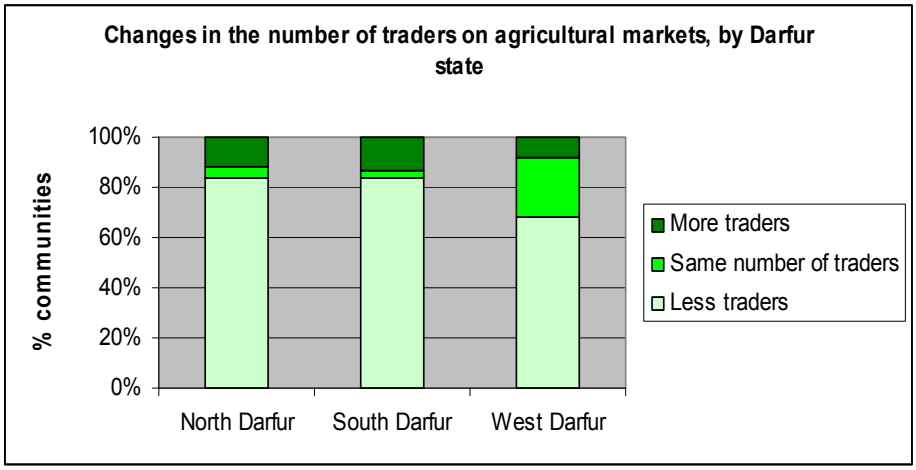
Figure 22: Average time (hours) to walk to the nearest market, by State



- Less than 30% of the communities in North Darfur were at less than 1 hour walk from these markets, compared to 57% of the communities in South Darfur and 83% of the communities in West Darfur;
- More than half of the communities in North Darfur (56%) were at more than 2 hours walk from these markets, compared to 23% in South Darfur and 12% in West Darfur.

Most communities in the three Darfur states indicated that the number of traders for agricultural inputs and produce had decreased compared to last year, although the decrease was less pronounced in South Darfur (68% of the communities) compared to North and South Darfur (83-84%).

Figure 23: Changes in the number of traders on agricultural markets, by State



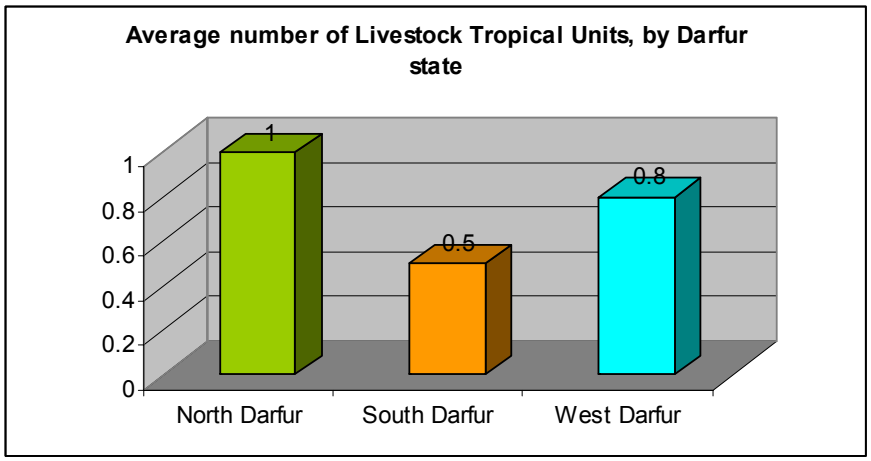
7.4 Livestock

7.4.1 Livestock ownership

The average number of Livestock Tropical Units[21] (LTUs) per household in crisis-affected Darfur was 0.77, however the number of LTU was twice as high in North Darfur (1 LTU) than in South Darfur (0.5 LTU) and average in West Darfur (0.8).

[21] The following factors were applied to calculate the Livestock Tropical Unit (LTU): cattle 0.8 LTU, camel 1 LTU, sheep 0.1 LTU, goat 0.1 LTU, donkey 0.5 LTU, horse 0.5 LTU, poultry 0.007 LTU.

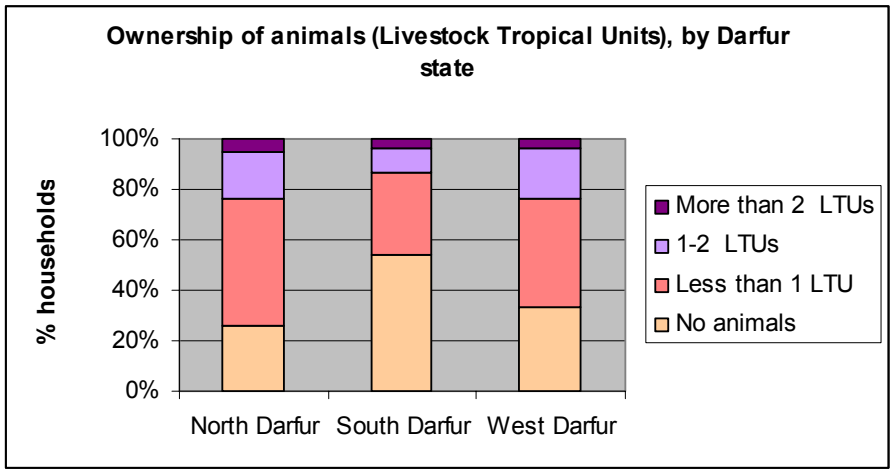
Figure 24: Average number of LTU, by State



The proportion of households not owning any animals was double in South Darfur (54%) than North Darfur (26%) and 34% in West Darfur. In North Darfur, about 70% of the households owned 1 or 2 LTUs, compared to 63% in West Darfur and only 42% in South Darfur; very few households owned more than 2 LTUs in the three states. On average it is considered that 3 to 5 LTU per household is acceptable for food security.

The overall proportion of Darfur households with no animals (38%) was similar as last year, indicating a lack of any significant restocking.

Figure 25: Ownership of animals, by State



As expected, residents owned significantly more animals than IDPs, although the presence of large numbers of IDPs in the communities seemed to affect negatively the ability of both residents and IDPs to raise animals, possibly because of more limited grazing and water resources available. The proportion of residents owning more than 1 LTU was more than double that of IDPs (30% and 14% respectively).

- IDPs owned on average 0.38 LTU and 55% had no animals at all;
- Residents owned on average 1.20 LTU and 26% had no animals;

The presence of IDPs in the communities affected negatively the ownership of sheep/goats, cattle and poultry by the residents, particularly when the IDPs outnumbered the residents.

Compared to last year, there seemed to be a slight decrease in the proportions of IDPs or residents owning donkeys and camels, but a slight increase of the proportion of IDPs living in communities and owning sheep or goats.

Donkeys:
- More than 1/3rd of the households in North and West Darfur, and more than half in South Darfur did not own any donkey;
- About half of the households in North and West Darfur owned 1 donkey, compared to 35% of the households in South Darfur;
- Twice as many households in North and West Darfur (15-17%) owned more than 2 donkeys compared to South Darfur (8%).
- Almost 60% of the IDPs did not own a donkey and 25% of the residents, but more than 50% of the residents owned one donkey and 19% more than one;
- The proportion of IDPs without donkey was the highest for IDPs in camps (64%) but IDPs living in communities were more likely to own one donkey (43-48% compared to 29% for those in camps).

Compared to last year, the proportion of IDPs owning donkeys is similar: in 2005, 30% of the IDPs in camps owned one; for those living in communities, 45% of the IDPs had a donkey last year.

Sheep and goats:
- The majority of the households in South (85%) and West Darfur (82%) owned neither sheep nor goats, compared to the 58% of the households in North Darfur;
- 87% of the IDPs did not own any sheep or goats, compared to 63% of the residents;
- The majority of the IDPs in camps did not own either sheep or goat (91%) versus 25% of those living in communities;
- However, the proportion of IDPs able to raise sheep/goats was higher in communities where they are a majority than in communities where they are a minority;
- The presence of large numbers of IDPs in the communities seemed to affect negatively the ability of residents to raise sheep or goats.

Compared to last year, the ownership of sheep or goats remained the same for IDPs in camps but increased a bit for IDPs in communities: last year, 19% owned these animals compared to 25% this year.

Cattle:
- Only 5 to 8% of the households in the three states owned any cattle.
- On average about 1% of the IDPs and 11% of the residents owned cattle;
- The presence of large numbers of IDPs seemed to have a strong negative effect on the ability of residents to raise cattle: while 12% of the residents owned cattle among those living in communities with no IDPs or with a minority of IDPs, only 3% of the residents owned cattle in communities with a majority of IDPs.

The average proportions of IDPs and residents owning cattle were not much different from last year, but there was no breakdown according to the number of IDPs in the communities in 2005 so it is not possible to analyse trends in this regard.

Poultry:
- While 25% to 30% of the households in North and West Darfur owned poultry, only 14% did so in South Darfur;
- The average number of poultry was 1.5 in North Darfur, 1 in West Darfur and less than 1 in South Darfur;
- 15% of the IDPs owned poultry, compared to 33% of the residents;
- Only 10% of the IDPs in camps owned any poultry, but 26% of the IDPs living in communities;
- The presence of large numbers of IDPs in the communities seemed to affect negatively the ownership of poultry: 40% of the residents owned poultry in communities with no IDPs compared to 27-30% in communities with IDPs.

Camels:
- Owners of camels were mainly found in North Darfur and for a very low proportion of households (5%).
- 3% of the IDPs living in communities where they are a minority owned cattle and virtually none of the IDPs in the other communities or in camps;
- Slightly less residents owned camels in communities with a majority of IDPs (1%) compared to communities with a minority of IDPs or with no IDPs (4%).

The proportion of camels owners was slightly higher among residents last year compared to this year although it was also low in 2005 (8% of the residents).

Horses:
- Only 3% of the households owned horses in the three Darfur states.
- The ownership of horses was practically limited to residents (5%), with less than 1% of the IDPs owning any;
- Among the residents, those living in communities with no IDPs were more likely to own horses (10%) than residents living in other communities (3-4%).

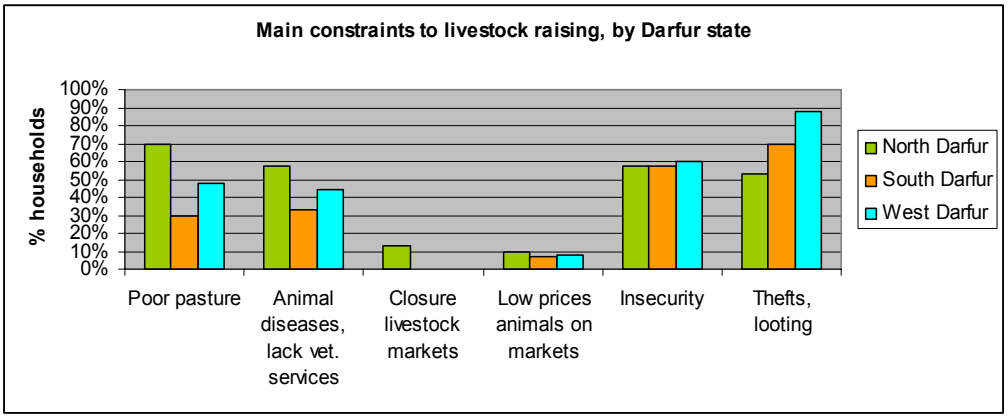
7.4.2 Main constraints to animal raising

7.4.2.1 Community level

Animal theft and looting were mentioned by 88% of the communities in West Darfur, 70% of the communities in South Darfur and 53% of the communities in North Darfur. Insecurity in general - impairing access to pasture, water points and migration routes - was reported by more than half of the communities (57 to 60%) in the three states.

The main constraints for animal raising differed between the three Darfur states:
- In North Darfur, poor quality and quantity of pasture was the problem mentioned by most communities (70%), followed by insecurity (57%), animal diseases/lack of veterinary services (57%) and thefts/lootings (53%); only 13% mentioned closure of livestock markets while this was not evoked in the other states;
- In South Darfur, thefts and lootings were reported by most of the communities (70%), followed by insecurity (57%); poor quality/quantity of pasture and animal diseases/lack of veterinary services were a problem for 30-33% of the communities;
- In West Darfur, 88% of the communities complained of thefts/lootings and 60% of insecurity; almost half mentioned problems with pasture and 44% of animal diseases/lack of veterinary services.

Figure 26: Main constraints to livestock raising, by State



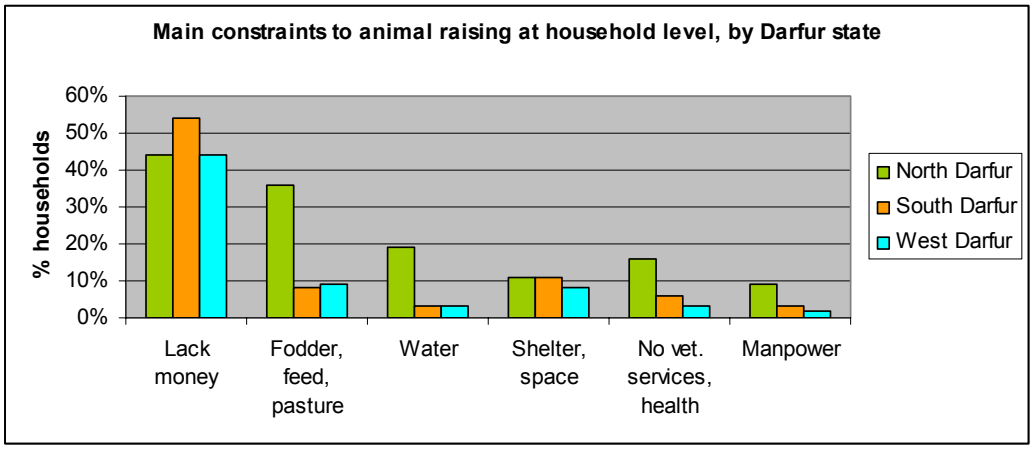
Compared to last year, most communities mentioned that the problems with livestock raising had worsened, including insecurity, thefts/lootings and animal diseases/lack of veterinary services. The worsening of the pasture conditions compared to last year was mentioned more

often by communities in North Darfur (71%) than in West (50% of the communities) and South Darfur (37%). Some improvement in the security and thefts/looting were reported by 1/4 to 1/3rd of the communities in South Darfur but only 12-19% of the communities in North Darfur and 9% in West Darfur (the latter only for thefts/looting).

7.4.2.2 Household level

Problems of theft and looting were mentioned by a higher proportion of households in West Darfur (71%) than in South (54%) and North (35%) Darfur. The same trend was noted for general insecurity. Lack of fodder especially, but also lack of access to water and veterinary services and manpower shortages were more likely to be mentioned in North Darfur than in South or West Darfur. These results are consistent with the information obtained from key informants at community level.

Figure 27: Constraints to animal raising at HH Level, by State



IDPs in camps were more likely to mention difficulties with animal shelters, compared to resident households. Residents living in communities with a minority of IDPs or with no IDPs reported more frequently problems with animal fodder and watering, and unavailability of veterinary services, than the others.

- IDPs: 57% thefts/lootings, 43% insecurity, 55% lack of money to purchase animals, 15% lack of animal fodder, 4% lack of water, 2% unavailability of veterinary services;
- Residents: 50% thefts/lootings, 32% insecurity, 39% lack of money to purchase animals, 20% lack of animal fodder, 12% lack of water, 15% unavailability of veterinary services.

7.4.2.3 Animal feeding

Most of the key informants indicated that, in addition to pastures, residents owning livestock were mostly feeding their animals with crop by-products (72%). This practice was more widespread in West Darfur (90%) than in South (78%) and North Darfur (50%). In North and South Darfur, 36% to 40% of resident livestock owners were also using their own animal feed sources, compared to 26% in West Darfur.

Crop by-products were the main animal feed complementing pastures for about 50% of the IDPs, and more so in West Darfur (65%) than in North (56%) and South Darfur (41%). Support received from agencies for animal feed was minimal, except in South Darfur (11% of the residents and 14% of the IDPs).

7.4.3 Gender and social aspects with regards to animal raising

The sex of the head of household had a strong influence on the ownership of animals. Male-headed households owned on average twice as many animals (0.85 TLU) than female-headed households (0.45 TLU).

The difference between male- and female-headed households applied to all animal species. However, while the proportion of households not owning cattle was similar between male-headed and female-headed households, a larger proportion of female-headed households did not own any sheep, goats, donkeys, or poultry compared to male-headed households:

- no sheep or goats: 73% of male-headed and 81% of female-headed households;
- no donkeys: 39% of male-headed and 55% of female-headed households;
- no poultry: 75% of male-headed and 83% of female-headed households.

Very few households owned camels or horses, and none was female headed. The ownership of large numbers of animals was more frequent among male-headed than female-headed households:

- cattle: 0.27 cattle in male-headed and 0.11 in female-headed households;
- sheep or goats: 1.43 in male-headed and 0.71 in female-headed households;
- poultry: 1.16 in male headed and 0.58 in female-headed households;
- donkey: 0.82 in male-headed and 0.55 in female-headed households.

There were very little differences between male- and female-headed households with regard to the main constraints for animal raising.

No relationship was observed between the literacy level of the head of household and the main constraints for animal raising.

7.4.4 Household size and dependency ratio, and ownership of animals

Smaller households (less than 6 members) owned less animals on average than larger households. This was especially the case for the ownership of sheep/goats or donkeys. The few households owning many animals were more likely to have a high dependency ratio, compared to those with less or no animals.

The main constraints to raise animals were similar among households whatever their size and dependency ratio, except for lack of manpower and lack of access to markets for animals which were more often mentioned by smaller households with a low dependency ratio.

7.4.5 Relationship between the number and type of sources of income, and animal ownership

(See Section 9 for details on income sources).

Households relying on one source of income owned slightly less animals on average, than those relying on two or three income sources: 0.6 LTU compared to 0.9 and 0.8 LTU respectively. In addition, 39% of households depending on one or two income sources did not own any animals, compared to 32% of those with three income sources.

The relationship between the number of income sources and ownership of animals was noted for all animal species. For donkeys in particular, the number of income sources seemed to be linked directly to the likelihood to own more: 10% of households with only one income source owned 2 donkeys or more, compared to 15% of those with two income sources and 17% of those with 3 income sources.

The type of main income source also influenced the ownership of animals.

- Not surprisingly, the number of animals owned was higher in households whose main source of income was livestock sales (4.64 LTU);
- Households relying on sales of crops or petty trade also owned a few animals (between 0.79 and 1 LTU), but much less than the livestock sellers;
- Households depending on waged labour, sales of handicraft, sales of firewood, sales of food aid or remittances were less likely to own animals, or owned small numbers (between

0.33 and 0.57 LTU); about half or more of these households did not own any animals (except those selling firewood, who were more likely to own at least one donkey).

The average number of *sheep/goats* owned by households relying mainly on sales of livestock was 10, compared to 1 or less than 1 for the other households; only 1/4th of livestock sellers did not own any sheep or goat. Households relying on waged labour, sales of handicraft or sales of food aid were less likely to own sheep or goats: more than 80% did not own any. None of the households relying on remittances owned any sheep or goat.

Households relying on livestock sales owned on average 2 *cattle*; 1/4th of these households owned between 2 and 5 cattle.

Households living mainly from waged labour, or sales of handicraft, petty trade, sales of food aid, gifts from relatives or remittances were less likely to own *poultry*: some 80% or more did not own any.

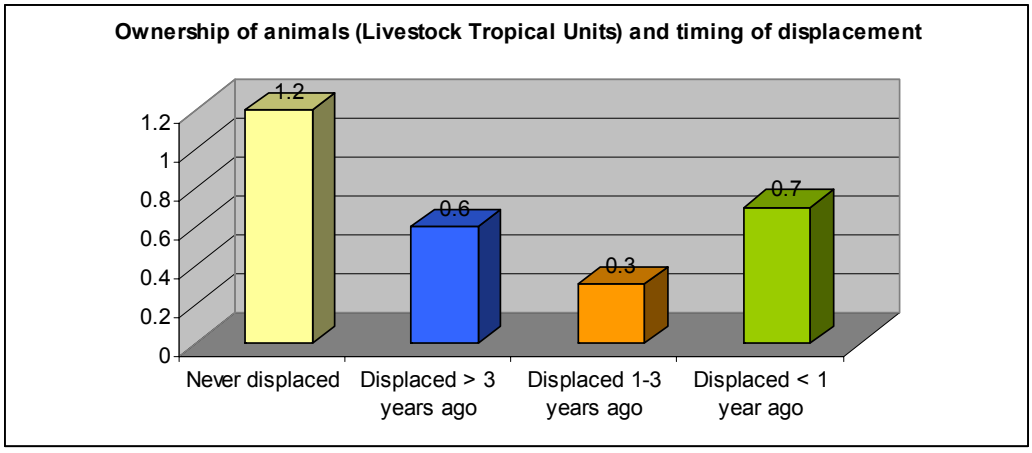
7.4.6 Relationship between displacement timing and animal ownership

Households never displaced owned twice as many animals as households recently displaced and households displaced before the conflict started (more than 3 years ago), and three times as many animals as households displaced in relation to the conflict, 1 to 3 years ago. This was true for all the animal species.

Households displaced 1 to 3 years ago were also more likely to be without any animals, compared to households recently displaced or to "old" IDPs, and to those who never moved. For the "old" IDPs, this result may indicate some ability to start rebuilding their animal stock.

The fact that IDPs recently displaced owned more animals than those displaced 1 to 3 years ago seem to indicate that they were somehow able to retain some of their animals for some time but finally had to sell or lost them after a while. Sheep, goats and donkeys were the animals more likely to be owned by recent IDPs compared to those displaced more than one year ago.

Figure 28: Ownership of animals (LTU) and timing of displacement



- Households never displaced: 1.22 LTU on average, and 17% did not own any animal; 34% owned poultry, 39% sheep/goats, 11% cattle, and 76% donkey;
- Households displaced more than 3 years ago: 0.57 LTU, and 42% did not own any animal; 21% owned poultry, 22% sheep/goats, 2% cattle, and 51% donkey;
- Households displaced 1 to 3 years ago: 0.34 LTU, and 57% did not own any animal; 16% owned poultry, 11% sheep/goats, 1% cattle, and 40% donkey;
- Households recently displaced: 0.65 LTU, and 49% did not own any animal; 4% owned poultry, 21% sheep/goats, 7% cattle, and 47% donkey.

7.4.7 Effects of the conflict on livestock trade

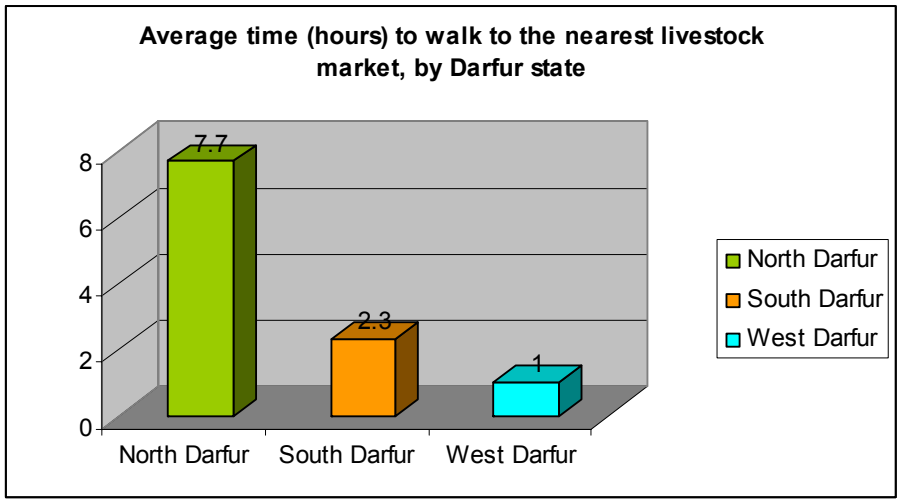
7.4.7.1 Access to livestock markets and level of livestock markets activity

According to the June 2006 Livelihoods study, before the conflict, livestock trade was a huge source of employment for thousands of traders, agents and middlemen. The conflict has forced herders to find 'crisis trade routes' which are much longer, incurring substantial additional expense and impacting negatively on the condition of the animals when they reach their final destination. The number of animals moved on the hoof at any one time has declined, and the cost of protecting them has increased. It has also become very risky for traders to travel with cash to purchase livestock.

The EFSNA survey showed at community level that access to markets for livestock was much easier in West Darfur than in the other two states, and particularly North Darfur:

- The average time to walk to the nearest market for livestock was much longer in North Darfur (7.7 hours) than South Darfur (2.3 hours) and shortest in West Darfur (about 1 hour);
- About half of the communities in North and South Darfur were located at less than 1 hour walk to the livestock market compared to 80% of the communities in West Darfur;
- Half of the communities in North Darfur were at more than 2 hours walking distance from these markets, 1/3rd of the communities in South Darfur and only 16% of the communities in West Darfur.

Figure 29: Average time (hours) to walk to nearest livestock market, by State



The majority of the communities in North and South Darfur (85-93%) indicated that the number of livestock traders had decreased compared to last year, but only about half of the communities in West Darfur.

7.4.7.2 Fodder market prices

Fodder market prices were higher in North Darfur (125 dinars per bundle) than in West Darfur (90 dinars) and lowest in South Darfur (61 dinars). Compared to last year, fodder prices remained somewhat stable in North Darfur, but they decreased by 30% in West Darfur and increased slightly (+11%) in South Darfur.

Chapter 8: FOOD ACCESS: INCOME, EXPENDITURES, COPING STRATEGIES AND MARKETS

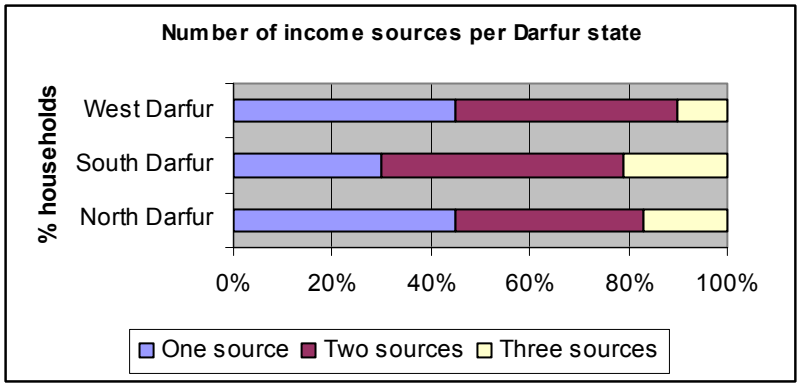
8.1 Income sources, wages, expenditures, assets and debts

8.1.1 Number and type of income sources

- Number of income sources

The majority of households in all three States had at least two main income sources. The proportion of households relying on one source of income was the lowest in South Darfur possibly indicative of a more diversified livelihood option in the State.

Figure 30: Number of income sources per State



Residents tend to have more diversified income sources than IDPs:

- IDPs: 41% had only one source of income, 47% two income sources, and 12% three income sources:
- Residents: 39% had only one source of income, 41% two income sources, and 20% three income sources:

Compared to 2005, the proportion of households in crisis-affected Darfur with three income sources has decreased from 23% to 16%.

Type of income source

The *first* source of income was waged labour for 45% of the IDPs and 29% of the residents.
- For the IDPs, wage labor (45%), sales of firewood (19%), sales of food aid (17%) and petty trade (8%).
- For the residents, wage labor (29%) sales of cereals (21%), sales of other crops (14%), petty trade (12%) and sales of firewood (11%).

When *the first, second and third sources of income were combined*, waged labour was the income-earning activity of 28% of the IDPs and 22% of the residents.
- For the IDPs, it was followed by sales of food aid (22%), sales of firewood (17%) petty trade (9%) and gifts from relatives/neighbours (7%).
- For the residents, it was followed by sales of cereals (15%), sales of firewood (13%), petty trade (12%), sales of other crops (11%) and sales of food aid (9%).

The proportions of households relying on agricultural-based activities (sale of cereals or other crops, sale of livestock or animal products) as their first source of income were lower in West

Darfur than in North and South Darfur, while the proportion of households relying on the sale of firewood/grass was much higher. This income generating activity (IGA) is generally associated with a poor economic situation, and reflects the higher proportion of IDPs in West Darfur compared to North and South Darfur.

The proportion of households in South Darfur relying on the sale of food aid as their main income source was more than twice higher than in West Darfur, and four times higher than in North Darfur. This result may be related to the slightly lower proportion of households in South Darfur depending on waged labour compared to the other two states.

Compared to 2005, at the level of crisis-affected Darfur the reliance on waged labour seems to have increased: 29% of all households in 2005 and 37% this year.

IDPs in general were less likely to rely on agricultural-based activities (sale of cereals or other crops, sale of livestock/animal products) than residents, and a higher proportion relied on waged labour or sale of firewood/grass for their income.

IDPs and residents in communities with small numbers of IDPs had similar IGAs, reflecting a relatively smooth integration of the IDPs in the host communities. This is in contrast with the situation of IDPs in camps. As much as 21% of IDPs in camps were mainly depending on the sale of food aid as their main source of income, compared to the other IDPs and the residents.

The presence of large numbers of IDPs seemed to affect the capacity of the residents to rely on the sale of agricultural production as a first source of income: a much lower proportion of residents in these communities relied on the sale of agricultural production compared to residents in the other communities. On the other hand, a higher proportion of residents in these communities relied on petty trade. The influx of many IDPs may have opened up small-scale trade activities to the residents and/or contributed to a switch of IGA in favour of petty trade.

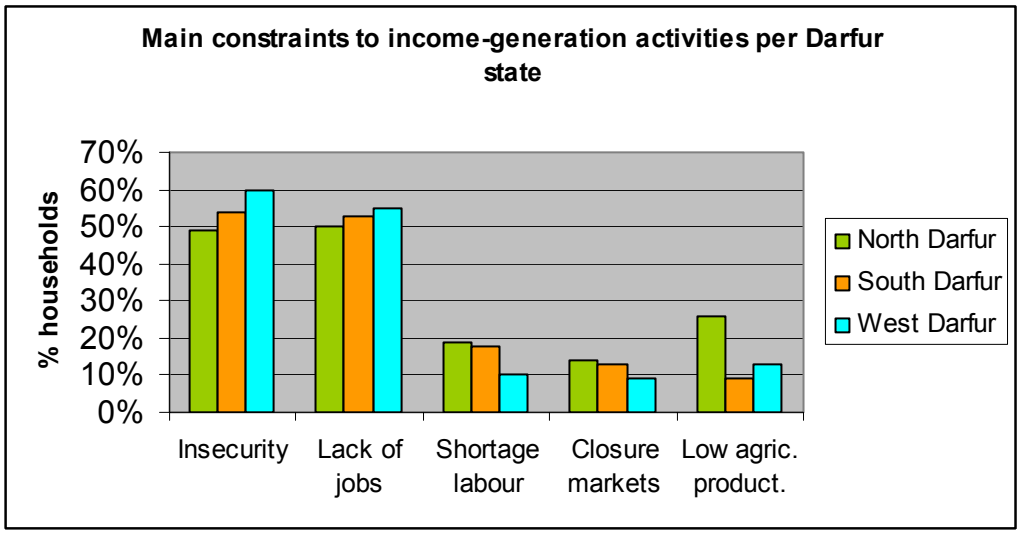
8.1.2 Main constraints to IGAs

The two main constraints for more than half of the households to earn an income were insecurity (59%) and limited employment opportunities (57%). Much less households mentioned lack of manpower (16%), illness (12%) or markets closure (9%). Less than 5% indicated problems with low market prices for agricultural produce or low performance of agricultural production.

While insecurity was mentioned more in West Darfur (60%) than in South (54%) and North Darfur (49%), lack of manpower was mentioned less in West Darfur (10%) than in South (18%) and North Darfur (19%). Low market prices for agricultural production, low performance of the crop and animal production, and illness constraints were more likely to be reported in North Darfur than in South and West Darfur.

A higher proportion of IDPs mentioned insecurity and limited employment opportunities as constraints for IGA, compared to residents.

Figure 31: Main constraints to IGA by State



8.1.3 Gender and other social aspects in relation to IGAs

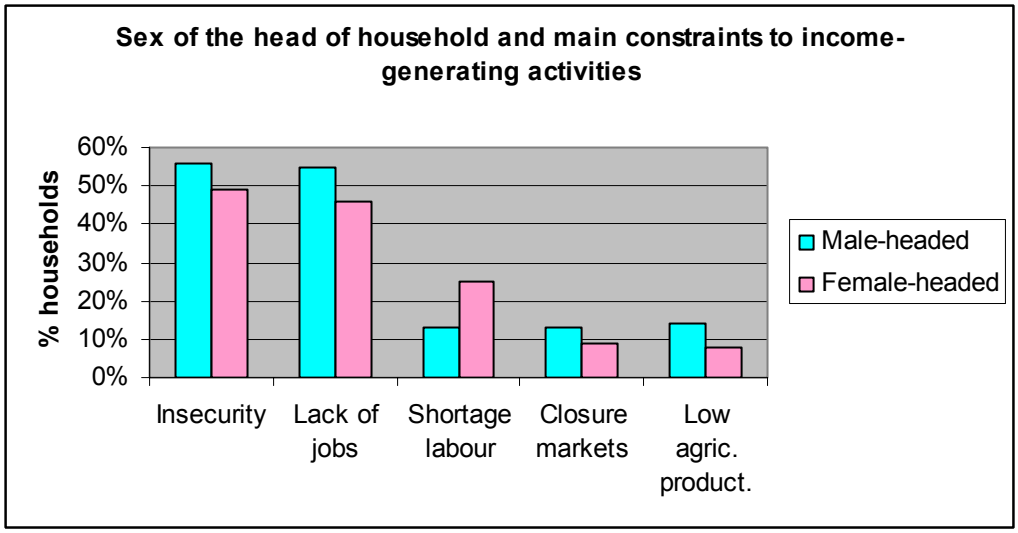
There were little differences in the type of income activities pursued by male- and female-headed households except for a slightly higher reliance on firewood/grass collection among female-headed households (18%) compared to male (14%), on gifts from relatives/neighbours (5% compared to 1%), and on the sale of food aid (13% compared to 10%).

Households whose head was literate were more likely to depend on 3 income sources (18%) than illiterate heads (13%).

8.1.3.1 Main constraints to income activities

Female-headed households were more likely to mention shortage of labour as a constraint to income generating activities, and less likely to report difficulties with employment opportunities or agricultural production.

Figure 32: Gender of the HH Head and main constraints to IGA



8.1.3.2 Sources of income, and household size and dependency ratio

As can be expected, a higher proportion of smaller households (less than 6 members) were mentioning shortage of labour as a constraint to their income activities, compared to larger ones. Difficulties due to low crop or animal productions were more likely to affect larger families (which were the ones cultivating more or owning more animals).

8.1.4 Daily wage levels and terms of trade (ToT) for unskilled labour

The daily wages for unskilled labour differed between the states and according to the type of labour.

Using the current market prices, between 9 to 17 kg of sorghum could be obtained against one day of unskilled work, depending on the type of labour and the State:

- For unskilled agricultural labour performed by men mostly, about 15 kg of sorghum could be obtained in South Darfur compared to 10-11 kg in North and West Darfur;
- For unskilled labour performed by women mostly, ToT against sorghum were comparable between the three states (about 16 kg of sorghum for one day of work);
- For the other unskilled labour, ToT against sorghum were better in South Darfur (12 kg) than North and West Darfur (around 9 kg).

Table 25: Current terms of trade of sorghum and millet against livestock and against labour

Terms of trade	States			Crisis-affected Darfur
	North Darfur	South Darfur	West Darfur	
Terms of trade of cereals against cattle:				
Amount (kg) of millet against 1 head of cattle	570 kg	550 kg	790 kg	**640 kg**
Terms of trade of cereals against sheep:				
Amount (kg) of sorghum against 1 sheep	200 kg	340 kg	300 kg	**280 kg**
Terms of trade of cereals against goat:				
Amount (kg) of sorghum against 1 goat	190 kg	220 kg	200 kg	**200 kg**
Terms of trade of cereals against unskilled labour:				
Amount (kg) of sorghum against 1 day of labour for land preparation/ clearing (men)	10 kg	15 kg	11 kg	**12 kg**
Amount (kg) of sorghum against 1 day of labour for crop weeding (women)	15 kg	16 kg	17 kg	**16 kg**
Amount of sorghum (kg) against 1 day of other unskilled labour	9 kg	12 kg	9 kg	**10 kg**

8.1.5 Migration patterns

8.1.5.1 Type of migration

One fourth of the households had at least one migrant member. In more than half of the cases, the main reason for migrating was to look for work or to cultivate own fields. About 12% mentioned insecurity as the main reason, and only 3% to take animals for grazing.

The proportion of households with migrant members was higher in North Darfur (29%) than in South (26%) and West (22%) Darfur. However, insecurity was more often mentioned as a cause for migration in West Darfur (17%) than in South (12%) and North Darfur (8%).

The proportion of households with migrant member(s) was similar in IDPs and residents, though it tended to be higher amongst residents living in communities with no IDPs (30%).

Almost 30% of the households relying on the sale of food aid as their first source of income had at least one migrating member.

8.1.5.2 Main reasons for non-migration

Among the households who did not have any migrant member, almost half indicated that they do not migrate usually. Almost 1/3rd mentioned insecurity as the main reason and 16% the lack of work opportunities. Insecurity as a constraint to migration was more often mentioned in West Darfur (39%) than in South (31%) and North (27%) Darfur.

