

# Nutrition Information in Crisis Situations

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# Highlights

**SOMALIA—WORSENING SITUATION IN SOUTHERN SOMALIA**— Failure of the *Deyr* rains, compounded by the previous poor *Gu* season, has led to a rapidly deteriorating food security situation in Southern Somalia, which will not improve at least until the next rainy season in June 2006.

The combined *Gu* and *Deyr* harvests are estimated as being the worse in a decade. About 1,700,000 people are expected to be in a humanitarian emergency or acute livelihood crisis until June 2006. The Somali president has appealed for US\$ 60 million in aid.

**SUDAN—SITUATION STILL FRAGILE IN DARFUR**—More than two million people were still considered affected by the crisis as of December 2005. Large scale nutrition and mortality surveys conducted in Darfur within the last few months showed a precarious nutrition situation at Greater Darfur level with North and South Darfur showing higher rates than West Darfur, where the nutrition situation was average. Mortality rates were below alert thresholds. The situation seemed better in 2004 than in 2005. The food security seemed also to have improved somewhat compared to 2004, especially among the IDPs.

In South Sudan, food security for the forthcoming dry season (January–April 2006) is expected to be overall better than last year as a result of an improvement in crops, fish and wild food availability and better access to water and pasture. Even Northern Bhar el Ghazal has shown a temporary improvement in food security although chronic food insecurity still persists.

**NIGER—SITUATION STILL PRECARIOUS**—The situation in Niger is still precarious despite a good 2005 agricultural season which has improved food availability and access. Millet prices decreased by 50% in November 2005 compared to August the same year but remained 9% higher than the average price for the same month over the last five years. Food insecurity continues to prevail in some areas, partly due to the consequences of the crisis, such as high levels of debt, loss of assets and limited food stocks. Concerted plans are being organised to answer the food insecurity in both the short and long term, and the capacity to monitor and assess the food security situation has been strengthened. Preliminary results of a national nutrition survey showed high levels of acute malnutrition.

**BURUNDI—SITUATION DETERIORATING IN NORTH-EASTERN PROVINCES**—The food security situation has been deteriorating in Burundi over the last few months, mostly due to poor weather conditions. North-Eastern provinces have been especially affected. Last harvests were below "normal" and food prices have remained high. The food deficit was estimated at 334,000 in 2005 compared to 254,000 in 2004. Admissions to feeding centres were higher in 2005 than in 2004. Food distributions have been scaled up, with planned distribution for the period of November 2005–March 2006 of double the quantity of the January–November 2005 distribution.

**UGANDA—IMPROVED FOOD SECURITY IN THE IDP CAMPS BUT MORTALITY REMAIN HIGH**—A food security assessment conducted between March and May 2005 revealed an improvement in the food security situation in the IDP camps, especially in Gulu and Pader districts, compared to the same period in 2004. This can be partly attributed to regular food distributions and improved access to land. On the other hand, public health was still very poor. According to a survey conducted in July 2005 crude mortality rates and under-five mortality rates were above alert threshold and even above emergency threshold for under-five mortality in Kitgum and Pader districts. Fever/malaria and HIV/AIDS were the main self-reported causes of deaths.

**PAKISTAN—FOOD INSECURITY FOR EARTHQUAKE AFFECTED PEOPLE**—An earthquake occurred in Pakistan on 8 October 2005, causing major destruction, about 73,000 deaths and 69,000 severely wounded in North West Frontier province (NWFP) and in Azad Jammu and Kashmir province. Of the 5.5 m population, it is estimated that 3.2 to 3.5 m people were affected, including 2.5 m homeless now living in tents or in transitional shelters. An assessment conducted in late November showed that the food security of the affected population is highly compromised, and will continue to be until at least the end of 2006.

## Risk Factors affecting Nutrition in Selected Situations

Situations in the table below are classed into five categories relating to prevalence and or risk of malnutrition (I—very high risk/prevalence, II—high risk/prevalence, III—moderate risk/prevalence, IV—not at elevated risk/prevalence, V—unknown risk/prevalence; for further explanation see section "Indicators and classification" at the end of the report).

The prevalence/risk is indirectly affected by

both the underlying causes of malnutrition, relating to food security, public health environment and social environment, and the constraints limiting humanitarian response. These categories are summations of the causes of malnutrition and the humanitarian response, but should not be used in isolation to prescribe the necessary response.

	<b>SOMALIA</b> Affected populations in the South	<b>SUDAN</b> Darfur	<b>NIGER</b>	<b>UGANDA</b> IDPs in the North	<b>BURUNDI</b>	<b>TANZANIA</b> Refugees	<b>PAKISTAN</b> Earthquake affected populations
Nutritional risk category	II	II	II	III	III	III	II
<b>FOOD SECURITY</b>							
Households' livelihoods	☹	☹	☺	☺	☺	☺	☹
External assistance	☹	☺	☺	☺	☺	☺	☺
<b>PUBLIC HEALTH ENVIRONMENT</b>							
Availability of water and access to potable drinking water	?	☺	?	☹	?	?	?
Health care	☹	☺	☺	☹	☺	?	?
Sanitation	?	☺	?	☺	?	?	?
<b>SOCIAL AND CARE ENVIRONMENT</b>							
Social environment	☹	☹	?	☹	☺	?	?
Child feeding practices	?	☺	?	?	☺	?	?
<b>DELIVERY OF ASSISTANCE</b>							
Accessibility to population	☹	☹	☺	☹	☺	☺	☹
Resources for humanitarian Intervention	?	☺	☺	☺	☺	☺	☺
Availability of information	☺	☺	☺	☺	☺	☺	☺



ADEQUATE



MIXED



INADEQUATE

# Greater Horn of Africa



## Ethiopia

Protests over the results of the May presidential elections erupted in June and continued in November (IRIN, 29/12/05). About 100 people were killed during the disturbances and more were arrested. Concerned by the government attitude, donors have put US \$375 million in budget support to the government on hold. Funds will be disbursed in other ways in the country.

## Extreme food insecurity in Somali region

The *Deyr* rainy season (October-December) was very poor in Somali region, badly affecting the livelihoods of one million people (FEWS, 26/12/05). The situation is alarming and will further deteriorate during the dry season from January to March. The worst affected areas are those which also experienced poor rains during the preceding *Gu* season, i.e. Liban, Afder and parts of Gode zones. Somali region has been experiencing adverse conditions over the few years, including droughts, high cereal prices, a livestock import ban from the Gulf states, and conflicts.

Sufficient food aid resources are available but interventions to protect animals are also imperative and need funding.

Random-sampled nutrition surveys conducted in Fik zone in June 2005 showed a worrying

nutrition situation (table 1) and a deterioration compared to the same period in 2004 (SC-UK, 05/05). Measles immunisation coverage was low and health delivery system is overall very poor. However, mortality rates were not critical.

TABLE 1 RESULTS OF SURVEYS IN FIK ZONE, SOMALI REGION, ETHIOPIA (SC-UK, 05/05)

% Acute Malnutrition (95% CI)	% Severe Acute Malnutrition (95% CI)	Measles immunisation coverage (%)*
<b>FIK AND HAMARO DISTRICTS</b>		
16.1 (13.6-18.7)	1.2 (0.5-1.9)	28.3
<b>DUHUN AND SEGEG DISTRICTS</b>		
20.7 (17.2-24.2)	1.8 (0.9-2.6)	27.1

\* According to cards or mothers' statements

## Improved prospects for 2006

In the rest of Ethiopia, although the situation remains fragile, the harvest was good according to preliminary results of assessments and the number of people in need of assistance in 2006 is expected to be the lowest in recent years (FEWS, 11/05).

Several surveys conducted within the last months showed contrasting results, ranging from critical to acceptable nutrition situations (table 2).

TABLE 2 RESULTS OF SURVEYS IN ETHIOPIA (SC-UK, 06/05; GOAL, 06/05; GOAL, 09/05; GOAL, 10/05; CONCERN, 12/05)

District	Date	% Acute Malnutrition (95% CI)	% Severe Acute Malnutrition (95% CI)	Measles immunisation coverage (%)*	Crude Mortality (/10,000/day)	Under 5 Mortality (/10,000/day)
<b>AMAHARA REGION, WAG HAMRA ZONE</b>						
Dehana	June-05	16.1 (13.8-18.3)	1.1 (0.4-1.8)	71.5	0.24	0.94
Sekota	June-05	14.8 (12.6-17.1)	0.9 (0.2-1.6)	68.3	0.27	0.4
<b>OROMYA REGION, WEST HARAGHE ZONE</b>						
Kuni	June-05	6.1 (4.7-7.9)	0.1 (0.0-0.7)	39.4	0.21	0.49
<b>AFAR REGION, ZONE 2</b>						
Abala	Oct-05	13.6 (11.5-16.0)	0.5 (0.2-1.2)	64.4	0.48	1.36
<b>SSNPR, SIDAMA ZONE</b>						
Dale	June-05	15.9 (12.8-19.6)	1.7 (1.1-2.4)	72.1	0.21	0.34
Awassa Zuria	Sept-05	4.6 (2.7-7.4)	0.5 (0.2-1.4)	58.0	0.17	0.5
<b>SSNPR, WOLAYITA ZONE</b>						
Damot Woyde	Dec-05	4.0 (2.5-6.4)	0.3 (2.5-6.4)	51.4	0.1	0.58
Offa	Dec-05	4.7 (3.0-7.2)	0.3 (0.0-1.6)	57.5	0.2	0.5

\* According to cards or mothers' statements

## Kenya

Failure of the short rainy season has compounded the already poor situation in eastern and northern Kenya (FEWS, 19/12/05). Malnutrition rates have been reported as being very high in Wajir, Mandera and Marsabit districts.

The need for emergency food aid is expected to expand from the current caseload of 1.14 million. More precise information will be available at the beginning of February when in-depth assessments will be completed. However, mobilisation to ensure that the food pipeline is replenished is urgently required.

## Somalia

### Worsening situation in Southern Somalia

Failure of the *Deyr* rains, compounded by the previous poor *Gu* season, has led to a rapidly deteriorating food security situation in Southern Somalia, which will not improved at least until the next rainy season in June 2006 (FSAU, 20/12/05; FSAU, 12/05).

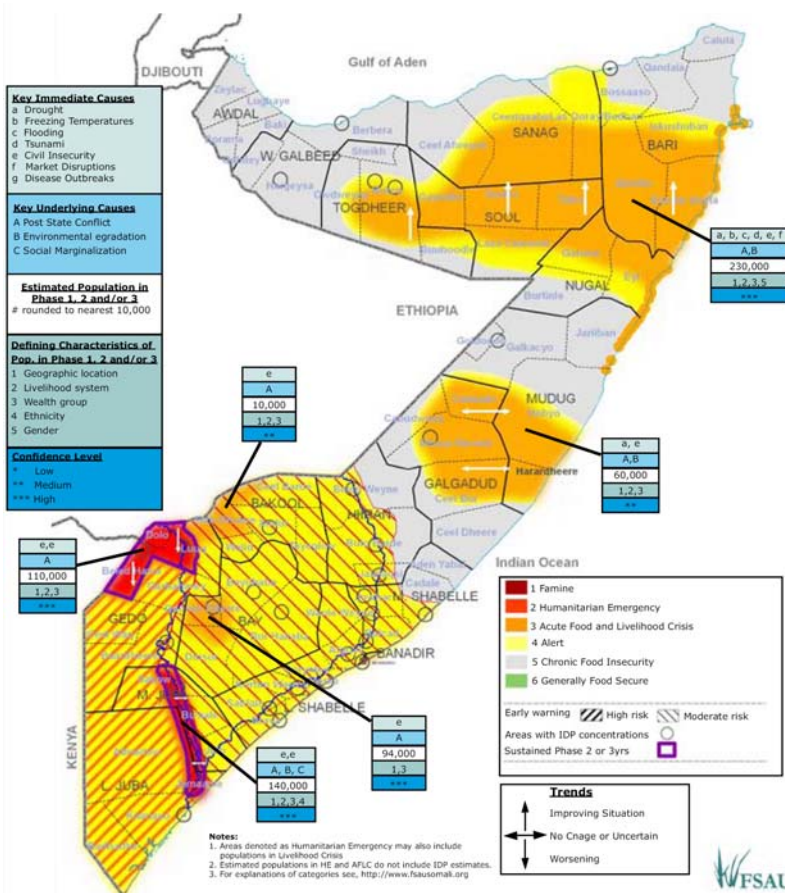
The combined *Gu* and *Deyr* harvests are estimated as being the worse in a decade; the *Gu* harvest was only 44% of the post-war average

(FSAU, 11/05). About 1,700,000 people are expected to be in a humanitarian emergency or acute livelihood crisis until June 2006 (see map). The Somali president has appealed for US\$ 60 million in aid (AFP, 29/12/05).

