**Overview**

- **Admissions into feeding centres:** Admissions into Supplementary Feeding Centres (SFCs) almost doubled compared to the figures reported in January/February, while admissions into Therapeutic Feeding Centres (TFCs) have more than doubled compared to January/February. Most of the SFC and TFC admissions were reported from West and South Darfur. Admissions were in line with seasonal trends. While SFC admissions were below 2006 levels, admissions to TFCs were higher than 2006, and further investigation is recommended.

- **Localised nutrition surveys:** Four localised nutrition surveys were conducted in South and West Darfur. Results indicate a stable nutritional situation of the population, however crude mortality rates at or above alert level indicate potential problems that need to be addressed. The key recommendations from these surveys focus around addressing the longer term underlying causes of malnutrition.

- **Health:** Overall, the incidence of endemic diseases has increased during the reporting period, in line with seasonal trends. Malaria, Acute Respiratory Infections (ARI) and diarrhoea continue to be reported as primary morbidities. There were 37 cases of measles during the reporting period, with the majority reported from West Darfur. The *polio and Vitamin A supplementation campaign* (30 April to 2 May) reached more than 95% of the target population. Additionally, cases of *bloody diarrhoea* have increased, with the majority reported from West Darfur.

- **Food security:** For the most part, the food security situation for resident population appears to be stable, though IDPs remain heavily dependent on food aid. Ongoing monitoring is recommended to identify populations at greatest risk of food insecurity as the dry season progresses.

- **Humanitarian access** across Greater Darfur continues to be limited, due to insecurity as well as travel restrictions. This limitation has resulted in localised suspensions of some activities, and unmet targets due to agencies’ inability to access beneficiaries in some areas.

- **Population movement:** The influx of refugees from Chad continued into Greater Darfur during the months of March/April. Additionally, tribal conflict in South and North Darfur resulted in population displacement during the reporting period. Ongoing monitoring is recommended.

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**Greater Darfur- deterioration in nutrition status in line with seasonal trends**

The detailed report of the *Emergency Food Security and Nutrition Assessment* (EFSNA) conducted in September 2006 has been released. This report includes the detailed analysis related to nutrition outcomes and underlying causes. Efforts to reduce and address malnutrition are recommended to focus on addressing the underlying causes of malnutrition, in particular improvement in safe water and hygiene promotion to reduce disease incidence, as well as promotion of appropriate caring practice, and targeting programmes for children under three years of age.

The report is currently available on ReliefWeb (http://www.reliefweb.int/rw/RWB.NSF/db900SID/LSGZ-73NDV8?OpenDocument), and soon to be released on the UN Sudan Information Gateway.

**Other nutrition surveys**

Four localised nutrition survey were conducted during the reporting period, three in South Darfur and one in West Darfur. Global Acute Malnutrition (GAM) rates did not exceed the emergency threshold of 15 per cent in any of the surveys, and there was no statistically significant difference between these results and results from similar time periods in 2006. Mortality rates, however, indicate that the situation may require additional monitoring. In one survey (ACF in South Darfur), both under-5 and crude mortality were at alert levels, while the crude mortality rate in two surveys (ARC in South Darfur and SC-US in West Darfur) were reported at or above alert level.

In the surveys were mortality rates were reported at or above alert levels, primary identified causes of death for children under five were reported to include diarrhoea, ARIs, and malaria. Primary identified causes of death for people older than five were reported to include fever, bloody diarrhoea, and malaria. This indicates that sustained efforts to address underlying causes of malnutrition, as well as the resolution of insecurity, are required.

The rate of GAM for children 6-29 versus 30-59 months continues to be elevated, indicating that sustained efforts...

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2. The EFSNA was carried out by the Federal Ministries of Health, and Agriculture, FAO, UNICEF, WFP, and CDC in September 2006.

3. All nutrition surveys reported in this bulletin use the standard 30x30 cluster methodology in line with international standards unless otherwise stated.
are required to address sub optimal infant and young child care practices.