Insecurity was also much more likely to constraint the migration of IDP members (47%) than residents (15%). This was also true for the lack of work opportunities, which limited the migration of 22% of the IDPs to migrate and 9% of the residents. In addition, more than 70% of the residents did not migrate usually, compared to 30% of the IDPs.

8.1.6 Household productive and domestic assets

8.1.6.1 Ownership of productive assets

The average number of productive assets (hoe/axe, plough, donkey cart, manual grinding mill, bicycle) owned by households in Greater Darfur was 1.7. About 1/4th of all surveyed households owned none, and about half owned one to two assets. The proportion of households without assets was higher in South Darfur (39%) than in North (24%) and West Darfur (13%).

Residents owned on average almost twice as many assets (2.2) as IDPs (1.2). While only 13% of the residents did not own any asset, they were 37% of the IDPs. IDPs in camps were the least likely to own assets (40% did not have any).

8.1.6.2 Type of assets

More than 70% of the households overall owned a hoe/axe, and 18% a plough. Less than 10% owned a donkey cart and very few had a bicycle (1%). Almost 20% owned a radio.

The proportion of households owning a hoe/axe was higher in West Darfur (86%) than in North (73%) and South (59%) Darfur. However, a higher proportion of households owned a plough in North (23%) and South Darfur (21%) than in West Darfur (11%). Radios were more likely to be found in North Darfur (29%) than in South and West Darfur (15%).

A lower proportion of IDPs owned a hoe/axe (61%) compared to residents (85%), as well as a plough (8% of IDPs, 29% of residents) or a radio (13% and 27% respectively).

8.1.6.3 Relationship between number/ type of income sources and ownership of productive assets

The higher the number of income sources, the higher the number of assets owned. The ownership of productive assets was lowest amongst households relying on the sale of food aid as their first source of income, and was also low for households relying mainly on remittances and on the sale of firewood. Households obtaining their income mostly from the sale of cereals or other crops, sale of livestock and animal products owned more productive assets.

8.1.7 Major household expenditures

8.1.7.1 Share of food, health and other expenditures

Food expenditures represented on average 69% of total monthly expenditures, while health expenditures represented 14%. The share of food expenditures was higher in West Darfur (77%) than in North (70%) and South Darfur (69%), while the share of health expenditures was lower in West Darfur (9%) than in South (13%) and North Darfur (19%).

IDPs tended to dedicate a larger amount of their expenditures for food (72%) than residents (66%).

8.1.7.2 Level of weekly food expenditures and type of food purchased

The average weekly food expenditures were slightly higher amongst households in North Darfur compared to South and West Darfur. This may be related to the fact that market prices were generally higher in North than in South and West Darfur (see paragraph 10.4 below):

- North Darfur: 4420 dinars/week, 820 dinars/week/capita;
- South Darfur: 3640 dinars/week, 690 dinars/week/capita;
- West Darfur: 3640 dinars/week, 700 dinars/week/capita.

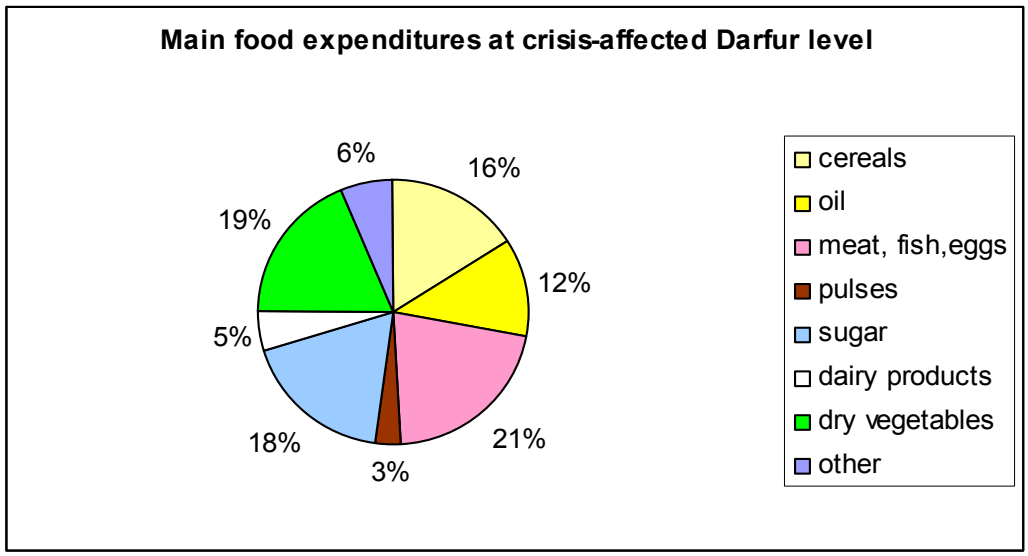
Resident households were spending on average 4170 dinars per week for food expenditures, which represented about 540 dinars more than the IDPs. The lowest level of weekly food expenditures was for IDPs in camps or in communities where they are a majority (about 3500 dinars/week), reflecting the higher limitations on income-earning activities for these households.

Table 26: Weekly food expenditures (7 days prior to the survey)

Past 7 days food expenditures	**Average weekly food expenditures** (dinars)	**Average weekly food expenditures per capita** (dinars)
North Darfur	4420	820
South Darfur	3640	690
West Darfur	3640	700
Total (crisis-affected Darfur)	**3900**	**740**
Total IDPs	**3630**	**680**
IDPs in camps	3510	670
Total residents	**4170**	**790**

Dry vegetables and meat represented each about 20% of the weekly food expenditures; sugar accounted for 18%, cereals 16%, oil 11% and milk 5%. This pattern of food expenditures was similar between IDPs and residents.

Figure 33: Main food expenditures at crisis-affected Darfur level



8.1.7.3 Share of food expenditures out of total monthly expenditures

On average, households dedicated almost 70% of their monthly expenditures to food purchases. This share was lower in North Darfur (61% of expenditures for food) than in South (69%) and West Darfur (77%). Only 11% of the households in North Darfur allocated more than 80% of their expenditures for food, compared to 26% in South Darfur and 37% in West Darfur. This situation reflects the higher proportion of IDPs in West Darfur and their economic precarity.

The average amount of weekly food expenditures per capita increased as the proportion of expenditures dedicated to food increased. While those dedicating 21-40% of their expenditures to food spent on average 310 dinars/capita, the level of food expenditures was 2050 dinars/capita among households dedicating more than 80% of their expenditures to food.

This result also shows that households allocating a small share of their expenditures to food are in fact spending very little for food, and their overall level of expenditures remain low. As such, their economic situation may not be that bright even though the proportion of food expenditures is low.

Table 27: Average amount of food expenditures per capita per week, according to the share of total expenditures

Amount of food expenditures	**Amount per capita per week (*dinars*) according to the food share of total expenditures**				
	0-20%	**21-40%**	**41-60%**	**61-80%**	**81-100%**
Per State:					
North Darfur	140	310	400	730	1940
South Darfur	120	310	390	720	2000
West Darfur	150	320	390	740	2200
Total (crisis-affected Darfur)	**140**	**310**	**390**	**730**	**2050**
Total IDPs	**130**	**310**	**380**	**740**	**2070**
IDPs in camps	130	310	380	740	2150
Total residents	**150**	**310**	**400**	**720**	**1980**

8.1.8 Household indebtedness

8.1.8.1 Extent of indebtedness

About 40% of all households were indebted to neighbours or relatives, and 48% to traders or money lenders. The proportion of households indebted to relatives/neighbours was lower in West Darfur (32%) than in South (38%) and North Darfur (45%). Conversely, the proportion of households indebted to traders/money lenders was higher in West Darfur (52%) than in South (48%) and North Darfur (46%).

IDPs tended to borrow less frequently than residents, except for IDPs in camps which were as indebted to relatives/neighbours as the residents:

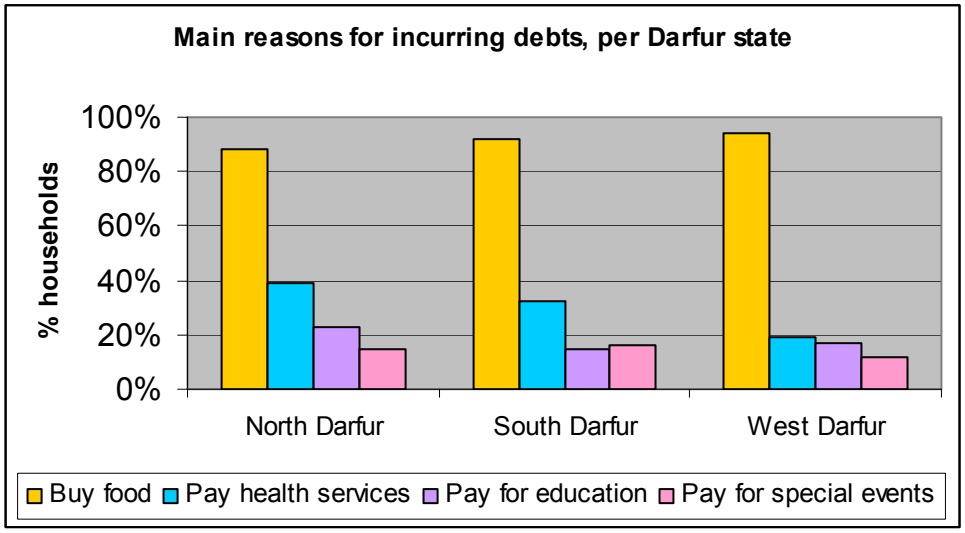
- IDPs: 40% indebted to relatives/neighbours, 53% to traders/money lenders;
- Residents: 37% indebted to relatives/neighbours, 43% to traders/money lenders.

8.1.8.2 Main reasons for borrowing

The majority of households took debts to purchase food (91%). About 30% were also indebted to pay for health expenditures, 18% for education expenses and 14% to pay for ceremonies and other exceptional events.

The use of debts to cover health expenses was higher in North Darfur (38%), than in South (32%) and West Darfur (19%). Debts to pay for education expenses were also higher in North Darfur (23%) than in West (17%) and South Darfur (15%).

Figure 34: Main reasons for incurring debt, by State



IDPs were less likely to be indebted to pay for health expenses (18%) compared to residents (39%) and this may reflect the relative improved access to health service among IDPs provided as part of humanitarian assistance.

8.2 Coping strategies in the event of food shortages

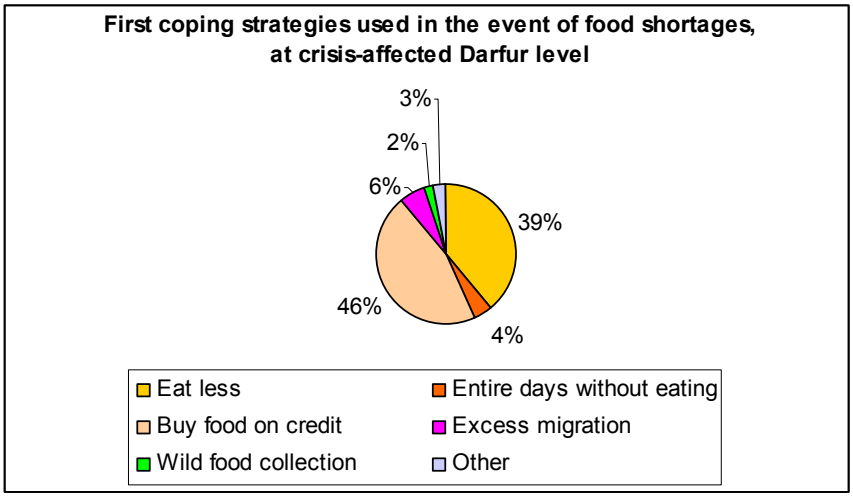
8.2.1 Main types of coping strategies according to the various household groups

There were little differences in the household coping strategies between the three Darfur states, with the exception of excess migration which was mentioned more often in South Darfur (11%) than in North or West Darfur (4%).

IDPs in camps tended to resort more frequently to excess migration (9%) to cope with food shortages compared to other IDPs (1-3%) or residents (4%), except for residents living in communities with no IDPs (7%). Residents living in communities with a majority of IDPs were more likely to eat less amounts of food in the event of food shortages (58%) compared to the other residents (36-41%), and less likely to purchase food on credit (35% compared to 43-52%).

Overall, the two main strategies used in the first instance to cope with food shortages were purchasing food on credit (46%) and eating less amounts of food/less meals (39%). Excess migration (6%), going for entire days without eating (4%), or increasing the collection of wild foods (2%) were much less frequent as a first response, and less than 1% of the households mentioned distress sales of animals (probably also because the number owned is low on average), sale of productive assets or valuables (for the same reason) or taking children out of school.

Figure 35: Primary Coping strategies



There were little differences between the Darfur states, with the exception of excess migration which was mentioned more often in South Darfur (11%) than in North or West Darfur (4%).

8.3 Market structures, function and prices

The Markets, Livelihoods and Food Aid study[22] carried out by FAO, USAID and the EC in 2005 and the Darfur EFSNA in 2005 have extensively described the adverse effects of the conflict on market functioning in Darfur. The WFP Livelihoods study of June 2006 confirmed the negative impact of the crisis on marketing activities and access to food by the population. Before the conflict, Darfur was normally able to achieve food self-sufficiency through significant grain flows from surplus producing areas in South and West Darfur states to the usually food-deficit North Darfur state. Only in very bad drought years had Darfur had to rely on grain imports from elsewhere in Sudan.

[22] A.R. Hamid, A.A.A. Salih, S. Bradley, T. Couteaudier, M. Jaafar El Haj, M.O. Hussein, P. Steffen: 'Markets, Livelihoods and Food Aid in Darfur: Rapid Assessment and Programming Recommendations". FAO, USAID and EC, May 2005.

The conflict affected market food supply, particularly cereals, through its effect on the agricultural production and limitations to the movement of producers and traders. It also impacted the demand through decreased purchasing power due to the collapsing of livelihoods and income sources.

8.3.1 Effects of the conflict on market structures

8.3.1.1 Number and type of markets accessible to communities and households

According to the EFSNA, almost all communities in the three Darfur states had access to either a permanent daily market or a weekly market. More than 60% of the communities had access to both daily and weekly markets in South Darfur, compared to about 50% in North and West Darfur. The number of weekly markets was also higher in South Darfur (2 compared to 1.3 in North and West Darfur).

Table 28: Availability of markets and changes in the number of markets and traders compared to last year

Markets	States			Crisis-affected Darfur
	North Darfur	South Darfur	West Darfur	
Availability of permanent or travelling markets per community:				
Average number of permanent/daily markets	1.0	0.9	0.9	**0.9**
Average number of travelling/weekly markets	1.3	2.0	1.3	**1.5**
% communities with no markets (no permanent *and* no travelling markets)	3%	0	0	**1%**
% communities with only travelling market (no permanent market)	20%	13%	32%	**22%**
% communities with only permanent market (no travelling market)	30%	23%	16%	**23%**
% communities with *both* permanent and travelling markets	47%	63%	52%	**54%**
Total	**100%**	**100%**	**100%**	**100%**
Changes in the number of permanent/daily markets compared to last year:				
% same number of markets	79%	77%	90%	**80%**
% less markets	21%	27%	10%	**20%**
% more markets	0	0	0	**0**
Total	**100%**	**100%**	**100%**	**100%**
Changes in the number of travelling/weekly markets compared to last year:				
% same number of markets	65%	50%	100%	**72%**
% less markets	30%	46%	0	**25%**
% more markets	5%	4%	0	**3%**
Total	**100%**	**100%**	**100%**	**100%**
Changes in the number of traders in permanent/daily markets compared to last year:				
% same number of traders	32%	18%	25%	**25%**
% less traders	58%	73%	75%	**69%**
% more traders	10%	9%	0	**7%**
Total	**100%**	**100%**	**100%**	**100%**
Changes in the number of traders in travelling/weekly markets compared to last year:				
% same number of traders	40%	19%	44%	**34%**
% less traders	55%	65%	56%	**59%**
% more traders	5%	15%	0	**7%**
Total	**100%**	**100%**	**100%**	**100%**

Compared to last year, the numbers of daily and weekly markets decreased, but less in West Darfur than in North and South Darfur.

However, the recovery in market activities seemed very low and limited to North and South Darfur: few communities (4 to 5%) reported an increase in the number of weekly markets and about 10% indicated a higher number of traders in these two states, while no increase was mentioned at all in West Darfur.

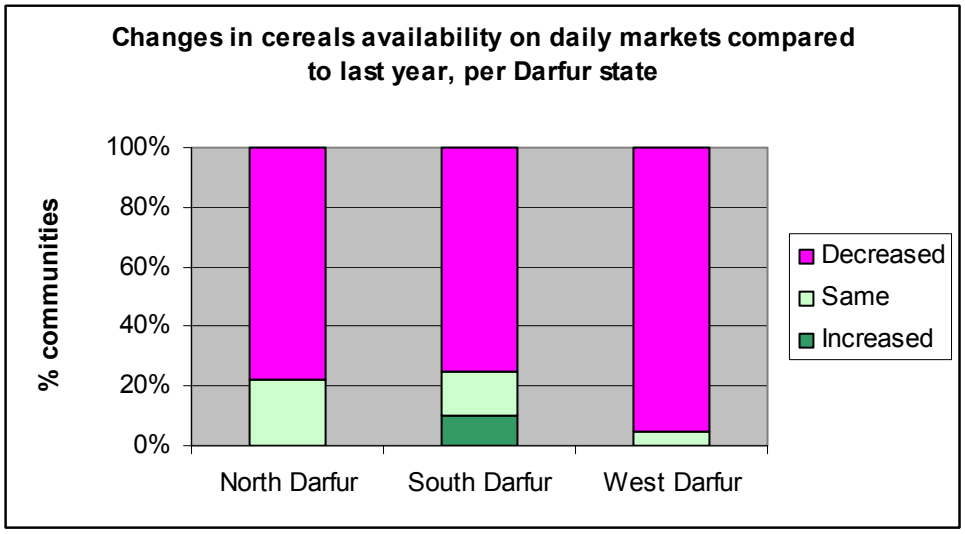
About 75% of the communities in South and West Darfur and 58% in North Darfur indicated that the number of daily traders had decreased. The number of weekly traders also decreased in 65% of the communities in West Darfur and 55-56% of the communities in North and West Darfur.

8.3.2 Market food availability

Before the conflict, weekly rural cereal markets were considered basic and not particularly efficient[23]. Long distances, high transportation costs and poor road infrastructure contributed to the poor integration of Darfur millet and sorghum markets with those of Central Sudan. This situation, further exacerbated by the conflict, exposes the region to periodic cereal shortages.

Practically all communities surveyed in West Darfur and more than 3/4th of the communities in North and South Darfur reported that the quantities of cereals available on the daily or weekly markets have decreased compared to last year at this period.

Figure 36: Changes in ceeal availability on daily markets compared to 2005, by State



In all three states, traders on daily markets procured their cereals mostly from local suppliers. For weekly traders, cereals came exclusively from local supply in West Darfur, while 8% of traders in South Darfur and 15% in North Darfur also bought cereals from other Darfur states and about 5% from national (rest of Sudan) trade.

The degree of reliance on local supply sources seemed higher than last year.

8.3.3 Effects of the conflict on cash crops

Groundnuts are grown especially in South and part of North Darfur. Traders and companies from Central Sudan have withdrawn, and with them has gone a major source of credit on which many groundnut farmers used to depend. Most of them must now sell all their groundnuts at harvest time, when price is lowest, to pay back any loans that they have managed to secure from the population. Groundnut prices have almost halved from pre-conflict levels.

[23] '*Markets, livelihoods and food aid in Darfur: a rapid assessment and programming recommendations*', FAO/EC/USAID Assessment Report, May 2005

The EFSNA community survey reported wide differences between the Darfur states, with groundnuts prices higher in North Darfur (159 dinars per kg) than in West Darfur (103 dinars) and lowest in South Darfur (75 dinars). Compared to last year, prices had increased by 50% in North Darfur but decreased by 50% to 60% in the other two states.

8.3.4 Effects of food aid on trade and market prices of local and food aid commodities

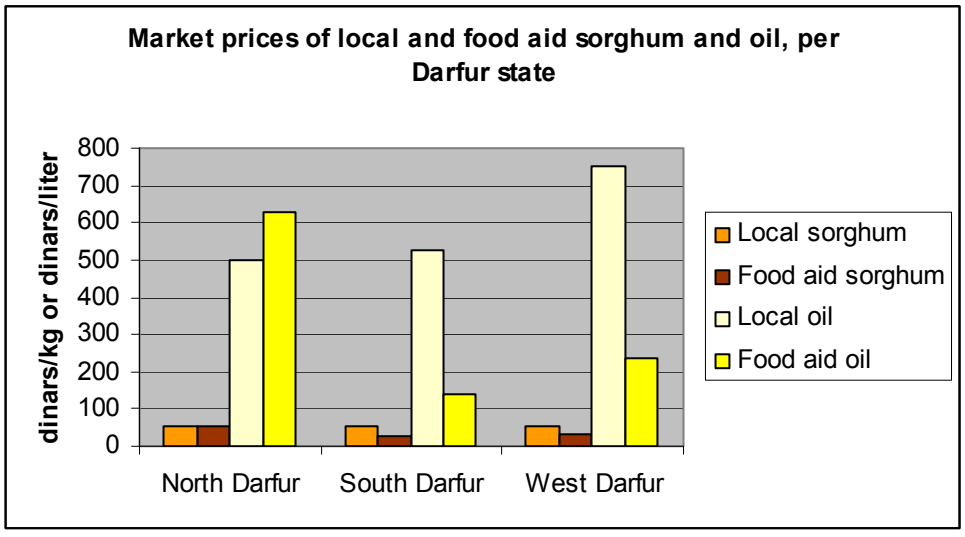
The June 2006 *Livelihood study* confirmed the critical role that the provision of large quantities of food aid sorghum and wheat had played in keeping traders in business. Agents are buying grain on a daily or monthly basis from IDPs. Food aid has also maintained prices at affordable levels, although still unusually higher than pre-conflict prices, except for wheat. Marketed relief grain is thus affordable for those who have been missed from general food aid registration and for those not eligible for humanitarian assistance but who nevertheless struggle to cope with the increased cost of living. Even IDPs frequently end up buying grain back again when their supply runs out before the next distribution.

Relief grain is also exported from Darfur to Central Sudan as the price differential makes it worth the transportation costs.

The *EFSNA community survey* showed that the average price of local sorghum was similar in the three Darfur states (53-54 dinars/kg) while the price of sorghum food aid differed. Sorghum food aid price was comparable to the price of local sorghum in North Darfur, indicating a tight supply of local sorghum on the market, and consistent with the low level of sorghum production in that state generally and particularly at the time of the survey (pre-harvest). However, the price differential between local and food aid sorghum was much higher in South and West Darfur, with local sorghum being more expensive than food aid sorghum. This situation indicates a better local sorghum supply situation in these two states, somewhat consistent with the production patterns and transportation facilities as well.

The price of local oil was lower than food aid oil in North Darfur but much higher in South and West Darfur, indicating a deficit of local oil and/or preference for food aid oil in the North:

Figure 37: Market prices of local and food aid sorghum and oil, by State



8.3.5 Levels and trends of market food prices

Millet prices systematically exceed sorghum prices in Greater Darfur because of the strong preference for millet as the main staple, except in some parts of South Darfur where the reverse is true. The EFSNA market prices information collected at community level (rural markets) confirmed that prices were generally higher in North Darfur than in the other two states. The differences were especially marked for millet and food aid items.

However, local cooking oil was cheaper in North Darfur (498 dinars per liter) than in South Darfur (526 dinars) and West Darfur (752 dinars). There were less price differences between the Darfur states for local sorghum (average 54 dinars per bag) and sugar (average 330 dinars per kg).

The evolution of prices since last year differed according to the commodities and the Darfur states:

- All food prices (cereals, oil, sugar) increased in North and West Darfur, by a range of 17% to 36%;
- Millet prices increased more in North than in West Darfur, while the reverse was true for wheat prices;
- In South Darfur, prices of all cereals decreased: -3% for food aid sorghum, -16% for wheat;
- The price of oil increased significantly in all states, although more in North and West Darfur (+74% to +78% for food aid oil, +21% to +49% for local oil) than in South Darfur (+ 20% for food aid oil, + 24% for local oil);
- Sugar prices increased slightly in West (+10%) and South Darfur (+8%) but did not change noticeably in North Darfur.

8.3.6 Market livestock prices

The market prices of animals varied according to the state and to the species and no discernable pattern of differences could be observed:

- Cattle prices were higher in West Darfur than South Darfur and lowest in North Darfur;
- Sheep prices were higher in South Darfur than in North and West Darfur;
- Goat prices were higher in North and South Darfur than in West Darfur;
- Donkey prices were higher in South Darfur than in North and West Darfur.

Compared to last year, the prices of all animal species had increased in the three Darfur states, generally less in North Darfur and more West Darfur, with South Darfur in the middle:

- Cattle prices increased by +20% to +26%;
- Sheep prices increased by +16% (North Darfur) to +35% (West Darfur);
- Goat prices increased by +19% (North Darfur) to + 33% (West Darfur);
- The highest increase was for a donkey in North Darfur (+57%) compared to South (+19%) and West Darfur (+13%).

8.3.7 Terms of trade of livestock against cereals

Terms of trade (ToT) of large and small livestock against cereals differed between the states and according to the type of cereals considered:

- ToT of cereals against cattle were better in West Darfur than in South and especially North Darfur, particularly for sorghum: while selling a head of cattle enabled to purchase 1410 kg of sorghum in West Darfur, 1291 kg would be obtained in South Darfur and only 599 kg in North Darfur;
- ToT of millet against sheep or goats were not very different between the three states, but ToT of sorghum were better in South Darfur compared to North and especially West Darfur: the sale of a sheep would enable to purchase 339 kg of sorghum in South Darfur, compared to 298 kg in West Darfur and 201 kg in North Darfur.

Chapter 9. FOOD CONSUMPTION PATTERNS

9.1 Food consumption diversity and frequency

9.1.1 Principles of the food consumption pattern analysis

In order to enable comparisons with the EFSNA of 2005, the same methodology was used to determine three food consumption groups: 'poor'; 'borderline'; and 'acceptable'; based on the diversity and frequency of consumption of food items during the 7 days preceding the survey. A total of 14 food groups were used including: sorghum, millet, other cereals, pulses, meat, eggs, sugar, oil/fats, fruits, vegetables, wild foods, dry vegetables and Corn-Soya Blend (CSB). The latter two groups were not counted separately last year (dry vegetables were implicitly included under 'vegetables' and CSB under 'other cereals').

It was felt important to mention explicitly 'dry vegetables' due to the risk of respondents interpreting the question on the consumption of 'vegetables' as referring exclusively to fresh items and thus underestimating the usually high consumption of dry vegetables in Darfur. The specific question on CSB consumption was linked to concerns expressed by donors about CSB being sold instead of consumed.

The inclusion of these two additional food means that the average food score calculated for each food consumption group from the number of different food items consumed (diversity) and the number of times they have been eaten during the past 7 days (frequency) is necessarily different compared to last year. The comparison of the proportions of households in the various food consumption groups between the present EFSNA and last year must take this change of procedures into account.

9.1.2 Characteristics of the food consumption patterns in each group

9.1.2.1 Poor dietary diversity and frequency of food consumption

The table below shows the 'food scores' for average dietary diversity and food consumption frequency (see table 29). The diet for the 'poor' consumption group was characterized by:

- a frequent consumption of sorghum, sugar and dry vegetables (4 to 5 times per week);
- low consumption of other cereals and oil/fats (2-3 times per week);
- rare/no consumption of millet (more expensive than sorghum), pulses, meat, milk, eggs, fruits, fresh vegetables, wild foods and CSB (once per week or none).

Consumption of this diet is expected to contribute to malnutrition in the short-term (such as wasting) and if sustained, to longer term damage such as stunting in children, low birth weight and micronutrient deficiencies, and to limit the physical capacity (and productivity) of individuals engaged in physically demanding activities.

Table 29: Diet characteristics of the 'poor food consumption' pattern

Past 7 days food consumption	**Average food score**	**Number of days of consumption in the past week**			
		Always (6-7 days)	**Often** (4-5 days)	**Sometimes** (2-3 days)	**Rarely/never** (0-1 day)
Sorghum	24				
Millet					
Other cereals	(17 without CSB and dry vegetables)				
Pulses					
Meat					
Milk					
Eggs					
Sugar					
Oil/fats					

Past 7 days food consumption	Average food score	Number of days of consumption in the past week			
		Always (6-7 days)	Often (4-5 days)	Sometimes (2-3 days)	Rarely/never (0-1 day)
Fruits					
Vegetables					
Wild food					
Dry vegetables					
CSB					

9.1.2.2 Borderline dietary diversity and frequency of food consumption

The diet of the 'borderline food consumption' group was characterized by:
- frequent consumption of sorghum, other cereals (e.g. wheat), and sugar (4 to 5 times per week);
- daily consumption of oil/fats and dry vegetables;
- rare/ no consumption of millet, pulses, meat, milk, eggs, fruits, fresh vegetables, wild foods and CSB (once per week or none).

The consumption of such a diet can be expected to contribute to malnutrition (such as stunting in children), low birth weights and micronutrient deficiencies (especially anaemia) if such consumption continues for long periods.

Table 30: Diet characteristics of the 'borderline food consumption' pattern

Past 7 days food consumption	Average food score	Number of days of consumption in the past week			
		Always (6-7 days)	Often (4-5 days)	Sometimes (2-3 days)	Rarely/never (0-1 day)
Sorghum	32 (26 without CSB and dry vegetables)				
Millet					
Other cereals					
Pulses					
Meat					
Milk					
Eggs					
Sugar					
Oil/fats					
Fruits					
Vegetables					
Dry vegetables					
Wild food					
CSB					

9.1.2.3 Acceptable dietary diversity and frequency of food consumption

The diet of the 'acceptable food consumption' group was characterized by:
- frequent consumption of sorghum and other cereals (4 to 5 times per week);
- daily consumption of sugar, oil/fats and dry vegetables;
- low consumption of millet, pulses, meat, milk and CSB (2-3 times per week);
- rare/no consumption of eggs, fruits, fresh vegetables and wild foods (once per week or none).

Despite being labelled 'acceptable', it is worth noting that some households and specific individuals within this food consumption group will continue to be at risk of malnutrition in the longer term (especially stunting), depending on the amounts of food items that they effectively consume, the share of food within the household, and individual characteristics.

Table 31: Diet characteristics of the 'acceptable food consumption' pattern

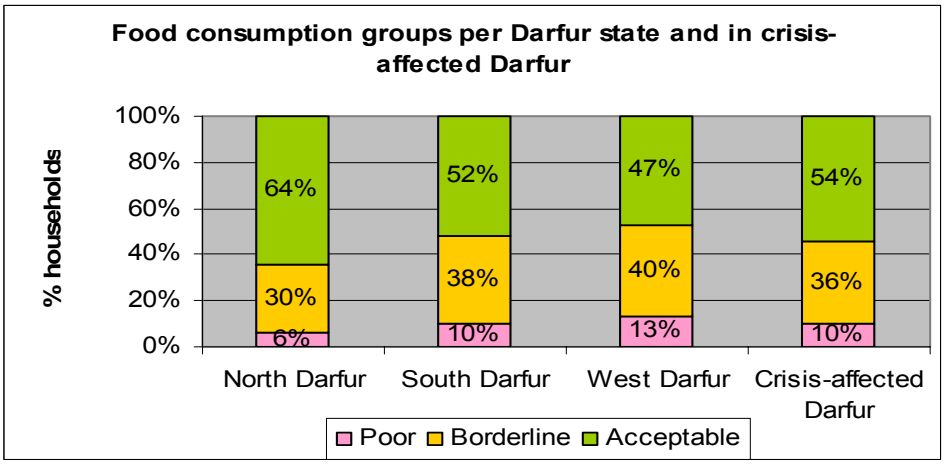
Past week food consumption	Average food score	Number of days of consumption in the past week			
		Always (6-7 days)	**Often** (4-5 days)	**Sometimes** (2-3 days)	**Rarely/never** (0-1 day)
Sorghum	44 (36 without CSB and dry vegetables)				
Millet					
Other cereals					
Pulses					
Meat					
Milk					
Eggs					
Sugar					
Oil/fats					
Fruits					
Vegetables					
Wild food					
Dry vegetables					
CSB					

9.1.3 Proportions of the various household food consumption groups in Darfur

Using the above classification, 10% of the households in Greater Darfur had a poor food consumption pattern, 36% borderline and 54% acceptable. Compared to last year, the proportion of households with a poor food consumption pattern has risen from 6% to 10%, while the proportion of households in the borderline food consumption group is slightly lower (39% in 2005) and those with 'acceptable' food consumption is similar (55% in 2005).

West Darfur had the highest proportion of households with poor food consumption pattern and North Darfur had the lowest, with South Darfur lying in the middle. This pattern reflects differences in the proportions of IDPs and residents between the three states. See figure X below.

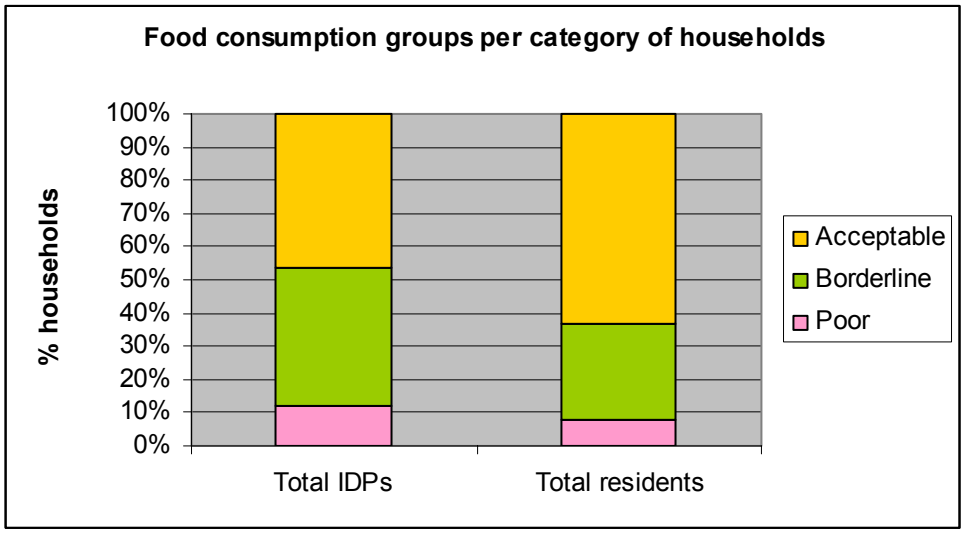
Figure 39: Proportion of different food consumption groups by state, Darfur September 2006



The food consumption pattern of the IDPs was worse than the residents:

- 12% of IDPs had poor food consumption, 42% borderline and 47% acceptable;
- 8% of the residents had poor food consumption, 29% borderline and 63% acceptable.

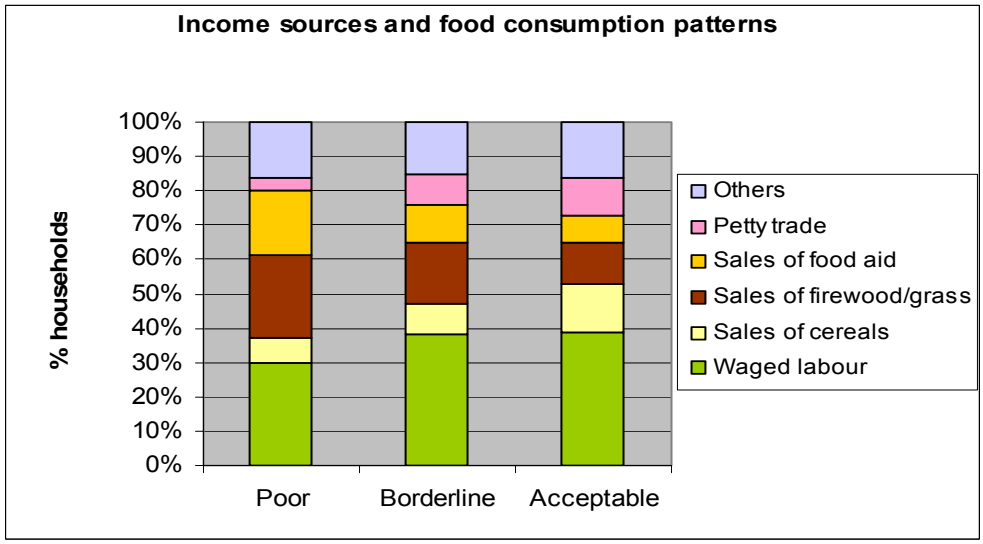
Figure 40: Food consumption groups per HH category



9.2 Relationship between food consumption and the number and type of income sources

The number of income sources was not related to the food consumption pattern. However the type of income generating activity was related: a poor food consumption pattern was associated with a reliance on the sale of firewood or sale of food aid, more than with the other income sources. Conversely, acceptable food consumption was more frequent among households relying on the sale of cereals. See figure XX.

Figure 41: Food consumption pattern and income source, Darfur September 2006



9.3 Relationship between food consumption and other household characteristics

There were no clear relations between the size of the households and their food consumption patterns. The proportion of households with poor food consumption pattern was slightly higher among female- than male-headed households (12% versus 9%), and the proportion of households with acceptable food consumption slightly lower (50% versus 55%).