Rapid nutrition assessments in sentinel sites conducted in Bay region showed an extremely worrying situation in Qansaxdheere, the northern part of Dinsor and Berdaale districts, with between 25% and 45% of the children surveyed being malnourished (FSAU/N, 10/05). In addition to the poor food security situation, civil insecurity has increased in the area from late 2004.

In Bakool region, nutrition surveillance showed levels of acute malnutrition ranging from 10% to 45% (FSAU/N, 12/05), while in Gedo region, between 15% and 35% of the children surveyed were acutely malnourished (FSAU/N, 11/05).

INTEGRATED FOOD SECURITY PHASE CLASSIFICATION (FSAU, 12/05)



### Contrasting situations for IDPs and returnees

In Togdheer region, according to a rapid nutrition assessment among IDPs/returnees in Burao, about 15% of the 186 children surveyed were acutely malnourished (FSAU/N, 11/05). This is within the same range as results of a nutrition survey conducted in 2003. People have low income opportunities and weak social support. Basic needs are also not well covered. A random-sampled nutrition survey was carried out in IDP camps in Mogadishu in September 2005 (FSAU/N, 12/05). The results showed a precarious situation which has not improved compared to 2000 and 2004 (figure 1). Measles coverage and vitamin A supplementation seemed to have decreased compared to last year. The main source of income was casual work for 76% of the households. Some of the key constraints to improving the situation are continuing civil insecurity and limited

TABLE 3 RESULTS OF A NUTRITION SURVEY AMONG IDPs/RETURNEES IN HARGEISA, SOMALILAND (FSAU/N, 09/05)

% Acute Malnutrition (95% CI)	% Severe Acute Malnutrition (95% CI)	Measles immunisation coverage (%)*	Vitamin A distribution (%)
7.6 (6.0-9.5)	1.2 (0.6-2.2)	44.7	53.5

\* According to cards and mothers' statements

economic development and humanitarian access.

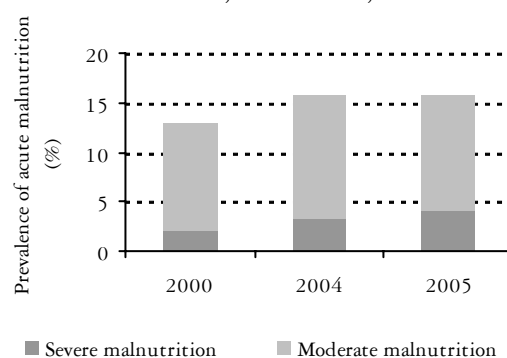
In Hargeisa, a random-sampled survey conducted among IDPs/returnees in September 2005 showed average prevalence of acute malnutrition (table 3) (FSAU/N, 09/05). The situation has improved compared to 2001 and 2003 when it was 16.3% and 15.3%, respectively. This amelioration has been attributed to an increase in the number of refugees having access to casual labour from 31% in 2003 to 64% in 2005, due to an overall improvement in the economy in Hargeisa. Access to basic services such as health care, water and sanitation has also increased as a result of NGOs, UN and government efforts, but remains limited. In addition, a significant number of refugees/IDPs have been relocated into permanent settlements.

### North and Central regions

Although they have generally experienced good *Deyr* rains, parts of the regions are still experiencing an acute food and livelihood crisis, affecting about 290,000 people (FSAU, 20/12/05).

In Nugal region, a random-sampled nutrition survey conducted in Dangoroyo and Eyl districts in August 2005 revealed an average situation: 8.9% (7.2-11.0) of the children were acutely malnourished, including 1.9% (0.5-2.9) severely malnourished (FSAU/N, 08/05). Mortality rates were below alert thresholds: CMR = 0.78/10,000/day and < 5 MR = 1.33/10,000/day. The average situation of this population despite having been exposed to numerous traumas such as the tsunami and effects of drought is attributed to an improvement of the food security situation following good 2005 *Gu* rains and access to humanitarian assistance.

FIGURE 1 PREVALENCE OF ACUTE MALNUTRITION AMONG IDPS, MOGADISHU, SOMALIA



## Recommendations

### From the FSAU

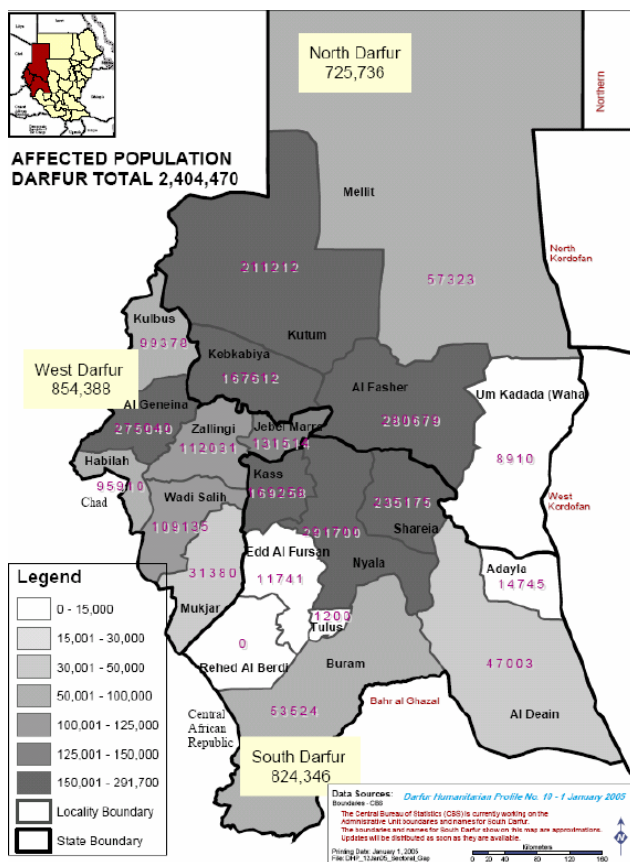
- Immediate livelihood support interventions for pastoralists at high risk of acute food and livelihood crisis in Gedo and Juba regions
- Increased humanitarian assistance to support the basic needs of populations in humanitarian emergencies in Gedo and Juba regions
- Stepped-up efforts at peace and reconciliation to prevent or mitigate widespread conflict, which would be the trigger factor leading to a major humanitarian emergency throughout Southern Somalia
- Prepositioning of donor support to respond according to assessment findings of the FSAU and partners' expanded *Deyr* assessment in Southern and Central Somalia.



## Sudan Darfur

The security situation in Darfur remains highly unstable. Peace talks are on-going but with no significant achievement as yet (IRIN, 20/01/06). More than two million people were still considered affected by the crisis as of December 2005 (see map).

AFFECTED POPULATION BY LOCALITY,  
DARFUR (HIC, 28/12/05)



There were two large scale nutrition and mortality surveys conducted in Darfur within the last few months. The first one was a random-sampled nutrition survey conducted in Greater Darfur in August-September 2005, during the lean season, as a follow-up of the survey conducted in September 2004 (WFP/joint, 12/05). As in September 2004, the target population was the IDPs and the residents considered affected by the crisis, or approximately 3.2 m in the 2005 survey (representing about 66% of the total population), double the number of the 2004 survey. The survey was de-

signed to adequately measure the prevalence of acute malnutrition in each Darfur state and in Greater Darfur. The results showed a precarious nutrition situation at Greater Darfur level with North and South Darfur showing higher rates than West Darfur, where the nutrition situation was average (table 4). Although not directly comparable because the populations studied were not the same, the 2005 survey showed a better situation than the 2004 one when prevalence of acute malnutrition was 21.8% (18.2-25.3). Mortality rates were below alert thresholds (table 4) and seemed also to be lower than in the 2004 survey. However, 16.2% of the deaths were still related to violence.

According to the analysis of food consumption and the share of household expenditure on food, food security seemed to have improved somewhat compared to 2004, especially among the IDPs (box 1). The proportion of households with acceptable food consumption has improved overall from 31% in 2004 to 58% in 2005, with an increase from 14% to 51%, 31% to 55% and 47% to 65% among the IDPs in camps, IDPs in host communities and resident population, respectively. Large scale food aid is considered to be an important factor of this improvement. About 58% of the households received WFP food distribution. Part of the food distribution was traded, mostly in IDP camps, in order to get other food commodities, to have cereals milled and to pay for fuel, education and medication. Public health and access to safe drinking water and sanitation were average as were child-feeding practices (table 4) (box 1).

About 73% of the households consumed iodised salt containing at least 15 ppm of iodine, as tested during the survey. 91.5% of the salt received during the food distribution was iodised.

The second survey was a follow-up of the mortality survey conducted in August 2004 by WHO/EPIET (WHO, 09/05). According to this survey, mortality rates were below emergency thresholds in all affected populations (IDPs in camps, IDPs in host population and affected resident populations), except for under-five mortality rate in IDP camps in South Darfur (table 4). Due to security constraints,

no data could be recorded for the other population groups in South Darfur. When compared to the 2004 survey, there are indications that mortality rates have substantially decreased in IDP camps. Mortality related to injury was widespread, especially in North Darfur where it accounted for 9%, 34% and 55% among IDPs in camps, IDPs in host population and residents respectively.

Smaller scale surveys were also conducted throughout Darfur (table 4). In Abu Shok

camp and the adjacent As Sallaam camp, prevalence of acute malnutrition has steadily decreased since June 2004 (figure 2) but remained precarious as of November 2005 (ACF-F, 11/05). The same pattern was observed for mortality rates, which were below alert threshold in November 2005 (figure 2). The appalling rate of under-five mortality in June 2004 was explained by a measles outbreak. While measles vaccination coverage has improved since then, it remained lower than recom-

BOX 1 FOOD SECURITY, PUBLIC HEALTH ENVIRONMENT AND CHILDREN FEEDING PRACTICES, DARFUR, AUGUST-SEPTEMBER 2005 (WFP/JOINT, 12/05; WHO, 09/05)

FOOD SECURITY

Food secure: 26%\* (18.6%, 26.2% and 36.1% among IDPs in camps, IDPs in host communities and residents, respectively)

Vulnerable: 28% (27.6%, 30% and 28.3% among IDPs in camps, IDPs in host communities and residents, respectively)

Food insecure: 46% (53.8%, 43.8% and 35.6% among IDPs in camps, IDPs in host communities and residents, respectively).