Selective feeding centre data
Admissions\(^4\) into SFCs across Greater Darfur almost doubled compared to admissions in the previous two months (5,039 in March/April versus 3,262 in January/February). The largest increases in admissions were reported from South and West Darfur. Similarly, admissions into TFCs more than doubled (1,233 in March and April versus 593 in January and February). Again, the largest increases in admissions were reported from South and West Darfur.

The increase in admissions into both SFCs and TFCs is in line with the seasonal increase of admissions seen at this time of the year. The absolute number of admissions for SFCs in March/April is lower than those reported during the same time period in 2006. The absolute number of admissions into TFCs in March/April is higher than 2006 levels, in particular in South Darfur. Further investigation of the underlying causes for increased TFC admissions is recommended (see Graphs 1 and 2).

Graph 1: SFC admissions, Greater Darfur

Graph 2: TFC admissions, Greater Darfur

Performance indicators for SFCs across Greater Darfur remain below SPHERE standards,\(^5\) though trends in terms of recovery, defaulting and death rates during March/April vary between states. The continued lack of progress in meeting SPHERE standards underlines the inability of SFC programming to address moderate malnutrition if additional supportive interventions in areas that address the underlying causes of malnutrition are not available.

Performance indicators for TFCs are deteriorating compared to previous months, with recovery rates across Greater Darfur falling from acceptable levels in January (78 per cent), to below standards in February (70 per cent), March (61 per cent) and April (54 per cent). Death and defaulting rates, however, did continue to meet SPHERE standards. The underlying reason for the deterioration in recovery rates is not clear, though a similar trend was observed in 2006 along with increased admissions, suggesting that the decline may be in part attributable to the challenges of meeting the needs of increased caseloads.

Health
Overall, the incidence of endemic diseases increased in Greater Darfur, in line with seasonal trend data.

Acute respiratory infections (ARI), diarrhoea and malaria/fever continue to be reported as the most common illnesses in the sentinel sites.

The number of reported measles cases rose from 5 cases reported between December 2006 and February 2007, to 37 reported cases during March and April. The majority (34 cases) were reported by West Darfur, followed by South Darfur (2 cases) and North Darfur (1 case).\(^6\) The increase in the number of reported measles cases is cause for concern in areas where Vitamin A supplementation for children is low. However, coverage rates from recent the polio and Vitamin A supplementation campaign (30 April to 2 May) were reported by FMOH to be above 95 per cent for children between one and five years of age.

There has been a sharp increase in the reported cases of bloody diarrhoea during March/April compared to previous months, with the majority of cases reported from West Darfur. It will be critical to ensure that appropriate preventive and curative measures are strengthened, in particular in West Darfur, in order to prevent deterioration in the nutritional situation.

Food security
Sentinel site data shows that food aid continues to play a significant role for both IDP and resident populations, either through direct consumption or through sale of food aid in order to purchase other commodities. While some IDP sites report their own production as a food source, this is more often observed in resident populations. Wage labour, bartering and trade play a smaller role in terms of primary food sources for both IDP and resident populations. Dietary diversity remains low, with a reliance on cereals and oils, and limited consumption of animal products or vegetables, though this trend is more pronounced in IDP sites compared to resident populations.

Coping strategies reported through the sentinel site system suggest that primary responses to food insecurity have the potential to negatively impact the nutrition status of individuals. Frequently reported strategies include shifting to less preferred foods, starting new income generating activities, limiting portion sizes, and in the case of resident populations selling assets or sending family members in search of wage labour, a strategy that is not as widely available to IDP populations.

\(^4\) Refers to children 6-59 months of age
\(^5\) SPHERE standards refer to minimum standards in humanitarian response to be attained in five key sectors (water supply and sanitation, nutrition, food aid, shelter and health services), that were developed through inputs from practitioners.

\(^6\) WHO/FMOH Weekly Morbidity and Mortality Bulletin, week 10 through week 17
Regular food security monitoring by FAO suggests that household food security is stable or beginning to deteriorate as the summer months approach and food stocks from the winter harvest decrease. Flow of commodities to market are reported to be influenced by security across Greater Darfur. As the dry season approaches, supplies of fodder and water resources have become more scarce and more expensive, which may negatively impact production potential during the dry season.