Similarly, the proportion of households with poor food consumption pattern was slightly higher among households whose head was illiterate (12%) than those whose head was literate (8%), and the proportion of households with acceptable food consumption was slightly lower (51% versus 57%).

Chapter 10: COVERAGE AND EFFECTS OF FOOD AND NON FOOD ASSISTANCE

10.1 Receipt of food aid

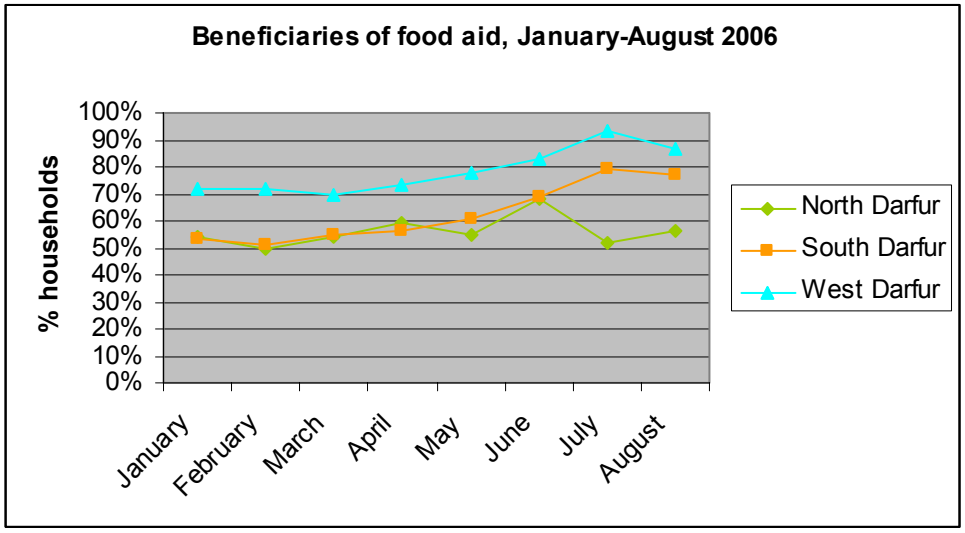
10.1.1 Receipt of food aid per Darfur state

The proportion of households having received food aid increased between January and August 2006, especially since June: about 3/4th of the households received food aid from June onwards, compared to 60% in the first half of the year.

The proportion of households receiving food aid since the beginning of the year was much higher in West Darfur than in North and South Darfur, although the differential between West and South Darfur narrowed from June onwards. This is linked to the larger proportion of IDPs in the West compared to other states, and to new influx of IDPs in the South at the beginning of the summer.

- North Darfur: slightly more than half of the households received food aid from January to August, with a peak at 68% in June; the relatively lower coverage in North Darfur since June reflects reduced food aid distribution activities in the State due to increased insecurity over the summer months
- South Darfur: the proportion of food aid beneficiaries increased regularly, from 53% in January to 77% in August;
- West Darfur: the proportion of food aid beneficiaries also increased between January (72%) and August (87%) with a peak at 93% in July.

Figure 42: Food Aid Beneficiaries Jan-August 2006



10.1.2 Receipt of food aid according to household status

Overall, more than 2/3rds of the *IDPs* received food aid every month since January 2006, increasing up to 85% of the IDPs in July. The proportion of *resident* households receiving food aid increased gradually from about 50% in January to 61%-63% in July/August.

10.1.3 Receipt of food aid and sex and marital status of the head of household

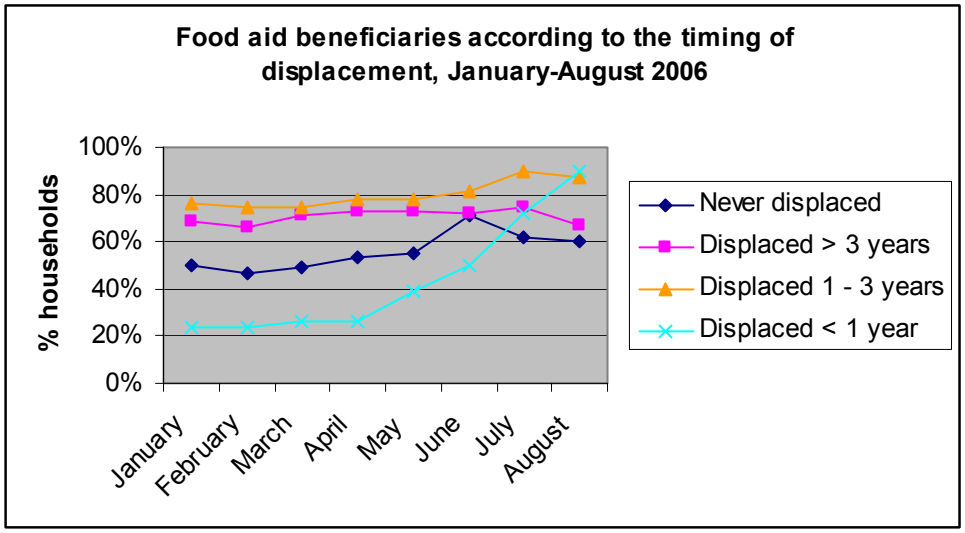
There were no differences in the proportion of female- and male-headed households with regard to the receipt of food aid during the 8 months preceding the survey. About 90% of both types of households received food aid at least once since January 2006. Although the EFSNA 2005 had identified female-headed households as vulnerable, this did not seem to have influenced the targeting of food aid. In the focus group discussions, both men and women confirmed that all wives in a polygamous union had a food ration card on their name and had control over food in their household.

10.1.4 Receipt of food aid and timing of displacement

As expected, the proportion of households who received food aid since the beginning of the year was higher among households who had been displaced, compared to those who had never moved. However, during the first half of 2006, households who were displaced before the conflict started (i.e. "old" displacement cases, who moved for other reasons than the current crisis) received food aid to practically the same extent as those displaced in relation to the current conflict. From June to August, the coverage of these households was lower than the households who were displaced less than 3 years ago (67% in August compared to about 90%).

Conversely, between January and June, households recently displaced (less than 1 year ago) were much less likely to benefit from food aid. However, the coverage of this group improved progressively and reached an impressive 90% of beneficiaries in August.

Figure 43: Food aid beneficiaries according to the timing of displacement Jan-Aug 2006



10.2 Type of food aid commodities received and sales of food aid

10.2.1 Type of food aid commodities received

Overall 90% of the households who benefited from food aid in July or August 2006 indicated that they had received the various commodities: 97% cereals, 91% pulses, 92% oil, 88% CSB, 83% sugar, and 92% salt. The completeness of the food ration (in terms of content, but with no indication of the amounts) was slightly better in West Darfur than in South and North Darfur.

Between 84% and 95% of the IDPs (according to the food commodities) reported the receipt of most of the food items. The completeness of the food ration was best in camps

10.2.2 Sale of food aid by beneficiaries

10.2.2.1 Extent of food aid sales

Almost 30% of the food aid beneficiaries indicated that they had sold at least one of the food ration commodities. Food aid sales were much higher in South Darfur (40% of the beneficiaries) than in West (29%) and North Darfur (17%). There were little differences between the states in the type of commodities that were sold, except for cereals and oil.

On average, cereals were the item most frequently sold (19% of the households), followed by oil (7%), pulses (5%) and CSB (4%) while less than 1% of the households sold sugar. These proportions are consistent with the results of the Post Distribution Monitoring survey carried out in Darfur for the period January/June 2006.

The differences between the Darfur states below are mostly linked to the variations in the proportions of IDPs and residents and their type of location.

Figure 44: Beneficary hhs selling food aid by State

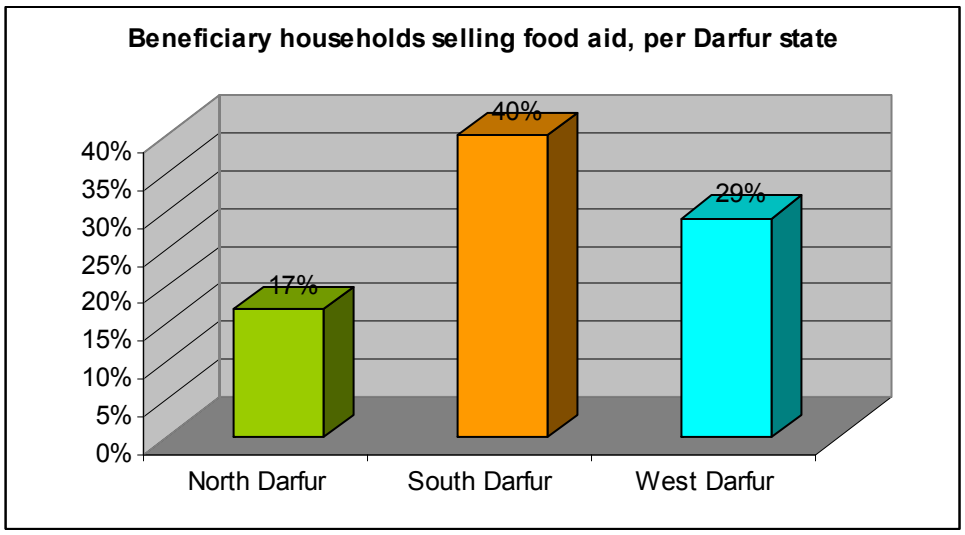
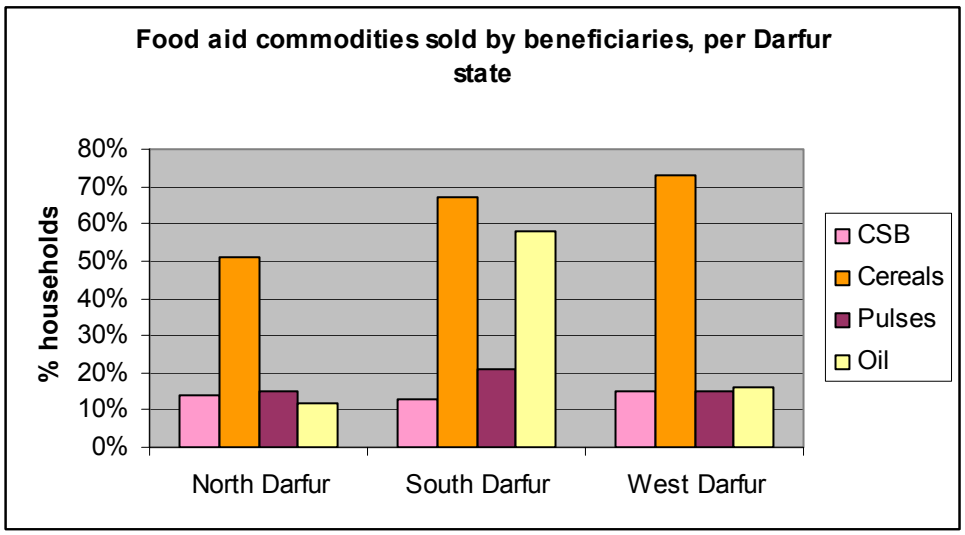


Figure 45: Food aid commodities sold by neneficiaries, by State



IDPs were more likely to sell food aid (41%) than residents (13%), with the highest proportion for IDPs in camps. Cereals were the item most frequently sold by all IDPs (31%), particularly in camps (38%), followed by oil and pulses. CSB was sold by 6% of the IDPs (10% by IDPs in camps). Some 6% of the resident food aid beneficiaries sold cereals, 1% oil or CSB.

While the results confirm the sales of food aid by a high proportion of IDPs, particularly in camps, they show that cereals are the main item sold and do not indicate significant sales of CSB, except in camps.

10.2.2.2 Main reasons for selling food aid

Amongst the households who sold food aid, the vast majority did so to buy other foods (88%) and almost half did it to pay for milling costs (48%). Almost 20% were selling food aid to pay back loans, and between 10% and 12% to buy firewood or to pay for education or health expenditures.

These proportions are similar as those mentioned last year, but higher than those reported during the Post-Distribution Monitoring in Darfur January-June 2006 (31% of the respondents mentioned purchase of other food and 25% milling costs).

Important differences were noted between the three Darfur states, mostly linked to the variations in the proportions of IDPs and residents.

Residents were more likely to have sold food aid to purchase other foods (92%) than IDPs (85%). However, the IDPs were three times as likely as the residents to mention the purchase of firewood as a reason to sell food aid (13% of the IDPs, 3% of the residents) and also more likely to mention payment of milling costs (50% of the IDPs, 37% of the residents) and reimbursement of debts (21% of IDPs, 15% of residents).

- Total IDPs: 85% sold food aid to buy other foods, 50% to pay for milling costs, 21% to reimburse debts, 14% to buy firewood, and 12% to pay for education or health expenditures;
- Similarly as the IDPs, residents receiving and selling food aid were doing it mostly to buy other foods (92%) and pay for milling costs (37%), but the proportions differed somewhat according to the presence of IDPs in the community.

10.3 Degree of reliance on food aid for food consumption

About 3/4th of the households had consumed at least one commodity originating from food aid, during the 7 days preceding the survey. Half of them had consumed sorghum food aid, and 1/3rd oil.

The proportion of households having consumed food aid was higher amongst IDPs (73%) than residents (65%), and particularly for oil (38% of the IDPs, 25% of the residents). As expected, the highest proportion of food aid consumers was for IDPs in camps (87%).

Almost 45% of the households had consumed more than half of their food from food aid during the week before the survey, while 27% had not consumed any food aid item. More than 60% of the IDPs in camps had consumed more than half of their food from food aid. The proportion was much lower among residents.

10.4 Implementation of food aid distributions

All the communities included in the sample in South and West Darfur had received food distributions, and 86% of the communities in North Darfur.

Food distributions had taken place in all IDP camps and communities with a majority of IDPs, and 90% of communities with low numbers of IDPs or no IDPs. Food distributions also took place in comparable proportions of communities in SLA- and GoS-held areas.

10.4.1 Food Aid Committees, women's participation and risks related to food aid distributions

The proportion of communities with a Food Aid Committee (FAC) was 85% at crisis-affected Darfur level. It was highest in North Darfur (96%) and lowest in South Darfur (77%), and average in West Darfur (84%). IDP camps were less likely to have a FAC than communities.

Women participated in two thirds of these Committees in South and North Darfur and in all Committees in West Darfur. Women's participation was lower in FACs of IDP camps and in FACs of communities with no IDPs.

On average only a quarter of the FAC members were women in the three Darfur states. Less than 20% of women were members of FACs in IDP camps. It is worth remembering that WFP's gender policy requires that at least half of the representatives and half of the executive level members of FACs are women.

In the focus group discussions in the three states, both men and women stated that women did not have any leading role in the FACs. Their task was limited to the distribution of oil, since this was considered 'dirty work'. Some focus groups pointed out that they were not aware of the importance of having women in the FAC, and requested WFP and its implementing partners to explain this to the community.

Women participated in the design of food aid distributions in almost two thirds of the communities. Women's participation was lower in North and South Darfur (about 67% participated) than in West Darfur (100%). These results reflect the fact that women's participation was lower in IDP camps (they participated in half of the camps only) and higher in communities with a majority of IDPs (women participated in almost 90% of the cases).

A low proportion of communities reported insecurity for women to walk to the food aid distribution points (14%), however the proportion was much higher in South Darfur (21%), compared to West (12%) and North Darfur (8%). This may be linked to genuine security differences between the three states, and/or to different procedures followed to locate the distribution points. Women's safety seemed better in communities with a majority of IDPs, than in camps or other communities.

10.4.2 Food aid distribution modalities

Shelters and water points at food distribution sites had been installed in about half of the sites in West Darfur, and less than 1/4th of the sites in North and South Darfur.

Announcements of the next food aid distributions were duly made in most of the cases. In more than 80% of the cases, food distributions took place early in the morning (to facilitate collection by men and women).

10.5 Receipt of agricultural assistance or cash grants

10.5.1 Receipt of agricultural assistance or cash grants per Darfur state and household group

At crisis-affected Darfur level, about 20% of the households received hand-tools and 36% seeds. Very few benefited from veterinary services (less than 2%), manure or cash grants (less than 1%).

The coverage of agricultural assistance differed according to the states and type of item:

- North Darfur: only 15% received hand-tools but 38% seeds; 3% benefited from veterinary services;
- South Darfur: 23% hand-tools and 36% seeds; 1% veterinary services;
- West Darfur: 23% hand-tools and 33% seeds; less than 1% veterinary services.

Residents were more likely to have received agricultural assistance than IDPs but there were large variations according to the type of residence and type of item.

- IDPs: 21% received seeds, and 13% hand-tools; less than 2% benefited from assistance with veterinary services;
- Residents: 52% received seeds, and 28% hand-tools; almost 2% benefited from assistance with veterinary services.

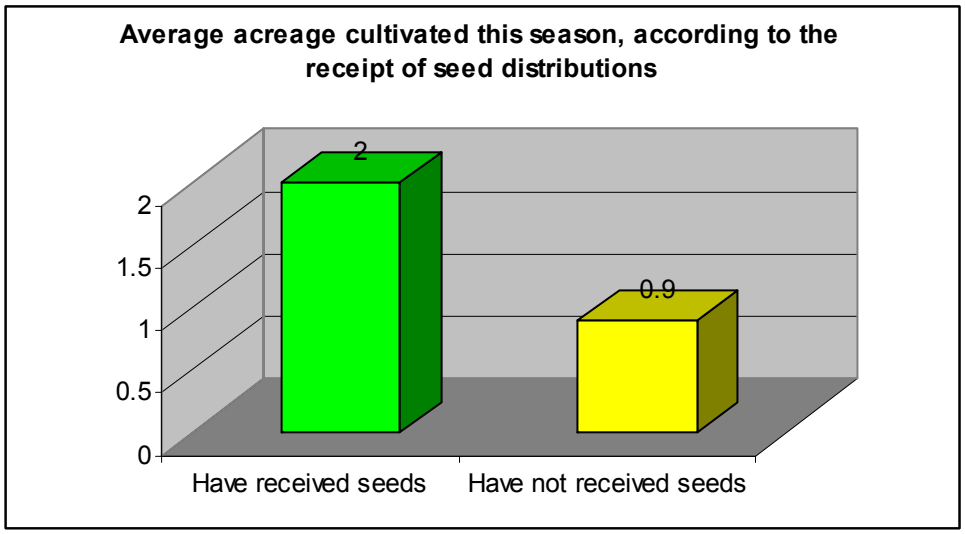
10.5.2 Receipt of seeds or manure and cultivation practices

The EFSNA indicated that seed distributions were well targeted, (i.e targeting farming households) with only 8% of households who do *not* cultivate having received seeds. However, 75% of farming households did *not* benefit from seed distributions.

In many cases the seed distributed are intended for the home garden (*jubraka*). If the ownership of a garden is taken as reference, targeting would seem poor (43% received seed while they did not own a *jubraka*) and 32% of those having a *jubraka* did *not* receive seeds.

The average acreage cultivated by seed beneficiaries (2 ha or 2.8 *mukhamas*) was more than double the acreage cultivated by non-beneficiaries (0.9 ha or 1.2 *mukhamas*).

Figure 46: Average acreage cultivated this season, according to the receipt of seed distributions



There were hardly any differences between male- and female-headed households with regard to the receipt of agricultural assistance, although the EFSNA 2005 had identified female-headed households as more vulnerable.

10.5.3 Environmental assistance and school garden programmes at community level

West Darfur was better served with environmental and school garden interventions than North and South Darfur:

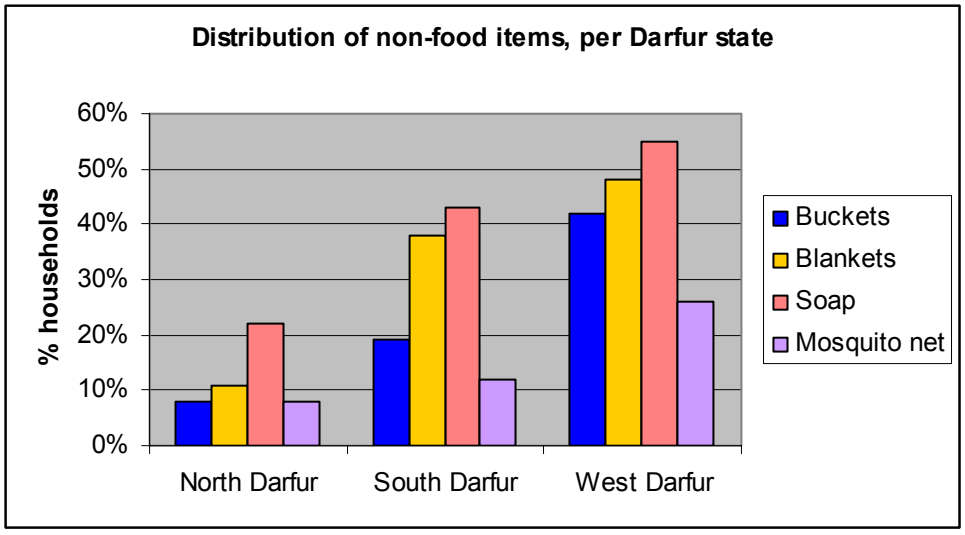
- about 30% of the communities at crisis-affected Darfur level received support with fuel-efficient stoves, but mostly in West Darfur (more than half of the communities surveyed) and much less in North (15%) and South Darfur (10%);
- tree plantation programmes were carried out in 20% of the communities overall, but again more in West Darfur (36%) than North (18%) and South Darfur (10%);
- school gardens were rare: 17% of the communities in West Darfur, 4% in North Darfur and none in South Darfur;
- water harvesting systems were also very seldom implemented (7% in North Darfur only).

10.6 Receipt of non-food items

10.6.1 Receipt of non-food items per Darfur state and per household group

Some 40% of the households mentioned receipt of soap, about 30% blankets, jerrycans, plastic sheeting or sleeping mats, 23% buckets, 15% mosquito nets, and 7% cooking utensils (pots, plates or cups). The proportions of non-food aid beneficiaries were higher in West Darfur and lower in North Darfur, with South Darfur in the middle. These differences are quite large and can be partly explained by variations of the proportions of IDPs between the three states as well as of the proportions of IDPs in camps. Issues of access/security and/or programming decisions may also have come into play.

Figure 48: Distribution of NFIs, by State



As expected, a higher proportion of IDPs received non-food items compared to residents.

Chapter 11: HOUSEHOLD FOOD INSECURITY AND RISKS TO LIVES AND LIVELIHOODS

11.1 Prevalence of household food insecurity and short-term risks to lives and livelihoods

11.1.1 Principles of the analysis based on food consumption and access

11.1.1.1 Criteria to determine hh groups according to food security and risks to lives and livelihoods

Food consumption frequency and diversity during the 7 days preceding the survey can be taken as a short-term proxy of food insecurity and risks to lives, given that the food consumption pattern affects directly health and nutrition.

The degree of reliance on food aid as a source of food, and the share and level of food expenditures in the 7 days preceding the survey can give an indication on risks to livelihoods: reliance on food aid reflects dependence on external assistance, and the share and level of food expenditures reflect the degree of economic security, given the well-established relation between food expenditures and poverty. However, because this information is based on a very limited timeframe (a few days before the survey), solid conclusions on risks to livelihoods must take into account other factors able to capture longer-term perspectives.

In order to enable comparisons with the EFSNA done in 2005, the same methodology was applied to categorize household groups on the basis of a combination of food consumption patterns, food aid as a source of food, and food expenditures, using the following criteria:

- Criteria for food aid:
  - more than 50% of food consumed
  - less than 50%
  - 0%

- Criteria for food expenditures:
  - less than 50% and less than 372 dinars/capita/week (average for Greater Darfur for the bottom two food expenditures quintiles)
  - more than 50% and less than 372 dinars/capita/week

11.1.1.2 Characteristics of hh groups defined by food consumption and access

The three groups are composed of various typologies of households, as illustrated in the table below:

Table 31: Typologies of the households according to their food consumption and access

Food consumption frequency and diversity	**Share and amount of food expenditures/ capita/ week**	**Degree of reliance on food aid as source of food consumed**		
		More than 50% of the food (high external dependence)	**Less than 50% of the food** (medium external dependence)	**0% of the food** (low external dependence)
Poor consumption (high health and nutrition risks)		**1**	**1**	**1**
Borderline (moderate health and	**> 50% and ≤ 372 dinars** (economic *insecurity*)	**2**	**2**	**3**

nutrition risks)	**< 50% or ≥ 375 dinars** (economic security)	**2**	**2**	**5**
Acceptable (low immediate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic *insecurity*)	**4**	**7**	**9**
	< 50% or ≥ 375 dinars (economic security)	**6**	**8**	**9**

Groups No.1 to 4 (in red): very unsatisfactory food consumption and access at the time of the survey, with high risks to lives or severe economic insecurity

1) Unsatisfactory food consumption pattern: severe risks to lives (negative effects expected on health and nutrition);
2) Borderline food consumption pattern with high or medium reliance on food aid: moderate risk for health and nutrition, high dependence on external assistance;
3) Borderline food consumption pattern with no reliance on food aid but large share of food expenditures and low amounts of food expenditures: moderate risk for health and nutrition, severe economic insecurity;
4) Acceptable food consumption pattern with high reliance on food aid and large share of food expenditures and low amounts of food expenditures: high dependence on external assistance, severe economic insecurity.

This whole group of households is considered to be severely food insecure and at high risk to lives and livelihoods on the short term.

Groups No.5 to 7 (in yellow): unsatisfactory food consumption and access at the time of the survey, with medium risks to lives and severe or moderate economic insecurity

5) Borderline food consumption pattern with no reliance on food aid: moderate risk for health and nutrition;
6) Acceptable food consumption pattern with high reliance on food aid but small share of food expenditures or high amounts of food expenditures: high dependence on external assistance;
7) Acceptable food consumption pattern with medium reliance on food aid and high share of food expenditures and low amounts of food expenditures: moderate dependence on external assistance, severe economic insecurity.

This whole group of household is considered to be moderately food insecure and at medium risk to lives and livelihoods on the short term.

Groups No.8 and 9 (in green): acceptable food consumption, with low risk to lives and moderate or low economic insecurity

8) Acceptable food consumption pattern with medium reliance on food aid and low share of food expenditures or high amounts of food expenditures: moderate dependence on external assistance, economic security;
9) Acceptable food consumption pattern with no dependence on food aid.

This whole group is considered food secure and at low risk to lives and livelihoods on the short-term.

11.1.2 Proportion of food insecure households at short-term risk to lives and livelihoods

Almost half of the households (46%) in crisis-affected Darfur were found to be at high risk to lives and livelihoods on the short term, 24% at moderate risk and 29% at low risk. These results are similar to those obtained last year: 46% at high risk, 26% at moderate risk and 28% at low risk.

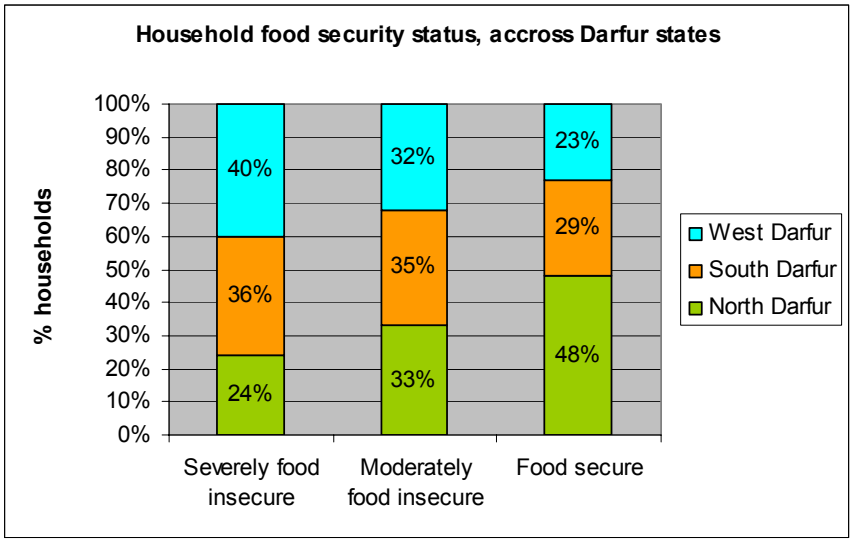
Similarly as for the food consumption groups, West Darfur presented the highest proportion of households at high short-term risk to lives and livelihoods while North Darfur had the lowest and South Darfur was in the middle, reflecting mostly the different repartition of IDPs and residents in the three states:

- North Darfur: 34% severely food insecure and at high short-term risk to lives and livelihoods, 24% moderately food insecure and at medium risk, and 42% food secure and at low risk;
- South Darfur: 50% severely food insecure and at high risk, 25% moderately food insecure and at medium risk, and 25% food secure and at low risk;
- West Darfur: 57% severely food insecure and at high risk, 23% moderately food insecure and at medium risk, and 20% food secure and at low risk.

Another way at looking at these results is to examine the distribution of the households among the Darfur states. Less than a quarter of the severely food insecure/high risk households and almost half of the food secure/low risk households were in North Darfur. The moderately food insecure households were distributed almost equally among the three states

- Severely food insecure and at high risk to lives and livelihoods: most were in South and West Darfur;
- Moderately food insecure and at medium risk: equally distributed between the three states;
- Food secure and at low risk: most were in North Darfur.

Figure 49: HH Food security status in Greater Darfur



More than half of the IDPs were severely food insecure and at high risk to lives and livelihoods on the short term compared to slightly more than one third of the residents. A quarter of both IDPs and residents were moderately food insecure and at medium risk. Less than 20% of the IDPs were food secure and at low risk, compared to 42% of the residents.

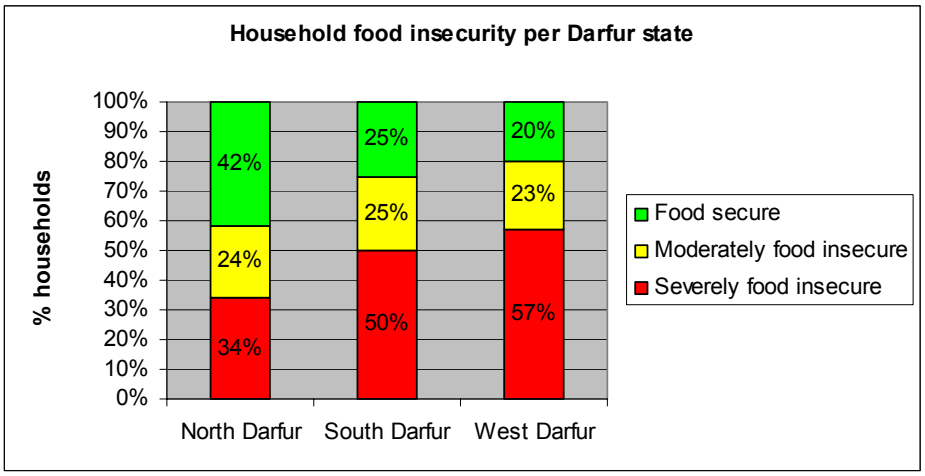
The highest proportion of households severely food insecure was amongst the IDPs in camps (62%), followed by the IDPs living in communities where they outnumber the residents (52%). An interesting result was the similarity observed in the levels of food insecurity and risk to lives and livelihoods similar between IDPs and residents in the communities, with a better situation in

communities where IDPs were present in small numbers compared to communities with many IDPs.

- Total IDPs: 58% severely food insecure and at high risk to lives and livelihoods on the short term, 25% moderately food insecure/medium risk, and 17% food secure/low risk.

- Total residents: 34% severely food insecure and at high risk to lives and livelihoods on the short term, 24% moderately food insecure/medium risk, and 42% food secure/low risk.

Figure 50: Household Food Security by State



11.2 Food insecurity/risks to lives and livelihoods, and household characteristics

11.2.1 Food insecurity/ risks to lives and livelihoods, and characteristics of the head of household

11.2.1.1 Sex, marital status and literacy level of the head of household

A slightly higher proportion of households severely food insecure and at high risk to lives and livelihoods were headed by a woman compared to food secure/low risk households. Among female-headed households, more than half (52%) were severely food insecure and less than a quarter were food secure (24%), compared to 45% and 30% respectively of male-headed households.

The proportion of literate heads of household was higher among the households food secure and at low risk, than the severely food insecure/high risk households.

When the heads of households were absent, those receiving support from the absent heads were more likely to be food secure: 33% of the households receiving support were food secure compared to only 23% when the absent head did not send support.

11.3 Food insecurity/risks to lives and livelihoods, and food availability

11.3.1 Food insecurity/risks to lives and livelihoods, and crop cultivation

11.3.1.1 Cultivation practices and ownership of a home garden

Households severely food insecure and at high risk to lives and livelihoods were less likely to cultivate and to own a home garden (*jubraka)* than moderately food insecure/medium risk and food secure/low risk households.

The importance of cultivation was also shown by the fact that 58% of those not cultivating were severely food insecure and only 23% were food secure, compared to 44% and 30% respectively of those cultivating. Similar trends were observed with regard to the ownership of a home garden.

11.3.1.2 Average acreage cultivated this season

The higher the severity of food insecurity and of risk to lives and livelihoods, the lower the acreage cultivated by households this season and the higher the likelihood to have foregone cultivation this season:

- Severely food insecure and at high short-term risk to lives and livelihoods: 58% had not cultivated this season and the average acreage planted was 0.8 ha (0.15 ha/capita); only 15% had planted more than 2 ha;
- Moderately food insecure and at medium risk to lives and livelihoods: 50% had not cultivated this season and the average acreage planted was 1.2 ha (0.21 ha/capita); 22% had planted more than 2 ha;
- Food secure and at low risk to lives and livelihoods: 34% had not cultivated this season and the average acreage planted was 2 ha (0.36 ha/capita); 33% had planted more than 2 ha.

11.3.1.3 Average acreage planted on cereals this season

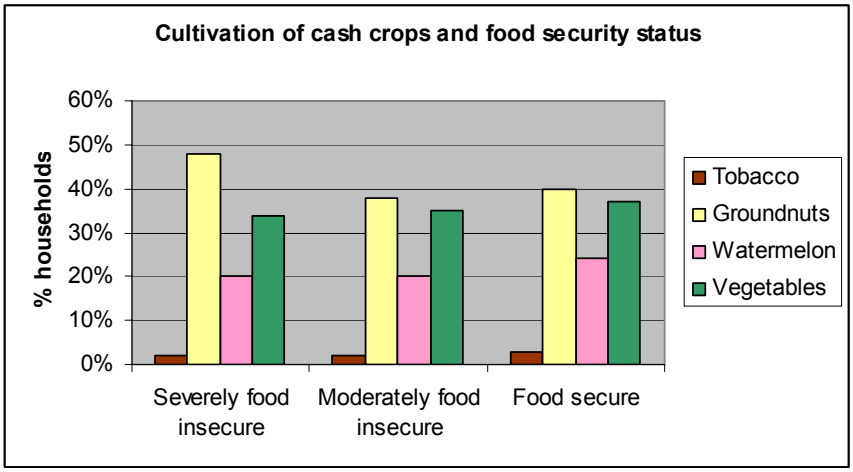
Similarly as above, the more severe was food insecurity and risk to lives and livelihoods, the lower likelihood to have planted cereals this season and the lower was the acreage planted on cereals:

- Severely food insecure and at high short-term risk to lives and livelihoods: 63% had not cultivated cereals this season and the average cereal acreage planted was 0.6 ha (0.11 ha/capita);
- Moderately food insecure and at medium risk to lives and livelihoods: 54% had not cultivated cereals this season and the average cereal acreage planted was 1 ha (0.17 ha/capita);
- Food secure and at low risk to lives and livelihoods: 38% had not cultivated cereals this season and the average cereal acreage planted was 1.5 ha (0.28 ha/capita).

11.3.1.4Cultivation of cash crops

There were little differences in the cultivation of watermelon or vegetables according to the degree of food insecurity and risk to lives and livelihoods. On the contrary, households severely food insecure and at high risk were slightly more likely to have planted groundnuts than the other households. These results may reflect the priority given to the food insecure households to crops that can generate an income for the lower acreage that they are able to plant compared to the other households.

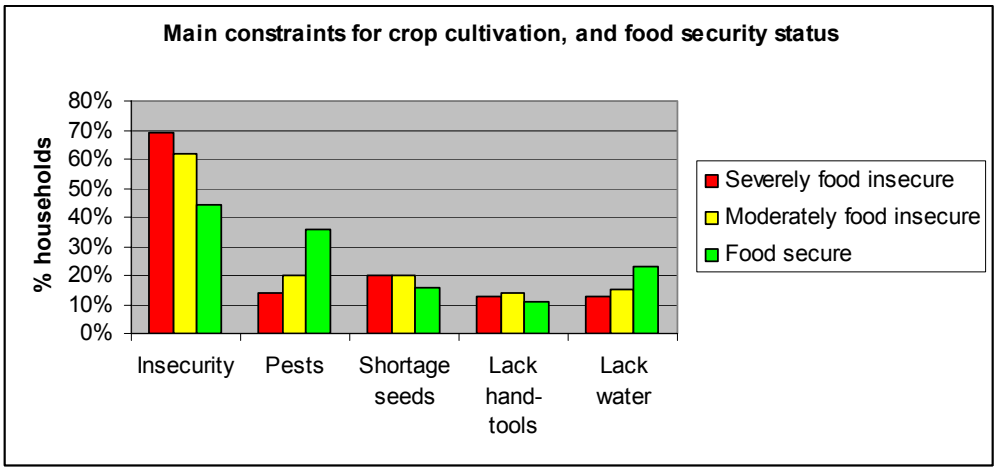
Figure 51: Cultivation of cash crops and food security status



11.3.1.5 Main constraints to crop cultivation

While security/access difficulties came first for all households, households food secure and at low risk to lives and livelihoods were less likely to mention these problems, than food insecure/at risk households. This result partly reflects the higher proportion of IDPs among the food insecure group. On the other hand, food secure/low risk households were more likely to report shortage of improved seeds, problems with pest or weeds, water shortages and shortage of labour, compared to the food insecure/at risk households.