Land cultivation: 51% (79% of the residents and 19% of IDPs in camps) vs 34% in 2004  
 Increase of areas planted because improvement of the security situation and availability of seeds  
 75% received at least one agricultural tool  
 Livestock situation the same as in 2004  
 Below typical market functioning

Recipients of food aid during the month preceding the interview

IDPs in camps: 81%, 86% and 71% in North, West and South Darfur, respectively\*\*

IDPs in host population: 64%, 52% in North and West Darfur, respectively\*\*

Affected residents: 47% and 73% in North and West Darfur, respectively\*\*

PUBLIC HEALTH

Access to safe drinking water : 66.2%

IDPs in camps: 95%, 61% and 72%, in North, West and South Darfur, respectively\*\*

IDPs in host population: 46%, 49% in North and West Darfur, respectively\*\*

Affected residents: 32% and 45% in North and West Darfur, respectively\*\*

Access to latrines: 58.2%

Soap in the house: 50.7%

Seek treatment for illness: 63.8%

(among them, 50% at health facilities supported by an NGO, 17% at a hospital, 10% at a government clinic)

CHILDREN FEEDING PRACTICES

Duration of breastfeeding: 15.9 months

Exclusive breastfeeding 0-6 months: 65.7%

Average age of introduction of complementary foods: 4.7 months

\* % of the interviewed families

\*\* From WHO survey



TABLE 4 RESULTS OF SURVEYS IN DARFUR, SUDAN (ACF-F, 10/05; ACF-F, 11/05; CONCERN, 07/05; GOAL, 10/05; WFP/JOINT, 12/05; WHO/MOH, 09/05)

Location	Date	Agency	% Acute Malnutrition (95% CI)	% Severe Acute Malnutrition (95% CI)	Measles immunisation coverage (%)*	Crude Mortality (/10,000/day)	Under 5 Mortality (/10,000/day)
<b>GREATER DARFUR</b>							
Emergency affected populations	Sept-05	WFP/joint	11.9 (10.3-12.6)	1.4 (0.9-2.0)	69.8	0.46 (0.36-0.55)	0.79 (0.5-1.09)
<b>NORTH DARFUR</b>							
Emergency affected populations	June-05	WHO/MOH	-	-	-	0.8 (0.6-1.0)	1.5 (1.0-2.1)
IDPs in camps	June-05	WHO/MOH	-	-	-	0.8 (0.5-1.0)	1.5 (0.9-2.4)
IDPs in host population	June-05	WHO/MOH	-	-	-	0.9 (0.6-10.3)	1.8 (0.8-3.4)
Residents	June-05	WHO/MOH	-	-	-	1.1 (0.7-1.7)	1.1 (0.7-1.7)
Emergency affected populations	Sept-05	WFP/joint	15.6 (12.3-18.8)	1.4 (0.7-2.2)	62.3	0.46 (0.3-0.55)	-
Kekabiya town	Oct-05	ACF-F	18.2 (14.9-22.1)	0.7 (0.2-2.1)	72.3	0.73	1.71
<b>WEST DARFUR</b>							
Emergency affected populations	June-05	WHO/MOH	-	-	-	0.6 (0.5-0.8)	0.9 (0.6-1.3)
IDPs in camps	June-05	WHO/MOH	-	-	-	0.8 (0.5-1.2)	1.0 (0.5-1.7)
IDPs in host population	June-05	WHO/MOH	-	-	-	0.5 (0.3-0.8)	0.8 (0.5-1.4)
Residents	June-05	WHO/MOH	-	-	-	0.4 (0.3-0.6)	0.7 (0.2-1.7)
Emergency affected populations	Sept-05	WFP/joint	6.2 (4.3-8.1)	0.7 (0.0-1.5)	67.3	0.57 (0.36-0.78)	-
Golo, Gildu & Rokero,	Oct-05	GOAL	13.5 (11.4-15.9)	0.4 (0.1-1.2)	83.6	1.79	2.32
Jebel Mara Seleia & Kulbus	Jul-05	Concern	16.2 (13.3-19.6)	1.9 (1.0-3.2)	-	0.56	1.03
<b>SOUTH DARFUR</b>							
IDPs in camps	June-05	WHO/MOH	-	-	-	0.8 (0.6-1.2)	2.6 (1.6-3.9)
Emergency affected populations	Sept-05	WFP/joint	12.3 (9.2-15.2)	2.1 (0.8-3.3)	81.3	-	-
Sanya Afendu & surrounding villages	Nov-05	ACF-F	11.6 (8.9-14.9)	1.1 (0.4-2.7)	82.7	0.27	0.46

\* According to cards or mothers' statements

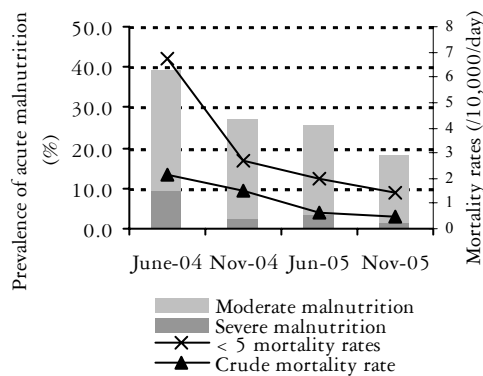
mended with only 73% coverage. Most of the families were receiving food distributions, but only 7.4% of the families arriving after August 2005 were registered for food distribution. A registration of these families was under way at the time of the survey.

In Kebkabiya town, which hosts a number of IDPs, the nutrition situation has not changed since August 2004 and remained serious as of

October 2005 (table 4), although the majority of the households are registered for food distribution (ACF-F, 10/05). On the other hand, mortality rates have significantly decreased and were below alert threshold.

In Jebel Mara, West Darfur, the prevalence of acute malnutrition was still significant as of October 2005 (table 4), during the harvest pe-

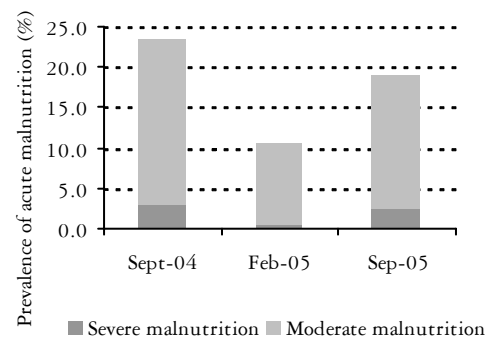
FIGURE 2 TRENDS IN PREVALENCE OF ACUTE MALNUTRITION AND MORTALITY RATES, ABU SHOK CAMP, NORTH DARFUR



riod, although it had declined compared to March 2005 (GOAL, 10/05). There is no IDP camp in the area, but IDPs are thought to make up one third to one half of the population. Food distributions have been erratic since the beginning of the crisis. Moreover, mortality rates were above alert thresholds (table 4). In Seleia and Kulbus, West Darfur, the prevalence of acute malnutrition had almost doubled in July 2005 compared to January the same year (table 4) (Concern, July 2005). It is difficult to know if the increase is only due to "normal" seasonal variation, as the first survey was done during the harvest period while the most recent was conducted during the hunger gap season, or if other factors have contributed to the deterioration of the situation. Food distributions seemed to have been irregular recently.

The same pattern was observed in Nyala town and IDP camps, South Darfur, where a random-sampled nutrition survey showed a worsening of the situation in September 2005 compared to February 2005 (post-harvest season) (figure 3) (ACF-F, 09/05). Furthermore, compared to September 2004, the overall nutrition situation has not improved. Mortality rates have remained under control. Although the surveys were not designed to derive the prevalence of acute malnutrition among resident and displaced population separately, there are indications that the situation was better among IDPs in September 2005 than one year before but had remained stable for the residents. In Kalma camp, South Darfur, the prevalence of acute malnutrition also showed the same

FIGURE 3 TRENDS IN PREVALENCE OF ACUTE MALNUTRITION, NYALA, SOUTH DARFUR



increase between February and August 2005 (figure 4), but the situation seemed to have somewhat improved in August 2005 compared to August 2004, although it has remained precarious (ACF-F, 08/05). Most of the displaced population was receiving general food distribution.

The prevalence of acute malnutrition was slightly better in Sanya Afendu and surrounding villages, South Darfur, according to a random-sampled survey conducted just after the harvest in November 2005 (table 4) (ACF-F, 11/05). Mortality rates were under control.

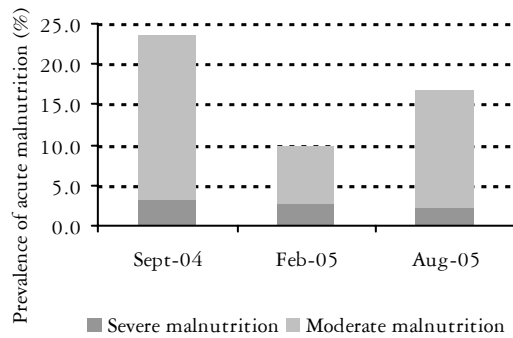
### Port Sudan, Red Sea state

A random-sampled nutrition survey conducted in Port Sudan town in August 2005 showed a poor situation: 11.5% (8.8-14.9) acute malnutrition, including 1.1% (0.4-2.7) severe acute malnutrition) which was comparable to the situation in December 2003 and in August 1997 (see RNIS 22) (ACF-F, 08/05).

### IDP camps, Kassala state

According to two surveys conducted in IDP camps in Kassala state, the situation was also precarious with a prevalence of acute malnutrition of 9.9% and 13.5% in Adraman and Dablawet IDP camp, respectively (GOAL, 05/05). Prevalence of acute malnutrition has, however, significantly improved compared to December 2004 when it was about 20%. This improvement is attributed to the implementation of a general food distribution to the IDPs and of a blanket-feeding programme for the under-fives.

FIGURE 4 TRENDS IN PREVALENCE OF ACUTE MALNUTRITION , KALMA CAMP, SOUTH DARFUR



### IDP camps and settlements, Khartoum state

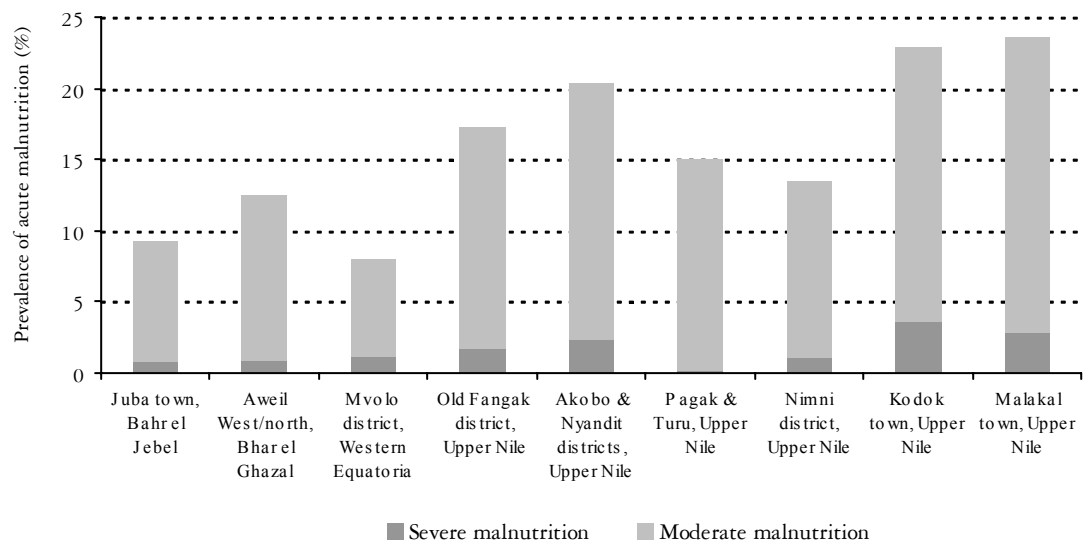
A rapid assessment conducted at the beginning of 2005 showed that the majority of the population had good access to health facilities but that health facilities were under utilized (MOH/WHO/UNIVEF, 05/05). The main reason for this seemed the cost of consultations and treatment. Some health facilities experienced drug shortages and vaccination coverage was below that recommended. The nutrition situation was not clear and seemed to vary depending on the camp and settlement.