Post harvest assessments are underway by various agencies, including WFP and FAO, and results should indicate areas where additional support may be required in the upcoming months.

**North Darfur- slight deterioration in nutrition status in context of persisting insecurity**

Tribal clashes reported in April contributed to population displacement. Insecurity continues to inhibit smooth operation of nutrition related interventions in the area. GOAL suspended their nutrition programme in Kutum due to insecurity and a vehicle hijacking. However, ACF opened a new Outpatient Therapeutic Programme (OTP) in Al Salam camp at the end of April in response to increased caseload. Relief International resumed nutrition operations Tawilla in March (after nutrition programmes had been closed in 2006 due to insecurity and stabilization of the situation) in response to deterioration in population nutrition status.

**Localised nutrition surveys**

No reports of nutrition surveys were received during the reporting period.

**Selective feeding centre data**

Admissions into SFCs fluctuated, increasing from 483 in February to 694 in March, and decreasing to 554 in April (see Graph 3). Admissions into TFCs also fluctuated, dropping from 105 in February to 79 in March, increasing to 161 in April (see Graph 4). Overall admissions to SFCs and TFCs were lower during this period compared to figures from 2006.

**Performance indicators for SFCs in North Darfur**

Improved in March/April compared to previous months, and were above the average reported across Greater Darfur. Recovery rates increased from 59.6 per cent in March to 73.3 per cent in April. Defaulting rates remained stable at 15.1 and 15.3 per cent in March and April, representing an improvement in defaulting rates reported as above 20 per cent in January and February. These are however still below SPHERE standards.

**Performance indicators for TFCs**

Fluctuated in March/April, with a deterioration observed in March and an improvement in April. Recovery rates were below SPHERE standards, falling from 64 per cent in February to 49 per cent in March, and increasing to 63 per cent in April. Defaulting rates more than doubled in March (26 per cent) compared to February (9 per cent), and dropped to 11 per cent in April. Death rates were in line with SPHERE standards in March and April, as in previous months.

**Sentinel site system**

Data was collected from six sites in March, and eleven sites in April. Some population influx was reported from a few of the sites.

The mean Weight for Height Z score (WHZ) was -1.45 in March, and -1.50 in April, which is slightly lower than mean WHZ reported at the same time in 2006, indicating a slight deterioration in population nutrition status compared to same time last year when mean WHZ was reported as -1.2. Mean WHZ reported during March/April is also slightly lower than mean WHZ reported in the EFSNA 2006 (-1.17). The mean WHZ is stable, however, compared to December 2006 and February 2007.

The leading causes of morbidity continue to include diarrhoea, ARI and skin/mouth/eye infections. Overall prevalence of morbidity decreased slightly in comparison to the previous reporting period, with less than 50 per cent of children under five reporting an illness in the previous two weeks in March/April as compared to the 55.7 per cent of children under five reporting an illness in February.

The majority of children under five and adults continue to have 2 to 3 meals per day. Dietary diversity, however, continues to be low and reliance on cereals and oils is very high, a trend that is more pronounced in IDP populations compared to resident populations due in part to their relatively greater reliance on food aid.

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7 FAO Monthly Food Security Updates, March and April 2007
Consumption of vegetable protein, dark green leafy vegetables and animal protein is low, rarely more than once or twice per week. About one third of households report that they are not consuming these commodities at all during a week.

In terms of food sources, both IDP and resident populations report reliance on their own production as well as food aid, with IDP sites additionally reporting food purchased through funds gained through selling food aid, while resident populations report food purchased with funds from other sources.

There is some indication that the sentinel site populations are stressed with the onset of the hunger gap given changes in reported coping strategies. Primary coping strategies reported by both residents and IDPs as shifts to less preferred foods and new income generating activities, though IDPs reported borrowing food, limiting portion sizes at meals and reducing adult intake so that children could eat. Resident populations, with their relatively greater access to assets, instead reported some sale of capital assets in April.

Market prices for key commodities in sentinel sites were reported as stable relative to previous months, and average livestock prices are in line with figures reported at the same time in 2006.