Figure 52: Main constraints to crop cultivation and food security status



11.3.2 Food insecurity/risks to lives and livelihoods, and animal ownership

11.3.2.1 Number and type of animals owned

Households severely or moderately food insecure and at high or medium risk to lives and livelihoods were much less likely to raise any animals, and owned twice less animals on average than food secure/low risk households:

11.3.2.2 Main constraints with animal raising

Households food secure and at low risk to lives and livelihoods were less likely to mention problems of insecurity or of thefts/lootings as constraints to raise animals, compared to households food insecure and at risk. On the other hand, they were more likely to report lack of fodder and water, as well as of access to veterinary services.

11.4 Food insecurity/risks to lives and livelihoods, and food access

11.4.1 Food insecurity/risks to lives and livelihoods, and income sources

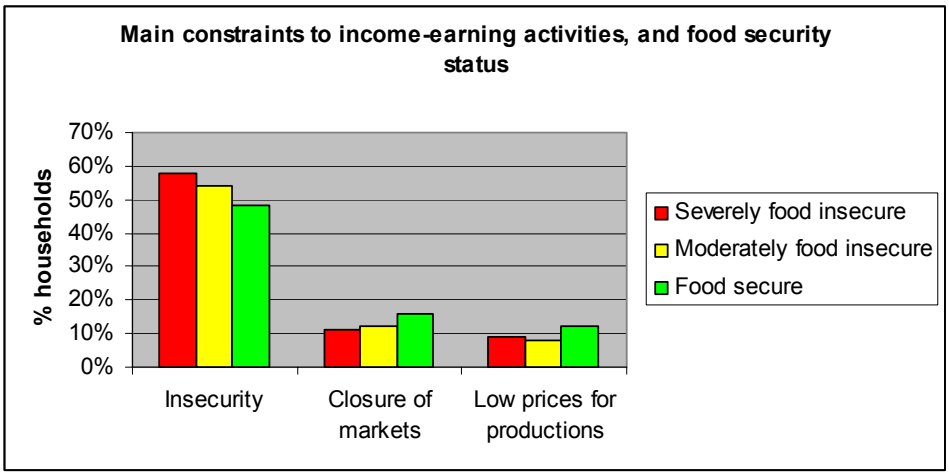
11.4.1.1 Number and type of income sources

The average number of income sources did not differ between households of different food security and risk status. Households food insecure/at high or medium risk to lives and livelihoods were more likely to rely on the sale of firewood or on the sale of food aid than households food secure/low risk, and less likely to rely on the sale of cereals, sale of livestock or animal products and petty trade.

11.4.1.2 Main constraints for income activities

For all households, insecurity to move and limited employment opportunities were the main constraints limiting income-earning activities. However, households food insecure and at risk to lives and livelihoods were more likely to mention security problems than food secure/low risk households. On the other hand, a higher proportion of food secure/low risk households reported difficulties related to low crop or animal production, closure of markets and low market prices, compared to food insecure/at risk households.

Figure 53: Main constraints to IGA and food security status



11.4.2 Food insecurity/risks to lives and livelihoods, and food expenditures

All the households dedicated on average a large share of their expenditures to food purchases, whatever their food security situation. However, the proportion of households dedicating more than 80% of their expenditures to food was much higher among households severely food insecure compared to the other households.

11.4.3 Food insecurity/risks to lives and livelihoods, and ownership of assets

Households that were food insecure and at high or medium risk to lives and livelihoods owned less assets than households that were food secure and at low risk.

11.4.4 Food insecurity/risks to lives and livelihoods, and indebtedness

There were no noticeable differences in the extent of indebtedness of households and the degree of food insecurity and risks to lives and livelihoods. For all households, purchasing food was the main reason for the debt. However, households severely food insecure and at high risks to lives

and livelihoods tended to borrow slightly less often to pay for medical or school expenses, or for ceremonies and other exceptional events, compared to the other households.

11.4.5 Food insecurity/risks to lives and livelihoods, and coping strategies in the event of food shortages

Coping strategies employed by households when faced with food shortages during the month preceding the survey did not differ much between households according to their food security and risk to lives and livelihoods. Households moderately food insecure and at medium risk were slightly more likely to decrease the amount of food consumed (less quantities, less preferred foods and/or lower number of meals) and less likely to send household members out to search labour and income than the other households, but the reasons for this pattern are unclear.

11.5 Regression analysis: causal factors of food insecurity

A regression analysis was conducted to identify the main causes of household food insecurity and distinguish independent factors and factors which are correlated between them (colinearity). The variables included in the regressions took into account the cross-tabulations carried out previously. The independent factors influencing food security were:

- The status of the household: IDPs were more likely to be food insecure than the residents;
- The acreage cultivated on cereals: the larger the planted area, the better the food security status;
- The type of income source: those relying on sales of agricultural production (cereals, other crops or animals/products) were more likely to be food secure than those relying on the collection of firewood/grass, remittances or sales of food aid);
- The prevalence of insecurity as a major constraint to pursue income-earning activities: food insecure households were more affected by security constraints than food secure households;
- The ownership of animals: owning at least some animals contributed to improve the food security status;
- The ownership of productive assets, mainly agricultural tools: food secure households were more likely to own these assets than food insecure households.

In addition, the location of households in specific Darfur states was also independently related to the food security status. This result indicates that the differences of household food security between the three Darfur states are not fully explained by the different proportions of IDPs and residents in each state. Other factors beyond the fact of being displaced came into play to influence the food security situation of households living in each state. These factors may include a combination of agro-ecological, infrastructural and social conditions. For example, North Darfur is much bigger than the other two states and includes a dry zone in the northern part where infrastructure and services are less developed than in the other states. There may also be concentrations of specific ethnic groups in particular states, who may benefit from particular type of kinship/tribal support, including remittances or cross-border trade.

11.6 Food insecurity/risks to lives and livelihoods, and receipt of food aid

11.6.1 Estimation of the inclusion and exclusion “errors”

To later adjust the programming of the assistance and improve its coverage and impact on food security, it is useful to examine the extent to which food insecure and food secure households had benefited from food aid during the month of August. This month is taken as reference because the food security analysis was essentially based on the 7-day preceding the survey which took place between the end of August and the third week of September.

However, some caution must be taken when assuming that households who did not mention having received food aid in August are really non-beneficiaries:

- some households may have received a double ration in July but did not consider having received food aid in August;
- a few households may have received food aid during the last week of August after the enumerators visited them;
- some households may have been enrolled just after the survey took place and will now benefit from food aid;
- the conflict intensity increased in Darfur (particularly in North and South Darfur) in August 2006, preventing access to several hundreds of beneficiaries.

These limitations may lead to over-estimates of the proportion of households classified as 'non-beneficiaries', but the margin of error cannot be estimated. The results presented at continuation must be considered bearing these caveats in mind.

Four groups of households were identified:

1) Food insecure households who did not receive food aid in August ("exclusion errors"):
They represent 29% of the food insecure. If truly missed (i.e. not registered as beneficiaries), these households have been erroneously excluded, given their food security situation. After accounting for the food insecure households expected to have an adequate harvest, the proportion would only slightly decrease down to 26% (representing those not receiving food aid in August and not expected to harvest adequately).

2) *Food aid beneficiaries (as of August) who were still food insecure*:
They represent 77% of the food aid recipients. Being food insecure, these households have been correctly targeted, but the current level of assistance is not sufficient to improve their food consumption. As very few of these households have planted an adequate acreage this season, no significant improvement would be expected on their food security situation with the forthcoming harvest.

Some of the reasons contributing to the limited effect of food aid to the food consumption of the households include:

- the need to sell of part of the food ration to meet essential expenditures, such as vegetables or animal foods to complement the food ration, milling costs, firewood or health care, or "protection" fees to powerful groups, due to the lack of alternative sources of income or inability to earn sufficient income from other sources than the sale of food aid; as a result, beneficiary households may effectively consume only two thirds of their food ration, as the amounts of other foods obtained do not compensate for the amounts of food aid sold;
- poor coping strategies used when food aid is finished: households tend to decrease the amounts consumed, or incur debts which are reimbursed by selling another part of the next food ration, hence perpetuating a poor food consumption pattern.

3) *Food aid beneficiaries (as of August) who were food secure*:
The food secure represent 23% of the beneficiaries (or put another way, 51% of the food secure were food aid beneficiaries). These households were able to consume a proper diet and had a sustainable pattern of food expenditures and medium/low reliance on food aid.

Not all food secure beneficiaries should be considered "inclusion errors", however. While a number of these households may not need assistance, especially in view of the next harvest, food aid may be essential for others to protect their current livelihoods. If cultivation and harvest prospects are taken into account, about 16% of these food secure beneficiaries (i.e. only 4% of the food secure households having received food aid) would be expected to harvest adequately. Although the risks are lower than for the food insecure, the situation of the remaining 17% food

secure beneficiaries may still deteriorate if their livelihood strategies are impaired, for example if the conflict prevents them to move and access jobs, markets or pasture for their animals.

4) *Food secure households who did not receive food aid in August*:
They represent 49% of the food secure households. These households can be considered "truly" food secure, as they manage to ensure their food security without external assistance. However, 18% of these households will not harvest properly and their situation should be monitored.

11.6.2 Estimation of the proportions of households included/ excluded

The proportion and number of households in each group can be calculated. The prospects of changes in the food security situation resulting from the forthcoming harvest have been taken into account. A threshold of 2 hectares planted for cereals this season has been selected to determine households who could reach self-sufficiency in cereals and two scenarios have been applied to account for the actual ability to harvest the whole acreage planted (see Section 12, paragraph 12.2.1).

Scenario 1 ('optimistic'): Two thirds of the households who have planted more than 2 ha of cereals this season can harvest (one third cannot harvest properly, or crop yields are lower than usual)

	Food insecure and at high/medium risk	**Food secure and at low risk**
Have not received food aid in August	Group 1: Exclusion "error" *(17% total households)* Food insecure households who are not current food aid beneficiaries but who would need assistance to improve their food security situation	Group 4: Non beneficiaries not needing assistance on the short term *(12% total households)* Food secure households who are able to cover their food requirements without assistance
Have received food aid in August	Group 2: Proper targeting, but level of assistance insufficient *(46% total households)* Current food aid beneficiaries for whom the assistance provided is not sufficient to ensure their food security	Group 3: Inclusion "error" *(4% total households)* Current food aid beneficiaries for whom food aid may not be required at the same level as currently

Note: the total of the 4 groups does not add up to 100% because the perspectives taken to estimate the proportions in each group are not always the same. For Group 1, the "pool" of reference is the group of food insecure households; for Groups 2 and 3, the pool of reference is food aid beneficiaries; and for Group 4, the pool of reference is the group of food secure households.

Scenario 2 ('pessimistic'): Half of the households who have planted more than 2 ha can harvest (the other half cannot harvest properly, or yields are lower than usual)

	Food insecure and at high/medium risk	**Food secure and at low risk**
Have not received food aid in August	Group 1: Exclusion "error" *(18% total households)* Food insecure households who are not current food aid beneficiaries but who would need assistance to improve their food security situation	Group 4: No need for assistance on the short term *(12% total households)* Food secure households who are able to cover their food requirements without assistance
Have received food aid in August	Group 2: Proper targeting, but level of assistance insufficient *(48% total households)* Current food aid beneficiaries for whom the assistance provided is not sufficient to ensure their food security	Group 3: Inclusion "error" *(3% total households)* Current food aid beneficiaries for whom food aid may not be required at the same level as currently

Note: the total of the 4 groups does not add up to 100% because the perspectives taken to estimate the proportions in each group are not always the same. For Group 1, the "pool" of reference is the group of food insecure households; for Groups 2 and 3, the pool of reference is food aid beneficiaries; and for Group 4, the pool of reference is the group of food secure households.

11.7 Chronic and transitory food insecurity

11.7.1 Challenges to distinguish chronic and transitory food insecurity in Darfur

Food insecurity and associated risks to lives and livelihoods in Darfur are the result of a combination of structural and conjectural factors (see table 33 below), and both chronically and transitory food insecure households coexist. Structural factors are understood here as those which tend to affect large sections of the region and population, and to have been present for a long time already (long-term), while conjectural factors refer to events that may affect specific areas or population groups within the region, and have come into play for a shorter period of time. While structural factors are the main determinants of chronic food insecurity, conjectural factors contribute not only to worsen the severity of chronic insecurity but also to push transitory food insecure households into chronic food insecurity when their effects are repeated or prolonged over time.

Although this is simplifying complex issues, the main structural factors of food insecurity (chronic) in Darfur can be broadly divided into socio-economic and agro-ecological factors:

a) Political decisions that have contributed to the neglect of some population groups and geographical areas in terms of infrastructures and basic services, resulting in poor access to health and education (itself leading to high illiteracy rates and prevalence of infectious disease and malnutrition), and poor access to markets for trade and labour for the groups affected; and
b) Limited natural resources, further constrained by population growth and competition, and poor soil fertility in most of the region, which limit agricultural and other livelihood activities and contribute to the impoverishment of the population and social tensions.

Conjectural factors can also be divided into socio-economic and agro-ecological factors:

a) Conflict-induced negative effects:
- on access to land, labour, livestock and other assets, and on market performance, resulting in difficulties to cultivate, raise animals, find income earning opportunities and ensure access to food and other necessities, and further impoverishment of the affected population groups;
- on basic infrastructures and access to health and education services;

b) Repeated poor rainfall patterns (e.g. late rains, drought spells or floods) and/or recurrent infestations by pests/diseases affecting the harvest and animals.

The analysis of the effects of structural and conjectural factors on household food security and on lives and livelihoods in Darfur is complicated by the fact that:
(i) both conjectural and structural factors have the same negative impacts on the human, physical, financial and social capital; and
(ii) structural and conjectural factors are mutually reinforcing, within and between themselves.

Table 32: Structural and conjectural factors of food security

Structural (long-term) factors of food insecurity	Conjectural (conflict-related) factors of food insecurity
• Characteristics of the head of household (female-headed households, illiterate heads of household, unmarried	• Place and duration of displacement • Disruption of the family composition deaths/departure of household members,

Structural (long-term) factors of food insecurity	Conjectural (conflict-related) factors of food insecurity
heads of household) • Characteristics of the household: size, dependency ratio • Structural constraints to crop cultivation: low acreage, poor soil fertility, susceptibility to pests and diseases, water shortages, inadequate agricultural practices • Structural constraints to livestock raising: lack of shelter/space to keep animals, lack of veterinary services, degradation of pastures • Structural constraints to income sources: shortage of labour, limited employment opportunities • Absence of changes in usual migration patterns	increase of female-headed households • Conflict-related constraints to crop cultivation: loss of land, shortage of seeds, lack of water, lack of animal traction and agricultural tools, insecurity • Conflict-related constraints to livestock raising: lack of fodder/feed, lack of water, lack of manpower, loss of market access, theft/looting, insecurity • Conflict-related constraints to income sources: insecurity (remittances, livelihood activities), closure/loss of markets, competition for labour, level of wages • Changes in usual migration patterns: border closures, travel insecurity for people, animals and goods

It is clear that structural and conjectural factors in the Darfur context have become intertwined, and as the conflict becomes more and more protracted, the distinction between them, and between chronic and transitory food insecurity, is increasingly blurring.

As described in the previous paragraphs, food insecure households are characterized by their:

- limited cultivation, ownership of animals and income opportunities;
- reliance on fragile (unreliable, destructive to the environment), low-earning, and sometimes risky (attacks) income sources, particularly firewood/grass collection, daily waged labour when available, or gifts;
- dependence on food aid as a major source of food for consumption and, for the most severely food insecure, as an income source;
- indebtedness to kinship, neighbours and traders, essentially for food purchase.

With the exception of food aid which was a direct response to, and strategy adopted as a result of, the conflict, all the other characteristics of food insecure households can reflect equally long-term or short-term factors. Many of the households who were transitorily food insecure prior to the conflict (such as those affected by seasonal food insecurity during the pre-harvest period) may now have reached a stage of depletion of assets, fields and animals, which places them in a chronic food insecurity situation. This is likely to be the case for most of the food insecure IDPs even if they were food secure before the conflict, while for the IDPs who were already chronically food insecure before, the current crisis has most probably deepened the severity of their food insecurity.

For food insecure residents, the low acreage cultivated, small numbers of animals, and/or limited access to reliable and high-return income sources may be the result of long-term, pre-conflict factors, or of the effects of the conflict itself due to the pressure on resources caused by the IDPs, or to the constraints on movements of people and goods, destruction of infrastructures and disruption of markets. Again, it is highly probable that the conflict has worsened the situation of residents generally, whether they were already chronically food insecure or transitorily food insecure before.

11.7.2 Implications for targeting and type of assistance

a) IDPs versus residents

Because the effects of the conflict have spread over all households, even those who did not have to leave their place of residence, and affected the food security situation of both residents and non-camped IDPs, it does not seem appropriate to distinguish between those who were already chronically food insecure prior to the crisis, from those who have become food insecure as a direct result of the conflict. Residents who had limited access to cultivation, animals and income before the conflict are likely to find themselves in a similar situation as IDPs at present.

In fact, the survey results have shown that the socio-economic and food security profile of the IDPs living in communities where they are a minority tend to resemble the residents there, while the profile of the residents living in communities where IDPs are a majority tend to resemble that of the IDPs. As the living conditions of the IDPs and residents become similar, the distinction between residents/chronically food insecure (pre-conflict) and IDPs/transitory food insecure (conflict-related) would be very complicated.

b) Chronic versus transitory food insecure households

Until the conditions in Darfur allow for a correct and accepted identification of households who are food insecure as a result of structural, long-term factors, versus households who are food insecure as a direct result of the conflict, and for the design and implementation of targeted assistance interventions to tackle the specific causes of food insecurity of each group, it would be unworthy and potentially damaging to attempt to distinguish between chronic and transitory food insecurity and to provide selective support to one or the other group.

Chapter 12. COMMUNITY PRIORITIES FOR IDPs AND RESIDENTS

Requests for training aimed at the promotion of IGAs were prominent in focus group discussions.

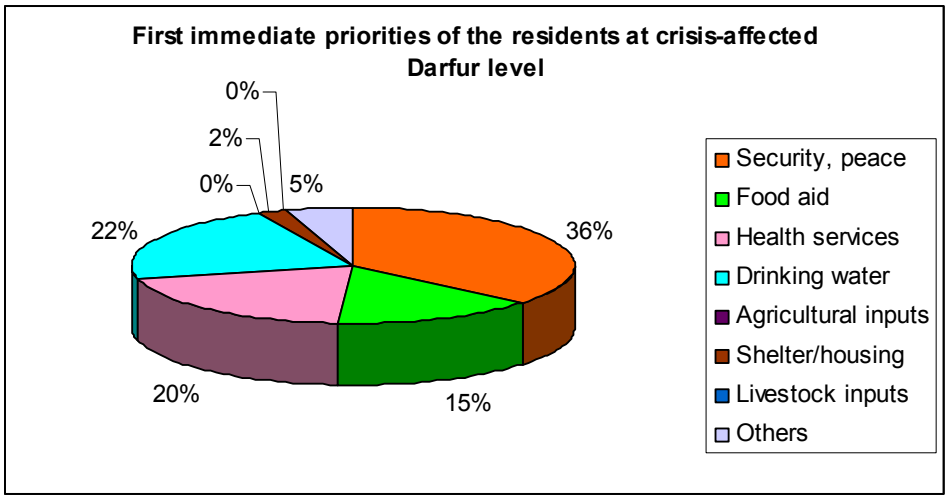
12.1 Immediate requirements

12.1.1 Immediate requirements of the residents

For the residents at crisis-affected Darfur level, the provision of health services was the immediate requirement most frequently mentioned by community key informants (28%), followed by drinking water (21%), food aid (18%), and security/peace (16%).

However, when asked to provide a priority ranking to these immediate requirements, security/peace came first (36%), followed by drinking water (22%), health services (20%) and food aid (15%). See figure X. Drinking water and health services were more frequently mentioned as second priority (31%), followed by food aid (23%). Among the third priorities, health services came first (33%), food aid was mentioned by 15% and drinking water by 11%.

Figure 53: Resident communities priorities – immediate term Darfur September 2006



Overall, food aid was much more often mentioned for residents in North (21%) and West Darfur (24%) than in South Darfur (9%), while peace/security was more often mentioned in West Darfur (24%) than in South (13%) and North Darfur (10%). However, further differences between the three states appeared when the immediate requirements were prioritised. Drinking water, peace/security and food aid were prioritised in North Darfur, while health services, security/peace and drinking water seemed more important in South Darfur, and security/peace, food aid, health services and drinking water were given priority in West Darfur. See figure XX.

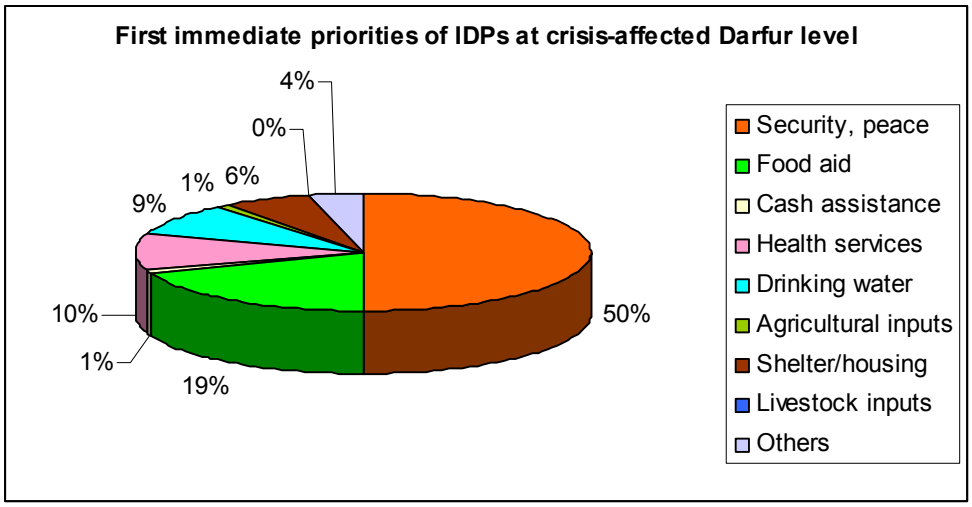
12.1.2 Immediate requirements of the IDPs

For the IDPs at crisis-affected Darfur level, food aid was the immediate requirement most frequently mentioned by the community key informants (25%), followed by health services (21%), security/peace (19%), drinking water (12%) and shelter/housing (10%).

When asked to provide a priority order to these requirements, security/peace came first (50%), followed by food aid (19%), health services (10%) and drinking water (9%). Food aid was more frequently mentioned as second priority (33%), followed by health services (24%), drinking water

(15%) and shelter/housing (15%). Among the third priorities, health services came first (27%), food aid was mentioned by 22% and drinking water by 12%. See figure XXX.

Figure 54: Immediate priorities for IDPs – Darfur-wide, September 2006



Overall, security/peace was more often mentioned for IDPs in West (24%) and South Darfur (21%) than North Darfur (13%), while drinking water was more often mentioned in North (18%) and West Darfur (14%) than South Darfur (4%). Shelter/housing seemed also more required in North Darfur (17%) than South (9%) and West Darfur (4%). When a priority ranking was applied, food aid, drinking water and shelter housing were prioritised in North Darfur, while security/peace, health services and food aid were given priority in South and West Darfur.

12.2 Longer-term priorities

12.2.1 Longer-term requirements of the residents

For the residents at Greater Darfur level, agricultural inputs were the longer-term requirement most frequently mentioned by community key informants (16%), followed by security/peace (12%), roads (11%), and health services (10%).

When asked to provide a priority ranking to these longer-term requirements, security/peace came first (23%), followed by roads (11%), agricultural inputs (10%) and health services (10%). Health services were the requirements most frequently mentioned as second priority (15%), followed by security/peace (13%), agricultural inputs (13%) and roads (11%). Among the third priorities, agricultural inputs came first (25%), livestock inputs were mentioned by 15%, and drinking water and cash assistance by 10%.

It must be noted that food aid came as a much lower priority (8% only ranked it first) than other longer-term requirements. This result should be reassuring with regard to possible concerns of dependency on food aid for the residents. While security/peace was a pre-requisite, interventions to protect health and restore livelihoods including support for productive activities in the crop and animal sectors and shelter/housing, were clearly given priority by the residents in the longer-term.

Differences in the longer-term requirements mentioned for the residents were noted between the three Darfur states:

- livestock inputs were more often mentioned for residents in North Darfur (14%) than in South (9%) and West Darfur (3%);
- health services were more often mentioned in North (13%) and West Darfur (11%) than in South Darfur (7%);

- agricultural inputs were more frequently mentioned in South Darfur (20%) than in West (16%) and North Darfur (13%);
- peace/security was more often mentioned in South Darfur (16%) than in North (11%) and West Darfur (9%).

However, further differences between the three states appeared when the longer-term requirements of the residents were prioritised. Security/peace, agricultural inputs, livestock inputs and health services were prioritised in North Darfur, while security/peace and agricultural inputs seemed more important in South Darfur, and security/peace, shelter/housing and health services were given priority in West Darfur.

12.2.2 Longer-term requirements of the IDPs

For the IDPs at Greater Darfur level, security/peace was the longer-term requirement most frequently mentioned by community key informants (14%), followed by health services (13%) and shelter/housing (11%).

However, when asked to provide a priority ranking to the longer-term requirements, security/peace came first (32%), followed by health services (12%) and food aid (10%). Drinking water and shelter/housing were the requirements most frequently mentioned as second priority (15%), followed by health services (13%) and agricultural inputs (11%). Among the third priorities, cash assistance came first (14%), health services were mentioned by 13%, agricultural inputs by 11%, and shelter/housing by 11%.

Among the longer-term requirements for the IDPs, food aid was mentioned more often than for the residents, more particularly in North and West Darfur. However, it generally came behind other longer-term priorities including basic services (health, drinking water) and infrastructures (both housing and roads). Support for the restoration of productive livelihood activities was less often mentioned for the IDPs than for the residents although cash assistance and agricultural inputs as second priorities in all the Darfur states.

Similar differences for the IDPs as for the residents were noted for the longer-term requirements between the three Darfur states:

- livestock inputs were more often mentioned for IDPs in North Darfur (8%) than in South and West Darfur (1%);
- health services were more often mentioned in North Darfur (20%) than in West (14%) and South Darfur (5%);
- drinking water was more frequently mentioned in South (14%) and North Darfur (11%) than in West Darfur (4%);
- shelter/housing was more often mentioned in West Darfur (19%) than in South (10%) and North Darfur (3%).

Further differences between the three states appeared when the longer-term requirements of the IDPs were prioritised. Security/peace, health services and food aid were prioritised in North Darfur, while security/peace, drinking water, cash assistance and roads seemed more important in South Darfur, and security/peace, shelter/housing and health services were given priority in West Darfur.

Chapter 13. CONCLUSION and RECOMMENDATIONS

13.1 Degree of severity of the nutritional and food security situation, and risks to lives and livelihoods

13.1.1 Overview of the current livelihoods of the population in Darfur

The Livelihoods study carried out in June 2006 summarized the current situation of conflict-affected people in Darfur, and the EFSNA has confirmed its main findings. The study summarized the overall effects of the conflict on the population as follows:

- The lives and livelihoods of all groups of the Darfur population have been affected directly or indirectly by a combination of population displacement, widespread destruction and looting of assets, and restricted movements of people, livestock and goods for trade.

- There has been little change in the livelihood strategies now available to affected households compared to when the conflict began. Large numbers of people have become dependent on daily labouring and petty trade, a precarious alternative to their previously diverse and adapted traditional livelihood strategies. Any pre-conflict livelihood strategies that have persisted are now operating at much reduced levels.

- Because of displacement and insecurity, most IDPs are unable to cultivate or at best are cultivating on a minimal scale on land loaned by others. Few still have seasonal access to part of their former farms. There were frequent reports in areas shared by pastoralists and settled farmers of animal grazing the crops before they were harvested.

- There has also been a significant (although unquantified) outflow of men and boys from Darfur, mainly to Central Sudan and Khartoum in particular. Displacement, death and migration has caused an increase in female-headed households, especially noticeable in IDP camps. (*Note: this was not confirmed by the EFSNA and may be due to differences in the definitions used for "female-headed" households, see footnote… Section 1*).

- On the whole, income-earning opportunities are very limited for the conflict-affected population: daily labour, petty trade, collection of firewood and grass associated with great risks for many. There is very high competition for work, which means that daily employment is both unpredictable and usually infrequent.
- The limited income earned is usually spent on food, milling, education and health care. Some must also spend on firewood and water.

- Many of the coping strategies adopted by people (such as firewood/grass collection for sales) are associated with risks of abuse, or with payments for protection to powerful groups; the risk of attack, looting and thefts remains for all groups.

- Markets in local cereals have been replaced by food aid.
- Food aid has had a positive impact on livelihoods as well as on nutrition, by reducing the adoption of damaging coping strategies and distress sales of livestock, and encouraging return to villages; there was no evidence of disincentive effects on agricultural production.

13.1.2 Severity of the current nutritional situation

The nutritional situation of children found in this survey is no different from that of 2005, except in West Darfur. The rates of malnutrition are still at or just below emergency levels, and North Darfur remains the state with the highest rates of both moderate and severe acute malnutrition. The situation is best described as "stable but precarious", with a high likelihood of deterioration if the

conflict escalates and/or if basic services, particularly provision of clean water and health care, are reduced.

Children under the age of three years are significantly more malnourished than children over three years. This is consistently found in localised nutrition surveys around Darfur as well as in all the Darfur-wide surveys. The majority of acute malnutrition is found in the very young children and this is likely to have serious consequences for their growth and development.

The survey showed that chronic malnutrition is associated more with the displaced population – especially those dependent on sales of food aid – than among the resident population – especially those dependent on sale of livestock. It also showed that acute malnutrition is somewhat more common amongst the resident population, although this was not quite statistically significant. These two results show that the normal seasonal pattern of malnutrition variance is still seen amongst resident groups, for whom the hunger gap (when the survey was conducted) causes increased acute malnutrition. For displaced groups, however this has been reduced by the provision of food, water and healthcare.

The finding that acute malnutrition is statistically associated with access to safe water and sanitation and disease prevalence, but not associated with food availability or consumption, should be highlighted again. The complex causal factors involved in malnutrition are often acknowledged but rarely is the framework given sufficient attention in terms of actual interventions. Food provided for free, or through work/voucher/etc schemes, or through supplementary feeding programmes, is without doubt crucial as part of the answer to preventing malnutrition; however agencies working on supplementary feeding programmes have known for long that they are not having the desired effect in Darfur, and the stable levels of moderate malnutrition (which they are intended to reduce) prove that. There are many possible reasons for this, including the size of the ration given, the inadequate nature of the household food rations, sharing of the food in the household, and so on. All of these are likely to play a role, but the assessment shows that, in fact, food is not the main issue: health, hygiene, access to safe water and use of sanitary facilities are much more important in Darfur.

These factors of health, hygiene, water, sanitation are the very services that people displaced from their homes and villages require to be provided by authorities, NGOs or other groups. They are also interventions which require a great deal of maintenance, resourcing, and expertise, and which are easily interrupted by conflict. The rise in insecurity through 2005/2006, with no immediate prospect of being solved, poses a very great threat to the people and children whose lives depend on these basic services.

Maternal nutrition has been shown to be stable, and encouraging gains have been made in provision of life-saving interventions such as vitamin A post-childbirth. However the coverage of these programmes is still far from optimal and much work remains to be done. Similarly the finding that maternal literacy is so low, and that literacy of the household head is related to chronic malnutrition, is a reminder that programmes to deal with women's skill enhancement are valuable contributors to nutritional status as well.

13.1.3 Severity of the current agricultural situation

a) Summary of the main results

Based on the assessment results, the overall security situation is still poor and does not allow the majority of the households to resume their productive activities at an acceptable level to ensure food security and livelihoods recovery. The average area cultivated was 1.8 mukhamas[24] per household across crisis-affected Darfur. North Darfur state ranked first with 3.1 mukhamas followed by South Darfur (1.4 mukhamas) and West Darfur with 0.9 mukhamas. The yield can be

[24] 1 mukhamas is equivalent to 1.72 feddan (1 feddan is equivalent to 0.42 ha.)

estimated to be between 300 and 350 kg of cereal (millet or sorghum) per feddan[25] for both South and West Darfur states while North Darfur can hardly reach an average of 100 kg per feddan. Those who managed to cultivate are only around 51% versus the 75% relying on agricultural activities for their livelihoods.

With regard to vegetable production, West Darfur ranked first with 49% of the population having a jubraka (home garden), followed by South Darfur (45% of the population) and North Darfur (28% of the population). The survey did not determine the size or various species cultivated, but watermelon, okra, cucumber, tomato and onion are among the most common and popular.

Little assistance has been provided to cash crop producers. Among the general constraints to agriculture, households mentioned insecurity (60%), which is correlated with the lack of adequate agricultural inputs comprising landrace and improved seeds as well as animal drawn and hand tools (reported by 63% of the households), pest management and related plant protection issues (22%) and lack of adequate water management for agriculture (16%).

On the livestock side, the proportion of households owning livestock remained the same compared to last year but an increase was noted in the proportion of those owning donkeys (from 47 % to 57%), both amongst the residents (from 64% to 75%) and the IDPs (from 37% to 41%). The number of households owning goats and sheep remained low at respectively 22% and 7%. The average number of livestock tropical units (LTU) per household was lower than "usual" at only of 0.8 LTU at crisis-affected Darfur level, ranging from 1 LTU/household in North Darfur and 0.5 LTU/household in South Darfur. As a matter of comparison, the number required to improve the food security situation would be 3 to 5 LTU/household. Residents had the highest number of LTU/household (1.2) followed by the IDPs in communities (0.6 LTU), while animal ownership was very low amongst IDPs in camps (0.3 LTU). No specific data were collected on pastoralists and no conclusions can be derived on the livestock situation of this particular group.

The main constraint to the good performance of the livestock sector, similarly as for the crop production, is the general poor security situation throughout Darfur. Most of the population lost their livestock due to repeated conflicts and are now facing problems to restore their livestock assets. Almost half of the households lacked money to acquire and keep animals, while 18% reported difficulties of feeding animals due to scarce and poor pasture and insufficient fodder available, 22 % faced animal health care problems linked to poor provision of veterinary services (provided to only 2% of the livestock keepers), and 22% lacked proper space to keep animals and freedom of movement. Shortage of manpower and lack of access to markets were less important (mentioned by respectively 5 % and 1 % of the households).

The survey highlighted the important contribution of the agricultural sector to households' livelihoods in terms of income generation. Although waged labour ranked first source (37% of the population), the sale of agricultural production including livestock represented the second main source of income (23% of the population, including 12% from the sales of crops, 8% vegetables and 3% livestock). Another 15% relied on the sale of firewood and grass as their main income source. Furthermore, food security was associated with agricultural activities: almost half of food secure households (47%) had a home garden; they cultivated on average 2.3 ha with cereals and they owned on average 1.27 LTU.

b) Conclusions for the agriculture sector

Insecurity is the major constraint to the proper resumption of agricultural productive activities by the population in Darfur. The conflict has adversely affected their crop, vegetable and livestock productions upon which more than 75% rely for their survival. There are no reliable signals that the situation will improve and this contributes to maintain the population in need of an emergency-type of agricultural assistance in the immediate and short term for most of the Darfur areas.

[25] 1 feddan is equivalent to 0.42 ha.

Some areas should be prioritized in order to improve the impact of the assistance, including:
- targeting: in order to focus more on the truly vulnerable people (some residents, IDPs in camps and in communities),
- paying attention to gender aspects for the selection of the beneficiaries and to take advantage of men's and women's capacities in productive activities (home/backyard gardening, small ruminant and poultry restocking etc),
- enhancing crop and vegetable production, and
- diversifying activities according to specific groups of beneficiaries, places of intervention and seasonality issues.

The livestock sub-sector has been severely affected and needs substantial support. However attention should be paid to the security situation as in some cases livestock assistance, especially restocking, may become a source of insecurity to the beneficiaries.

Natural resources (firewood, grass lands) are at risk and should be protected and rehabilitated as they are the main sources of income for some 15% of the population. The risk of natural resources degradation (deforestation, poor soil fertility etc.) is high, with an expected adverse impact on the food security situation if nothing is done. It should be a cross-cutting component in all related humanitarian interventions. Support to the environment and natural resources management as part of the protection and conservation of the scarce flora (forest and other vegetation) and as an initial and basic step of community-driven conflict resolution should help to improve the food security situation and contribute to livelihoods recovery.

13.1.4 Severity of the current household food security situation and risks to lives and livelihoods

The survey has shown that at global level, the food security, livelihoods and nutritional situation of the conflict-affected Darfur population has not changed significantly from last year.