### Southern Sudan

According to a UNICEF review of malnutrition trends, malnutrition was serious in some areas in 2005, but not significantly worse than in the three previous years (UNICEF, 10/05). The pattern of admissions to feeding centres seems to follow seasonal variation in access to food, with the highest numbers of admissions between April and October (UNICEF, 12/05). A plan among agencies and Government of South Sudan counterparts for 2006 seeks to reach the capacity of treating 10,000 patients through therapeutic feeding programmes and 50,000 children as well as pregnant and lactating women in supplementary feeding programmes. The plan also includes the establishment of a national public nutrition capacity and integration of nutrition into health care service to ensure minimum standards of nutrition services in 100 PHCUs, 20 PHCCs and four hospitals (UNICEF, 10/05).

Food security for the forthcoming dry season (January-April 2006) is expected to be overall better than last year as a result of an improvement in crops, fish and wild food availability and better access to water and pasture (FEWS, 12/05). Even Northern Bhar el Ghazal has shown a temporary improvement in food security although chronic food insecurity still persists (FEWS, 03/01/06).

FIGURE 5 PREVALENCE OF ACUTE MALNUTRITION , SOUTH SUDAN



UNHCR signed a tripartite agreement for the repatriation of refugees from Kenya. There are an estimated 550,000 Sudanese refugees, mainly in Uganda, Ethiopia, DRC and Kenya. It is expected that about 70,000 refugees will be repatriated in the first semester of 2006 (UNHCR, 13/01/06).

A survey conducted in Juba, Bahr el Jebel, showed an average nutrition situation (figure 5) which has remained stable for the past few years (ACF-F, 09/05).

The situation was also average, in Mvolo district, Western Equatoria (figure 5) (AAH-US, 09/05). This district is mostly agricultural and has known favorable weather conditions until last year.

On the other hands, surveys in Upper Nile showed a precarious to critical nutrition situation (figure 5) and especially in the towns of Kodok and Malakal where prevalence of acute malnutrition was above 20%. In Malakal town,

it has remained within the same range since August 2002.

In Old Fangak, although still precarious, the situation has improved compared to 2001, 2002 and 2003 when the prevalence of acute malnutrition was about 30%.

Mortality rates were under control in all areas surveyed, except in Kodok town.

## Overall

Although it seems to have improved compared to 2004, partly due to external assistance, the nutrition situation is still precarious and volatile in Darfur (category II). In South Sudan, the situation seems also to have improved in some areas, while it has remained critical in others (category II).

# West Africa

## Ghana

Ghana hosts about 62,000 refugees, mainly from Liberia (39,000) and Togo (16,000) (UNHCR, 12/05). While Liberian refugees are sheltered in camps, especially Buduburam camp, Togolese refugees, who fled their countries after the presidential election at the beginning of 2005, are settled among host communities in the Volta region.

A random-sampled nutrition survey conducted in Buduburam camp, hosting 42,000 refugees, mostly from Liberia, showed an average nutrition situation (table 5) (UNHCR/joint, 05/05).

The prevalence of wasting among refugees was higher than among the Ghanaian population in Central region in 2003, when it was 2.8% (DHS, 2003). 86.4% of the households used iodised salt. Mortality rates seemed under control. Ten thousand people were eligible for a general ration distribution of 2,100 Kcal.

These were new arrivals and vulnerable people targeted by social or medical criteria. Information on food security in the camp seemed scarce.



TABLE 5 RESULTS OF A NUTRITION SURVEY AMONG REFUGEES IN BUDUBURAM CAMP, GHANA (UNHCR, 06/05)

% Acute Malnutrition (95% CI)	% Severe Acute Malnutrition (95% CI)	Measles immunisation coverage (%)*	Vitamin A distribution	Crude Mortality (/10,000/day)	Under 5 Mortality (/10,000/day)
7.7 (6.1-9.6)	1.5 (0.9-2.6)	74.4	72.5	0.35	0.34

\* According to cards and mothers' statements

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## Ivory Coast

Violence erupted again in government's controlled areas of Ivory Coast following a recommendation made by an international group of negotiators to dissolve the interim parliament at the end of its term in office (Reuters, 23/01/06). Road blocks were erected and the "Jeunes Patriotes", supportive of Laurent Gbagbo, attacked UN bases, vehicles and residences for several days. The rioting ended when Gbagbo asked protesters to stop and announced that its party would return to peace process. UN and NGO bases were also attacked in the West of the country (OCHA, 20/01/06).

On the other hand, as of October 2005, the situation seemed to have somewhat normalised in West Ivory Coast (ACF-F, 11/05). The intensification of the presence of the peace-keeping forces has led to the return of a certain number of displaced people to their area of origin, although some pockets of insecurity persist. Agricultural activities have increased, allowing an improvement of the food security situation. Admissions to Zouan Houni TFC were about 100 children per month between May and October 2005, the seasonal peak of admissions (ACF-F, 11/05).

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## Liberia

The new president of Liberia, Ellen Johnson-Sirleaf, winner of the 8 November election, was sworn in on 16 January 2006 (Reuters, 16/01/06). She will face many challenges to the reconstruction of a country devastated by a 14-year civil war.

Returns of IDPs and refugees are on-going with 272,160 IDPs having received their return assistance package and meant to have returned to their places of origin, and about 43,100 refugees repatriated, mainly from

Guinea and Ivory Coast (UNHCR, 17/11/05; UNHCR, 03/01/06; UNMIL, 27/12/05). However, returnees still face difficult conditions. In Voinjama, Kolahun and Foya districts in Lofa county, one of the hardest hit by the war, the main problems faced by the returned households were cash, food, shelter, water and sanitation (ACF-F, 07/05). Moreover basic health services are still poor throughout Liberia (WHO-HAC, 22/01/06). Outbreaks of cholera and acute watery diarrhoea were reported in Tubnamburg and Zwedru (UNMIL, 01/12/05).

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## Niger

The situation in Niger is still precarious despite a good 2005 agricultural season which has improved food availability and access (FEWS, 19/12/05). Millet prices decreased by 50% in November 2005 compared to August the same year but remained 9% higher than the average price for the same month over the last five years. Food insecurity continues to prevail in some areas, partly due to the consequences of the crisis, such as high levels of debt, loss of assets and limited food stocks. Concerted plans are being organised to answer the food insecurity in both the short and long term, and the capacity to monitor and assess the food security situation has been strengthened.

A random-sampled nutrition survey was conducted in Niger at national and regional level

between mid-September and mid-October 2005 by UNICEF/CDC (WHO, 19/12/05). Preliminary results showed high levels of acute malnutrition (figure 6). Crude mortality rates seemed under control, while under-five mortality rates were above alert threshold in Zinder and Tahoua (figure 6). Other nutrition surveys were conducted in agricultural, agro-pastoral and pastoral zones of Maradi and Tahoua in the same period (ACH-S, 10/05) (table 6). They revealed a prevalence of acute malnutrition within the same range as the UNICEF/CDC survey and not different from surveys conducted in August 2005 (see NICS 7). The nutritional status of children under five was significantly better (although still serious) in the pastoral group than in the agro-pastoral group, which showed the highest prevalence. MUAC was measured among mothers and showed only 2 women with a MUAC < 185 mm in the

three zones together. 7.3%, 6.1% and 17.3% of the women had a MUAC  $\geq$  185 and  $<$  220 mm, showing an energy deficiency in the agricultural, agro-pastoral and pastoral zone, re-

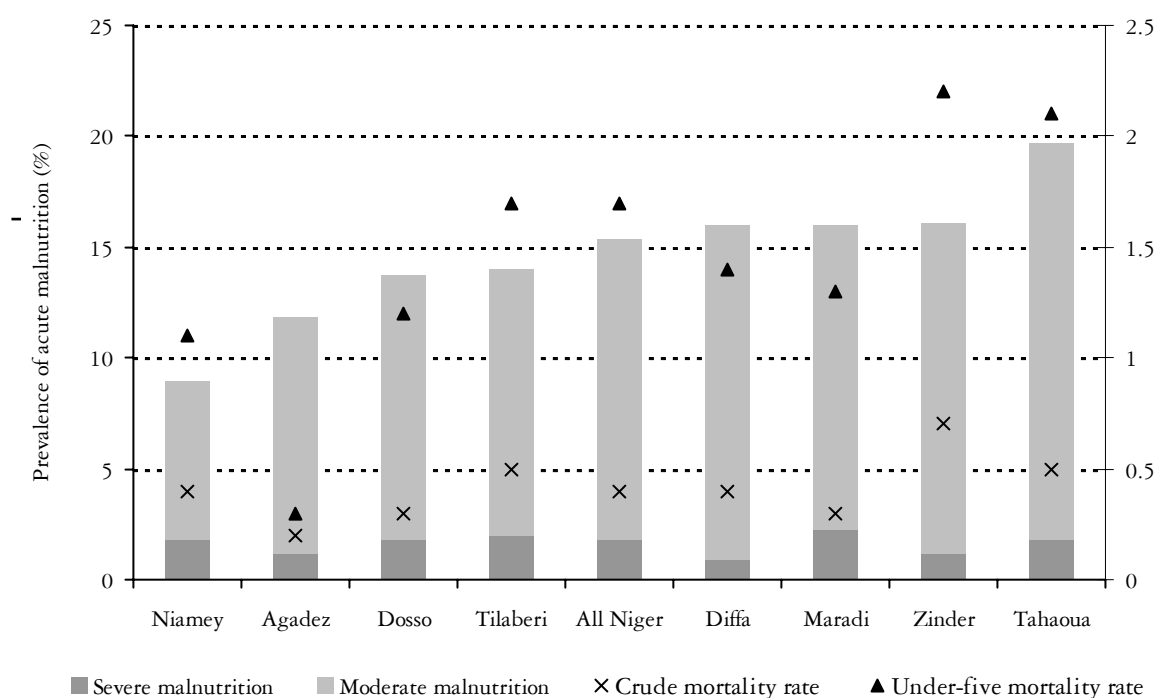
spectively. The percentage of families that had received food distributions varied from 44.8% in the agro-pastoral area to 27.4% in the agricultural zone and 9.1% in the pastoral zone.

TABLE 6 RESULTS OF NUTRITION SURVEYS IN MARADI AND TAHOUA REGIONS, NIGER (ACH-S, 10/05)

Zone	% Acute Malnutrition (95% CI)	% Severe Acute Malnutrition (95% CI)	Measles immunisation coverage (%)*	Crude Mortality (/10,000/day)	Under 5 Mortality (/10,000/day)
Agricultural	19.2 (16.6-21.8)	4.1 (2.8-5.5)	61.7	0.54	1.97
Agro-pastoral	24.7 (20.8-28.7)	5.4 (3.5-7.3)	52.9	0.45	1.63
Pastoral	16.4 (12.6-20.1)	2.8 (1.4-4.3)	42.5	0.54	1.73

\* According to cards and mothers' statements

FIGURE 6 RESULTS OF A NUTRITION SURVEY, NIGER (WHO, 12/05)



# Central Africa

## Burundi

The food security situation has been deteriorating in Burundi over the last few months, mostly due to poor weather conditions. North-Eastern provinces have been especially affected (SAP-SSA, 12/05). Last harvests were below "normal" and food prices have remained high. The food deficit was estimated at 334,000 in 2005 compared to 254,000 in 2004 (IRIN, 17/11/05). Admissions to feeding centres were higher in 2005 than in 2004. Food distributions have been scaled up, with planned distribution for the period of November 2005-March 2006 of double the quantity of the January-November 2005 distribution. Distributions of crops resistant to weather hazards have also been made. Nevertheless, migrations of Burundian to Tanzania have been reported (IRIN, 20/01/06).