**Food security**
Overall the food security situation in North Darfur is reported as stable relative to previous months. The cultivation of summer irrigated crops has begun. There are some concerns that insecurity may prevent the timely implementation of agricultural and livestock interventions, including pest management programmes and distribution of seeds and tools.

There have been reports of cases of Haemorrahagic Septicaemia in some livestock, to which FAO and partners responded with provision of vaccines. There was a shortfall in the amount of vaccine available, which leaves the livestock population, and consequently livelihoods, at risk.

**South Darfur –sharp increase in TFC admission and alert level mortality rates reported**

Population movement due to tribal clashes in March was reported, necessitating ongoing monitoring in order to identify and address needs of the displaced and resident populations as they arise.

**Localised nutrition surveys**
The table below provides a summary of the most recent nutrition surveys conducted in South Darfur.

<table>
<thead>
<tr>
<th>Location</th>
<th>Agency</th>
<th>Date</th>
<th>% GAM</th>
<th>% SAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ed Al Fursan and Kass Locality</td>
<td>ACT Caritas/NCA</td>
<td>Mar 07</td>
<td>12.5 (8.9 – 16.1)</td>
<td>1.7 (0.7 – 2.8)</td>
</tr>
</tbody>
</table>

Norwegian Church Aid and ACT Caritas undertook a nutrition survey during the period of 18-25 March in three administrative units, namely Kubum, Umlabasa (Ed Al Fursan locality) and Dagadousa (Kass locality), including both IDPs and resident populations.

Preliminary results report GAM for children 6-59 months of 12.5 per cent (CI 8.9-16.1), below emergency levels. Severe Acute Malnutrition (SAM) is reported at 1.7 per cent (CI 0.7-2.8), including one case of oedema. There is no statistically significant difference between malnutrition rates from this survey and the rates reported in March 2006 (GAM 18.3 per cent, CI 14.9-21.6; SAM 1.3 per cent, CI 0.7-1.9).

Mortality rates are below alert levels, with under-5 mortality reported as 0.81/10,000/day, and crude mortality reported as 0.44/10,000/day.

Primary child illnesses in the two weeks prior to the survey were reported as respiratory infections (25.0 per cent), malaria (20.0 per cent), and diarrhoea (13.8 per cent). More than two thirds (69.2 per cent) of children were vaccinated against measles (confirmed by card and/or confirmed verbally by caretaker).

Preliminary recommendations by the agency include strengthening community capacity through food security programming, interventions aimed at improving infant and young child feeding practices, and continued surveillance of the nutrition situation.

ACF carried out a nutrition survey in Nyala town and the surrounding IDP camps from 14-19 April, covering both IDP and resident populations. The nutrition situation is considered to be stable compared to results from surveys at the same season from previous years.

GAM for children 6-59 months was reported as 11.8 per cent (CI 9.1-15.2), which is below emergency levels. The prevalence reported in this survey is slightly higher than the prevalence estimate reported in March 2006 (9.7 per cent) though this is not a statistically significant difference. The GAM is reported is however statistically lower than the prevalence recorded in September 2006 (18.9 per cent). SAM for children 6-59 months was reported as 0.7 per cent (CI 0.2-2.1), as it was in March 2006, and included one case of oedema. Risk of malnutrition was not found to be related to gender or residential status.

Mortality rates are at alert levels, with under-5 mortality reported as 2.40/10,000/day, and crude mortality reported as 1.05/10,000/day. The underlying reasons for these rates are not known. Diarrhoea and respiratory infections were the primary identified causes of death for children under five, while fever was the primary identified illness leading to death for people above five.

Rates of morbidity reported in the previous two weeks were low, with 6.7 per cent reporting diarrhoea, and 7.5 per cent reporting ARIs. Measles vaccination reported by

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8 FAO Monthly Food Security Update, North Darfur, March and April 2007
Emergency levels. Preliminary results report populations have settled in resident villages. South Darfur during the period 16-23 April. While there is no statistically significant difference between these results and the results of the nutrition survey carried out in the same locality in February 2006, in which GAM was reported as 13.2 per cent and SAM was reported as 2.3 per cent.