At state level, a trend towards a degradation of the overall food security and nutrition is observed in West Darfur. In North and South Darfur, the evolution of the situation is less clear, as some aspects have remained similar to last year (e.g. average size of the animal herds), while others have become slightly worse in one or the other state (e.g. area cultivated in the South, or market prices and function, and water shortages in the North).

At household level, almost half of the households were found in severe food insecurity and at high risk to lives and livelihoods in the short term, with another quarter moderately food insecure and at medium risk. Just 30% of the population surveyed were food secure and at low risk. IDPs, particularly those living in camps, were in a worse situation than the residents, reflecting the limitations on access to natural and economic resources and income-generation opportunities of these groups.

IDPs in communities where they are a minority seem better able to integrate with the host population and their food security and economic profile tends to mirror that of the residents. Likewise, the profile of residents living in communities with high numbers of IDPs increasingly mirrors that of the IDPs who have settled in these locations. They are less likely to cultivate, to own animals and assets, and to earn income from agricultural-based activities, compared to residents in communities with smaller numbers of IDPs or with no IDPs. Petty trade and firewood/grass collection increase as their main sources of income, a pattern similar to the IDPs. This indicates that the situation of the residents worsen faster when the IDPs outnumber them, to the point of blurring many of the initial differences between both groups.

Compared to last year, the food security situation of the IDPs, particularly in camps, has deteriorated. On the other hand, it has tended to improve for some groups of residents, probably those who have better managed to adapt their livelihoods strategies to cope with the influx of

IDPs, for instance by taking advantage of new market opportunities (petty trade, vegetables growing) and by multiplying their sources of income. It cannot be excluded that some groups have also taken advantage of the large humanitarian assistance that is being delivered, essentially food aid, and are 'diverting' part of it for lucrative purposes.

The main coping mechanisms of the population are a combination of:

(i) reliance on food aid both for direct consumption and as a source of income to cover essential requirements (other foods, milling costs, reimbursement of debts incurred for food, purchase of firewood, health and education expenditures),
(ii) expanding the sources of income and the level of income, by diversifying the income-earning base (combining sale of food aid, sale of firewood/grass, waged labour, and petty trade for the IDPs, as well as sale of cereals and other crops for the residents) and by sending members out in search of labour and income (migrants);
(iii) indebtedness to relatives, neighbours and traders, mainly to purchase food; and
(iv) decreasing the amount of food consumed.

Given the stability of the food security and nutritional situation overall, these mechanisms can be considered as relatively efficient in maintaining the *status quo*. However, their cost and short- and longer-term implications must not be underestimated:

a) Households are in a vicious circle whereby they have to sell part of their food ration to meet other basic needs, and they end up consuming a poor or borderline diet which not only puts the nutritional and health status of the most vulnerable members (children, pregnant and lactating women, the elderly, the chronically sick) at jeopardy in the short- or longer-term, but also decreases their physical capacity and therefore their income-earning potential as well; their dependence on food aid is bound to increase overtime as a result of this negative pattern;
b) The lack of sufficient income, despite food aid and the attempts to diversify the income sources, puts them in another vicious circle and spiral of indebtedness, whereby households are incurring debts essentially to purchase food, and reimburse it by selling part of their food ration; this has the same negative effects on food consumption, human and physical capital on the short- and longer-term, as described above;
c) Even if all households, including IDPs in camps, struggle and manage to earn some income from various activities, most of them provide low returns and are unreliable (e.g. waged labour), unsustainable or potentially damaging to the environment and risky (e.g. collection of firewood);
d) While food aid represents the main source of income for less than 10% of the households, except for IDPs in camps (20%), it provides about half of the food consumed by the residents and more than 3/4th of the food consumed by the IDPs (based on a 7-day recall); the degree of reliance on food aid remains thus high both for the economy (livelihoods as well as markets) and nutrition (lives) of the population, and this gives little hope that the massive level of assistance currently provided can decrease in the near future.

13.1.5 Expected effects on lives and livelihoods

The food insecurity situation and risks to lives and livelihoods reflect the unsatisfactory food consumption pattern at the time of the survey and/or excessive reliance on food aid for the food consumed during that period, and/or unsustainable expenditure pattern for food purchases (either an excessive share of total expenditures or a very low amount of food expenditures). The practical implications for the food insecure households are as follows:

- Households and their members ***severely*** food insecure and at high risk to lives and livelihoods are likely to suffer from malnutrition and/or to be unable to cope with economic shocks if their situation does not improve quickly;
  - for *those heavily relying on food aid*, the assistance is not sufficient to ensure a proper diet, whatever level of cash resources they mobilize to purchase food;

- *those who had already consumed (or sold/barter) a large part of their food aid* by the time of the survey, are unable to obtain an acceptable diet even if they mobilize a high level of cash resources;
- *those not receiving food aid*, *or who had finished it* by the time of the survey, do not have the cash resources to purchase other foods even for a borderline diet.

- Households and their members ***moderately*** food insecure and at medium risk to lives and livelihoods may also suffer from malnutrition if their pattern of food consumption does not improve on the medium term, and economic shocks would quickly affect their current food intake:
  - *those relying heavily on food aid* must, in addition to this assistance, mobilize a high level of their cash resources to ensure an acceptable diet, and their food intake would be jeopardized in case of economic shocks or decrease of food aid;
  - *those who had already consumed/sold/barter a large part of their food aid* by the time of the survey, have insufficient cash resources to purchase additional food necessary to ensure a proper diet;
  - *those not receiving food aid, or those who had finished it* by the time of the survey, struggle to maintain a fragile food consumption (borderline) by mobilizing a high level of cash resources; any economic shock would quickly deteriorate their food intake.

- Households food ***secure*** and at low risk to lives and livelihoods currently manage to ensure an acceptable diet; however, the situation may not be optimal for some households in this group:
  - *some of those who had already consumed a large part of, or who had finished their food aid by the time of the survey*, have to mobilize a high level of cash resources to maintain their current acceptable food consumption; their food security on the longer term depends heavily on the reliability of their sources of income;
  - *some of those not receiving food aid, or who had finished it by the time of the survey*, are able to maintain an acceptable food consumption pattern despite low levels of food expenditures, but they may be in a fragile situation as they rely on their own food stocks and production (whose levels would depend on the adequacy of the next harvest, or access to good pasture and veterinary care) and/or depend on other external support for food (such as gifts and remittances) which may not be reliable or sustainable on the longer term.

13.2 Forecasts and scenarios

13.2.1 Prospects of the forthcoming harvest at household level

The capacity to cultivate, to raise animals, and to sell crop and animal productions is associated with better food security and lower risks to lives and livelihoods. The forthcoming harvest is expected to improve the food security and nutritional situation of households who have been able to cultivate a significant acreage, provided they can harvest as planned (security) and their crops have not been affected by poor rainfalls, pests or other damage. While the acreage cultivated gives a good indication of the capacity of farming households to sustain themselves, yields (related to climatic factors, agro-ecologic conditions, pest/weeds that may affect the crops) and the ability to harvest all the area planted (security issues) must also be taken into account.

Even though the acreage planted may have been underestimated by the respondents, it can be taken as a basis for a rough estimation of the proportion of households expected to harvest a reasonable area. An acreage of 2 hectares cultivated on cereals can be taken as an indicator of household's self-sufficiency capacity, based on the following considerations:

- Average sorghum yields in Darfur (EFSNA 2005 report): 210 kg/feddan ~ 520 kg/ha
- Average millet yields in Darfur (EFSNA 2005 report): 170 kg/feddan ~ 430 kg/ha

- In 2005, the area planted under millet was approximately 77% the total area under cereals, and 23% for the sorghum; the average cereal yield (sorghum and millet combined) can thus be estimated at 450 kg/ha
- A household cultivating 2 ha can thus expect to harvest 900 kg of cereals.
- Based on the joint FAO/WFP Crop and Food Supply Assessment Missions typical hypotheses, an average individual in Darfur consumes 150 kg of cereals per year. The average size of households in Darfur is 6, meaning that 900 kg of cereals would be required for complete self-sufficiency, corresponding to the acreage of 2 ha.

Considering the acreage planted under cereals, the proportions of households having planted more than 2 ha were 5% for IDPs and 27% for residents. Only 10% of the severely food insecure and 16% of the moderately food insecure had planted more than 2 ha of cereals (compared to 25% of the food secure).

It is difficult to predict the proportion of farmers who may not be able to harvest all their land due to insecurity. For planning purposes, two scenarios could be envisaged, based on assumptions that 2/3rd (optimistic scenario) or only half (pessimistic scenario) of the farmers will be able to harvest for the coming season and to obtain normal yields. These working assumptions have been used in Section 15.3 to estimate the numbers of households requiring assistance.

13.2.2 Prospects of evolution of the security situation

Security is clearly the main constraint impeding both residents and IDPs to conduct their usual livelihood activities, including food production (cultivation and livestock raising) and income-earning activities (sale of own production, seasonal migration, remittances). The presence of large numbers of IDPs is putting a serious strain on the availability of land, grazing areas, water for animals and humans and the labour market. This affects both residents and IDPs living in these communities.

There are no indications that the conflict will recede in the foreseeable future. The Darfur Peace Agreement has not succeeded in bringing about peace and on the contrary, heightened tensions, particularly in North and West Darfur. Attacks on humanitarian workers have also increased since May 2006, severely jeopardizing the ability of humanitarian agencies to reach the most vulnerable people in need of assistance.

13.3 Estimation of the number of households requiring immediate assistance (food and /or non-food)

13.3.1 Identification of households requiring assistance, and level of assistance

Using the population considered 'crisis-affected' in Darfur, as defined by the humanitarian community (3.74 million as of August 2006, including 1.67 million IDPs and 2.07 million residents), which was used as sample universe for the survey, the number of food insecure households can be estimated at ***2.65 million, including 1.64 million IDPs and 1.01 million residents***. They represent the population which was in need for assistance *at the time of the survey*.

At the level of crisis-affected Darfur population, the breakdown is as follows:
- severely food insecure/high risk: 1.76 million;
- moderately food insecure/medium risk: 897 000;
- food secure/low risk: 1.08 million.

Among the IDPs and the residents, the approximate numbers are:
- severely food insecure/high risk: about 1.15 million IDPs and 597 000 residents;
- moderately food insecure/medium risk: about 495 000 IDPs and 421 000 residents;

- food secure/low risk: about 337 000 IDPs and 738 000 residents.

13.3.2 Accounting for the forthcoming harvest

The assessment took place at the peak of the lean season, when food availability and access are expected to be at their lowest. The food security analysis focused on the 7 days prior to the survey (food consumption, weekly food expenditures and sources of the food consumed) and does not incorporate possible changes in the situation in the future.

A further "screening" of the households can be done to anticipate the potential improvement of the food security situation that can be expected with the forthcoming harvest, as well as to consider the possible effects of harvest failure or impossibility to harvest.

The acreage planted under cereals this season is taken as a reference for this analysis. The rationale for basing the projections on the cereal harvest stems from the strong linkages found between food security, nutritional status and cereals cultivation. For those who have cultivated and are able to harvest as planned, the harvest will not only increase the food available for direct consumption at household level but also contribute to a decrease of market prices of the local staples, thus easing the economic access of the non-producing households.

A number of other factors beyond the acreage cultivated influence the food security situation. However, it would be too complex and unpractical from an operational point of view, to consider them all. The objective here is to fine-tune the estimation of the number of people requiring assistance, for *planning purposes*, and not to obtain accurate figures of households disaggregated according to their specific food security characteristics.

The level of assistance, in volume or timing, provided to the households able to harvest a significant acreage of cereals (sorghum and/or millet) should be adjusted to account for the harvest. Some farming households may not need support during the first 3-4 months after harvesting, but would require assistance thereafter, or they may be able to manage with a decreased ration instead of a full ration. Clearly, some flexibility is also required to take into account the local context; for example, the conditions in one area may justify a given level of assistance, while more or less support would be required in another area.

The adjustments of the amount and/or timing of the assistance should apply not only to the households identified as food insecure at the time of the survey, but also to food secure households who have planted a low acreage and/or who may be unable to harvest properly.

Two scenarios were retained to account for varying ability to harvest:

1) 'optimistic' scenario, assuming that only 1/3rd of the farmers who have planted more than 2 hectares of cereals (see Section 14 for the rationale behind this threshold) may not be able to harvest properly;
2) 'pessimistic' scenario assuming that half of the farmers who have planted more than 2 hectares of cereals may not harvest properly.

The results indicate that:

- between 2.36 and 2.43 million of food insecure households would not be expected to harvest properly (i.e. less than 2 ha, or unable to access their fields, or obtaining lower yields than "normal") and would need the same level of assistance after the harvest;
- 0.22 to 0.29 million of food insecure households may not need assistance for a few months post-harvest (i.e. have been able to harvest more than 2 ha), or they could benefit from a decreased level of support;
- 0.28 to 0.30 million of food secure households have planted less than 2 ha of cereals, or are not expected to harvest properly their fields, and they may require assistance at some stage if their

other livelihood strategies are impaired by changes in the conflict situation (contingency planning).

13.3.3 Role of food aid

Food aid is currently a crucial resource for both IDPs and residents. For the IDPs, it is not only their major provider of food for consumption but also an essential source of income (especially in camps), either the main one or one that complements other low income-earning activities.

While food aid is essential, it must be reiterated that improving security, establishing and maintaining peace, is the number-one priority to improve food security and protect lives and livelihoods of the population. Security is also essential to enable any assistance programmes, food or non-food, to reach the target groups. Food aid will be palliative at best and inefficient at worse if people remain constrained in accessing their land and pastures, marketing their production, and migrating for trade and labour. Phasing down and eventually phasing out emergency food aid will also remain elusive if IDPs and residents cannot increase their self-reliance through their agricultural production, employment and income-generating activities.

In fact, the survey has confirmed the limitations of food aid as a response to the needs of the conflict-affected population in Darfur. Food aid is unlikely to be the most cost-efficient way to cover non-food requirements, and complementary interventions would be required to assist with these, such as providing flour to decrease milling costs, cash or vouchers to enable beneficiaries to purchase goods not included in the ration on the market (fresh food, firewood) and facilitate access health and education services (e.g. gratuity/exemption of fees) for the most vulnerable groups, such as female-headed households.

In conclusion, while food aid should as far as possible be complemented with other types of assistance, it remains the best support at crisis-affected Darfur level to improve and protect the food security and livelihoods situation of the food insecure households in the current conflict situation in Darfur. This is because:

- insecurity continues to prevent most of the population to carry out their usual cultivation and animal raising activities, to trade their production and to move for work and income earning activities;
- the influx of IDPs continues to put a high pressure on natural (e.g. land, pasture and water for animals) and economic resources (e.g. labour market, housing, drinking water and health services);
- the volatility of the security situation precludes the implementation of *large-scale* programmes involving large amounts of cash, or valuable non-food assets (such as animals), susceptible to be monopolized or misused by armed or other powerful groups and to endanger both the intended beneficiaries and the implementing agencies.

13.4 Recommendations for Nutrition and health

- Any programme aiming to reduce and/or prevent malnutrition must focus on increasing access to safe water and sanitation, and reducing disease incidence, particularly diarrhoeal disease, respiratory infections and fever.

- Health and hygiene promotion should be strengthened to include all populations, resident and non-resident, and supported by provision of appropriate non-food items such as water containers, blankets, mosquito nets, where needed.

- Food assistance also plays a vital role in ensuring good health and nutrition status, and should be continued for those who are unable to provide adequately for themselves.

- Nutrition programmes should focus mostly on children under the age of three years, since this is where the majority of acute malnutrition is found.

- Caring practices are a key factor in young child nutrition and health status: exclusive breastfeeding must be promoted and fully explained to mothers and midwives as a key starting point.

- 10% of children under the age of two are looked after by other family members, therefore education on child caring practices should include other family members as well, particularly fathers, grandmothers and eldest daughters.

- Routine immunisations and supplementation of vitamin A for all children should be strengthened, and health clinics supported to provide these vital services. Campaigns to maintain high levels of measles and polio immunisation are also a necessary strategy in situations of conflict such as Darfur.

- Outreach and early case finding of malnourished children in the communities should be strengthened where possible, to improve coverage of therapeutic feeding programmes.

- Supplementary feeding programmes should focus more on education for caretakers, and be used as an opportunity to raise awareness of appropriate health, hygiene and caring practices, rather than simply a distribution of food. Outreach should also be expanded to ensure early detection and treatment of moderately malnourished children and women.

- Interventions to increase supplementation of pregnant women with iron/folate and to provide post-partum vitamin A to new mothers should be supported and expanded to include resident as well as displaced groups.

- Routine surveillance activities should be strengthened to allow early detection of changes in nutrition and health status, and to remove the need for large surveys such as this. Such surveillance systems should be integrated into government structures and include food security monitoring indicators as well.

13.5 Recommendations for Food Aid

13.5.1 Recommended food aid programmes to improve household food security and livelihoods

a) Food aid response options

Efforts should be made to improve targeting. Three food aid response options are suggested. While the first two are mutually exclusive, the ideal would be a combination of options (1) or (2) with option (3):

(1) Adjust upwards the level of general food distributions by increasing the amount of the commodities distributed in the household food ration, so that beneficiaries are still able to consume appropriate quantities after selling or bartering part of it to meet other essential expenditures; *or*

(2) Complement the food rations with small cash grants or vouchers, so that food aid beneficiaries do not need to sell so much of their ration to meet other essential expenditures and have the flexibility to acquire other goods according to their own priorities and/or to pay for certain expenses (e.g. to get free access to health care and to schools);

(3) Combine food aid interventions with other programmes aimed at building skills and future human capital (including school feeding), enhancing infrastructure and access to basic services (particularly safe drinking water and improved latrines, in view of their importance for children's nutritional status), as well as increasing crop and animal production.

For option (3), general food distributions could be associated with food and/or cash or voucher assistance and programmes targeted to specific groups (including the IDPs in camps and female-headed households). Selected beneficiaries would receive food/cash transfers against their participation in programmes consisting of:

- Training and sensitization to build individual skills in crop cultivation practices, animal raising and small business management, and child care practices (infant and young children feeding, hygiene); requests for training aimed at income-generation activities were indeed prominent in focus group discussions;
- Literacy classes for adults and older children not enrolled in schools;
- Formal schooling (attendance monitored) and repair/building of school facilities;
- Repairs of water hand-pumps and boreholes, and building/repairs of improved latrines, roads and houses.

In addition, vouchers or exemption of fees should be considered for the neediest households, particularly female-headed, to meet education and health expenses.

Considering the pros and cons of the various options, option (1) would seem the most straightforward and feasible in the very short term, although clearly not the most cost-effective use of food aid.

At the same time of adjusting the general food distributions, plans should be made to implement options (2) and (3) on a pilot basis, to address the limitations of food aid to improve and protect the food security and livelihoods of the conflict-affected population in Darfur.

c) Interventions complementary to food aid distributions - option (3)

It will take time to consult local authorities and communities and to identify potential agencies and/or implementing partners to carry out cash or vouchers interventions. If pilot projects can be initiated in the next 6 months in a few places where security conditions allow, lessons learned from these initiatives will be extremely valuable when the situation improves and enable scaling up, and it will save considerable time.

It is clear that the current conflict in Darfur prevents any large-scale non-food/cash interventions at the moment. What is being argued here is that making some attempts to carry out such projects, at a very small-scale, in communities where the security and access situation are appropriate would bring worthwhile lessons, without having to wait for proper conditions to be present everywhere in Darfur. A specific feasibility and design mission should take place for this purpose. The mission should review ongoing cash transfer projects implemented by some NGOs and determine the value of the cash or voucher transfer on the basis of market prices, level of daily wages for unskilled labour, and possible inflationary effects, and in consultation with targeted communities and implementing partners.

While the objective of these cash/vouchers programmes will be to strengthen livelihoods and promote early recovery, they will still retain an 'emergency' aspect given that they will still target the population affected by the ongoing conflict and aim at enhancing the impact of humanitarian food aid, particularly by reducing the need for beneficiaries to sell their food ration.

Cash and/or voucher-based interventions were also recommended by the Livelihoods study and Khartoum Food Aid Forum held in June, to be implemented in IDP settings where there has been

no looting or attacks in the recent months. Vouchers for key items such as grain milling, clothes, firewood and health care were recommended.

A priority mentioned by the majority of participants to the focus group discussions was for skills training with the aim of developing income-generating activities. These activities were considered both a protection measure to reduce the risks associated with the collection of firewood/grass collection and a means to improve livelihoods. Men and women agreed that women, especially in female-headed households, were the most in need of training and income-generation skills building because of their heightened vulnerability and role as food providers and carers to children and other dependent members in the household.

Specific interest was expressed in the focus groups for training in food processing, sewing, milling, soap making, first aid, agriculture, pasta making, driving, building and handicrafts.

d) Targeting criteria

As indicated previously, adjustments of the assistance should be made to: (i) account for the improvement of the food security situation that will take place with the forthcoming harvest; and (ii) minimize exclusion errors (priority) and inclusion errors.

WFP has already been adapting the level of food aid rations provided to households based on an appraisal of the food security situation at community level. While IDPs in camps received a full ration at all times, given their very limited access to land and the difficulty to target households within a camp setting, the ration is adjusted for all households living in the same community. In these communities, all households (IDPs and residents) receive either a full ration or half ration according to:

- the period of the year, considering three periods: pre-harvest (lean season), post-harvest and 'transitional';
- the proportion of IDPs in the communities where they have moved;
- other possible factors having an impact of the food security situation of the households.

This pragmatic approach is considered consistent with the results of the survey and should continue. It rightly gives priority to:

1) *Camp settings*, with a full ration to all IDPs: this is appropriate considering that IDPs in camps are the most affected by food insecurity, and that their situation has worsened compared to last year;

2) *Communities with a majority of IDPs*: this is also appropriate as the analysis has shown that the situation of residents in these communities tends to deteriorate and resemble that of the IDPs, and that both groups are increasingly equally affected by lack of access to natural and economic resources; the situation is the reverse in communities with a minority of IDPs (where the situation of the IDPs tends to mirror that of the residents and is better than the other IDPs elsewhere);

3) *Communities where most of the households are not able to cultivate and/or sustain their food security and livelihoods by their own means*: this approach takes duly into account the fact that households in some locations are less affected by insecurity and other difficulties (e.g. poor rains, pests or diseases affecting the crops) and therefore do not need the same level of assistance, or can "graduate" from the assistance at some times.

A series of factors make it difficult to implement household targeting within communities, particularly the risk of creating tensions within and between IDPs and residents, and the fact that in many cases the number of food secure households is small and the cost-benefits of targeting

may be very low. Nevertheless, some tentative guidance is provided below for household targeting, should conditions allow to implement it at a later stage.

- *Priority order for community/camp targeting*:

1) camps
2) communities where large numbers of IDPs are found (out-numbering the residents)
3) communities (with or without IDPs) facing security problems which limit access to land, pasture, labour opportunities and markets for goods and animals, or suffering from specific climatic, pests/diseases or agro-ecological difficulties affecting the harvest
4) communities with small numbers of IDPs, and
5) communities with no IDPs and no major security problems.

- *Household targeting - if and when feasible - for general food distributions*:

1) IDPs in camps: no targeting;
2) IDPs and residents in communities: consider targeting on the basis of the acreage cultivated, and/or ownership of livestock (sheep, goats, cattle) and/or size of the household (given that larger households cultivate less acreage per capita even if the total acreage is more than 2 ha); it is expected that many women-headed households will be targeted using these criteria, given their lower access to land and animals.

- *Individual targeting for food/cash/voucher-for-training, and food/cash/voucher-for-work programmes* (e.g. skills building in agriculture practices, training in small business management, literacy classes, sensitization and demonstrations of child care practices, repairs/construction of roads, schools, health posts, water points etc.):

1) Both IDPs and residents should be allowed to participate, with selection based on age, physical ability and vulnerability; it is expected that women and female-headed households will be given priority given their overall poorer access to land, animals and income-earning opportunities; in addition, WFP's gender policy requires that 70% of food-for-training participants are female; some self-selection is also anticipated as a result of the active participation expected from the beneficiaries.
2) If the programmes cannot accommodate all the potential beneficiaries, selection criteria will probably need to be devised on a case-by-case basis, with priority to be given to the IDPs, households unable to cultivate and households owning no animals (a large number of them is expected to be female-headed).

e) Level of food assistance required and feasibility issues

The total number of people requiring assistance varies little even after projecting for the forthcoming harvest. It is therefore recommended to take the **2.65 million** severely and moderately food insecure people who were in need of assistance at the time of the survey as the planning figure to calculate the amount of food aid that will be required in 2007. The level and phasing of the assistance should vary according to harvest outcomes and other factors that may affect the food security status of the population, and addressed on a case-by-case basis.

As agreed with the WFP Country Office in Sudan, no attempt is made in this report to calculate the tonnage of food aid that will be required, so as to leave sufficient flexibility to the CO to incorporate the adjustments listed above. Instead, guidance is provided on the proportions and numbers of food insecure IDPs and residents in various types of location (camps, communities with a majority of IDPs, communities with a minority of IDPs) which can be used to project the amount of assistance required at crisis-affected Darfur level (see Annex 6).

In terms of level of the food ration, the programming guidance below is again based on the expected harvest, however it is understood that other factors, including security issues preventing people to carry out their livelihood activities, should be taken into consideration as appropriate.

Table 33: Programming Guidance based on the forthcoming harvest

Degree of food insecurity	Expected harvest	Eligibility for food aid and level of food ration
Severe or moderate food insecurity	Inadequate	Full ration
Severe or moderate food insecurity	Adequate	Decreased ration (e.g. 2/3rd or half of full ration) or no ration for 4 to 6 months (particularly post-harvest) and full ration for 6 to 8 months
Food security	Inadequate	
Food security	Adequate	No food aid

The estimations of the proportions and numbers of IDPs and residents in need for full or decreased food rations, according to their place of residence (camps, communities with a majority of IDPs, communities with a minority of IDPs), are shown in the tables in Annex 6 and the chart below, taking into account: (i) the prevalence of food insecurity, and (ii) the proportions of households expected to harvest a significant acreage assuming a 'pessimistic' scenario (half of the farmers able to harvest properly).

On the operational side, it is acknowledged that the estimations of the numbers of food insecure people who require support may not be identical to the numbers of people that can feasibly be targeted and reached by the assistance. This is because:

- targeting may not be feasible, particularly at community level, as it risks increasing tensions between IDPs and residents, or within IDP or resident groups;
- targeting may not be cost-efficient if the target groups represent a very small proportion of the households at community level;
- physical access to target groups may not be possible for security reasons.

13.6 Recommendations for agricultural assistance to improve household food security and livelihoods

The following actions are recommended in the agricultural sector:

- Conduct specific assessments to refine the identification of food insecure and at risk populations and their specific assistance requirements. Efforts should be made to sensitize communities and ensure ownership of the interventions to be implemented, as well as accountability on the results.

- Pay particular attention to gender issues, particularly for vegetable production as well as for small ruminants and poultry restocking where women can perform better and obtain higher impacts.

- Increase population coverage with timely agricultural input distributions. Yield increases should be supported through the provision of well adapted and better performing seeds, adequate agricultural tools and equipment for land preparation and weeding. Support should also be given to agricultural water provision and management through small scale irrigation schemes and provision of adequate equipment (treadle pumps, drip irrigation kits etc.), training and promotion of appropriate plant protection techniques like Integrated Pest Management (IPM) and any other *ad hoc* training on improved agricultural practices.

- Start a seed multiplication and production programme in locations close to the Agricultural Research Corporation Section to benefit from the expertise of the Ministry of Agriculture and ensure sustainability beyond the humanitarian assistance programme.

- Increase household income sources through the diversification of IGAs such as post-harvest treatments (crop processing, transformation, preservation); support to fishery projects through training and provision of adequate equipment (mills, fishing equipment etc.) and facilitate access to remittances. Particular attention should be given to areas where IDP live and areas that have experienced protracted or repeated conflict.

- Ensure the protection and rehabilitation of natural resources through training and provision of alternative sources of energy like clay fuel-efficient stoves or solar heaters and coolers, promotion of tree nurseries for seedling production and multipurpose tree planting, and raise community awareness through community-driven conflict management. Action should be undertaken in coordination with the UN Environmental Programme and the UN Population Fund to adopt a common and coordinated strategy for humanitarian interventions and joint assessments of progress and impact.

- Launch a livestock restocking programme to improve households' animals ownership. The goal should be to reach a minimum of 3 LTU per household in the short term. Donkeys, goats and sheep are among the recommended species in the current volatile context of Darfur. Chicken restocking can be implemented only if avian influenza is proved to be under control.

- Plan and implement timely livestock vaccination campaigns and treatment against endemic and epidemic diseases, following livestock movements during the year.

- Consider a programme to provide the most vulnerable household with fodder for their livestock at least during the lean period of the year, particularly for the regions with poor pasture conditions like North Darfur and IDP camps.

- Conduct a pasture seed collection and broadcasting programme to rehabilitate poor pastureland in collaboration with local communities and Government counterparts wherever possible, to address the problem of livestock feeding. Preventive measures against wild fires should be also promoted (e.g. opening of firelines).

- Rehabilitate or create new waterpoints for livestock. A water needs assessment should be conducted according to the number of animals per specific area throughout the year. Good knowledge of the needs and specific appropriate response would support the reduction of water-related livestock movement, which is one of the roots of the problems between pastoralists and farmers.

- Initiate a community-driven conflict management plan for all land and natural resource conflict areas to address the problem of livestock movement. At a later stage, carry out the demarcation of the livestock routes.

The implementation of the above recommendations will require significant and timely funding from the Common Humanitarian Funds and from bilateral Donors.

13.7 Recommendations for monitoring and future assessment of the nutritional, food security and livelihoods situation

This EFSNA is the third annual assessment at crisis-affected Darfur level, involving random sampling of a large number of communities, households and children. While the wealth of information obtained and its usefulness for programming and advocacy are not disputed, the staff, financial and logistics implications cannot be underestimated.

The 2004, 2005 and 2006 assessments have enabled partners to build a comprehensive picture of the nutritional and food security situation of conflict-affected IDPs and residents in the three Darfur states. In future, it may not be necessary to repeat such a large-scale survey on an annual

basis. Instead, more regular and consistent monitoring of the food security situation, complemented by punctual, purposive assessments for cross-checking and/or improved understanding should be considered.

For the assessment of the nutritional situation, standard practices require the random sampling of a minimum number of children under-5. This procedure should be continued to enable comparisons and identification of trends. However, if a solid and reliable integrated food security and nutrition surveillance system is in place, with sufficient geographical coverage, full nutritional assessments can be carried out only in areas of identified possible concern, to save time and resources.

The monitoring of the food security situation should be combined with the nutritional surveillance system (NSS) and expanded to areas not covered by the NSS. It could involve either a sentinel surveillance approach, with random selection of a given number of households surveyed at key periods (e.g. pre-harvest, mid-term, post-harvest) and/or focused small-scale assessments in communities or areas purposively selected on the basis of information on population movements (arrivals or departures) or other events requiring an evaluation of the effects on food security.

Annex 1: Food security analysis - Regression results

WITH STATE AND WITHOUT AGE SQUARE

Tests of Between-Subjects Effects

Dependent Variable: FOOD SECURITY PROFILES

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	248.1199	19	13.05894	21.35632	3.07533E-67
Intercept	62.84052	1	62.84052	102.768	1.33714E-23
Interaction term between status of household&ltu	S2_1 * LGLTU	4.628221	1	4.628221	7.568893	0.005990471
Interaction term between status of household&hectare cultivated for cereals	S2_1 * LGS5_4	1.114135	1	1.114135	1.822033	0.177220005
main sources of income	S4_1A	16.82634	1	16.82634	27.51744	1.71674E-07
Sex of household head	S1_1	0.0737	1	0.0737	0.120527	0.728499461
age of household head	S1_5	4.568562	1	4.568562	7.471329	0.0063226
Presence of household head	S1_2	0.080653	1	0.080653	0.131899	0.716508758
owning bycicle	S3_5	6.844415	1	6.844415	11.19321	0.000835729
status of household	S2_1	8.326194	1	8.326194	13.61648	0.000230036
Duration of stay in actual place	S2_2	0.569516	1	0.569516	0.931374	0.334619537
lack of access to market for animals	S3_14	6.173875	1	6.173875	10.09662	0.001507457
Insecurity to move	S4_4	5.184346	1	5.184346	8.478369	0.003632637
hectare cultivated in cereals	LGS5_4	2.062139	1	2.062139	3.372378	0.066442236
Shortage of seeds	S5_10	0.063421	1	0.063421	0.103718	0.747445243
presence of markets	TYPMARK	2.698223	1	2.698223	4.412616	0.035795534
livestock tropical unit	LGLTU	1.646465	1	1.646465	2.692593	0.100968488
Owning hoe, axe and plough	HOEPL	7.301644	1	7.301644	11.94095	0.000560275
dependency ration	LGDEPRAT	3.427501	1	3.427501	5.605262	0.01799867
State	STATEID	22.58077	1	22.58077	36.92811	1.45653E-09
literacy of household head	S1_6	0.845451	1	0.845451	1.382632	0.239789381
Error	1257.813	2057	0.611479		
Total	8378	2077			

Annex 2 – List of assessment members in each Darfur state

State: North Darfur

Function	Name	Affiliation (organization)
Nutrition Coordinator	Grainne Moloney	UNICEF
Operational Coordinator	Gloria Kusemererwa	WFP
Logistics Coordinator	Zein Elabdin Hassan	WFP
TEAM 1		
Supervisor	Simon N Dradri	WFP
Team Leader	Yahia Medani	WFP
Community interviewer	Amna Elzein	WFP
Household interviewer 1	El Tahir Musa Isa	MoA
Household interviewer 2	Asmat Salih Omer	MoA
Household interviewer 3	Nazik Ismail Hamid	'free lance'
Household interviewer 4	Fawzi Ahmed	ACF
Household interviewer 5	Salha Issa Adam	RI
Anthropometrist 1	Ishag Ibrahim	MoH
Anthropometrist 2	Nafisa Abdulgadir	ACF
Anthropometrist 3	Nasreen Abbas	MoH
TEAM 2		
Supervisor	Grainne Moloney	UNICEF
Team Leader	Taj Eldin Suleiman	UNICEF
Community interviewer	Saeed Dunkus	PA
Household interviewer 1	James Akol	WFP
Household interviewer 2	Mohammed Abubaker	PA
Household interviewer 3	Najat Adam	ACF
Household interviewer 4	Afaf Khalifa Mohammed	'free lance'
Household interviewer 5	Abdalla Idris	RI
Anthropometrist 1	Jamal Ismail	GOAL
Anthropometrist 2	Nasridin Hussein	ACF
TEAM 3		
Supervisor	Wanja kaaria/Azzedine Zeroual	WFP/UNICEF
Team Leader	Bashir Abdelrahman	FAO
Community interviewer	Abass Abdulgassim	UNICEF
Household interviewer 1	Acuil Malual N	WFP
Household interviewer 2	Ayman Saber Hassan	WFP
Household interviewer 3	Osman Adam Belela	MoA
Household interviewer 4	Sulafa Abdulrahim	MoA
Household interviewer 5	Yousif Ibrahim	AHA
Anthropometrist 1	Ibrahim Omer Abdulrahman	MoH
Anthropometrist 2	Salwa Yousif Briema	MoH
TEAM 4		
Supervisor	Haile Redai	WFP
Team Leader	Mohammed Salih	WFP
Community interviewer	Ali Isamil Nuggara	WFP
Household interviewer 1	Mazahir Adam	WFP
Household interviewer 2	Abdulrahman Ismail	GAA
Household interviewer 3	Awadalla Hamid	PA
Household interviewer 4	Ahkam Ahmed Ibrahim	'free lance'
Household interviewer 5	Abdulkareem Adam Fadul	AHA
Anthropometrist 1	Fatima El Rasheed	SUDO

Function	Name	Affiliation (organization)
Anthropometrist 2	Gomer Noreen	RI
DATA ENTRY		
International Coordinator	Louise Agathe Tine	WFP
Data entry supervisor	Badria Musa Yousif	Ministry of Health/MoH
Data entry clerk 1	Hassan Ibrahim Mohammed	WFP
Data entry clerk 2	Mohammed Awad Ahmed	WFP
Data entry clerk 3	Ehab Elhaj Mohammed	WFP
Data entry clerk 4	Hussamaldin Mohammed Nour	WFP
Data entry clerk 5	Abdallah Mohammed Abdallah	Ministry of Health/MoH
Data entry clerk 6	Rehab Mohammed Bashir	Ministry of Health/MoH