Returns of refugees have decreased in late 2005. This might be due to the on-going insecurity because of the FNL activities and to the bad agricultural year. About 68,000 refugees went back to Burundi in 2005, mostly from Tanzania, of whom 66,400 were repatriated by the UNHCR (IRIN, 27/01/06). Pressure from Tanzania intensified at the end of 2005 and restrictive measures such as stopping all refugees from working for relief organisations in the camps, in compliance with Tanzanian law, have been implemented in Kibondo district (IRIN, 30/12/05).

## Average nutrition situation at national level

A national nutrition survey was conducted in February-March 2005 (MOH/joint, 09/05). According to the survey, the prevalence of wasting was 6.5% (5.9-7.0), and 0.2% of the children had oedema.

About 45% of the children less than six months old were exclusively breastfed, and 87.5% of the children 6-8 months old were receiving complementary food.

According to vaccination cards, only 29.7% of the 12-23 month olds were vaccinated against measles and 7.3% of the 6-59 month olds had received vitamin A during the previous six months.

A significant proportion of women had an energy deficiency (table 7), while more than 20% of the women in urban areas were overweight. The elderly were especially at risk of chronic energy deficiency.

The survey also revealed micro-nutrient deficiencies: 29.3% of the children were considered vitamin A deficient as they had a blood retinol concentration below 0.7 µmol/l. Moreover, 60.5% of the 7-12 year olds had a urinary iodine excretion of less than 100 µg/l, indicating an iodine deficiency, although among the samples of salt which were analysed for presence of iodine (87% of the families had salt in the house at the time of the survey), 98% was iodised. However, iodisation might have been below the level recommended.



TABLE 7 ANTHROPOMETRIC NUTRITIONAL STATUS OF 15-49 YEAR OLDS WOMEN AND OF ELDERLY (> 60 YEAR OLDS), BURUNDI, FEB-MAR, 2005 (MOH/JOINT, 03/05)

Population	Severe Chronic Energy Deficiency BMI < 16 (%)	Moderate Chronic Energy Deficiency 16 ≥ BMI < 18.5 (%)	Normal 18.5 ≥ BMI < 25	Overweight BMI ≥ 25
15-49 year olds	4.3	19.7	73.6	6.3*
elderly	11.3	46.2	52.1	1.7



## Precarious prevalence of acute malnutrition in Bujumbura rural

A nutrition survey was conducted in Muhuta, Mutambu and Mukike communes of Bujumbura rural in November 2005, which corresponds to the hunger-gap period (Concern, 11/05). Bujumbura rural, being the stronghold of the lone remaining guerrilla army (FNL) has known insecurity for years. The survey showed a precarious nutrition situation, although mortality rates were below alert threshold (table 8).

## Overall

Despite political and security improvement, the situation remains precarious in Burundi (category III), mostly due to poor last harvests and continuing insecurity, especially in Bujumbura rural.

TABLE 8 RESULTS OF A NUTRITION SURVEY IN BUJUMBURA RURAL, BURUNDI (CONCERN, 11/05)

% Acute Malnutrition (95% CI)	% Severe Acute Malnutrition (95% CI)	Measles immunisation coverage (%)*	Crude Mortality (/10,000/day)	Under 5 Mortality (/10,000/day)
9.0 (7.1-10.9)	0.3 (0.0-0.7)	85.9	0.43	0.83

\* According to cards and mothers' statements

## Democratic Republic of the Congo

Fighting has continued in East DRC, especially in South and North Kivu, Maniema and Katanga provinces and has led to population movements inside the country and to neighbouring countries, particularly Uganda (OCHA, 30/11/05; UNHCR, 27/01/06).

Nutrition surveys conducted in Malemba and Lwamba health zones, Katanga province, in August 2005, showed a nutrition situation which was not critical, but a crude mortality rate on the edge of the alert threshold (table 9) (AAH-US, 08/05). The prevalence of acute malnutrition was within the same range as in 2004. At the time of the survey, the area had been calm for several months.

TABLE 9 RESULTS OF NUTRITION SURVEYS IN MALEMBA N'KULU AND LWAMBA HEALTH ZONES, KATANGA, DRC (AAH-US, 08/05)

Zone	% Acute Malnutrition (95% CI)	% Severe Acute Malnutrition (95% CI)	Measles immunisation coverage (%)*	Crude Mortality (/10,000/day)
Malemba N'Kulu	4.5 (2.9-7.0)	0.2 (0.0-1.4)	83.4	1.1
Lwamba	5.3 (3.5-7.9)	0.3 (0.0-1.6)	69.8	1.0

\* According to cards and mothers' statements

## Uganda

### Improved food security in the IDP camps, Northern Uganda, but mortality remains high

A food security assessment conducted between

March and May 2005 revealed an improvement in the food security situation in the IDP camps, especially in Gulu and Pader districts, compared to the same period in 2004 (WFP, 09/05). This can be partly attributed to regular food distributions and improved access to land

and sources of income. IDPs have been entitled to a 74% ration since May 2004. In addition a higher number of households could cultivate in 2005 compared to 2004: 85% vs. 65% in Gulu district and 51% vs. 37% in Pader district. Access to land has remained stable in Kitgum district. The areas under cultivation have also increased from 0.5 to 2.52 acres in

Gulu and from 0.71 to 1.77 in Pader but has remained stable (around 0.70) in Kitgum. IDPs have access to different sources of food and income (box 2).

It was estimated that the Recommended Daily Allowance of 2,100 Kcal was met in Gulu, Kitgum and Pader districts, but that Lira experienced a 13% deficit.

BOX 2 FOOD SECURITY AND PUBLIC HEALTH ENVIRONMENT, IDPS, NORTHERN UGANDA, 2005  
(WFP/JOINT, 09/05; WHO, 07/05)

#### FOOD SECURITY

##### *MAJOR SOURCES OF INCOME*

Exploitation of natural resources

Labor for cash

Crop sales

Petty trade

Brewing

##### *MAJOR SOURCES OF FOOD*

Food aid

Own crop

Purchase

Gathering

##### *EXPENDITURE ON FOOD AS A PERCENTAGE OF TOTAL EXPENDITURE*

24%, 35%, 38% and 57% in Gulu, Kitgum, Pader and Lira, respectively

#### PUBLIC HEALTH

##### *ACCESS TO SAFE DRINKING WATER*

97% (88.5%\*\*), 87%, 86% (86.2%), 75% (86.6%) and 89.4% in Gulu, Lira, Pader, Kitgum districts and Gulu municipality, respectively

Time to collect water

4.2 (2), 3.6 (3.6), 2.5, 2.4 (3.5) and 1.3 hours in Gulu, Kitgum, Lira, Pader districts and in Gulu municipality, respectively

Average quantity (l) of water per person collected the day before the survey

11, 12.8, 9.7 and 8.8 in Gulu district, Gulu municipality, Kitgum and Pader, respectively

##### *MEASLES VACCINATION COVERAGE OF CHILDREN 9 MONTHS TO 14 YEARS*

94.8%, 95.7%, 85.1% and 90.6% in Gulu district, Gulu municipality, Kitgum and Pader, respectively

##### *MORBIDITY WITHIN THE PREVIOUS TWO WEEKS*

Malaria/fever: 55.4%

Cough/difficulty breathing: 16.9%

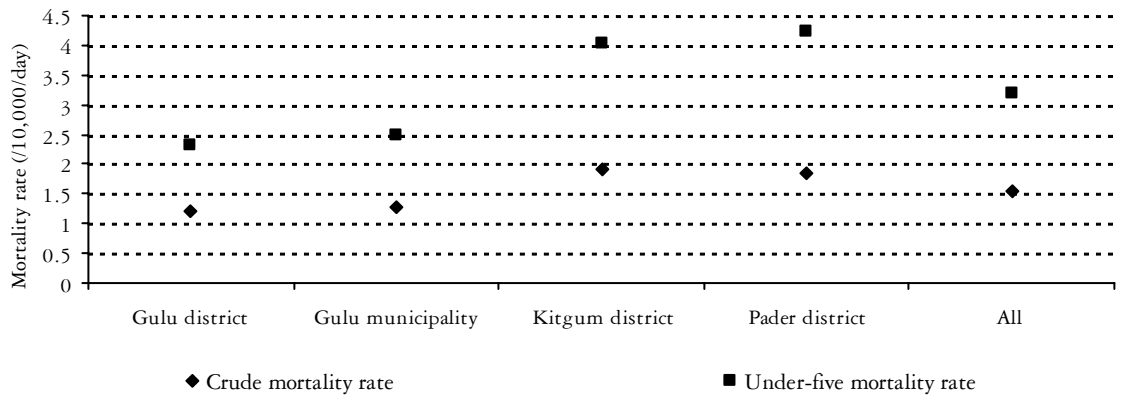
Diarrhoea: 14.8%

##### *FIRST SOURCE OF TREATMENT FOR SICK CHILDREN*

Health centre: 41.8%, private clinic/drug store: 20.9%, community outreach resource persons: 15.1%, hospital: 12.1%

\*\* In italic, figures from WHO survey

FIGURE 7 MORTALITY RATES, NORTHERN UGANDA, JULY 2005 (WHO/JOINT, 07/05)



The improvement of the food security reveals the same picture as the last nutrition surveys which showed situations which, generally, were not critical (see NICS 6 and 7).

The recommendations of the assessment were to decrease the general ration to 50% of a full ration.

On the other hand, public health was still very poor. According to a WHO/joint survey, conducted in July 2005, crude mortality rates and under-five mortality rates were above alert threshold and even above emergency threshold for under-five mortality in Kitgum and Pader districts (figure 7) (WHO/joint, 07/05). Fever/malaria was the first reported cause of morbidity (box 2) and mortality (varying between 42.9% and 52.5%) among children. It also accounted for 28.5% of the deaths among all age groups, the second cause being HIV/AIDS (13.5%). According to the assessment, there was a lack of specific disease control interventions against malaria and HIV/AIDS. It also seemed that health care system was inadequate. Deaths caused by violence were 11.7%, 3.4%, 10.5% and 11.4% in Gulu district, Gulu municipality, Kitgum district and Pader district, respectively.

Measles vaccination coverage was average (box 2).

Furthermore, a significant proportion of families does not have access to safe drinking water and for those who have access, the average quantity is below that recommended and the time taken to fetch water is unacceptably high (box 2).

Average nutrition situation in refugee camps Surveys in Adjumani settlements and in Rhino

and Impevi refugee camps, Arua district, showed an average nutrition situation (AHA, 09/05; DDHS Arua, 11/05). The prevalence of acute malnutrition was 9.7%, including 3.2% severe acute malnutrition, in Adjumani and 7.9%, including 2.8% severe malnutrition, in Rhino and Impevi camps. The situation seems to have remained stable for the last few years. In Impevi and Rhino camp, refugees were entitled to a 60% food ration, except for the newly-arrived, who were receiving a 100% ration. Refugees were also engaged in agricultural activities. 95.7% of the refugees fetched water from a protected source.