The under-5 mortality rate is reported as 1.02/10,000/day, below alert level, while the crude mortality rate reported as 1.07/10,000/day is at the alert level. There is no statistically significant difference between rates or mortality reported in February 2006 and April 2007. Primary identified causes of death for children under five included diarrhea, malaria and ARIs, while primary identified causes of death for people above five included bloody diarrhea and malaria.

Over half (53.3 per cent) of caretakers reported a child’s illness within the previous two weeks. While specific morbidities were not medically confirmed, caretakers categorized the illnesses as malaria/fever (43.6 per cent), ARI/cough/difficult breathing (28.7 per cent) and diarrhoea (18.0 per cent). However, knowledge and practices that could prevent these morbidities are low in the community, in part due to access issues. For example, vaccination against measles (verbal or report or confirmed by immunization card) was reported as 48.2 per cent. Less than one third (27.5 per cent) of children 9-59 months had received Vitamin A in the last 6 months.

Caretakers reported limited access to safe water (primarily related to distance and overcrowding of water points) as well as limited access to latrines.

In order to prevent deterioration during the coming months, the agency made preliminary recommendations including integration of nutrition services into health services, strengthening delivery of primary health care services (Vitamin A for children 9-59 months and post partum women), work at the community level to increase knowledge of iodized salt and basic health and hygiene practices as well as increase access to safe water and sanitation facilities, and widening of the evidence base through carrying out a food security assessment.

Selective feeding centre data
Admissions into SFCs almost tripled in March/April compared to January/February. There were 943 admissions in March, and 870 in April, well below admission rates reported during the same time period in 2006 (see Graph 5). Admissions into TFCs also increased dramatically, from 284 in March and 432 in April, which is almost double the admission rates observed in 2006 (see Graph 6). Increases in admissions are in part attributable to increases in reported diarrhoea cases, but further investigation into underlying causes for this increase is recommended.

Performance indicators for SFCs were below SPHERE standards. Recovery rates improved in March (74.4 per cent) relative to February but fell to 63.2 per cent in April. Defaulting rates improved in March (15.4 per cent) compared to February, but deteriorated in April (19.6 per cent).

Performance indicators for TFCs steadily declined in relation to the previous reporting period. Recovery rates remain below SPHERE standards, from 66 per cent in March and 51 per cent in April. Death rates and defaulting rates remained below 10 per cent.

Sentinel site system
Data was collected from 14 sites in March and April. Population movement into both village and camp sites was reported.

Mean WHZ score in March (-1.13) and April (-1.02) indicates a slight deterioration in population nutrition status compared to the previous reporting period where mean WHZ was reported as -0.97. Mean WHZ reported during March/April is also slightly lower than mean WHZ.
reported in the EFSNA 2006 (-0.92). This deterioration is to be expected at this time of the year.

Diarrhoea, ARI, and malaria continue to be the main cause of morbidity among children under five, though focus group discussions reported eye infections as an additional concern. While more than 90 per cent of children reported an illness in the last two weeks in February, just over half of the children reported illness in the previous two weeks in March and April, potentially indicating localised improvement in the situation.

Dietary intake is similar to the previous reporting period, with the majority of children under five having 2 to 3 meals a day, and adults reporting 2 to 3 meals per day. Dietary diversity remains low and reliant on cereals and oil, with limited intake of dark green leafy vegetables, animal and vegetable proteins, and dairy, though this trend is more pronounced in IDP populations relative to resident populations. Low dietary diversity may predispose the population to micronutrient deficiency diseases.

Food aid as well as food purchase (from the sale of items other than food aid) continues to play a large role in both resident and IDP sites, though residents report contribution from their own production as well as trade.

Coping strategies reported did not differ between IDP and resident sites. These included shifts to less preferred foods as well as engaging in new income generating activities, as well as reducing the number of meals eaten in a day (though this was not corroborated by dietary intake data).

Food security
There is some concern reported in relation to adequate fodder and water resources that existing supplies might not be sufficient with the onset of the dry season, which could translate into further reductions in availability and access to food in some areas in the coming months. Ongoing monitoring is recommended.