State: South Darfur

Function	Name	Affiliation (organization)
Operational Coordinator	Caterina Galluzzi	WFP
Nutrition Coordinator	Erin Boyd	UNICEF
Logistics Coordinator	Abdalla Elsheikh	WFP
TEAM 1		
Supervisor	Marie Nzungize	UNICEF
Team Leader	Talal Mahgoub	UNICEF
Community interviewer	Mounier Elias	WFP
Household interviewer 1	Mariam Mohamed Adam	NOCD
Household interviewer 2	Ibrahim Eltaher	Ministry of Health/MoH
Household interviewer 3	Hamid Ibrahim	SUDO
Household interviewer 4	Hashim Ibrahim	WFP
Household interviewer 5	Mohyi El Din Gaber Teyar	WFP
Household interviewer 6	Abdu E Mawla Eisa Ahmed	FAO
Anthropometrist 1	Yousef Mohamed	ACF
Anthropometrist 2	Maha Mohammed	Ministry of Health/MoH
TEAM 2		
Supervisor	Barbara Perez	UNICEF
Team Leader	Bakri Osman	WFP
Community interviewer	Siddig Musa	Ministry of Health/MoH
Household interviewer 1	Mohammed Abdul Karim Abdalla	WFP
Household interviewer 2	Faiza Idris	WFP
Household interviewer 3	Abdella Osman Abel Mukaram	WFP
Household interviewer 4	Mahghoub Eisa Mohammed	WFP
Household interviewer 5	Mohammed Adam	FAO
Household interviewer 6	Osama Bashir	WFP
Anthropometrist 1	Habeeba Essadig	Ministry of Health/MoH
Anthropometrist 2	Adam Mohamed Jumaa	ACF
Observer/Assistant	Emam Ebraheem	Humanitarian Aid Commission (HAC)
TEAM 3		
Supervisor	Erin Boyd	UNICEF
Team Leader	Eisa El Nour Assab	FAO
Community interviewer	Abdulbagi Abduraham Ibrahim	WFP
Household interviewer 1	Hasan Yousef	WVI
Household interviewer 2	Osman Iman	WFP
Household interviewer 3	Mawahib Omer	WFP

Function	Name	Affiliation (organization)
Household interviewer 4	Noun Jacob Mohamed	NOCD
Household interviewer 5	Eisa Mohammed Jabir	WFP
Household interviewer 6	Mujadin Yousef	FAO
Anthropometrist 1	Bahja Abduraham	Ministry of Health/MoH
Anthropometrist 2	Adooma Juma	Ministry of Health/MoH
TEAM 4		
Supervisor	Zeneb Habte	WFP
Team Leader	Malony Tong	WFP
Community interviewer	Abdellah Adam	UNICEF
Household interviewer 1	Hamad Ibrahim	SUDO
Household interviewer 2	Magboula Salih	WFP
Household interviewer 3	Ahmed Dawelbeit	WFP
Household interviewer 4	Habeeb Omer Abdu	WFP
Household interviewer 5	Ali Khalafalla	WFP
Household interviewer 6	Hanan Mukhutar Abdalla	WFP
Anthropometrist 1	Hanan Mohammed	Ministry of Health/MoH
Anthropometrist 2	Nour Eldeen Zakaria Ahmed	UNICEF
Observer/Assistant	Intisar Khaleed	Humanitarian Aid Commission (HAC)
DATA ENTRY		
International Coordinator	Louise Agathe Tine	WFP
Data entry supervisor	Fawzia Mohammed Elsharief	Ministry of Health/MoH
Data entry clerk 1	Murtada Ahmed Abdel Gadir	WFP
Data entry clerk 2	Ogail Mohamed Hassan	WFP
Data entry clerk 3	Hiba Abdelroaf El Sheikh	WFP
Data entry clerk 4	Mohamed Abdul Wahab Ahmed	WFP
Data entry clerk 5	Emtinan Hussain Mohammed	Ministry of Health/MoH
Data entry clerk 6	Awatif Daw Elabait	Ministry of Health/MoH

State: West Darfur

Function	Name	Affiliation (organization)
Operational Coordinator	Mariko Kawabata	WFP
Nutrition Coordinator	Sarah King	UNICEF
Logistics Coordinator	Sidahmed Beteik	WFP
TEAM 1		
Supervisor	Sarah King	UNICEF
Team Leader	Abdulrahim Norein	WFP
Community interviewer	Adam Abdelrahman	MoA
Household interviewer 1	Safa Abdalla Yusiff	MoA
Household interviewer 2	Mubarak Abdel Karim	FAR
Household interviewer 3	Rauda Musa Abdalla	CRS
Household interviewer 4	Mustafa Adam Mohamed	MoA
Household interviewer 5	Abdallah Ishag-Adam	MoA
Household interviewer 6	Abdalla Mohamed Yahiya	CRS
Anthropometrist 1	Khalid Ismail Mohamed	MoH
Anthropometrist 2	El Haj El Nur Nurdain	MoA
Anthropometrist 3	Amna Ahmed Mohamed	SC-US
TEAM 2		
Supervisor	Cyridion Ahimana	UNICEF

Function	Name	Affiliation (organization)
Team Leader	Abdulrahaman Mohamed Nour	FAO
Community interviewer	Abdelatif Adam Abdulrahim Deen	MoA
Household interviewer 1	Gaffer Mokhtar Basheryones	MoA
Household interviewer 2	Mohamed Yousif Ismail Yagoub	MoA
Household interviewer 3	Nadia Ibrahim Ahmed	MoA
Household interviewer 4	Osman Ahmed Hussein Solaiman	MoA
Household interviewer 5	Yahya Adam Abdelshafi Abdul Rahim	MoA
Anthropometrist 1	Ahmed Adam Abdallah	MoA
Anthropometrist 2	Arafa Mahomed Salah	MoH
Anthropometrist 3	Joseph Pasquale Leone Sabu	Tearfund
TEAM 3		
Supervisor	Henry Sebiluba	WFP
Team Leader	Meezan Mohamed Osman	WFP
Community interviewer	Ahmed Sabeel Abdalla	SC-US
Household interviewer 1	Kamal Abdel Karim Nahid	MoA
Household interviewer 2	Omer Abdalla Adam	MoA
Household interviewer 3	Mona Yousif Altom	SC-US
Household interviewer 4	Sabil Musa Ibrahim Sabil	MoA
Household interviewer 5	El Sadig Moh Ahmed	MoA
Anthropometrist 1	Howeida Ahmed	MoH
Anthropometrist 2	Sadig Abdul Karim	Concern
Anthropometrist 1	Adam Abdelshcour Abdel Wahab	Concern
TEAM 4		
Team Leader	Tunna William	WFP
Community Interviewer	Elsadig Hammad	HAC
Household interviewer 1	Abdubaker Ali Dafallah Mahmoud	MoA
Household interviewer 2	Abdalla Mohamed Yahiya	CRS
Anthropometrist 1	Imam El Sir	MoH
DATA ENTRY		
International Coordinator	Louise Agathe Tine	WFP
Data entry supervisor	Dr. Durria Mohammed Osman	MoH
Data entry clerk 1	Mohammed Zacharia	MoH
Data entry clerk 2	Mohamed Ibrahim Musa	Ministry of Agriculture
Data entry clerk 3	Yasir El Sayed Ahmed Ali	WFP
Data entry clerk 4	El Dirdiri Hassan Mahmoud	WFP
Data entry clerk 5	Abu El Gasim Ahmed Atta-Al Manan	WFP
Data entry clerk 6	Ahmed Nasereldin	MoH
Data entry clerk 7	Mohamed Elhafiz Yousif	MoH
Data entry clerk 8	Ali Ishag Bushra	MoH
Data entry clerk 9	Barakat Mohammed	MoH

Annex 3: Household Interview Questionnaire

COMPLETE BEFORE THE INTERVIEW		COMPLETE UPON DATA ENTRY
Date : التاريخ	|__|__| / |__|__| / **2006** الشهر اليوم *Month Day*	**Questionnaire number:** رقم الاستبيان |__|__|__|__|__|
Interviewer ID : رقم العداد	|__|__|__|	
Interviewer Name : أسم العداد	|__|__|__|__|__|__|__|__|__|__|	
Supervisor ID: رقم المشرف	|__|__|__|	***Note*** Use the **same Questionnaire Number** in the Mother and Child Sections
Location ID : رقم المكان	***State:*** |___| **1** = North **2** = South **3** = West الولاية 1 شمال 2 جنوب 3 غرب ***Cluster*:** |____|____| العينة ***Household:*** |____|____| الاسرة ***Village:*** |_____| القرية	

Consent: We are conducting a survey on the nutrition and food security of your family. I would like to ask you some questions about your family and we will also weigh and measure your children who are younger than 5 years of age. The survey usually takes about one hour to complete. Any information that you provide will be kept strictly confidential and will not be shown to other people. This is voluntary and you can choose not to answer any or all of the questions if you want; however we hope that you will participate since your views are important. Do you have any questions? May I begin now?

YES_____ **NO_____**

SECTION 1A – DEMOGRAPHICS القسم أ 1 - الخصائص السكاني

A household is defined as a group of people who routinely eat out of same pot and live on the same compound (or physical location). It is possible that they may live in different structures. نعني بالاسرة ك الأ فراد الذين ينامون تحت سقف واحد ويأكلون من برمة واحدة ويعيشون فينفس الحوش وقد يعيشون في أكثر من غرفة واحدة

1.1	What is the sex of the household head? **ما نوع جنس رب الاسرة؟**	1	Male **ذكر**	2	Female **أنثي**
1.2	Has the head of the household been living in the household during the past 6 months? **هل رب الاسرة يسكن مع الاسرة خلال الستة أشهر الماضية؟**	1= Yes → ***skip to 1.4***		0= No لا	
1.3	If No, is the head of the household sending money or supporting the family ? **إذا لا ، هل رب الاسرة يرسل مصاريف أو دعم للاسرة؟**	1= Yes نعم		0= No لا	
1.4	What is the marital status of the household head? **الحالة الاجتماعية لرب الاسرة**	**1**	Married polygamous **متزوج بعدة زوجات**		
		2	Married monogamous **متزوج بزوجة واحدة**		

	CIRCLE ONLY ONE OPTION **ضع دائرة حول إجابة واحدة**	**3**	Not married (*divorced, living apart not divorced, widow or widower, never married*) **غير متزوج (مطلق، عايشة على حدة ليستْ مطلقة،أرملة أو أرمل، لم يُتَزَوَجُ قط**
1.5	What is the age of the household head (*in years*)? **ما هوعمر رب الاسرة (بالسنوات) ؟**	**(years)** |__|__|	
1.6	Can the head of household read and write? (in any language) **هل رب الاسرة يستطيع القراءة والكتابة ؟ (بأي لغة)**	1= Yes نعم	0= No لا
1.7	Since last rainy season, did some members of the household move? **منذ خلال موسم الخريف الماضي هل هنالك أي شخص من الاسرة غادر أو تحرك لمكان أخر**	1= Yes نعم	0= No → ***Skip to 1.12*** إذا لا حول إلي 1.12

Why did they move? لماذا غادروا ***DO NOT READ THE OPTIONS, LEAVE THE RESPONDENT ANSWER SPONTANEOUSLY*** **لا تقرأ الخيارات بل أترك المستجوب يجاوب** ***TICK THE BOX IF THE ANSWER IS MENTIONED*** ضع علامة ( ) في الصندوق إذا ذكرت الاجابة		**Tick if mentioned** ضع علامة √ علي الاجابة التي ذكرت
1.8	To look for work or to cultivate own lands **للبحث عن العمل أو لزراعة اراضيه**	|___|
1.9	To take animals for grazing or marketing animals **لأخذ ماشيتة للمرعي أو للسوق**	|___|
1.10	Because of insecurity **لأسباب أمنية**	|___|
1.11	For other personal reasons (health, education, etc.) **لأسباب شخصية أخري (صحة ، تعليم ، .....الخ)**	|___|

Why nobody moved for any reason (either for trade or employment)? لماذا لم يقادر أحد بغرض التجارة أو للعمل ***DO NOT READ THE OPTIONS, LEAVE THE RESPONDENT ANSWER SPONTANEOUSLY*** **لا تقرأ الخيارات بل أترك المستجوب يجاوب** ***TICK THE BOX IF THE ANSWER IS MENTIONED*** ضع علامة ( ) في الصندوق إذا ذكرت الاجابة		ضع علامة للإجابة التي ذكرت **Tick if mentioned**
1.12	That is normal (usually they do not migrate or move) اعتيادي (عادة لا يهاجرون أو يغادرون)	|___|
1.13	Because of lack of employment opportunities بسبب قلة فرص العمل	|___|
1.14	Because of insecurity (hampering access to land, grazing routes or markets) بسبب انعدام الأمن (صعوبة الوصول للأراضي الزراعية, مسارات الرعي أو الأسواق)	|___|

COMPLETE BEFORE THE INTERVIEW

Questionnaire number: \|___\|___\|___\|___\|
أستبيان رقم

SECTION 1B – MORTALITY الوفيات - القسم 1ب

AT THE LAST EID AL ADHA, HOW MANY PEOPLE WERE LIVING IN THE HOUSEHOLD?
في يوم عيد الأضحى الماضي: كم عدد الأشخاص المقيمين بالمنزل

Person No الشخص رقم.	**Age** العمر *(years* بالسنة*)* *Write 0 for babies below 1 year old* أكتب صفر في حال الأطفال أقل من سنة	**Sex** الجنس *(circle* ضع *دائرة)*	**-Is he or she alive today? هل هى أو هو على قيد الحياة؟ -If alive, is he or she currently living in the HH? إذا كان حيا هل يقيم حاليا بالمنزل؟ ,** **1=** Alive (living in the household) **1= حي (يقيم حاليا بالمنزل)** **2=** Alive (living elsewhere) **2= حي (يقيم حاليا بمكان آخر)** **3=** Died **3= متوفي.** **4=** Missing/ unknown **4= مفقود \ مجهول المكان.**	**If he or she is living elsewhere or dead, what month did they leave/die? إذا كان هو أو هى متوفيا أو يعيش في مكان آخر, منذ متى غادرأو توفي؟** (أكتب بالإنجليزية *write in English*)	**If dead, what was the main cause of death? اذا كان متوفيا ما سبب الوفاة الرئيسي** *(Enter code from table below)* أدخل رقما من الجدول أدناه
1 HH head رب الأسرة		**M / F أنثى/ ذكر**	**1 2 3 4**		|___|
2		**M / F أنثى/ ذكر**	**1 2 3 4**		|___|
3		**M / F أنثى/ ذكر**	**1 2 3 4**		|___|
4		**M / F أنثى/ ذكر**	**1 2 3 4**		|___|
5		**M / F أنثى/ ذكر**	**1 2 3 4**		|___|
6		**M / F أنثى/ ذكر**	**1 2 3 4**		|___|
7		**M / F أنثى/ ذكر**	**1 2 3 4**		|___|
8		**M / F أنثى/ ذكر**	**1 2 3 4**		|___|
9		**M / F أنثى/ ذكر**	**1 2 3 4**		|___|
Persons who have arrived or were born since last Eid Al Adha الأشخاص الذين ولدوا أو قدموا منذ عيد الأضحى حتى الآن	**Age (years) بالسنه** *Write 0 for babies below 1 year old* أكتب صفر في حال الأطفال أقل من سنة	**Sex**	**-Is he or she alive today? هل هو أو هى على قيد الحياة؟ -If alive, is he or she currently living in the HH?- إذا كان حيا , هل يقيم حاليا بالمنزل؟** **1=** Alive (living in the household) **1= حي (يقيم حاليا بالمنزل)** **2=** Alive (living elsewhere) **2= حي (يقيم حاليا بمكان آخر)** **3=** Died **3= متوفي.** **4=** Missing/ unknown	**If he or she is living elsewhere or dead, what month did they leave/die? إذا كان متوفيا أو يعيش في مكان آخر, منذ متى غادر أو توفي؟** (أكتب بالإنجليزية *write in English*)	**If dead, what was the main cause of death? اذا كان متوفيا ما هو سبب الوفاة الرئيسي** *(Enter code from table below)* أدخل رقما من الجدول أدناه

			4= مفقود \ مجهول المكان.						
10		M / F أنثى/ ذكر	1	2	3	4		|___|
11		M / F أنثى/ ذكر	1	2	3	4		|___|
12		M / F ذكر \ أنثى	1	2	3	4		|___|
13		M / F ذكر \ أنثى	1	2	3	4		|___|

Codes for cause of death أسباب الوفاة	***Definitions*** التعريفات
1 = Watery diarrhea: **1= إسهال مائي**	Any episode of 3 or more watery stools per day أكثر من ثلاث مرات إسهال **مائي** في اليوم
2= Bloody diarrhea: **2= إسهال مصحوب بدم.**	Any episode of 3 or more watery stools per day with blood أكثر من ثلاث مرات إسهال **مائي** في اليوم مصحوب بدم
3= Fever: **3=حمى**	High temperature with shivering إرتفاع في درجة الحرارة ورجفة
4= Measles: **4= حصبة**	Any episode of fever accompanied by skin eruption/rash accompanied by runny nose and/or cough and/or inflamed eyes إرتفاع في درجة الحرارة مصحوب بحكة\ إحمرار في الجلد, و مخاط \ كحة\ عيون محمرة ومنتفخة
5= Difficulty breathing: **5= صعوبة في التنفس**	Any episode with difficulty breathing or severe persistent cough أي صعوبة في التنفس أو كحة ثقيلة
6= Violence/conflict-related: **6= إعتداء\ مرتبط بالأحداث الحالية**	Any death as a direct result of intentional violence or conflict أي وفاة كنتيجة مباشرة لإعتداء أو صراع
7= Accident: **7= حادث**	Any death as a result of an accident أي وفاة كنتيجة مباشرة لحادث
8= Other cause: **8= أسباب أخرى**	Any other cause than the ones above, etc. أي سبب غير مذكور اعلاه

SECTION 2 – HOUSEHOLD CIRCUMSTANCES

2.1	What is the status of the household? ما هي حالة الأسرة ***CIRCLE ONLY ONE OPTION*** ضع دائرة لخيار واحد فقط	**1**	IDP or Refugees in camp نازحين او لاجئين في معسكر
		2	IDP outside camps نازحين خارج المعسكرات
		3	Resident or returnees مقيمين او عائدين
		4	Practicing pastoralism (nomad) يمارسون الرعي (رحل)
2.2	How long have you been here? منذ متي تعيش هنا ***CIRCLE ONLY ONE OPTION*** ضع دائرة لخيار واحد فقط	**1**	Has always been living there (never left, normal migratory patterns) يعيش في نفس المكان بصفة دائمة لم يغادر نمط تحرك عادي)
		2	Has come before the conflict started, more than 3 years ago حضر قبل بدء الصراع (أكثر من ثلاثة سنوات)

		3	Has come between 1 and 3 years ago حضر بين سنة إلي ثلاثة سنوات
		4	Has come less than 1 year ago حضر قبل أقل من سنة
2.3	What is the main source of drinking water for your household **at the moment?** حاليا ما هو المصدر الرئيسي لمياه الشرب لأسرتك ***CIRCLE ONLY ONE OPTION*** ضع دائرة لخيار واحد فقط	**1**	**Safe source** *(household connection, public standpipe, borehole, protected dug well, protected spring, UN/NGO tanker truck water)* مصدر مياه مأمون (توصيلات داخل المنزل ، مأسورة عامة ، بئر مع مضخة يدوية ، بئر إرتوازية محمية ، حفير محمي ، عربة تانكر مياه تابعة لمنظمة عالمية او طوعية)
		2	**Unsafe source** *(rainwater collection, unprotected spring, unprotected well, rivers or ponds, vendor-provider water)* مياه غير مأمونة (مياه أمطار، حفير غير محمي ، بئر غير محمية، خور، وادي)
2.4	Does your household treat its drinking water? هل تعالج الاسرة مياه الشرب	1= Yes نعم	2= No → ***skip to No.2.6*** لا إنتقل إلي السؤال 2.6
2.5	How do you treat the drinking water ? كيف تعالج مياه الشرب	1	By household chlorination إضافة الكلور بواسطة الاسرة
		2	By boiling بالغلي
2.6	How long does it usually take you to collect water for the household? كم من الوقت تستغرق عادة لجلب المياه للاسرة ***Record total time to go, collect and come back*** سجل جملة الوقت ذهاباً وإياباً *Write "0.5" if it takes half an hour* **أكتب 0.5 إذا تستغرق نصف ساعة** *Write "0" if it takes less than half an hour or if the water source is located close to the house* **أكتب 0 إذا تستغرق أقل من نصف ساعةأو مصدر المياه قريب جداً**	بالساعات (**in hours**) |___|___|.|___|___|___|	

What are the main constraints with water? ما هي المشاكل الرئيسية لمياه الشرب
DO NOT READ THE OPTIONS, LEAVE THE RESPONDENT ANSWER SPONTANEOUSLY
لا تقرأ الخيارات ، أترك المستجوب يجاوب بنفسه
TICK THE BOX IF THE ANSWER IS MENTIONED ضع علامة ( ) في الصندوق المقابل للإجابة التي ذكرها المستجوب

		Tick if mentioned
2.7	Dangerous, insecurity خطر / غير أمن	|___|
2.8	Insufficient amounts of water كمية المياه غير كافية	|___|
2.9	Low quality of the water مياه ذات نوعية متدنية	|___|
2.10	Long distance and time to collect water (queuing etc.) مصدر المياه بعيد وتستغرق زمناً	|___|
2.11	High cost of water تكلفة المياه عالية	|___|
2.12	Lack of manpower in the household to collect the water الاسرة ليس لديها من له القدرة لجلب المياه	|___|

2.13	Who, in the household, is mainly responsible to get or collect the water most of the time? من بالاسرة تقع عليه مسئولية جلب المياه في أغلب الاحيان ؟ ***CIRCLE ONLY ONE OPTION*** ضع دائرة لخيار واحد فقط	**1**	Adult men and boys الرجال والاولاد
		2	Adult women النساء

		3	Girls البنات
		4	The elderly only المسنين فقط
		5	Everybody or in group (whoever is available) أي من أفراد الأسرة (من هو موجود)

2.14	What is your main source of firewood? ما هو المصدر الرئيسي لحطب الوقود ***CIRCLE ONLY ONE OPTION*** ضع دائرة علي خيار واحد فقط	**1**	Collection جمع
		2	Purchase → ***Skip to 2.22*** شراء إنتقل إلي
2.15	If you collect firewood, how long does it take? إذا كنت تجمع حطب الوقود ، كم من الزمن يستغرق *Record time to go, collect and come back* أكتب الزمن ذهاباً إياباً *Write "0.5" if it takes half an hour* **أكتب 0.5 اذا كان يستغرق نصف ساعة** *Write "0" if it takes less than half an hour or if the firewood source is located closer to the household* **أكتب 0 إذا كان يستغرق أقل من نصف ساعة أو مصدر الحطب قريب**	بالساعات (**in hours**) |___|___|.|___|___|	

What are the main constraints with collecting firewood? ما هي الصعوبات التي تواجهك للحصول علي حطب الوقود

DO NOT READ THE OPTIONS, LEAVE THE RESPONDENT ANSWER SPONTANEOUSLY لا تقرأ الخيارات ، أترك المستجوب يجاوب بنفسه

TICK THE BOX IF THE ANSWER IS MENTIONED ضع علامة (√) في الصندوق المقابل للإجابة التي ذكرها المستجوب

		Tick if mentioned
2.16	Dangerous, insecurity خطر / غير أمن	|___|
2.17	Fees/taxes to be able to collect the firewood غير قادر علي دفع رسوم جمع حطب الوقود	|___|
2.18	Small quantities available الكميات المتاحة قليلة	|___|
2.19	Long distance and time to collect firewood مصدر حطب الوقود بعيداً ويستغرق وقتاً	|___|
2.20	Lack of manpower in the household to collect the firewood الاسرة ليس بها من له المقدرة علي جلب حطب الوقود	|___|

2.21	Who, in the household, is mainly responsible to collect firewood most of the time? من بالاسرة يقع عليه المسئولية الرئيسية لجلب حطب الوقود معظم الاوقات ***CIRCLE ONLY ONE OPTION*** ضع دائرة علي خيار واحد فقط	**1**	Adult men and boys الرجال والأولاد
		2	Adult women النساء
		3	Girls البنات
		4	The elderly only كبار السن فقط
		5	Everybody or in group (whoever is available) الكل أو في مجموعات (على نحو مت هز متاح)

2.22	What kind of toilet facility does your household use? ما هو نوع المرحاض الذي تستخدمة في منزلك ***CIRCLE ONLY ONE OPTION*** ضع دائرة حول خيار واحد فقط	**1**	Traditional pit latrine/ without slab/ open pit مرحاض بلدي/ بدون إسلاب / حفرة مفتوح
		2	Improved latrine with cement slab مرحاض محسن مع إسلاب من الاسمنت
		3	Flush latrine مرحاض بجرار مياه

		4	Open air (bush, stream)/corner place in the compound → ***skip to Section 3*** خلاء (غابة / خور) إنتقل إلي القسم 3
2.23	If using latrines, how many households share the latrine? عدد الاسر التي تشارك في إستخدام المرحاض ***CIRCLE ONLY ONE OPTION*** ضع دائرة حول خيار واحد فقط	**1**	One household only أسرة واحدة
		2	Two to 4 households 2- 4 أسر
		3	Five or more households 5 أسر أو أكثر

SECTION 3 – HOUSEHOLD ASSETS AND ANIMALS

How many of the following items does your household currently own? ما هي الممتلكات التي تمتلكها الاسرة بالبيت حالياً ***Write "0" if not owned*** أكتب 0 أذا لم يمتلكوا ***Read out each of the items below:***		**Indicate the quantity of each item which** is owned:
3.1	Hoe, axe طورية / فاس	|___|
3.2	Plough محراث	|___|
3.3	Donkey \horse cart كارو بحمار/حصان	|___|
3.4	Manual Grinding mill طاحونة يدوية	|___|
3.5	Bicycle دراجة	|___|
3.6	Radio راديو	|___|

What are your main constraints *currently* for animal raising? **ما هي المشاكل الاساسية التي تواجهك حالياً في تربية الحيوانات**

DO NOT READ THE OPTIONS, LEAVE THE RESPONDENT ANSWER SPONTANEOUSLY **لا تقرأ الخيارات بل أترك المستجوب يجاوب**
TICK THE BOX IF THE ANSWER IS MENTIONED ضع علامة (√) في الصندوق إذا ذكرت الاجابة

		Tick if mentioned
3.7	Lack of money to buy or to keep animals **عدم توفر المال لشراء أو الاحتفاظ بالحيوانات**	|___|
3.8	Lack of animal fodder, animal feed or pasture **عدم توفر المراعي او الاعلاف**	|___|
3.9	Lack of water for animals **عدم توفر مياه الشرب للحيوان**	|___|
3.10	Lack of shelter/space to keep the animals **عدم توفر المأوي / مكان لحفظ الحيوانات**	|___|
3.11	Lack of access to veterinary services (they do not exist), or animal diseases **عدم توفر الخدمات البيطريةاو وجود أمراض**	|___|
3.12	Lack of economic access to veterinary services (too expensive) **عدم توفرالقدرة المالية للحصول علي الخدمات البيطرية (غالية جداً)**	|___|

3.13	Lack of manpower to look after the animals **عدم وجود شخص له المقدرة علي رعاية الحيوانات**	|___|
3.14	Lack of access to markets for animals **عدم وجود سوق للماشية**	|___|
3.15	Theft, looting **سرقة / نهب**	|___|
3.16	Insecurity (access to pastures, to migration routes) **(عدم الامن (للوصول للمرعي ، مسارات الماشية**	|___|

How many of the following animals does your family **currently own**? عدد الحيوانات التي تمتلكها الاسرة حالياً
Write "0" if not owned أكتب 0 إذا لم تمتلك

3.17 Cattle أبقار	**3.18** Donkeys حمير	**3.19** Camels جمال	**3.20** Goats ماعز	**3.21** Sheep ضأن	**3.22** Poultry دواجن	**3.23** Horses خيل
|___|___|___|	|___|___|	|___|___|___|	|___|___|___|	|___|___|___|	|___|___|___|	|___|___|

SECTION 4 – INCOME AND LIVELIHOOD SOURCES

Please complete the table one activity at the time, using the codes below, for the YEAR *الرجاء ملئ الجدول لكل نشاط علي حدة متستخدما الرموز أدناه للسنة*		**a.** What are your household's main income sources throughout the year? ما هي مصادر الدخل الرئيسية للاسرة طيلة العام *Use activity codes below, up to 3 activities* أستخدم ارقام الرموز الموضح ادناه لثلاثة أنشطة	**b**. What is the relative contribution of each activity to the total income? بالتقريب كم نسبة مساهمة كل نشاط من الدخل الكلي *Use proportional piling or 'divide the pie' method* استخدم طريقة التمثيل النسبي
4.1	**Main** رئيسي	|___|___|	|___|___|___| %
4.2	**Second** ثاني	|___|___|	|___|___| %
4.3	**Third** ثالث	|___|___|	|___|___| %
		Total:	**100%**

Income activity codes الرموز لأنشطة مصادر الدخل
01= sale of cereals (sorghum, millet) بيع الحبوب الغذائية (زرة / دخن)
02= sale of other crops and produce (vegetables, groundnuts, tobacco, watermelon etc.) بيع محاصيل ومنتجات اخري (خضروات ، فول سوداني تمباك ، بطيخ)
03= sale of livestock and animal produce بيع الماشية والمنتوجات الحيوانية)
04= waged labour (casual labour, skilled labour, salaried work, provision of services) عمالة بأجر (عمالة يومية ، عمالة مهرة ، ، عمالة بمرتب ، تقديم خدمات)
05= sales of handicraft بيع منتوجات يدوية
06= sales of firewood or grass بيع حطب وقود وقش
07= petty trade, small business تجارة هامشية ، اعمال صغيرة
08= remittances حوالات
09= begging تسول
10= gifts from family/relatives مساعدة من اسرة / اقارب
11= sale of received food aid (from NGOs, WFP, ICRC) بيع مواد إغاثة

What are the main constraints *currently* for your sources of income? ما هي المصاعب التي تحد من مصادر دخلك حاليا ؟

DO NOT READ THE OPTIONS, LEAVE THE RESPONDENT ANSWER SPONTANEOUSLY **لا تقرأ الخيارات بل أترك المستجوب يجاوب**

TICK THE BOX IF THE ANSWER IS MENTIONED ضع علامة (√) في الصندوق إذا ذكرت الاجابة

	Tick if mentioned

4.4	Insecurity to move (to fields, to migration routes for livestock, to markets for trade, to remittance flows) عدم الامن يعوق الحركة(يسبب عدم الوصول ألي الاسواق ، الحقول ، المسارات وطرق الحيوان ، وإنسياب الاعانات)	|___|
4.5	Lack of manpower in the household عدم توفر قدرة للعمل داخل الاسرة	|___|
4.6	Closure of markets قفل الاسواق	|___|
4.7	Low prices or demand of agricultural, animal or other produce sold by the household تدني اسعار المنتجات الزراعية والحيوانية المباعة	|___|
4.8	Limited employment/labour opportunities/lack of jobs محدودية فرص العمالة / التوظيف	|___|
4.9	Low agricultural production تدني الانتاج الزراعي	|___|
4.10	Low animal production تدني في الانتاج الحيواني	|___|
4.11	Sickness or health problems الامراض والمشاكل الصحية	|___|

SECTION 5 – CROP PRODUCTION

5.1	Do you cultivate usually? هل تزرع عادة	1= Yes	0= No
5.2	Do you have a *jubraka*? هل لديك جبراكة	1= Yes	0= No
5.3	How many *mukhamas* did you cultivate this year? كم مخمس زرعت هذا العام **Do not divide the land if there are several wives, indicate the TOTAL land cultivated.** **اذا تعددت الزوجات لا تقسم التراضى الزراعية فقط اكتب جملة الأرض المزروعة** ***If the household has not cultivated this year, write 0 and skip to 5.10*** اذا لم تزرع الاسرة في هذا العام ، اكتب 0 انتقل الي 5.10	|___|___|.|___| → ***If 0, skip to 5.10***	**إذا 0 إنتقل إلي 5.10**
5.4	How many *mukhamas* did you plant with sorghum and millet? (***make the sum of the mukhamas for the 2 crops)*** كم مخمس زرعت بالدخن و الذرة	|___|___|.|___| → ***If 0, skip to 5.6***	
5.5	How do you expect the yield of cereals to be this year compared to last year? ***CIRCLE ONE OPTION ONLY***	**1** Worse than last year **اسوأ من السنة الماضية** **2** Same as last year **نفس السنة الماضية** **3** Better than last year **أحسن من السنة الماضية**	
5.6	Did you plant any tobacco? هل زرعت أي تمباك	1= Yes نعم	0= No **لا**
5.7	Did you plant any groundnuts? هل زرعت أي فول سوداني	1= Yes نعم	0= No **لا**
5.8	Did you plant any watermelon ? هل زرعت بطيخ	1= Yes نعم	0= No **لا**
5.9	Did you cultivate vegetables? هل زرعت خضروات	1= Yes نعم	0= No **لا**

What are your main constraints *currently* with crop production?ما هي الصعوبات التي تواجهك في زراعة المحاصيل في هذا الموسم

DO NOT READ THE OPTIONS, LEAVE THE RESPONDENT ANSWER SPONTANEOUSLY **لا تقرأ الخيارات بل أترك المستجوب يجاوب**
TICK THE BOX IF THE ANSWER IS MENTIONED ضع علامة (√) في الصندوق إذا ذكرت الاجابة

		Tick if mentioned
5.10	Shortage of seeds (difficulties to access traditional seeds) نقص في التقاوي (صعوبة الحصول للتقاوي البلدية)	|___|
5.11	Shortage of improved seeds (no problems to access traditional seeds) نقص التقاوي المحسنة (ليس هنالك اي صعوبة للحصول علي التقاوي التقليدية)	|___|
5.12	Poor soil fertility ضعف في خصوبة التربة	|___|
5.13	Pests, weeds, crop diseases الافات , الحشائش, الأمراض	|___|
5.14	Water shortage (poor rains, lack of irrigation) نقص في المياه (قلة الامطار / نقص في الري)	|___|
5.15	Lack of animal for traction عدم توفر حيوانات لجر المعدات الزراعة	|___|
5.16	Lack of plough عدم توفر المحاريث	|___|
5.17	Lack of agricultural tools such hoes, axes etc. عدم توفر معدات زراعية يدوية مثل الطورية ، الفاس	|___|
5.18	Shortage of labour نقص في العمالة	|___|
5.19	Insecurity (to go to the fields, displacement or land occupation) عدم الامن (للذهاب للمزارع / نزوح او احتلال الأراضي)	|___|

SECTION 6 – EXPENDITURES

Did you spend money on the following foods during **last week** for your family consumption?