## Recommendations

*From the WHO/joint survey in IDP camps in Northern Uganda*

- Scale up and improve the capacity of health services
- Improve and increase water and sanitation services
- Apply preventive measures against malaria and HIV/AIDS
- Strengthen routine immunisation
- Improve coordination and targeting of relief efforts
- Improve the underlying cause of ill health
- Advocate greater funding and institutional attention
- Improve humanitarian access and protection and respect for humanitarian law
- Sustain epidemiological surveillance

## Tanzania

Although the repatriation of refugees, and especially of Burundian refugees, has begun, Tanzania still hosts an estimated 355,000 refugees in Kigoma and Kagera regions. Nutrition surveys conducted in the 12 refugee camps in September 2005 showed a nutrition situation under control and which seemed to have slightly improved compared to 2004 (figure 8), despite reduction in food rations due to shortages since November 2004 (UNHCR/

joint, 09/05). It is thought that this might be due to increase coping mechanisms among families who stayed in Tanzania, while those who can not cope with a reduced ration opted for repatriation. Nutrition centres have also known a decrease in admissions in 2005. On the other hand, anaemia was still a major problem in the camps (table 10). Stunting was also significant, varying between 19.9% and 39.5% depending on the camp.

FIGURE 8 PREVALENCE OF ACUTE MALNUTRITION, REFUGEE CAMPS IN TANZANIA

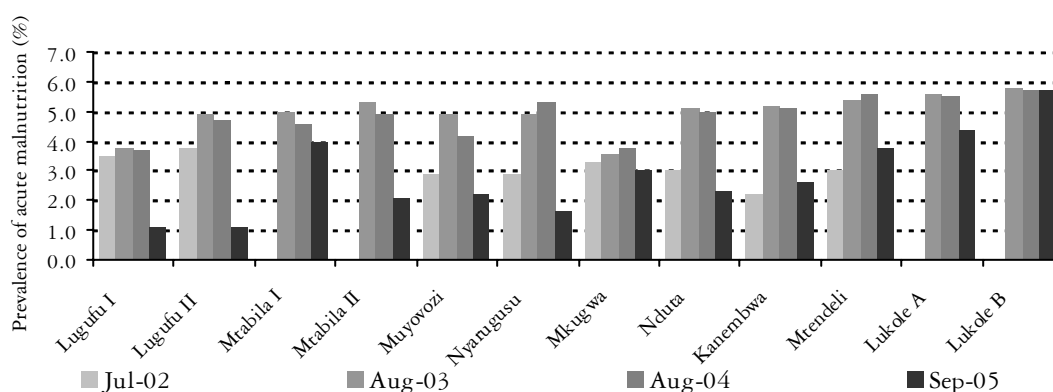


TABLE 10 ANAEMIA AMONG CHILDREN AND WOMEN, REFUGEE CAMPS IN TANZANIA, AUG-SEPT 2005 (UNHCR, 09/05)

Camps	Anaemia*					
	6-59 months		Pregnant women		Lactating women	
	N	%	N	%	N	%
Lukole A	105	35.2	75	30.7	100	10.0
Lukole B	102	34.4	75	20.0	102	20.6
Mkugwa	18	11.2	16	25.0	14	7.1
Mtendeli	87	35.6	62	19.4	83	16.9
Nduta	62	33.9	42	28.6	65	18.5
Kanembwa	80	25.1	43	25.6	78	12.5
Nyarugusu	77	44.8	44	41.0	73	24.7
Muyovosi	74	43.3	54	20.4	76	22.4
Mtabila II	75	47.9	57	19.3	67	16.4
Lugufu I	74	60.8	61	50.9	74	21.6
Lugufu II	72	54.2	47	53.2	73	30.1

\* Hb < 11 g/dl for children 6-59 months and pregnant women

## Chad

The security situation has deteriorated in Eastern Chad, where refugees are gathered in 12 camps. Attacks have been reported in Adre and

Guereda (IRIN, 23/01/06). The insecurity is not only due to tension with neighbouring Darfur area but also to internal rebel movements, accused by the Chadian government of being backed by Sudan.

Arrivals of Sudanese refugees are still reported. In addition, a new wave of more than 1,000 refugees from Central African Republic, fleeing growing insecurity in Northern CAR, has recently joined 30,000 of their compatriots already refugees in Chad (IRIN, 30/01/06) (see NICS 4). More resources are needed to continue to support the previous refugees and to care for the new arrivals.

A nutrition survey, conducted in Guereda district, Dar Tama department, Wadi Fira region, showed a precarious nutrition situation among the Chadian population, although mortality rates were under control (table 11). The prevalence of acute malnutrition was within the same range as in Mile camp, one of the two refugee camps in the department, in June 2005 (see NICS 6).

TABLE 11 RESULTS OF A NUTRITION SURVEY IN GUEREDA AREA, WADI FIRA REGION, CHAD (AAH-US, 06/05)

% Acute Malnutrition (95% CI)	% Severe Acute Malnutrition (95% CI)	Crude Mortality (/10,000/day) (95% CI)	Under-five Mortality Rate (/10,000/day) (95% CI)
19.3 (16.1-22.4)	0.9 (0.0-2.0)	0.36 (0.13-0.59)	0.33 (0.0-0.72)

## Southern Africa

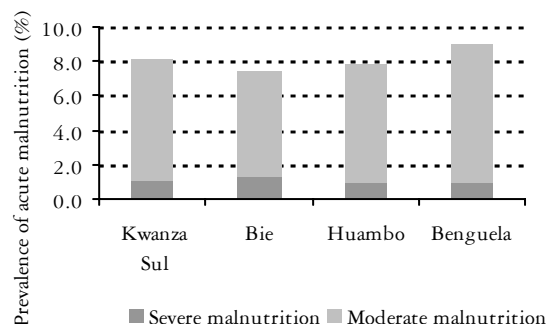
### Angola

Several surveys conducted in Kwanza Sul, Bie, Huambo and Benguela provinces during the lean season showed an average nutrition situation (figure 9), which was comparable to the situation within the same period in 2004

(CDRA, 04/05). Stunting was very high, varying from 45% to 52%, depending on the province.



FIGURE 9 PREVALENCE OF ACUTE MALNUTRITION IN PARTS OF KWANZA SUL, BIE, HUAMBO AND BENGUELA PROVINCES (CDRA, 04/05)



# Asia

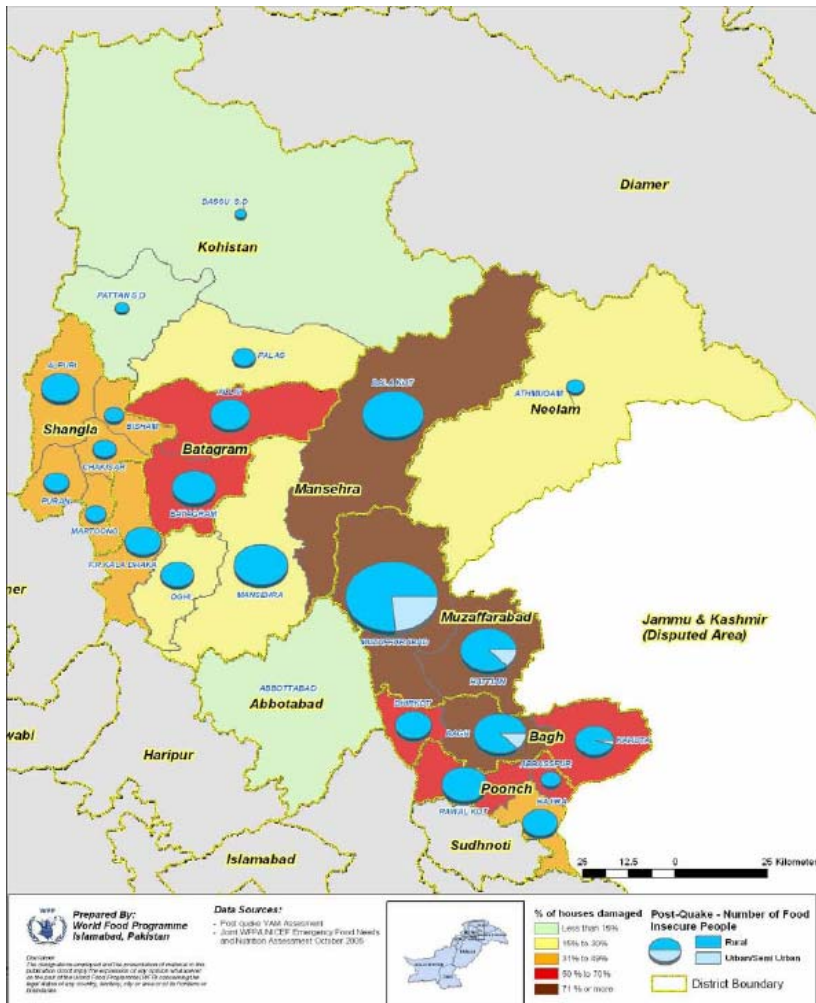
## Tsunami affected countries Indonesia

An FAO/WFP food supply and demand assessment mission was conducted in Aceh province and Niah island at the end of 2005 (FAO/WFP, 22/12/05). The assessment estimated that damage of paddy production due to Tsunami will be only 7%. On the other hand, the fisheries sector was far from recovery with only 45% for marine fish and 28% for brackish water of "normal" output. While major food prices had remained stable between January and September 2005, an increase in fuel prices in October has significantly affected households' purchasing power. The number of IDPs seems not to have been firmly established.



According to the government, 371,700 people remained displaced in October 2005, the majority of them (about 250,000) living with host families. A significant number of families seemed not to have re-established their livelihood yet and humanitarian assistance is still required (FAO/WFP, 22/12/05; ACF-F, 10/05). However, FAO/WFP assessment recommended that use of market based options (cash/voucher) for food assistance be preferred. Shelter is still a major problem.

## PAKISTAN EARTHQUAKE — AFFECTED AREAS AND FOOD INSECURE POPULATIONS



## Pakistan

An earthquake occurred in Pakistan on 8 October 2005, causing major destruction, about 73,000 deaths and 69,000 severely wounded (OCHA, 31/12/05). Eight districts (Batagram, Manshera, Shanla, Muzaffarabad, Neelam Abbotabad, Poonch and Kohistan) have been affected in North West Frontier province (NWFP) and in Azad Jammu and Kashmir province (AJK) (see map) (UNICEF/WFP, 11/05). Of the 5.5 m population, it is estimated that 3.2 to 3.5 m people were affected, including 2.5 m homeless now living in tents or in transitional shelters. About 187,000 people live in either the 470 spontaneous camps or the 30 planned ones. It is estimated that 2.5 m people are in need of food assistance, which is provided by the government of Pakistan to 1.5 m people, by WFP to 1 m people and by ICRC to 150,000. The area is highly mountainous, which renders the delivery of aid difficult, especially for inhabitants residing at higher elevations. Helicopters are often required. Winter and snow further affects the population and hampers delivery of humanitarian assistance. Contributions to the UN flash appeal are 56% of the US\$ 550 m requested. The priorities are to provide heating, to winterize tents and to improve sanitation in camps (OCHA, 27/01/06). It seems that distribution

of non-food items, such as shelter materials has improved lately. The hundreds of spontaneous camps of less than 50 tents seem to have received the least attention so far.

An assessment conducted in late November showed that the food security of the affected population is highly compromised, and will continue to be until at least the end of 2006 (UNICEF/WFP, 11/05). About 30% of the rice crop and 75% of the maize crop has been lost due to the earthquake. Moreover, many households have missed the planting of winter wheat which is normally harvested in June-August. They will have to wait until the next

harvest of maize-rice in October 2006. Live-stock, which was also an important component of the livelihood, has also been lost with 60% of the households having lost part of it and 20% having lost all of it. The earthquake also resulted in a dramatic loss of employment and income opportunities, which, in addition to higher food and non-food prices, hampers access to food.

It seems that the nutrition situation was precarious before the crisis. To our knowledge, no comprehensive data on the nutrition situation after the earthquake was available.