West Darfur- deterioration in nutrition situation

The influx of refugees from Chad continues, reported in Umshalaya, Beida locality, and Furbaranga. Concern suspended the OTP/SFP in Romalya village (Geneina locality) in March due to insecurity. The increase in bloody diarrhoea cases is under investigation at state level.

Localised nutrition surveys
The table below provides a summary of the most recent nutrition survey conducted in West Darfur.

<table>
<thead>
<tr>
<th>Location</th>
<th>Agency</th>
<th>Date</th>
<th>% GAM</th>
<th>% SAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furbaranga</td>
<td>SC-US</td>
<td>Feb 07</td>
<td>7.9 (6.2-9.9)</td>
<td>0.6 (0.2-1.4)</td>
</tr>
</tbody>
</table>

SC-US carried out a nutrition survey from 10-19 February in Furbaranga. Preliminary results suggest that the nutrition situation appears to be stable, with GAM for children 6-59 months reported below emergency levels at 7.9 per cent, and SAM reported at 0.6 per cent with no cases of oedema. The results are much improved compared with results from 2004 (GAM 24.8 per cent).

The mortality rate for children under-5 (1.47/10,000/day) is below alert levels, however the crude mortality rate (1.21/10,000/day) is above alert levels. Primary identified causes of death for children under five included malaria, while primary identified causes for people above five years included respiratory and causes.

Preliminary recommendations by the agency included extension and improvement of health, food distribution, water and sanitation, education and protection programmes in the Furbaranga administrative unit, as well as development of programmes to address the needs of children under 5 years of age.

Selective feeding centre data
Admissions into SFCs fluctuated, dropping from 988 in February to 926 in March, and increasing to 1,052 in April. Admissions were highest compared to the other states, and are higher than levels reported in 2006. This may be due in part to population movement, as well as seasonal increases in illness (see Graph 7). Admissions into TFCs steadily increased from 72 in February to 122 in March and 155 in April, higher than levels reported in 2006 (see Graph 8). This may be due in part to the proportionally large number of cases of bloody diarrhoea reported in West Darfur as well as the higher number of TFCs in West Darfur relative to other states.

Performance indicators for SFCs in terms of recovery and defaulting were below SPHERE standards in March (recovery 50.9 per cent, defaulting 31.3 per cent) and April (recovery 55.7 per cent, defaulting 26.1 per cent). Death rates met SPHERE standards.

Performance indicators for TFCs were below SPHERE standards for recovery and defaulting in March (recovery 59 per cent, defaulting 16 per cent) and April (recovery 57 per cent, defaulting 18 per cent), though death rates met standards in April.

Graph 7: SFC Admissions - West Darfur

Sentinel site system

Data was collected from 16 sites in March and April. Population influx was reported from most of the sites.

Mean WHZ score in March (-0.69) and April (-0.93) indicates a slight deterioration in population nutrition status, however this figure is in line with the mean WHZ score reported at the same time in 2006 (-0.89) and the EFSNA 2006 (-0.88).

The majority of children under five were reported to have experienced an illness in the previous 2 weeks, indicating that some action may be required to increase access to services and strengthen knowledge and practices to prevent and treat illnesses. Diarrhoea and malaria continue to be the most commonly identified illness for children under five.

The majority of children under five are reported as having 3 meals a day, while the majority of adults reported 2 meals per day. Dietary diversity is low for both resident and IDP sites, with reliance on cereals and oil, with limited intake of dark green leafy vegetables, animal and vegetable proteins, and dairy. Low dietary diversity may predispose the population to micronutrient deficiency diseases.

Food security

Overall the food security situation is reported to be stable with the exception of some areas in which food shortages are reported, as households still have some millet and sorghum from the 2006 harvest. Availability in terms of market supply of staple foods and vegetables appear to be high. The outbreak of sheep pox in April was dealt with through rapid despatch of drugs, vaccines and equipment. Ongoing monitoring is recommended.

CONTACT

Online: The “Darfur Nutrition Update” is now available online. Check the following link for this issue and previous issues http://www.unicef.org/emerg/darfur/files/

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