هَلْ صَرفتَ مالاً على الأطعمةِ التاليةِ خلال الأسبوع الماضي لأسرتك؟

If not bought: write 0 - If don't know: write 99999 and go to next food item – Round up the figures (no comma)
إذا لم تصرف : أكتب 0 - إذا لم تعرف : أكتب 99999 وإنتقل لبند الطعام التالي

		In POUNDS spent **last week** بالجنيهات كم صرف الاسبوع الماضي
6.1	Cereals (sorghum, millet, maize, wheat) الحبوب الغذائية (ذرة / دخن / ذرة شامية / قمح)	|___|___|___|___|___|
6.2	Cooking oil زيت طعام	|___|___|___|___|___|
6.3	Meat/eggs/fish لحم / بيض / سمك	|___|___|___|___|___|
6.4	Groundnuts/beans/pulses فول سوداني / لوبيا / بقوليات	|___|___|___|___|___|
6.5	Sugar سكر	|___|___|___|___|___|
6.6	Milk/yoghurt/cheese لبن / زبادي / جبنة	|___|___|___|___|___|
6.7	Dry okra, dry tomatoes, dry onions ويكة / صلصي ناشف / بصل ناشف	|___|___|___|___|___|
6.8	Other foods (fresh vegetables, fruits, coffee, tea, pasta etc.) مواد غذائية اخري (خضروات طازجة / فواكه / قهوة / شاي / باسطة ..... الخ)	|___|___|___|___|___|

What is the estimated share of the total **MONTHLY expenditures** for the following items:

ما هي المساهمة التقديرية من المصروفات الشهرية للمواد التالية

Use proportional piling technique/divide the pie أستخدم طريقة البايلنق

		% of total expenditures of LAST MONTH نسبة جملة المصروفات خلال الشهر الماضي
6.9	Food expenditures المصروفات للأطعمة	|___|___|___| %
6.10	Health expenditures المصروفات للصحة	|___|___| %
6.11	All the rest of expenditures (education, milling, agricultural inputs, ceremonies, transportation, clothing, etc.) متبقي المصروفات في (التعليم /الطحين / مدخلات زراعية /مناسبات / ترحيل / ملابس ... الخ)	|___|___| %
	Total: الجملة	**100%**

6.12	Do you currently have debts *to relatives or to neighbours* that you have to pay back? هل لديك حالياً أي ديون نقدية لأقارب أو جيران واجبة السداد	1= Yes	0= No
6.13	Do you currently have debts *to traders, land owners, or others*, that you have to pay back? هل لديك حالياً أي ديون نقدية لتجار أو ملاك أراضي أو آخرين واجبة السداد	1= Yes	0= No

If you have debts or credit, what was the main reason for you to borrow? (what was the main use of the money) ?
إذا كان عليك ديون ما هو السبب الرئيسي الذي أجبرك علي الاستدانة (ما هو الغرض الرئيسي الذي إستخدم فية المال المستدان)
If no current debts or credit: → skip to section 7 إذا لم تستدين إنتقل الي القسم 7

DO NOT READ THE OPTIONS, LEAVE THE RESPONDENT ANSWER SPONTANEOUSLY **لا تقرأ الخيارات بل أترك المستجوب يجاوب**
TICK THE BOX IF THE ANSWER IS MENTIONED ضع علامة ((√) في الصندوق إذا ذكرت الاجابة

		Tick if mentioned
6.14	To purchase food لإشتري طعام	|___|
6.15	To purchase productive inputs(لأشتري مدخلات إنتاج (الزراعي / الحيواني / إنتاج آخري) (for agriculture, animals, other production)	|___|
6.16	To pay for medical services لأشتري أدوية	|___|
6.17	To pay for education لدفع رسوم التعليم	|___|
6.18	To pay for exceptional events/ceremonies لأدفع لاغراض خاصة / مناسبات	|___|
6.19	To pay for transportation لأدفع للترحيل	|___|
6.20	To pay for fees, taxes and other payments requested by authorities or groups لأدفع للضرائب او دفعيات اخري تطلبها السلطات او المجموعات	|___|

SECTION 7 – FOOD SOURCES AND CONSUMPTION

How many days in the **past WEEK** your household has eaten the following food items, and what was the main source of each food item consumed? *كم يوم من الاسبوع الماضي أكلت أسرتك أحد الاطعمة التي سانكرها لك وما هو المصدر الرئيسي لكل نوع من الطعام؟*

Write 0 for foods not eaten over the last 7 days *أكتب 0 في الصندوق المقابل للطعام الذي لم يتم أكله خلال ال7 أيام الماضية*

Use codes below for the food sources - If there are several sources for a same food, indicate the main source
أستخدم الرموز أدناه لمصادر الطعام ، إذا كان المصادر متعددة لنفس الطعام أذكر المصدر الرئيسي

	Food item *نوع الطعام*	a. Number of days when the food was eaten last week (0 to 7) *عدد الايام التي أكل فيها نوع الطعام الاسبوع الماضي*	b. Main food source *المصدر الاساسي للطعام*		Food item *نوع الطعام*	a. Number of days when the food was eaten last week (0 to 7) *عدد الايام التي أكل فيها نوع الطعام الاسبوع الماضي*	b. Main food source *المصدر الاساسي للطعام*
7.1	Sorghum ذرة	|___|	|___|	**7.8**	Fresh vegetables *خضروات طازجة*	|___|	|___|
7.2	Millet دخن	|___|	|___|	**7.9**	Fruits *فاكية*	|___|	|___|
7.3	Wheat/ bread قمح / رغيف	|___|	|___|	**7.10**	Milk, yoghurt, cheese, etc لبن / زبادي / جبنة ..الخ	|___|	|___|
7.4	Corn Soya Blend (CSB) خلطة	|___|	|___|	**7.11**	Sugar سكر	|___|	|___|
7.5	Groundnuts, legumes فول سوداني / بقوليات	|___|	|___|	**7.12**	Eggs *بيض*	|___|	|___|
7.6	Meat/chicken, bush meat, etc. لحم / دجاج / لحم صيد..الخ	|___|	|___|	**7.13**	Dry okra, tomatoes or onions ويكة / صلصة ناشف / بصل ناشف	|___|	|___|
7.7	Cooking oil/fats زيت طعام / دهون	|___|	|___|	**7.14**	Wild foods (including leaves) غذاء بري (يشمل اوراق النباتات	|___|	|___|

Food source codes

1 = Own production (crops, animals) (من إنتاجة الشخصي (محاصيل / ماشية
2 = Purchase on market, shop etc. شراء من السوق / دكان ... الخ
3= Hunting, fishing, gathering صيد / صيد سمك / جمع
4 = Received in-kind against labour or against other items أجر عيني نظير عمل / أو أي بند أخر
5 = Borrowed إستلاف
6 = Gift of food from family/relatives هدية في شكل طعام من العائلة أو الأقارب
7= Food aid (NGOs, WFP) (إغاثة (منظمات / برنامج الغذاء العالمي

SECTION 8 – COPING STRATEGIES

8.1	Did you experience food shortages during the past month? هل واجهت الاسرة نقص في الطعام خلال الشهر الماضي	1= Yes نعم	0= No → ***skip to section 9*** **لا إنتقل لي القسم 9**

If yes, what were the three main actions you took to try to cover these shortages? إذا كانت االاجابة بنعم ما هي الثلاثة معالجات الرئيسية التي إتخذتها الاسرة لتلافي هذا النقص

Ask what was the FIRST action taken, then ask what else was done أسأل عن أول معالجة إتخذتها الاسرة ، ثم ماذا فعلت بعد ذلك

LEAVE BLANK IF THERE WERE NO 2nd OR 3rd ACTIONS أترك المكان خالي إذالم تكن هنالك معالجة ثانية وثالثة

DO NOT READ THE OPTIONS, LEAVE THE RESPONDENT ANSWER SPONTANEOUSLY **لا تقرأ الخيارات بل أترك المستجوب يجاوب**

	Codes: الرموز	Write the code corresponding to each of the 3 actions taken: أكتب الرمز المقابل لكل من الثلاثة معالجات الرئيسية	
Eat less quantities, less preferred food, or less meals تاكل كميات أقل / وجبات أقل / أطعمة غير محببة	**1**	|_____| 1st action المعالجة الاولي	**8.2**
Go on entire days without eating نبقي لأيام كاملة من دون أكل	**2**	|_____| 2nd action المعالجة الثانية	**8.3**

Get food on credit from traders, borrow or ask for food as gift (begging) نشتري أكل بالدين من التجار / نستلف / نطلب أكل كهدية (تسول)	**3**	3rd action المعالجة الثالثة |_____|	**8.4**
Increase collection of wild food, or collect unusual food يزيد في جمع الطعام البري أو يجمع أطعمة غير متعود عليها	**4**	***Write "0" if no 2nd action or no 3rd action was taken*** أكتب صفر إذا لم يوجد الخيار الثاني أو الثالث	
Consume immature crops يستهلك محاصيل لم تصل طور النضج	**5**		
Distress sale or slaughter of animals بيع او يذبح الحيوانات إضطراريا	**6**		
Sell productive assets such as agricultural tools, bicycle etc. يبيع وسائل انتاج كالمعدات اليدوية الزراعية _ دراجة ....الخ	**7**		
Excess sale of valuables such as jewelry بيع أشياء قيمة (بصورة متزايدة) كالمصوغات	**8**		
Excess out-migration for work هجرة متزايدة من أجل العمل	**9**		
Take children out of school يخرج الاطفال من المدرسة	**10**		
Engage in illegal activities (theft/banditry, prostitution) يعمل في انشطة غير شرعية (سرق / نهب / دعارة)	**11**		

SECTION 9 – FOOD AID AND OTHER HUMANITARIAN ASSISTANCE إغاثة وإعانات إنسانية أخري

9.1	Have you received food aid during any of the last 8 months (since last Eid)? هل صرفت أي إغاثة خلال الثمانية اشهر الماضية (منذ عيدالأضحى الماضي)	1= Yes نعم	0= No → ***Skip to 9.24*** 0 = لا اتحول إلي 9.24

If yes, ask for each month one by one إذاالاجابة بنعم ، اسال عن كل شهر علي واحد تلو الاخر

TICK THE BOX FOR EACH MONTH RECEIVED أشر إلي الصندوق لكل شهر تم فيه الصرف ***(leave blank if not received that month)***

	January يناير	**February** فبراير	**March** مارس	**April** أبريل	**May** مايو	**June** يونيو	**July** يوليو	**August** أغسطس
9.2	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|

If you received food aid in July and/or August, indicate each type of food items received:
إذا صرفت إغاثة في يوليو و أو أغسطس وضح أي نوع من الطعام إستلمتة

→ ***If no food aid was received in July or in August, skip to 9.9***
إذالم تستلم الاغاثة في يوليو أو أغسطس . أتحول إلي 9.9

ASK FOR EACH OF THE FOOD LISTED BELOW: إسألْ عن كُلّ منْ الغذاء المدرجَ تحت:
TICK THE BOX IF THE FOOD HAS BEEN RECEIVED ضع علامة (√) علي الصندوق المقابل لنوع الطعام المستلم

		Tick if received in July or in August ضع علامة إذا صرف إغاثة في يوليو أو أغسطس
9.3	Cereals حبوب غذائية	|___|
9.4	Pulses بقوليات	|___|
9.5	Vegetable oil زيت طعام	|___|
9.6	CSB (corn-soya blend) خلطة	|___|

9.7	Sugar سكر	|___|
9.8	Salt **ملح**	|___|

9.9	Did you trade or sell any of the foods that you received as food aid? هَلْ تاجرتَ أو بعتَ أيّ منْ الأطعمةِ التي إستلمتها كإغاثة؟	1= Yes	0= No → ***skip to 9.24*** إذا لا حول إلي 9.24

If yes, which foods did you trade or sell? إذا نعم ما هي المواد الغذائية التي تاجرت أوبعت ***ASK FOR EACH OF THE FOOD BELOW*** أسأل عن كل طعام علي حدة من الاطعمة أدناه ***TICK THE BOX IF THE FOOD HAS BEEN TRADED OR SOLD*** ضع علامة في الصندوق المقابل للطعام المباع أو المتاجر فيه		**Tick if received** ضع علامة (√) إذا تاجر أو باع
9.10	Corn-Soya Blend (CSB) خلطة	|___|
9.11	Cereals حبوب غذائية	|___|
9.12	Pulses بقوليات	|___|
9.13	Oil زيت طعام	|___|
9.14	Sugar سكر	|___|

If you sold part or all of your food ration, why did you trade or sell it? إذا بعت أو تاجرت في كل أو جزء من الاغاثة لماذا ؟

DO NOT READ THE OPTIONS, LEAVE THE RESPONDENT ANSWER SPONTANEOUSLY **لا تقرأ الخيارات بل أترك المستجوب يجاوب**
TICK THE BOX IF THE REASON IS MENTIONED

		Tick if mentioned ضع علامة (√) للسبب المذكور
9.15	To obtain buy medicine or pay for health services لشراء دواء أو خدمات صحية	|___|
9.16	To pay for education, schooling لدفع نفقات التعليم والتدريس	|___|
9.17	To buy animals لشراء الماشية	|___|
9.18	To buy animal fodder or animal feed لشراء أعلاف للحيوانات	|___|
9.19	To buy firewood or fuel لشراء حطب الحريق أو وقود	|___|
9.20	To pay for milling للطحين	|___|
9.21	To buy agricultural inputs لشراء مدخلا ت زراعية	|___|
9.22	To buy other/preferred foods لشراء أطعمة أخري مفضلة	|___|

9.23	To pay back debts ليسدد ديونه	|___|
Did you receive during the past 6 months the items below: خلال الستة أشهر الماضية هل استلمت أي من الاشياء أدناه ***ASK FOR EACH ITEM*** أسأل من أي بند ***TICK THE BOX IF THE ITEM WAS RECEIVED*** ضع علامة ( ) في الصندوق المقابل للبند		**Tick if the item was received** ضع علامة ((√) للبند المستلم
9.24	Agricultural hand-tools معدات يدوية زراعية	|___|
9.25	Seed تقاوي	|___|
9.26	Green manure سماد بلدي	|___|
9.27	Veterinary services for animals خدمات بيطرية للحيوانات	|___|
9.28	Pots or other utensils for cooking حلل أو معينات أخري تستخدم للطبخ	|___|
9.29	Plates, cups, or other utensils for eating صحون / كبايات/ او أي معينات أخري يستخدم للأكل	|___|
9.30	Buckets جرادل	|___|
9.31	Jerrycan جركانة	|___|
9.32	Blankets بطاطين	|___|
9.33	Soap صابون	|___|
9.34	Plastic sheet مشمعة بلاستيك	|___|
9.35	Sleeping mat فرشات النوم	|___|
9.36	Mosquito net ناموسية	|___|
9.37	Cash grant for petty trade or other small business to generate income منحة نقدية لتجارة صغيرة أوعمل أخر ليدر دخلاً	|___|

COMPLETE BEFORE THE INTERVIEW

Questionnaire number: |___|___|___|___|___| (Same number as on the cover page)

Mother code: |___| **1 2 3** (circle a number, if there are more than one mother)

SECTION 10 – NUTRITION OF MOTHERS (WITH A CHILD 0-59 MONTHS) القسم 10 – تغذية الأمهات (فقط في حالة أم لديها طفل من 0-59 شهور)

This section should be filled out only for the mothers of children of ages 0 (birth) to 59 months of age or pregnant.

هذا القسم يملأ فقط في حالة أم لديها طفل من 0-59 شهور

If the mother is not present, skip to the next section 11 **في حالة عدم وجود الأم , أترك هذا السؤال و أبدا بملء القسم 11 مباشرة**

If more than one mother lives in the household, fill out ONE form for EACH mother and assign mother code above. **في حالة وجود أكثر من ام بالمنزل , إملآ هذا القسم لكل أم في فورم منفصل وخصص رقم محدد لكل ام على حدة**

10.1	Do you have a child below 5 years old? هل لديك أطفال اقل من 5 سنوات ؟	1= Yes نعم =1	2= No → ***If No, END OF THE INTERVIEW*** **2=لا في حالة لا, لا داعي لإكمال الإستبيان**	
10.2	Are you currently pregnant? هل أنت حاليا حامل ؟	1= Yes نعم =1	0= No لا =0	2= Don't know لا أعرف =2
10.3	Are you currently breastfeeding any child? هل ترضعين طفل حاليا؟	1= Yes نعم =1	0= No لا =0	
10.4	Do you have a child below 6 months of age? هل لديك طفل أقل من 6 أشهر؟	1= Yes نعم =1	2= No → ***If No, skip to 10.8*** 0= لا. في حالة لا, تحول مباشرة للجزء 10.8	
10.5	Is he or she currently breastfed? هل هو\هي ترضع حاليا؟	1= Yes نعم =1	0= No لا =0	
10.6	Has he or she received any fluid other than breast milk in past 24 hours? هل شرب اي سوائل خلال ال24 ساعة الماضية؟	1= Yes نعم =1	0= No لا =0	
10.7	Has he or she received any solid food in the past 24 hours? هل أكل أي طعام خلال ال24 ساعة الماضية؟	1= Yes نعم =1	0= No لا =0	
10.8	After the birth of your last child, did you receive vitamin A within 2 months? هل تلقيت جرعة فيتامين (أ) خلال شهرين من بعد ولادة اخر طفل لك؟ ***Show a 200,000 IU capsule to check*** ***دع الأم ترى نموذجا من كبسولة الفيتامين 200,000 وحدة للتأكيد***	1= Yes نعم =1	0= No لا =0	2= Don't know لا أعرف =2
10.9	Did you consume iron-folate tablets during your last pregnancy? هل كنت تأخذين حبوب حديد (فيفول) أثناء حملك الخير ***Show iron folate tablets to check*** ***دع الأم ترى نموذجا من الحبوب للتأكيد***	1= Yes نعم =1	0= No لا =0	
10.10	Did you sleep under a mosquito net last night? هل نمت تحت ناموسية ليلة البارحة؟	1= Yes نعم =1	0= No لا =0	
10.11	Can you read and write? (in any language) هل تستطيعين القراءة أو الكتابة (بأي لغة)	1= Yes نعم =1	0= No لا =0	
10.12	Do you usually do any work to earn money for the household? هل تمارسين اي عمل لكسب نقود للمنزل؟	1= Yes نعم =1	0= No → ***skip to 10.15*** 0= لا. في حالة لا, تحول مباشرة للجزء 10.15	
10.13	What are your main sources of income? ما هو مصدر دخلك الرئيسي؟ ***Choose only the main activity using the codes below:*** **إختر فقط النشاط (المهنة) الرئيسية مستخدما الرموز ادناه:**		**Write the code corresponding to the main activity:** **أكتب الرمز الموازي للمهنة الرئيسية:**	

	Income activity codes **01**= sale of cereals (sorghum, millet) 1= بيع حبوب (دخن, ذرة) **02**= sale of other crops and produce (vegetables, groundnuts, tobacco, watermelon etc.) 2= بيع محاصيل او منتجات أخرى (خضروات, فول, تمباك, بطيخ, إلخ) **03**= sale of animals and animal produce 3= بيع بهائم أو منتجات حيوانية. **04**= waged labour (casual labour, skilled labour, salaried work, provision of services) 4= عمالة (عمالة, عاملة مدربة, عمالة بأجر شهري, تقديم خدملا) **05**= sales of handicraft 5= بيع مصنوعات يدوية **06**= sales of firewood or grass 6= بيع حطب وقود او أعشاب (قش) **07**= petty trade, small business 7= تجارة صغيرة, أعمال حرة صغيرة. **08**= remittances from migrants 8=حوالات من شخص مهاجر **09**= begging 9= تسول **10**= gifts from family/relatives 10= هدايا من جيران أو أقارب **11**= selling food aid (from NGOs, WFP, ICRC) 11= بيع الإغاثات		|__|
10.14	Do you participate in deciding how the money is spent? هل تشاركين في صنع القرارات قي كيفية صرف النقود؟	1= Yes 1= نعم	0= No 0= لا

10.15	If you have a child under 2 years of age, who is the main person who is usually feeding this child in the household? إذا كان لديك طفل أقل من عامين, من هو الشخص المسؤل عن إطعامه في المنزل؟ ***CIRCLE ONLY ONE OPTION*** ضع دائرة حول **خيار واحد فقط**	**Circle the code corresponding** ضع دائرة حول الرمز المناسب	
		1	No child below 2 years → ***skip to 10.17*** لا يوجد طفل أقل من عامين , **تحول للسؤال 10.17 مباشرة**
		2	The mother herself → ***skip to 10.17*** الأم بنفسها, **تحول للسؤال 10.17 مباشرة**
		3	The child himself or herself → ***skip to 10.17*** الطفل يأكل بنفسه, **تحول للسؤال 10.17 مباشرة**
		4	A sibling (direct brother or sister) of the child الأخ او الأخت الأكبر
		5	Another family member شخص آخر من الأسرة
		6	Someone not member of the family شخص آخر من خارج الأسرة
10.16	How old is that person? كم عمر هذا الشخص؟	|__|__| (سنواتyears)	
10.17	Measure the mid-upper arm circumference (MUAC) of the mother: قم بقياس الميواك للأم:	|__|__|.|__| سمcms	

SECTION 11 – CHILD QUESTIONNAIRE (CHILDREN 6-59 MONTHS) **القسم 11 – إستمارة الاطفال (الأطفال من عمر 6 - 59 شهر)**

رقم
Questionnaire number: |___|___|___|___|

كرر رمز الام
Repeat the mother code: |___| **1 2 3** (if more than one mother, circle mother code)

(إذا كان هنالك أكثرمن أم ضع دائرة علي رمز الام) 1 2 3

الاستمارة

	11.1	**11.2**	**11.3**	**11.4**	**11.5**	**11.6**	**11.7**	**11.8**	**11.9**	**11.10**	**11.11**	**11.12**	**11.13**	**11.14**	**11.15**	**11.16**
	Relation-ship of child to the caretaker العلاقة بالشخص الذي يرعي الطفل	Sex of the child نوع الطفل	Age of the child عمر الطفل	Has the child recei-ved solid food in past 24 hours? هل أكل طعام صلب خلال ال_24 ساعة الماضية	Has the child received vitamin A supplement in last 6 months? أخذ فيتامين أ خلال ال 6 أشهر الماضية **(عينة للتأكيد)**	Has the child had watery diarrhea in last 2 weeks? عنده إسهال مائي خلال الاسبوعين الماضيين	Has the child had bloody diarrhea in last 2 weeks? عنده إسهال مع دم خلال الاسبوعين الماضيين	Has the child had cough with difficulty breathing last 2 weeks? عنده كحة مع صعوبة في التنفس خلال الاسبوعين الماضيين	Has the child had fever in last 2 weeks? عنده حمى خلال الاسبوعين الماضيين	Has the child had measles in last 2 weeks ? هل أصيب الطفل بالحصبة خلال الاسبوعين الماضيين	Has he/she received measles vaccination? تطعيم ضد الحصبة	Has slept under mos-quito bed net last night? نام في ناموسية الليلة الماضية	Curren-tly in thera-peutic feeding pro-gram-me? حالياً داخل في برنامج التغذية العلاجية	Curren-tly in supple-mentar y feeding pro-gram-me? حالياً داخل برنامج التغذية الاضافية	How long does the ration last? أذا كانت الاجابة بنعم في كم من الزمن إستهلكت الكمية	Is the ration shared with other house-hold mem-bers? هل يشاركه أحد من أفراد الاسرة في أستهلاكه هذه الكمية
Code: الرموز	**1**=Mother أم **2**=Father أب **3**=Other caretaker راعي أخرللطفل	**1**= M ذكر **2**= F انثي	**Months** الشهور	**1**=Yes نعم **0**= No لا	**1**= Yes card نعم بكرت **2**= Yes recall نعم من الذاكرة **3**= No لا **4**= Don't know لا أعرف	**1**=Yes نعم **0**= No لا	**1**=Yes نعم **0**= No لا	**1**=Yes نعم **0**= No لا	**1**=Yes نعم **0**= No لا	**1**= Yes **0**= No	**1**= Yes card نعم بكرت **2**= Yes recall نعم من الذاكرة **3**= No لا **4**= Don't know لا أعرف	**1**=Yes نعم **0**=No لا	**1**=Yes نعم **0**=No لا	**1**= Yes نعم **0**= No لا ***→ If no, skip to 11.16*** إذا لا إنتقل ألى 11.16	**Days** أيام	**1**= Yes نعم **0**= No لا
Child 1 الطفل الأول																
Child 2 الطفل الثاني																
Child 3 الطفل الثالث																
Child 4 الطفل الرابع																

	11.17	**11.18**	**11.19**	**11.20**
	Oedemaورم	**Weight** الوزن	**Height** الطول	**Mid-upper arm circumference** (MUAC) محيط منتصف الذراع الأعلى (موك)
Codes الرموز	**1**= Yes نعم **0**= No لا	**Kilograms** كيلوجرام	**Cm** سم	**Cm** سم

Child 1 الطفل الأول				.					.					.	
Child 2 الطفل الثاني				.					.					.	
Child 3 الطفل الثالث				.					.					.	
Child 4 الطفل الرابع				.					.					.	

COMPLETE BEFORE THE INTERVIEW أملاء قبل بدء المقابلة

Date : التاريخ	|__|__| / |__|__| / **2006** الشهر ***Month*** اليوم ***Day*** **2006**
Interviewer ID : **رقم مجري المقابلة**	|___|___|___|
Name of interviewer : **إسم مجري المقابلة**	|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|
Supervisor ID رقم المراقب	|___|___|___|
Location ID: رقم المكان	**State** |__| **1** = North **2** = South **3** = West الولاية شمال جنوب غرب **Cluster** |__|__| **العينة** **Locality**_____ **المحلية** **Admin unit**_____ **الوحدة الادارية** **Village**_____ **القرية**
Coordinates: الاحداثيات	ش **خطوط العرض** Y-coordinate (latitude) N |____|____|, |____|____|____|____|____| غ **خطوط الطول** X-coordinate (longitude) W |____|____|, |____|____|____|____|____|

COMPLETE UPON DATA ENTRY
أملاء عند إدخال البيانات

Questionnaire number\|__\|__\|

رقم الاستبيان

Comments تعليق

Section 1 –Demographic Information (approximately) and population movements

الفصل (1) – البيانات الديمقرافية وحركة السكان

CURRENT POPULATION **السكان الحاليين**

1.1	Number of ***Residents*** **عدد السكان المقيمين**	|__|__|__|__|__|__|
1.2	Number ***Resident households*** **عدد الاسر المقيمة**	|__|__|__|__|__|
1.3	Number of ***IDPs*** **عدد النازحين**	|__|__|__|__|__|__|
1.4	Number ***IDP households*** **عدد الاسر النازحة**	|__|__|__|__|__|

In the past year, have there been returns or departures of **residents** of the community?

في العام الماضي ، هل هالك عائدين أو مغادرين من السكان المقيمين في هذا المجتمع

1.5	***Returns*** of former residents *عودة مقيمين سابقين*	1= Yes نعم	0= No لا
1.6	***Departures*** of residents *مغادرة مقيمين*	1= Yes نعم	0= No لا

In the past year, have there been arrivals or departures of **displaced persons** of the community?

في العام الماضي ، هل هالك عائدين أو مغادرين من النازحين المقيمين في هذا المجتمع

1.7	***Arrival*** of IDPs *وصول نازحين*	1= Yes نعم	0= No لا
1.8	***Departures*** of IDPs *مغادرة نازحين*	1= Yes نعم	0= No لا
1.9	If there are IDPs in this community, how long have they been here for the majority? **إذا كان هنالك نازحين في هذا المجتمع ، فمنذ متي تواجدت أغلبيتهم في هذا المكان**	|__|__| (**in years**)	

SECTION 2 –AGRICULTURE (CROP PRODUCTION)

2.1

What proportions of households in this community are cultivating land?

ما هي نسبة الاسر التي تزرع الأرض في هذا المجتمع

Write only one option **أكتب خيار واحد فقط**

Choose one code below: **أختار رمز واحد من الرموز أدناه**

	a. Residents **مقيمين**	**b. IDPs** **نازحين**
1= Almost all تقريباً الكل **2**= Half of the households نصف الاسر **3**= Less than half of the households أقل من نصف الاسر **4**= Very few قليل جداً	|___|	|___|

2.2

Compared with last year, how much land has been planted by residents, and IDPs?

مقارنة مع العام الماضي ما هي المساحة التي زرعت بواسطة المقيمين و النازحين.

Write only one option ***أكتب خيار واحد فقط***

Choose one code below: إختار رمز واحد من الرموزأدناه

	a. Residents **مقيمين**	**b. IDPs** **نازحين**
1= Cultivated area has increased زادت المساحة المزروعة **2**= Cultivated area remained the same المساحة المزروعة كالعام السابق **3**= Cultivated area has decreased قلت المساحة المزروعة **4**= Did not plant لم تزرع	|___|	|___|

Currently, what is the status of crops under the following agricultural stage (tick under the relevant column):

حالياً ما هي مرحلة النمو الزراعي للمحاصيل أدناه

If the crops are not grown in the community, or have not germinated, write "0" in the columns-
اذا لم تزرع هذه المحاصيل او لم تنبت , اكتب 0 فى العمود المقابل

		Vegetative النمو الخضري	**Flowering** الإزهار	**Maturing** النضج
2.3	Millet **الدخن**	|___|	|___|	|___|

2.4	Sorghum **الذرة**	|___|	|___|	|___|
2.5	Groundnuts **فول سوداني**	|___|	|___|	|___|

In the past 6 months, has there been any of the environmental interventions below in the community?

خلال الستة أشهر الماضية ،هل كان هنالك أي تدخل بيني في المجتمع

READ THE VARIOUS INTERVENTIONS BELOW **أقرأ التدخلات المتباينة أدناه**

2.6	Tree plantation **زراعة أشجار**	1= Yes نعم	0= No لا
2.7	School gardening **حدائق مدرسية**	1= Yes نعم	0= No لا
2.8	Fuel efficient stoves **موقد محسن**	1= Yes نعم	0= No لا
2.9	Water harvesting systems **حصاد مياه**	1= Yes نعم	0= No لا

	Currently, what are the main constraints to agricultural production for people in the community, and are they different from last year? **حالياً، ما هي أهم المعوقات التي تواجه الانتاج الزراعي في هذا المجتمع هل عى مختلفة من العام الماضى** ***DO NOT READ THE OPTIONS, LEAVE THE RESPONDENTS ANSWER SPONTANEOUSLY*** **لا تقراء الخيارات ، بل أترك المستحوب يجيب بنفسه**	**Problem mentioned?** **المشكلة المذكورة**		**Is it different from last year?** هل هي تختلف عن العام الماضي؟ **1**= Worse problem than last year أسوء من العام السابق **2**= Same problem as last year كالعام السابق **3**= Better than last year أحسن من العام الماضي
2.10	Lack of rainfall / dry spells **قلة المطر / جفاف (صبنة)**	1= Yes نعم	0= No لا	|___|
2.11	Infestation by Desert Locust **إصابة بالجراد الصحراوي**	1= Yes نعم	0= No لا	|___|
2.12	Infestations by other pest / crop diseases **إصابة بافات أو أمراض أخري**	1= Yes نعم	0= No لا	|___|
2.13	Poor soil fertility **ضعف خصوبة التربة**	1= Yes نعم	0= No لا	|___|
2.14	Lack of seeds (local, traditional seeds) **نقص في التقاوي (محلية ، تقليدية)**	1= Yes نعم	0= No لا	|___|
2.15	Lack of improved seeds **نقص في التقاوي المحسنة**	1= Yes نعم	0= No لا	|___|
2.16	Lack of hand-tools **نقص في أدوات الزراعة المحلية**	1= Yes نعم	0= No لا	|___|
2.17	Lack of agric. machinery **عدم توفر الالات الزراعية**	1= Yes نعم	0= No لا	|___|
2.18	Lack of animal for traction **نقص في الحيوانات التي تجر الادوات الزراعية**	1= Yes نعم	0= No لا	|___|
2.19	Lack of manpower within the households **نقص في القوي البشرية داخل الاسرة**	1= Yes نعم	0= No لا	|___|

2.20	Lack of hired labour accessible in the community **نقص في الايادي العاملة المتاحة من داخل المجتمع**	1= Yes نم	0= No لا	|___|
2.21	Low prices of agricultural produce sold on markets **إنخفاض اسعار المنتجات الزراعية المباعة بالاسواق**	1= Yes نعم	0= No لا	|___|
2.22	Lack of credit **عدم توفر قروض**	1= Yes نعم	0= No لا	|___|
2.23	Insecurity / conflict **أسباب أمنية / صراعات**	1= Yes نعم	0= No لا	|___|
2.24	Land occupation by others **إحتلال الارض بواسطة أخرين**	1= Yes نعم	0= No لا	|___|

2.25	How long does it take for households to walk to the nearest market where they can trade agricultural inputs and produce? **(time one way)** **كم من الزمن تستغرقه الاسرة مشياً علي الاقدام للوصول لأقرب سوق للتجارة في المدخلات والمنتجات الزراعية (الوقت لأتجاه واحد دون الرجوع)** **Write "0.5" if half an hour** **أكتب 0.5 إذا كان الوقت نصف ساعة** **Write "0" if less than half an hour or if the market is located within the community** **أكتب 0 إذا كان الوقت أقل من نصف ساعة أو السوق داخل المكان**	**بالساعات (in hours)** |___| |___|. |___|___|	
2.26	This year, have there been changes in the number of traders buying or selling agricultural inputs and produce? **هذا العام هل هنالك أي تغيير في عدد التجار الذين يبيعون أو يشترون المنتجات والمدخلات الزراعية ؟** ***Choose only one option*** **إختار خيار واحد فقط**	|___|	**1**= Less traders **تجار أقل** **2**= Same number **نفس العدد** **3**= More traders **تجار أكثر**

		a. Residents **مقيمين**		**b. IDPs** **نازحين**	
What are the main factors that contribute to post-harvest losses ***DO NOT LIST THE OPTIONS, LEAVE THE RESPONDENTS ANSWER SPONTANEOUSLY*** **ما هي العوامل الاساسية التي تؤدى الى فقدان المحاصيل بعد ا لحصاد؟** **لا تقرأ الخيارات أترك المستجوب يجاوب بنفسة**					
2.27	Insecurity (thefts, looting) **عدم الأمن (السرقة / الأخذ بالقوة)**	1= Yes نعم	0= No لا	1= Yes نعم	0= No لا
2.28	Poor storage facilities **ضعف المعينات التخزينية**	1= Yes نعم	0= No لأ	1= Yes نعم	0= No لأ
2.29	Pests, rodents post-harvest **آفات / قوارض ما بعد الحصاد**	1= Yes نعم	0= No لأ	1= Yes نعم	0= No لأ

Section 3 –Livestock and Pasture الفصل (2) الماشية والمراعي

Currently, what are the main problems for raising livestock? Are they different from last year at this time of the year? **حالياً ، ما هي المشاكل التي تواجه سعاية الحيوانات هل هي مختلفة عن مثيلاتها في العام الماضي** ***DO NOT LIST THE OPTIONS, LEAVE THE RESPONDENTS ANSWER SPONTANEOUSLY*** **لا تقرأ الخيارات ، أترك المستجوب يجاوب نفسة**				
		Problem mentioned? المشكلة المذكورة		**Is it different from last year?** هل تختلف عن العام الماضي؟ **1**= Worse problem than last year أسوء من العام الماضي **2**= Same problem as last year نفس العام الماضي **3**= Better than last year أحسن من العام الماضي
3.1	Shortage / lack of access to pasture or water نقص / عدم الوصول الي المراعي أو المياه أ	1= Yes	0= No	|___|
3.2	Animal diseases, lack of veterinary services, drugs أمراض الحيوان ، نقص في الخدمات البيطرية والأدوية	1= Yes	0= No	|___|
3.3	Closure of livestock markets قفل أسواق الماشية	1= Yes	0= No	|___|
3.4	Low prices of animals on markets إنخفاض أسعار الماشية في الاسواق	1= Yes	0= No	|___|
3.5	Insecurity عدم الأمن	1= Yes	0= No	|___|
3.6	Thefts, looting السرقة والنهب	1= Yes	0= No	|___|
3.7	How long does it take for households to go to the nearest market where they can sell or buy animals? **كم من الزمن تستغرقه الاسرة مشياً علي الاقدام للوصول لأقرب سوق لبيع أو شراء الماشية** **(time one way) (اتجاه واحد)** Write "0.5" if half an hour **أكتب 0.5 إذا كان الزمن نصف ساعة** Write "0" if less than half an hour or if the market is located within the community **أكتب صفر إذا كان الوقت أقل من نصف ساعة أو السوق داخل المكان**	|___|___|.|___| (**in hours**)		
3.8	This year, have there been changes in the number of traders buying or selling animals? **هذا العام ، هل هنالك أي تغيير في عدد التجار الذين يبيعون أو يشترون الماشية** ***Choose only one option*** **إختار خيار واحد فقط**	|___|		**1**=Less traders **تجار أقل** **2**=Same number **نفس التجار** **3**=More traders **تجار كثر**
Currently, what are the types of animal health services available to the community? **حالياً ما هي أنواع الخدمات الصحية المتوفرة لماشيتكم في هذا المجتمع** ***ASK FOR EACH OF THE OPTIONS*** **أسأل لكل خيار علي حدة**				
3.9	Community Animal Health Workers **معاون صحي بيطري**	1= Yes	0= No	
3.10	Private veterinary clinics **عيادة بيطرية خاصة**	1= Yes	0= No	
3.11	Public veterinary clinics **عيادة بيطرية عامة**	1= Yes	0= No	
3.12	Traditional animal healers **المعالجون التقليديون للحيوان**	1= Yes	0= No	

If there are no animal health services available to the community, skip to 3.16

اذا لم توجد خدمات بيطرية لهذا المجتمع, انتقل الى 3.16

What are the main problems with the existing animal health services?