## References

### Greater Horn of Africa

#### Ethiopia

Concern	11/05	Nutrition survey report summary, Damot Woyde district, Wolayita zone, SNNPR
Concern	11/05	Nutrition survey report summary, Offa district, Wolayita zone, SNNPR
IRIN	29/12/05	Ethiopia: Donors withhold budget support to government
FEWS	11/05	Ethiopia, food security update
FEWS	26/12/05	Ethiopia: food security emergency
GOAL	06/05	Findings of a nutrition survey, Dale district, Sidama zone, SNNPR
GOAL	06/05	Nutrition survey, Kuni district, West Hararghe zone, Oromyia region
GOAL	09/05	Findings of a nutrition survey, Awassa Zuria district, Sidama zone, SNNPR
GOAL	10/05	Nutrition survey, Abala district, zone 2, Affar region
SC-UK	05/05	Nutrition assessment in Fik, Hamaro, Segeg and Duhun districts of Fik pastoral food economy zone, Somali region
SC-UK	06/05	Nutrition assessment report– Ethiopia- Sekota district, Wag Hamra zone, Amhara region
SC-UK	06/05	Nutrition assessment report– Ethiopia- Dehana district, Wag Hamra zone, Amhara region

#### Kenya

FEWS	19/12/05	Season failure precipitates a crisis among the northern and eastern pastoralists and southeastern farm households
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#### Somalia

AFP	29/12/05	Somali president appeals for aid for famine-threatened south
FSAU	11/05	Food security and nutrition monthly brief
FSAU	12/05	Food security and nutrition monthly brief
FSAU	20/12/05	Press release. Deteriorating food security situation rapidly leading to widespread humanitarian emergency in southern Somalia
FSAU/N	08/05	Monthly nutrition update
FSAU/N	09/05	Monthly nutrition update
FSAU/N	10/05	Monthly nutrition update
FSAU/N	11/05	Monthly nutrition update
FSAU/N	12/05	Monthly nutrition update

#### Sudan

AAH-US/	09/05	Nutritional anthropometric survey, children under five years old, Mvola
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SUVAD		district, Mvolo county, Western Equatoria
AAH-US	09/05	Nutritional anthropometric survey, children under five years old, Akobo & Nyandit districts, Akobo county, Upper Nile
AAH-US	10/05	Nutritional anthropometric survey, children under five years old, results summary, Old Fangak: Zeraf county, Upper Nile
AAH-US	10/05	Nutritional anthropometric survey, children under five years old, results summary, Old Fangak: Zeraf county, Upper Nile
AAH-US/	11/05	Nutritional anthropometric survey, children under-five years old, results summary, Nimni district, Guit county, Western Upper Nile
ACF-F	08/05	Nutritional anthropometric survey, children under 5 years old, final report, Port Sudan, Red Sea state, Sudan
ACF-F	08/05	Nutritional anthropometric and mortality survey, Kalma IDP camp, South Darfur state
ACF-F	09/05	Nutrition anthropometric survey, children under 5 years old, Nyala town, South Darfur state, summary results
ACF-F	09/05	Nutritional anthropometric survey, children under 5 years old, Juba, Bahr el Jebel state, Sudan, preliminary results report
ACF-F	10/05	Nutrition anthropometric survey, children under 5 years old, Kebkabiya, North Darfur state, preliminary results
ACF-F	11/05	Nutrition anthropometric survey, preliminary results report, Sanya Afendu and surrounding villages, South Darfur
ACF-F	11/05	Nutrition anthropometric and retrospective mortality survey, children under 5 years old, Abu Shok camp, North Darfur state, preliminary results
Concern	07/05	Report of a nutrition survey in Seleia & Kulbus administrative units, West Darfur, Sudan
Concern	11/05	Nutritional survey preliminary results, Aweil West/North counties, Bahr el Ghazal, South Sudan
FEWS	12/05	Southern Sudan– food security update
FEWS	03/01/06	Food security watch
GOAL	05/05	Nutrition survey of Adraman and Dablawet IDP camps in Kassala state
GOAL	06/05	Findings of a nutrition survey, Kodok town, Upper Nile state, Sudan
GOAL	06/05	Findings of a nutrition survey, Kodok town, Upper Nile state, Sudan
GOAL	06/05	Findings of a nutrition survey, Malakal town, Upper Nile state, Sudan
GOAL	10/05	Preliminary findings of a nutrition survey, Jebal Marra, West Darfur, Sudan
HIC Darfur	28/12/05	Sudan, Darfur: Affected population by locality
IRIN	20/01/06	Sudan: Darfur talks frustratingly slow, says UN official
MOH/WHO /UNICEF	05/05	Rapid assessment of health and nutrition situation in IDP settlements and peripheral settlements in Khartoum state
UNHCR	13/01/06	Kenya/Sudan: Milestone tripartite agreement signed for return
UNICEF	10/05	UNICEF southern Sudan monthly report, October 2005
UNICEF	12/05	UNICEF southern Sudan monthly report, December 2005
WFP/joint	12/05	Emergency food security and nutrition assessment in Darfur, Sudan, 2005
WHO/MOH	09/05	Mortality survey among Internally Displaced Persons and other affected populations in Greater Darfur, Sudan

## West Africa

### Ghana

DHS	2003	Ghana demographic and health survey
UNHCR	05/05	Nutrition survey report, Buduburam refugee settlement, Ghana
UNHCR	12/05	UNHCR global appeal 2006, Ghana

### Ivory Coast

ACF-F	11/05	Surveillance de la sécurité alimentaire, Ouest de la Côte d'Ivoire
OCHA	20/01/06	Côte d'Ivoire: Le coordonnateur humanitaire dénonce et condamne les actes de violence et de destruction perpétrés contre les Organisations humanitaires à Guiglo
Reuters	23/01/06	Ivory Coast ruling party returns to peace process

### Liberia

ACF-F	07/05	Food security report, Voinjama, Kolahun and Foya districts, Lofa county
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Reuters	16/01/06	New Liberian president vows end graft, violence
UNHCR	17/11/05	UNHCR Liberia: Briefing notes
UNHCR	03/01/06	UNHCR Liberia: Briefing notes
UNMIL	01/12/05	Humanitarian situations report No 33
UNMIL	27/12/05	Humanitarian situations report No 37
WHO-HAC	22/01/06	Health Action in Crises—Highlights No 91

## Niger

ACH-S	10/05	Enquête nutritionnelle et de mortalité, Sept-Oct 2005
FEWS	19/12/05	Niger: Food security warning
WHO	19/12/05	WHO emergency health programme for the food crisis in Niger, situation report # 19

## Central Africa

### Burundi

Concern	11/05	Nutrition survey report, Mutambu, Muhuta and Mukike communes, Bujumbura rural— draft
IRIN	17/11/05	Burundi: UN agencies warn of looming food crisis
IRIN	30/12/05	Burundi-Tanzania: refugees reluctant to return home
IRIN	20/01/06	Burundi: drought kills 120 as thousands flee
IRIN	27/01/06	Burundi: repatriations below target, UN agency says
MOH/joint	09/05	Rapport de l'enquête nationale de nutrition de la population— Draft
SAP-SSA	12/05	Système d'alerte précoce— surveillance de la sécurité alimentaire au Burundi— Bulletin No 41, Novembre 2005

### DRC

AAH-US	08/05	Enquêtes nutritionnelles anthropométriques, zones de santé de Malemba et Lwamba, province du Katanga, RDC
OCHA	30/11/05	Situation humanitaire en RDC, novembre 2005
UNHCR	27/01/06	Uganda: Recent Congolese arrivals moved away from border

### Uganda

AHA	09/05	Nutritional survey report, Adjumani refugee settlements
DDHS Arua	11/05	Anthropometric and EPI coverage survey among refugees in Rhino camp and Impevi refugee settlements in Arua district
WFP/joint	09/05	Emergency food security assessment of IDP camps in Gulut, Kitgum, Lira and Pader districts, March-May 2005.
WHO/joint	07/05	Health and mortality survey among internally displaced persons in Gulu, Kitgum, and Pader districts, northern Uganda

### Chad

AAH-US	06/05	Enquête nutritionnelle et de mortalité retrospective, population locale de Guereda, department de Dar Tama, region de Wadi Fira, Chad
IRIN	23/01/06	Chad: UN scales back in east after local officials kidnapped
IRIN	30/01/06	Budget shortfalls loom as more refugees flee into Chad

## Southern Africa

### Angola

CDRA	04/05	Anthropometric survey, Benguela, bie, Huambo and Kwanza Sul provinces
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## Asia

### Tsunami affected countries

ACF-F	10/05	Food security surveillance newsletter #003
FAO/WFP	22/12/05	FAO/WFP food supply and demand assessment for Aceh province and Nias island (Indonesia)

### Pakistan

OCHA	31/12/05	OCHA—Geneva natural disasters highlights No 3
OCHA	27/01/05	Pakistan— earthquake: OCHA situation report No 34
UNICEF /WFP	11/05	Pakistan earthquake, joint WFO/UNICEF rapid emergency food security and nutrition assessment

# Results of surveys

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI) <sup>§</sup>	Severe Acute Malnutrition** (%) (95% CI) <sup>§</sup>	Oedema (%)
<b>GREATER HORN OF AFRICA</b>							
<b>ETHIOPIA</b>							
<b>SOMALI REGION</b>							
Fik & Hamaro districts, Fik zone	May-05	Residents	90,300	SC-UK	16.1 13.6-18.7	1.2 (0.5-1.9)	0
Duhun & Segeg districts, Fik zone	May-05	Residents	20,760	SC-UK	20.7 (17.2-24.2)	1.8 (0.9-2.6)	0
<b>AMHARA REGION</b>							
Dehana district, Wag Hamra zone	June-05	Residents	119,800	SC-UK	16.1 (13.8-18.3)	1.1 (0.4-1.8)	0
Sekora district, Wag Hamra zone	June-05	Residents	167,500	SC-UK	14.8 (12.6-17.1)	0.9 (0.2-1.6)	0
<b>OROMIA REGION</b>							
Kunia district, West Hararghe zone	June-05	Residents	153,780	GOAL	6.1 (4.7-7.9)	0.1 (0.0-0.7)	0
<b>AFAR REGION</b>							
Abala district, Zone 2	Oct-05	Residents	58,800	GOAL	13.6 (11.5-16.0)	0.5 (0.2-1.2)	0
<b>SNNPR</b>							
Dale district, Sidama zone	Jun-05	Residents	388,900	GOAL	15.9 (12.8-19.6)	1.7 (1.1-2.4)	0
Awassa Zuria district, Sidama zone	Sept-05	Residents	414,700	GOAL	4.6 (2.7-7.4)	0.5 (0.2-1.4)	0
Damot Woyde district, Wolayita zone	Dec-05	Residents	219,230	Concern	4.0 (2.5-6.4)	0.3 (2.5-6.4)	0
Offa district, Wolayita zone	Dec-05	Residents	151,720	Concern	4.7 (3.0-7.2)	0.3 (0.0-1.6)	0
<b>SOMALIA</b>							
IDP camps, Mogadishu	Sept-05	Displaced	-	UNICEF/joint	15.8 13.7-18.5	4.0 2.8-5.5	-
IDPs/Returnee settlements, Hargeisa town	Sept-05	Displaced/Returnees	-	FSAU/joint	7.6 6.0-9.5	1.2 0.6-2.2	0.1
Dangoroyo/Eyl districts, Nugaal region	Aug-05	Residents	-	FSAU/joint	8.9 7.2-11.0	1.9 0.5-2.9	0.2
<b>SUDAN</b>							
<b>GREATER DARFUR</b>							
Emergency affected populations	Sept-05	Displaced/Residents	3,381,650	WFP/joint	11.9 10.3-12.6	1.4 0.9-2.0	0.5
<b>NORTH DARFUR</b>							
Emergency affected populations	Jun-05	Displaced/Residents	698,010	WHO/MOH	- -	- -	-
IDPs in camps	Jun-05	Displaced	-	WHO/MOH	- -	- -	-
IDPs in host population	Jun-05	Displaced	-	WHO/MOH	- -	- -	-
Residents	Jun-05	Residents	431,480	WHO/MOH	- -	- -	-
Emergency affected populations	Sept-05	Displaced/Residents	1,142,960	WFP/joint	15.6 12.3-18.8	1.4 0.7-2.2	0
Abu Shok & As Salam IDP camps, El Fasher	Nov-05	Displaced	-	ACF-F	18.5 15.2-22.5	1.4 0.5-3.0	0.5
Kebkabiya town	Oct 2005	Displaced/Residents/	-	ACF-F	18.2 14.9-22.1	0.7 0.2-2.1	0

\*Acute malnutrition (children aged 6-59 months): weight-height < - 2 Z-scores and/or oedema

\*\* Severe acute malnutrition (children aged 6-59 months): weight-height < - 3 Z-scores and/or oedema

<sup>§</sup>95% Confidence Interval; not mentioned if not available from the survey report

NOTE: see at the end of the report for guidance in interpretation of indicators

Continued...