ما هي المشاكل الرئيسة للخدمات الصحية للحيوان الموجود لديكم حالياً

DO NOT LIST THE OPTIONS, LEAVE THE RESPONDENTS ANSWER SPONTANEOUSLY
لا تقرأ الخيارات ، أترك المستجوب يجاوب نفسة

			Problem mentioned?	
3.13	Lack of animal vaccines and drugs	**نقص في اللقاحات والأدوية البيطرية**	1= Yes	0= No
3.14	Lack of veterinary equipment	**نقص في المعدات البيطرية**	1= Yes	0= No
3.15	Lack of animal health trained staff	**نقص في الكوادر البيطرية المدربة**	1= Yes	0= No

In addition to normal grazing, what are the sources of livestock feeds? **بالإضافة الي الرعي ما هي مصادر التغذية للماشية** ***ASK FOR EACH OF THE OPTION*** **أسأل عن أي خيار علي حده**			**a**. Residents		**b**.IDPs	
3.16	Crop by-products	**مخلفات المحاصيل**	1= Yes	0= No	1= Yes	0= No
3.17	Private feed mills	**مصاحن علف خاصة**	1= Yes	0= No	1= Yes	0= No
3.18	Own animal feed sources	**مصادرك الخاصة لأطعام الحيوان**	1= Yes	0= No	1= Yes	0= No
3.19	Distributions by NGOs or other external assistance	**توزيعات من المنظمات الطوعية أو مساعدات خارجية**	1= Yes	0= No	1= Yes	0= No

Section 4 – Health الفصل 4 - الصحة

4.1	How long does it take to walk to the nearest Health facility **in the dry season**? (one way) **كم من الزمن تستغرقه مشياً علي الاقدام للوصول لأقرب وحدة صحية في زمن الجفاف** *Write "0.5" if half an hour* **أكتب 0.5 إذا كان الزمن نصف ساعة** *Write "0" if less than half an hour or if the health facility is located within the community* **أكتب 0 إذا كان الوقت أقل من نصف ساعة أو السوق داخل المكان**	بالساعات (**in hours**) |__|__|.|__|
4.2	How long does it take to walk to the nearest one **in the rainy season**? (one way) **كم من الزمن تستغرقه مشياً علي الاقدام للوصول لأقرب وحدة صحية في زمن الخريف** *Write "0.5" if half an hour* **أكتب 0.5 إذا كان الزمن نصف ساعة** *Write "0" if less than half an hour or if the health facility is located within the community* **أكتب 0 إذا كان الوقت أقل من نصف ساعة أو السوق داخل المكان**	بالساعات (**in hours**) |__|__|.|__|
4.3	What is the health facility most used by the community? **ما هي أكثر الوحدات الصحيةالتي يستخدمها المجتمع** ***Choose one code below*** **أختار رمز واحد من الرموز ادناه**	

	1= Hospital مستشفى **6=** Private clinic عيادة خاصة **2=** Government clinic عيادة حكومية **7=** Traditional practice الممارسات البلدية **3=** NGO clinic عيادة منظمات غير حكومية **8=** Pharmacy صيدلية **4=** Mobile/outreach clinic عيادة متجولة **5=** Village health care worker معاون صحي بالقرية	|___|	
4.4	Is a supplementary feeding programme available for this community at present? **حالياً هل يوجد برنامج للتغذيةالإضافية في هذا المجتمع**	1= Yes نعم	0= No لا
4.5	Is a therapeutic feeding programme available for this community at present? **حالياً هل يوجد برنامج للتغذية العلاجية في هذا المجتمع**	1= Yes نعم	0= No لا

Section 5 – Education القسم 5 - تعليم

5.1	How long does it take to walk to the nearest primary school **in the dry season**? (one way) **كم من الزمن تستغرقه مشياً علي الاقدام للوصول لأقرب مدرسة أساس في موسم الجفاف** *Write "0.5" if half an hour* **أكتب 0.5 إذا كان الزمن نصف ساعة** *Write "0" if less than half an hour or if the school is located within the community* **أكتب 0 إذا كان الوقت أقل من نصف ساعة أو المدرسة داخل المكان**	|__|__|.|__| (**in hours**) **بالساعات**
5.2	How long does it take to walk to the nearest primary school **in the rainy season**? (one way) **كم من الزمن تستغرقه مشياً علي الاقدام للوصول لأقرب مدرسة أساس في موسم الامطار** *Write "0.5" if half an hour* **أكتب 0.5 إذا كان الزمن نصف ساعة** *Write "0" if less than half an hour or if the school is located within the community* **أكتب 0 إذا كان الوقت أقل من نصف ساعة أو المدرسة داخل المكان**	|__|__|.|__| (**in hours**) **بالساعات**

SECTION 6 – MARKETS AND PRICE INFORMATION

Preferably, please put these questions to traders/shopkeepers in the village **يفضل توجيه هذه الاسئلة للتجار وأصحاب الدكاكين بالقرية**

	a. How many markets are people of the community using? **كم عدد الاسواق التي يذهب إليها الناس من هذا المجتمع**	**b.** Has the number of **markets** changed compared to last year? هل تغير عدد الاسواق مقارنة بالسنة الماضية	**c.** Is the **amount of cereals** on the markets different from last year at this time of the year? هل تختلف كمية الحبوب الموجودة حالياً عن مثيلاتها في نفس الوقت من العام الماضي	**d.** Has the number of **traders** changed compared to last year? هل تغير عدد التجار مقارنة مع السنة الماضية	**e.** What is the main source of cereal supply by the traders? ما هي المصادر الرئيسية لإمدادات الحبوب لدي التجار
		1= Same شبيه **2=** Less أقل **3=** More أكثر			**1=** Local محلي **2=** Intra-regional (other Darfur States) تداخل إقليمي (ولايات دارفور) **3=** National (other Sudan) قومى ولايات السودان الاخرى **4=** International (outside Sudan) عالمى

6.1	Number of **permanent daily markets** **عدد الاسواق اليومية**	|___|	|___|	|___|	|___|	|___|
6.2	Number of **travelling Weekly markets** **عدد الاسواق الاسبوعية**	|___|	|___|	|___|	|___|	|___|

What is the retail price of the following foods: **ما هي سعر التجزينة للأطعمة الآتية**		**a-Retail Unit** سعر التجزئة للوحدة كجم (*kilograms*)	**b- Current price/unit** السعر الحالي للوحدة جنيه (*pound*)	**c- Price/unit 12 months ago** سعر الوحدة قبل عام جنية (*pound*)
6.3	Millet **الدخن**	|_____|	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.4	Sorghum (traditional**)** **الذرة (البلدي)**	|_____|	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.5	Sorghum (food aid**)** **الذرة (إغاثة)**	|_____|	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.6	Wheat **القمح**	|_____|	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.7	Maize **الذرة الشامية**	|_____|	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.8	Groundnuts **الفول السوداني**	|_____|	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.9	Cooking oil (non food aid) **زيت الطعام (غير الاغاثة)**	|_____|	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.10	Cooking oil (food aid) **زيت الطعام (الاغاثة)**	|_____|	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.11	Sugar **السكر**	|_____|	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.12	Water (one jerrycan) **جركانة الماء الواحدة**	|_____|	|___|___|___|___|___|___|	|___|___|___|___|___|___|

What is the price of the following animals? **ما هو السعر للحيوانات الاتية**		**a. Current price/head** السعر الحالي للرأس (*pound*) جنية	**b. Price/head 12 months ago** سعر الرأس قبل عام جنية (*Pound*)
6.13	Cattle 3 to 4 years أبقار من عمر 3-4 سنة	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.14	Sheep 1 year old **ضأن عمر سنة**	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.15	Goats 2 year **الماعز عمر سنتين**	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.16	Donkey Rural **حمار بلدي**	|___|___|___|___|___|___|	|___|___|___|___|___|___|

What is the retail price of the following commodities? ما هو سعرالتجزئة للسلع أدناه		a. **Current price** السعر الحالي (*pound*)جنية	b. **Price 12 months ago** السعر قبل عام (*pound*) جنية
6.17	Fodder (bundle/heap) **علف (ربطة / كوم)**	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.18	Firewood (small bundle) **حطب الحريق (ربطة صغيرة)**	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.19	Firewood (large bundle) **حطب الحريق (ربطة كبيرة)**	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.20	Charcoal (1 bag) **فحم (جوال)**	|___|___|___|___|___|___|	|___|___|___|___|___|___|
6.21	How much does it cost to mill grain? **كم يكلف طحين الحبوب الغذائية**	Unit (**kilograms**): |_____| **(كيلوجرام) الوحدة**	|___|___|___| pound/unit
6.22	What is the daily wage rate for unskilled labour for **land preparation and clearing**? **ما هو الأجر اليومي لعامل غير ماهر لتجهيز ونظافة الأرض**		|___|___|___|___|___| pound/day
6.23	What is the daily wage rate for unskilled labour for **weeding of crops**? **ما هو الأجر اليومي لعامل غير ماهر لإزالة أعشاب المحاصيل (الحشاشة)**		|___|___|___|___|___| pound/day
6.24	What is the daily wage rate for other unskilled labours? **ما هو الأجر اليومي لعمال أخرين غير مهرة**		|___|___|___|___|___| pound/day

Section 7 – Food aid distributions in the community — الفصل 7 - توزيع الإغاثة في المجتمع

7.1	Are there food aid distributions in the community? **هل تم هنالك توزيع مساعدات إنسانية (إغاثة) في وسط هذا المجتمع**	1= Yes	0= No → ***skip to Section 8***
7.2	Is there is a Food Aid Committee in the community? **هل توجد لجنة مساعدات إنسانية (إغاثة) في وسط هذا المجتمع**	1= Yes	0= No → ***skip to 7.5***
7.3	If yes, do women participate in this Committee? **إذا نعم ، هل النساء يشاركن في هذه اللجنة**	1= Yes	0= No → ***skip to 7.5***
7.4	If yes, what is the proportion of women in the Committee? **إذا نعم ، ما هي نسبة النساء في هذه اللجنة**	|___||___| %	
7.5	Did women participate in the design of the food aid distribution system (such as the selection of food aid distribution points)? **هل النساء شاركن في تصميم نظام لتوزيع المساعدات الغذائية (مثل إختيار مركز لتوزيع المساعدات الغذائية)**	1= Yes	0 = No
7.6	Is it safe for women to walk to the food aid distribution points? **هل مراكز توزيع المساعدات الغذائية أمنة للنساء لكي يذهبن**	1= Yes	0 = No

Have the following interventions been made to help women and men during food aid distributions? هَلْ التدخّلات التالية جُعِلتْ لمُسَاعَدَة النِساءِ والرجال أثناء توزيعاتِ مساعدة غذائيةِ؟			
ASK FOR EACH OF THE OPTIONS BELOW : إسألْ عن كُلّ منْ الخياراتِ أدناه			
7.7	Construction of shelters and water points **بناء روكيب أو ما شابه ذلك ومصادر مياه**	1= Yes	0 = No
7.8	Announcement of food aid distributions a day before **قبل يوم يتم الأعلان عن توزيع المساعدات الغذائية**	1= Yes	0 = No
7.9	Distributions of food aid early in the morning **التوزيعات للمساعدات الغذائية يتم باكراً وفي الصباح**	1= Yes	0 = No

Section 8 – Community priorities

8.1	For the various groups of people of the community, what are the main **3 immediate** priorities? **بالنسبة للمجموعات في المجتمع ما هي أهم ثلاثة أولويات رئيسية و فورية ؟** ***(Use the codes below - If other specify)*** **(أستخدم الرموز الاتية – وإذا أخري حدد)**	**a. Residents**	**b. IDPs**
		1st priority |___|___|	1st priority |___|___|
		2nd priority |___|___|	2nd priority |___|___|
		3rd priority |___|___|	3rd priority |___|___|
8.2	For the various groups of people of the community, what are the main **3 long-term** priorities? **بالنسبة للمجموعات المجتمع ما هي أهم ثلاثة أولويات رئيسية وبعيدة المدي ؟** ***(Use the codes below - If other specify)***	**a. Residents**	**b. IDPs**
		1st priority |___|___|	1st priority |___|___|
		2nd priority |___|___|	2nd priority |___|___|
		3rd priority |___|___|	3rd priority |___|___|

01 = Security, peace (for movement, returns, access to land or to markets) (الامن ، السلام (للتحرك / للعودة /، الوصول إلي الارض /و الأسواق)
02 = Food aid/other food assistance إغاثة / إعانات غذائية اخري
03 = Cash assistance إعانة مالية
04 = Health services (infrastructures/health staff/drugs) (خدمات صحية (بنية تحتية / كادر صحي / ادوية)
05 = Drinking water (quantity/quality/equipment)(مياة شرب (كمية / نوعية / معدات)
06= Agricultural inputs مدخلات زراعية
07= Shelter/housing (plastic sheets, house repairs) (ماوي/ سكن (مشمعات بلاستيكية ، إصلاحات للمنزل)
08 = Roads repairs/improvement أصلاحات / تحسين طرق
09 = Livestock inputs مدخلا ت حيوان
10= Other (specify) أخري (حدد)

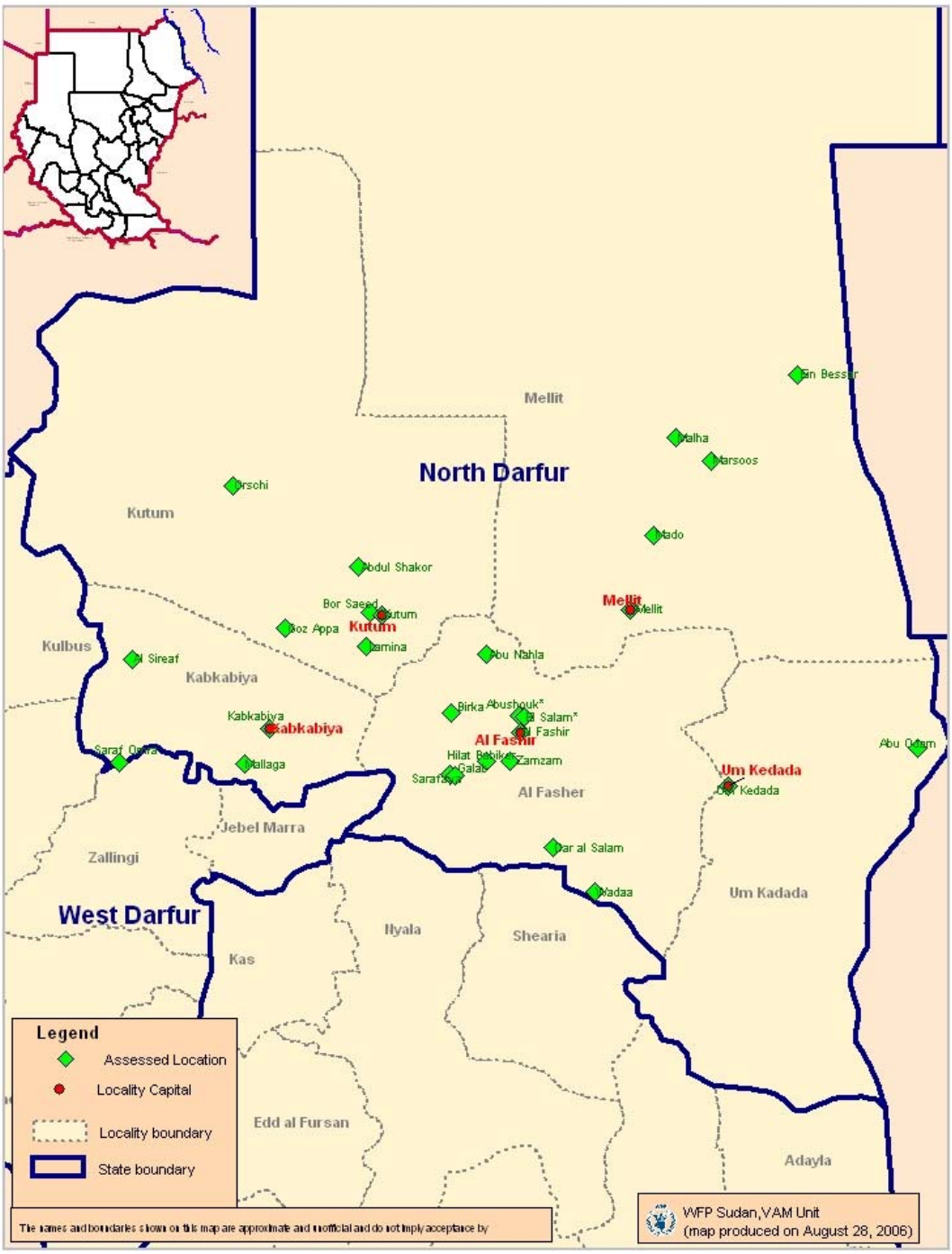
ANNEX 4: Comparison of Area, Production & average Yield of Sorghum & Millet in Darfur 2006/07 (Early forecast) with 5-year averages (99/00 - 2003/04), 2004/05 & 2005/06

Area (000) feddans					Production (000) Mt								Yield Kg/fed				
	5 years average (1999/00 - 2002/2003)				2004/05				2005/06				2006/07				
	Area		Y	Prod.	Area		Y	Prod.	Area		Y	Prod.	Area		Y	Production	
	P	H			P	H			P	H			P	H		High Scenario	Low Scenario
1- Sorghum																	
North Darfur	99	52	130	7	53	21	100	2	147	65	178	12	110	55	125	7	
South Darfur	1043	686	261	179	730	423	180	76	937	620	270	167	800	600	315	189	
West Darfur	529	445	291	129	172	109	220	24	200	127	350	44	200	140	360	50	
Subtotal Sorghum Darfur Region	***1671***	***1183***	***266***	***315***	***955***	***553***	***184***	***102***	***1284***	***812***	***275***	***223***	***1110***	***795***	***309***	***246***	
2- Millet																	
North Darfur	2081	1218	61	74	1440	517	63	33	1530	673	112	69	1300	520	65	34	
South Darfur	2379	1536	128	196	1537	922	150	138	2000	1300	190	247	1600	1150	200	230	
West Darfur	647	430	236	102	229	172	170	29	260	180	300	54	240	160	300	47	
Subtotal Millet Darfur Region	***5107***	***3184***	***117***	***372***	***3206***	***1611***	***124***	***200***	***3790***	***2153***	***172***	***370***	***3140***	***1830***	***171***	***311***	
Total (sorghum and millet)	**6778**	**4367**		**687**	**4161**	**2164**		**302**	**5074**	**2965**		**593**	**4250**	**2625**		**557**	**418**

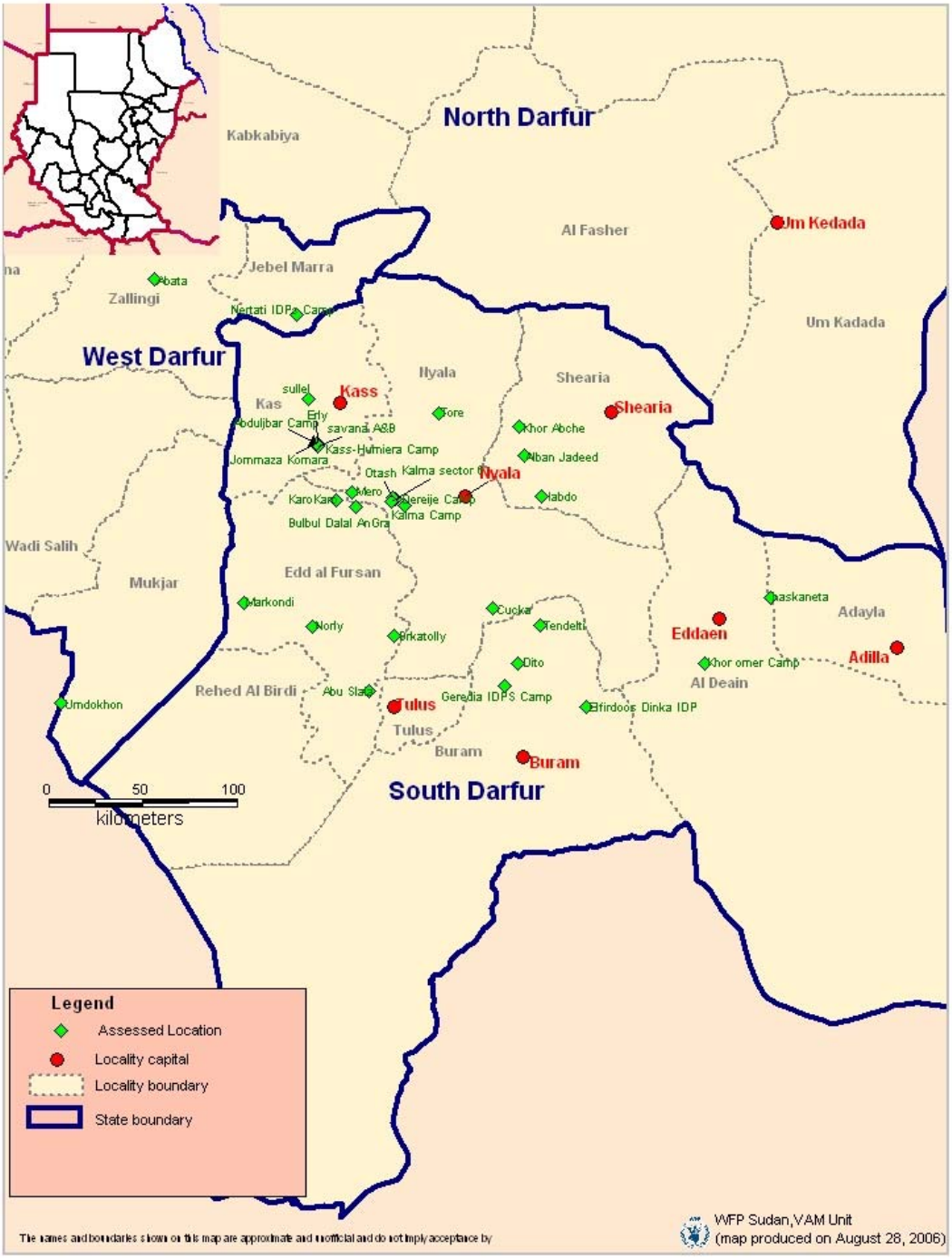
Legend:
P = Planted
H = harvested
Y = Yield
Prod = Production-
Mt = metric ton

Annex 5: Maps of North, West and South Darfur Survey Sites (WFP-VAM Unit)

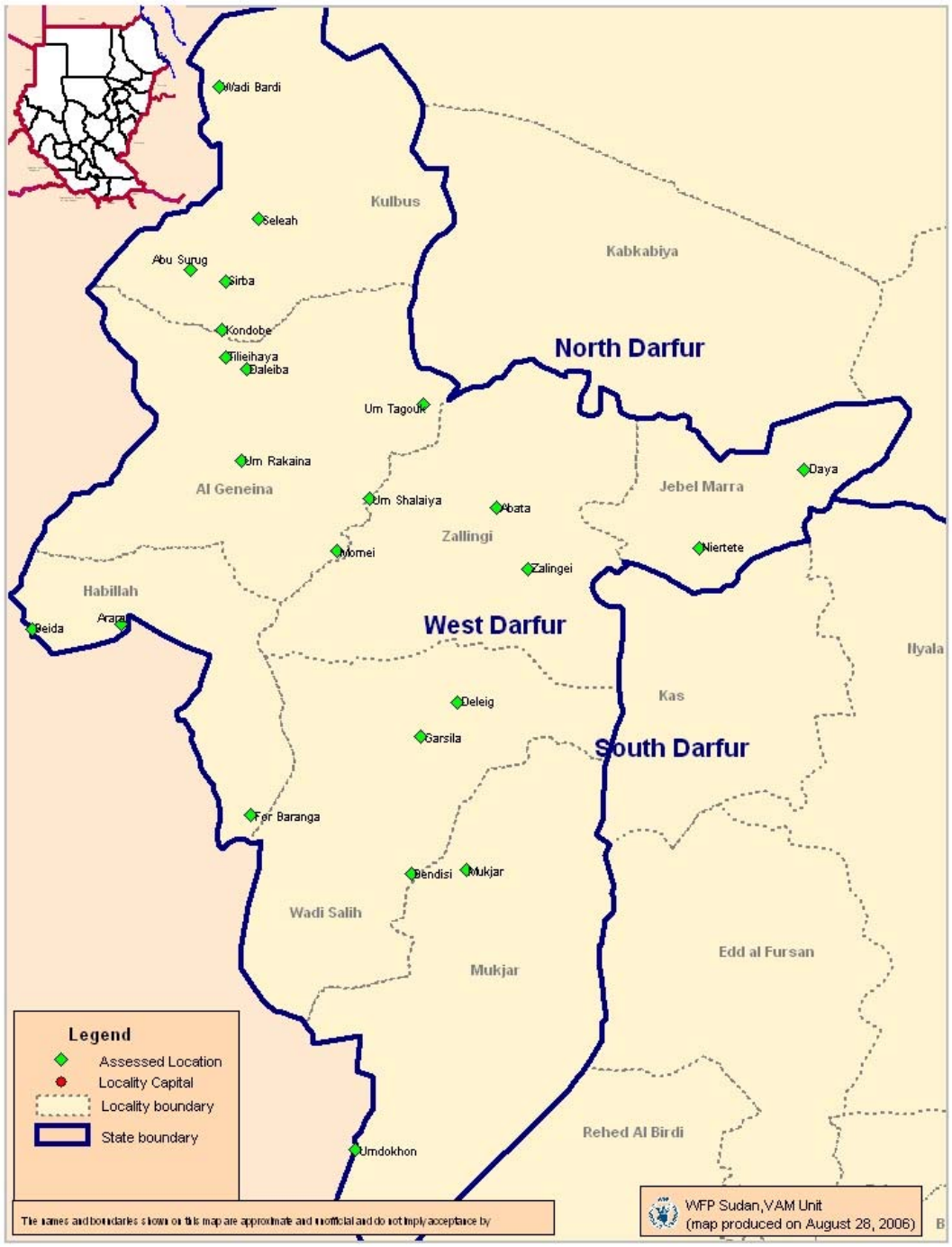
1. North Darfur Assessment Sites



2. South Darfur Assessment Sites



3. West Darfur Assessment Sites



Annex 6: Food security status per sub-group of IDPs and residents

Food security status of **IDPs in camps**:

Food consumption frequency and diversity	Share and amount of food expenditures/ capita/ week	Degree of reliance on food aid as source of food consumed		
		More than 50% of the food (high external dependence)	**Less than 50% of the food** (medium external dependence)	**0% of the food** (low external dependence)
Poor food (high health and nutrition risks)		6.8%	2.8%	2.8%
Borderline (moderate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	14.1%	3.6%	1.8%
	< 50% or ≥ 375 dinars (economic securiy)	12.9%	5.3%	3.2%
Acceptable (low immediate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	12.2%	2.2%	0.2%
	< 50% or ≥ 375 dinars (economic securiy)	18.2%	9.6%	4.2%

Food security status of **IDPs outside camps**:

Food consumption frequency and diversity	Share and amount of food expenditures/ capita/ week	Degree of reliance on food aid as source of food consumed		
		More than 50% of the food (high external dependence)	**Less than 50% of the food** (medium external dependence)	**0% of the food** (low external dependence)
Poor food (high health and nutrition risks)		6.8%	0.3%	2.0%
Borderline (moderate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	8.5%	4.1%	5.4%
	< 50% or ≥ 375 dinars (economic securiy)	7.8%	8.1%	9.2%
Acceptable (low immediate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	3.4%	2.0%	1.7%
	< 50% or ≥ 375 dinars (economic securiy)	15.6%	12.9%	12.2%

Food security status of **IDPs outside camps in communities with a minority of IDPs**

Food consumption frequency and diversity	Share and amount of food expenditures/ capita/ week	Degree of reliance on food aid as source of food consumed		
		More than 50% of the food (high external dependence)	**Less than 50% of the food** (medium external dependence)	**0% of the food** (low external dependence)
Poor food (high health and nutrition risks)		7.0%	0.0%	2.0%
Borderline (moderate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	3.0%	1.0%	5.0%
	< 50% or ≥ 375 dinars (economic securiy)	5.0%	7.9%	16.8%

Acceptable (low immediate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	4.0%	2.0%	2.0%
	< 50% or ≥ 375 dinars (economic securiy)	8.9%	13.9%	21.8%

Food security status of **IDPs outside camps in communities with a majority of IDPs**

Food consumption frequency and diversity	**Share and amount of food expenditures/ capita/ week**	**Degree of reliance on food aid as source of food consumed**		
		More than 50% of the food (high external dependence)	**Less than 50% of the food** (medium external dependence)	**0% of the food** (low external dependence)
Poor food (high health and nutrition risks)		6.7%	0.5%	2.0%
Borderline (moderate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	11.3%	5.7%	5.7%
	< 50% or ≥ 375 dinars (economic securiy)	9.3%	8.2%	5.2%
Acceptable (low immediate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	3.1%	2.1%	1.5%
	< 50% or ≥ 375 dinars (economic securiy)	19.1%	12.4%	7.2%

Food security status of **residents**

Food consumption frequency and diversity	**Share and amount of food expenditures/ capita/ week**	**Degree of reliance on food aid as source of food consumed**		
		More than 50% of the food (high external dependence)	**Less than 50% of the food** (medium external dependence)	**0% of the food** (low external dependence)
Poor food (high health and nutrition risks)		2.7%	2.6%	3.0%
Borderline (moderate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	3.9%	3.4%	3.3%
	< 50% or ≥ 375 dinars (economic securiy)	6.2%	5.6%	6.8%
Acceptable (low immediate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	3.8%	4.1%	2.5%
	< 50% or ≥ 375 dinars (economic securiy)	12.8%	17.6%	21.8%

Food security status of **residents in communities with no IDPs**

Food consumption frequency and diversity	**Share and amount of food expenditures/ capita/ week**	**Degree of reliance on food aid as source of food consumed**		
		More than 50% of the food (high external dependence)	**Less than 50% of the food** (medium external dependence)	**0% of the food** (low external dependence)
Poor food (high health and nutrition risks)		4.6%	3.2%	4.5%
Borderline (moderate	**> 50% and ≤ 372 dinars** (economic insecurity)	4.1%	4.1%	3.7%

health and nutrition risks)	**< 50% or ≥ 375 dinars** (economic securiy)	6.6%	6.2%	3.3%
Acceptable (low immediate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	3.7%	7.4%	0.8%
	< 50% or ≥ 375 dinars (economic securiy)	11.1%	20.2%	16.5%

Food security status of **residents in communities with a minority of IDPs**

Food consumption frequency and diversity	**Share and amount of food expenditures/ capita/ week**	**Degree of reliance on food aid as source of food consumed**		
		More than 50% of the food (high external dependence)	**Less than 50% of the food** (medium external dependence)	**0% of the food** (low external dependence)
Poor food (high health and nutrition risks)		2.5%	2.5%	2.8%
Borderline (moderate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	2.7%	3.0%	2.8%
	< 50% or ≥ 375 dinars (economic securiy)	5.5%	4.9%	6.6%
Acceptable (low immediate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	3.9%	3.1%	3.1%
	< 50% or ≥ 375 dinars (economic securiy)	12.1%	18.7%	25.5%

Food security status of **residents in communities with a majority of IDPs**

Food consumption frequency and diversity	**Share and amount of food expenditures/ capita/ week**	**Degree of reliance on food aid as source of food consumed**		
		More than 50% of the food (high external dependence)	**Less than 50% of the food** (medium external dependence)	**0% of the food** (low external dependence)
Poor food (high health and nutrition risks)		0.0%	1.4%	0.7%
Borderline (moderate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	9.3%	4.3%	5.0%
	< 50% or ≥ 375 dinars (economic securiy)	8.6%	7.9%	13.6%
Acceptable (low immediate health and nutrition risks)	**> 50% and ≤ 372 dinars** (economic insecurity)	3.6%	2.9%	2.1%
	< 50% or ≥ 375 dinars (economic securiy)	18.6%	7.9%	14.3%

Annex 7: Sample and Replacement Clusters Selected for the 2006 Darfur EFSNA

North Darfur – Sample Clusters

Province/Locality	Locations	Number of Clusters	Status
Kebkabiya	Kebkabiya	1	completed
Um Kadada	Um Kadada	1	completed
Um Kadada	Abu odam	1	completed
Kabkabyia	KK rural area (Mallaga,jaurai)	1	completed
Kebkabiya	Saraf Omra	1	completed
ElFasher	Abushok	2	completed
Kutum	Kutum	1	completed
Mellit	Mellit town	1	completed
ElFasher	Zamzam	1	completed
Kabkabyia	El Seriaf	1	completed
ElFasher	Fasher	1	completed
ElFasher	El Salam	1	completed
Malha	Malha	1	completed
Tawila	Dali Camp	1	dropped
Rural Elfasher	Sarafaya	1	completed
Wadaa	Wadaa	1	completed
Kutum Dar zagawa	Orschi (includes Ana Bagi)	1	completed
ElFasher	Galab	1	completed
El Fasher	Hillat Babiker	1	completed
Kutum Dar zagawa	Um Mahareik	1	dropped
Kutum	Lemena	1	completed
Malha	Ein Besaro	1	completed
El Fasher	Birka	1	completed
Kutum	Abu Nahla	1	completed
Furnong	Algosappa	1	completed
Malha	Marsous	1	completed
Jebel Si	Taronga	1	dropped
Mallit	Mado Shamal	1	completed
Kutum	Bor Sayeed	1	completed

North Darfur - Replacement Clusters

Province/Locality	Locations	Number of Clusters	Status
Korma	Dar El Salam	1	completed
West Thabit	Thabassa Garib	1	
Kutum	AbdelShakour	1	completed
Jebel Si	Kaguro	1	
Rural Tawila	(Dadanga, Bansor, Marita, Sandingo, Um siyala, Marar)	1	

Total number of North Darfur clusters completed = 29

South Darfur – Sample Clusters

Province/Locality	Locations	Number of Clusters	Status
Gereida IDP		3	completed
Nyala	Kalma	2	completed
Idd El Fursan	Norlay	1	completed
Idd El Fursan	Markondi	1	completed
Shereia	Muhajeria Darfurian	1	dropped
Nyala	Otash	1	completed
Um Kedada	Haskanita	1	completed
Ed Daein	Khor Omer	1	completed
Shereia	Labado	1	completed
Nyala	Dereige	1	completed
Ed Daein	Elfirdos	1	completed
Nyala	Bulbul Dalal Angara	1	completed
Sheria	El Ban Jadied - Host Comm.	1	completed
Buram	Dito	1	completed
Kass	Humira school	1	completed
Nyala	Abu Selala (non Dinka)	1	completed
Kass	Erly	1	completed
Nyala	Karo Karo	1	completed
S-E Jebel Marra	Sulell	1	completed
Shereia	Khor Abache	1	completed
Kass	Savannah (A & B)	1	completed
Kass	A/Jabar (B)	1	completed
Nyala	Mero	1	completed
S-E Jebel Marra	Tore	1	completed
Kass	Gemeiza Korma	1	completed
Nyala	Baraka Tolly	1	completed
Nyala	Cucka	1	completed

South Darfur - Replacement Clusters

Province/Locality	Locations	Number of Clusters	Status
Nyala	Beliel	1	
Shereia	Menwashi	1	
Kass	Megles	1	
Ed Daein	Abu Matarig	1	
Nyala (SE)	Um Tendelti	1	completed

Total number of South Darfur clusters completed = 30

West Darfur – Sampel Clusters

Province/Locality	Locations	Number of Clusters	Status
EL Geneina	Keranic Gadier	1	dropped
EL Geneina	Kirenik	1	completed
EL Geneina	Mornei	3	completed
EL Geneina	Tilahaya	1	completed
EL Geneina	Um Rakaina	1	completed
EL Geneina	Um Shalaya	1	completed
EL Geneina	Um Shalaya-Refugees	1	completed
EL Geneina	Um Tajouk	1	completed
Habila	Arara	1	completed
Habila	Beida	1	completed
Habila	Furburanga	1	completed
Jabal Marah	Nertiti	1	completed
Jebel Marra	Gildo	1	dropped
Jebel Marra	Golo	1	dropped
Jebel Marra	Rokero	1	dropped
Kulbus	Abou Sourouge	1	completed
Kulbus	Kundobe	1	completed
Kulbus	Seleah	2	completed
Kulbus	Sirba	1	completed
Kulbus	Wadi Bardi	1	completed
Mukjar	Mukjar	1	completed
Wadi Salhi	Bindizi	1	completed
Wadi Salhi	Deleij	1	completed
Wadi Salhi	Garsila	1	completed
Zalingei	Abata	1	completed
Zalingei	Zalingei	2	completed

West Darfur - Replacement Clusters

Province/Locality	Locations	Number of Clusters	Status
EL Geneina	Abu Zar	1	completed
EL Geneina	Dalaiba	1	completed
EL Geneina	Warda	1	
Jebel Marra	Daya	1	
Mukjar	Um Dukhon	1	completed

Total number of West Darfur clusters completed = 29

Annex 8: Darfur Seasonal Calendars: Calendar of Local Events South Darfur, September 2006

Month	2001		2002		2003		2004		2005		2006		
Jan		**New Year's Day** Independency Fatrein		**New Year's Day** Independency Fatrein	**56**	**New Year's Day** Fatrein	**44**	**New Year's Day** Fatrain Buram Attack Death of Habania Nathir	**32**	New Year's day Eid Dahiya	**20**	Eid Al Adha Islamic new year Independence Day	**08**
Feb		Eid Al Adha		Dahia Eid Al Adha	**55**	*SLA Start* *Dahia*	**43**	Dahia Eid Dahiya	**31**	Polio Campaign	**19**	Lipiodol Campaign	**07**
Mar		*Daheitaein*		*Daheitain*	**54**	*Dahietein*	**42**	*Dahaitain*	**30**		**18**	*Al Waheed* Al Molid Al Nabawi	**06**
April		Tom Awal		Tom	**53**	Fasher attack Tom	**41**	Wahid	**29**	Polio Campaign	**17**	Polio Campaign	**05**
May		Onset of rain (Rushas} Tomain		*Tabat Attack* *Rainy season* *Tomain*	**52**	*Tomain* *Onset of rain*	**40**	*Karamah* *Molad Al Nabawi* *Onset of rain*	**28**	*Molad Al Nabawi* Onset of rain (Rushas)	**16**	Al Tom Al Awal Rains (Rushash) onset, Singing of DPA	**04**
Jun		Saig Al Timan Molad Al; Nabawi Rovlutiobn celeberation		Saig Al Timan Molad Al; Nabawi	**51**	Saig Al Timan Revolution celebration	**39**	Revolution celebration	**27**	Polio Campagin	**15**	Second Tom and, Revolution celebration and planting	**03**
July		Planting (Tairab Wahid		Planting (Tairab *Waheed*	**50**	Planting (Tairab *Wahid*	**38**		**26**	Planting-Tairab Deathof Garang	**14**	Al Tom Al Thani, Weeding (Hashasha	**02**
Aug		Weeding (Hishash Karamah		Weeding (Hishasha Karamah	**49**	Weeding (Hishasha Karamah	**37**	Weeding (Hishasha	**25**	Weeding-Hishasha Polio,measles campaign	**13**	Rajab, Rezeigat/Habania peace agreement 2nd weeding (Jankab)	**01**
Sept		Harvest (Darat) Rajab		Harvest (Darat) Rajab	**48**	Harvest (Darat) Rajab	**36**	Harvest (Darat)	**24**	Harvest (Darat)	**12**		
Oct		Gisair Harvest	**59**	Gisair Harvest	**47**	**RAMADAN** Harvest	**35**	**RAMADAN** Harvest	**23**	Ramadan month	**11**		
Nov		**RAMADAN** Harvest	**58**	**RAMADAN** Harvest	**46**	**Eid Fatoor** Harvest	**34**	**Eid Fatoor** **Harevest**	**22**	**Eid Al Fitir/ Harvest**	**10**		
Dec		**Eid Fatoor** **X - Mass**	**57**	**Eid Fatoor** **X - Mass**	**45**	**X – Mass**	**33**	**X - Massl**	**21**	**Harvest/ X-Mass**	**09**		