Measles immunisation coverage (%) <sup>#</sup>		Assessment of micro-nutrient deficiencies	Vitamin A distribution coverage, within the past 6 months	Women's anthropometric status (%)	Crude Mortality (/10,000/day) (95% CI) <sup>§</sup>		Under 5 Mortality (/10,000/day) (95% CI) <sup>§</sup>	
Proved by card	Card + history							
0.7	28.3	-	-	-	-	-	-	-
0.1	27.1	-	-	-	-	-	-	-
0.8	71.5	-	-	-	0.24		0.94	
1.4	68.3	-	-	-	0.27		0.4	
4.8	39.4	-	42.9	-	0.21		0.49	
1.5	64.4	-	81.1	-	0.48		1.36	
17.2	72.1	-	75.9	-	0.21		0.34	
-	58.0	-	41.8	-	0.17		0.5	
11.0	51.4	-	78.3	-	0.1		0.58	
21.5	57.5	-	71.2	-	0.2		0.5	
-	34.0	-	36.0	-	-		-	
-	44.7	-	53.5	-	-		-	
-	41.0	-	30.0	-	0.22		1.33	
14.6	69.8	-	39.2	-	0.46	0.36-0.55	0.79	0.5-1.09
-	-	-	-	-	0.8	0.6-1.0	1.5	1.0-2.1
-	-	-	-	-	-		-	
-	-	-	-	-	-		-	
-	-	-	-	-	-		-	
-	62.3	-	39.3	-	0.46	0.3-0.55	-	
45.7	73.3	-	-	-	0.49		1.46	
48.1	72.3	-	-	-	0.73		1.71	

<sup>#</sup> Measles vaccination coverage for children aged 9-59 months

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI) <sup>§</sup>	Severe Acute Malnutrition** (%) (95% CI) <sup>§</sup>	Oedema (%)	
<b>WEST DARFUR</b>								
Emergency affected populations	Jun-05	Displaced/Residents	869,560	WHO/MOH	- -	- -	-	
IDPs in camps	Jun-05	Displaced	-	WHO/MOH	- -	- -	-	
IDPs in host population	Jun-05	Displaced	-	WHO/MOH	- -	- -	-	
Residents	Jun-05	Residents	230,515	WHO/MOH	- -	- -	-	
Emergency affected populations	Sept-05	Displaced/Residents	1,104,660	WFP/joint	6.2 4.3-8.1	0.7 0.0-1.5	0.3	
Golo, Gildu & Rokero, Jebel Marra	Oct-05	Residents/Displaced	220,000	GOAL	13.5 11.4-15.9	0.4 0.1-1.2	0.1	
Seleia & Kulbus	Jul-05	Residents/Displaced	46,000	Concern	16.2 13.3-19.6	1.9 1.0-3.2	0	
<b>SOUTH DARFUR</b>								
IDPs in camps	Jun-05	Displaced	585,875	WHO/MOH	- -	- -	-	
Emergency affected populations	Sept-05	Displaced/Residents	1,134,030	WFP/joint	12.3 9.2-15.2	2.1 0.8-3.3	1.3	
Nyala town and IDP camps	Sept-05	Residents/Displaced	480,000	ACF-F	19.1 15.6-23.0	2.4 1.3-4.4	0	
Kalma camp	Aug-05	Displaced	161,630	ACF-F	16.9 13.6-20.7	2.3 1.2-4.2	0	
Sanya Afendu and surrounding villages	Nov-05	Displaced/Residents	27,290	ACF-F	11.6 8.9-14.9	1.1 0.4-2.7	0	
<b>RED SEA</b>								
Port Sudan town	Aug-05	Residents	308,290	ACF-F	11.5 8.8-14.9	1.1 0.4-2.7	0.1	
<b>KASSALA</b>								
Adraman	May-05	Displaced/Residents	-	GOAL	9.9	1.0	0.1	
Dablawet IDP camp	May-05	Displaced	-	GOAL	13.5	1.0	0	
<b>NORTHERN BAHR EL GHAZAL</b>								
Aweil West ( 2 districts) & North ( 4 districts) counties	Dec-05	Residents	-	Concern	12.5 9.7-15.9	0.8 0.2-2.2	-	
<b>BAHR EL JEBEL STATE</b>								
Juba town	Sept-05	Residents/Displaced	-	ACF-F	9.2 6.8-12.3	0.9 0.3-2.4	0.2	
<b>WESTERN EQUATORIA</b>								
Mvolo district	Sept-05	Residents	-	AAH-US	8.0	1.1	0.2	
<b>UPPER NILE</b>								
Old Fangak district	Oct-05	Residents	-	AAH-US	17.3 13.6-21.6	1.7 0.7-3.8	-	
Akobo & Nyandit districts	Sept-05	Residents	30,575	AAH-US	20.3 16.7-24.4	2.4 1.2-4.4	0	
Pagak & Turu districts	Nov-05	Residents	-	AAH-US	15.0 11.8-18.9	0.2 0.0-1.5	-	
Nimni disctict	Nov-05	Residents	-	AAH-US	13.5 10.3-17.4	1.1 0.4-3.0	-	
Kodok town	June-05	Residents	4,500	GOAL	22.9	3.7	-	
Malakal town	June-05	Residents/Displaced	-	GOAL	22.8 20.0-25.9	2.8 1.8-4.2	0	

\*Acute malnutrition (children aged 6-59 months): weight-height < - 2 Z-scores and/or oedema

\*\* Severe acute malnutrition (children aged 6-59 months): weight-height < - 3 Z-scores and/or oedema

<sup>§</sup>95% Confidence Interval; not mentioned if not available from the survey report

NOTE: see at the end of the report for guidance in interpretation of indicators

Continued...

Measles immunisation coverage (%) <sup>#</sup>	Assessment of micro-nutrient deficiencies	Vitamin A distribution coverage, within the past 6 months	Women's anthropometric status (%)	Crude Mortality (/10,000/day) (95% CI) <sup>§</sup>		Under 5 Mortality (/10,000/day) (95% CI) <sup>§</sup>	
				Proved by card	Card + history		
-	-	-	-	0.6	0.5-0.8	0.9	0.6-1.3
-	-	-	-				
-	-	-	-				
-	-	-	-				
-	67.3	-	46.6	0.57	0.36-0.78	-	
22.9	83.6	-	82.7	1.79	1.29-2.29	2.32	0.97-3.67
-	-	-	-	0.56		1.03	
-	-	-	-				
-	81.3	-	32.6	-		-	
50.0	93.7	-	-	0.36		0.75	
65.8	90.7	-	-	0.89		0.9	
9.5	82.7	-	-	0.27		0.46	
22.5	85.9	-	94.3	-		-	
-	-	-	-	-		-	
-	-	-	-	-		-	
-	-	-	-	-		-	
-	-	-	-	0.31		1.04	
32.1	77.7	-	-	-		-	
8.4	52.9	-	-	-		-	
15.3	47	-	-	0.31	0.03-0.59	0.68	0.05-1.31
2.1	28.6	-	-	0.27	0.05-0.5	0.57	0.12-1.02
27.1	56	-	-	0.9	0.48-1.31	1.56	0.57-2.54
0.9	27.2	-	-	-		-	
37.6	72.7	-	99.1	0.9		2.3	
58.6	84.4	-	98.2	-		-	

<sup>#</sup> Measles vaccination coverage for children aged 9-59 months



Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI) <sup>§</sup>		Severe Acute Malnutrition** (%) (95% CI) <sup>§</sup>		Oedema (%)
<b>WEST AFRICA</b>									
<b>GHANA</b>									
Buduburam camp	May-05	Refugees	42,000	UNHCR/joint	7.7	6.1-9.6	1.5	0.9-2.6	0
<b>NIGER</b>									
Whole country	Oct-05	Residents	-	UNICEF/CDC	15.3	13.9-16.8	1.8	1.4-2.3	-
Agadez	Oct-05	Residents	-	UNICEF/CDC	11.8	9.2-15.0	1.2	0.5-2.9	-
Diffa	Oct-05	Residents	-	UNICEF/CDC	16.0	13.2-19.3	0.9	0.3-2.9	-
Dosso	Oct-05	Residents	-	UNICEF/CDC	13.7	10.4-17.8	1.8	0.9-3.5	-
Maradi	Oct-05	Residents	-	UNICEF/CDC	16.0	12.5-20.2	2.3	1.5-3.6	-
Tahaoua	Oct-05	Residents	-	UNICEF/CDC	17.9	14.3-22.1	1.8	1.0-3.1	-
Tillaberi	Oct-05	Residents	-	UNICEF/CDC	14.0	11.0-17.7	2.0	1.1-3.8	-
Zinder	Oct-05	Residents	-	UNICEF/CDC	16.1	12.9-19.9	1.2	0.6-2.6	-
Niamey	Oct-05	Residents	-	UNICEF/CDC	8.9	6.8-11.6	1.8	0.7-3.7	-
Agricultural zone, Maradi and Tahoua regions	Oct-05	Residents	-	ACH-S	19.2	16.6-21.8	4.1	2.8-5.5	1.2
Agro-pastoral zone, Maradi and Tahoua regions	Oct-05	Residents	-	ACH-S	24.7	20.8-28.7	5.4	3.5-7.3	0.9
Pastoral zone, Maradi and Tahoua region	Oct-05	Residents	-	ACH-S	16.4	12.6-20.1	2.8	1.4-4.3	1.2
<b>CENTRAL AFRICA</b>									
<b>BURUNDI</b>									
National	Mar-04	Residents	7 m	MOH/joint	6.5 <sup>1</sup>	5.9-7.0	-	-	0.2
Mutambu, Muhuta and Mukike communes, Bujumbura rural	Nov-05		139,000	Concern	11.9	8.6-15.2	0.7	0-1.6	0.1
<b>UNITED REPUBLIC OF TANZANIA</b>									
Lukole A	Sept-05	Refugees	-	UNHCR	4.4	2.8-6.9	0.1	0.0-1.2	-
Lukole B	Sept-05	Refugees	-	UNHCR	5.7	3.8-8.4	0.4	0.1-1.7	-
Mtendeli	Sept-05	Refugees	-	UNHCR	3.8	2.3-6.1	0.4	0.1-1.8	-
Kanembwa	Sept-05	Refugees	-	UNHCR	2.6	1.7-4.6	0.1	0.0-1.2	-
Nduta	Sept-05	Refugees	-	UNHCR	2.3	1.2-4.3	0.4	0.1-1.8	-
Mkugwa	Sept-05	Refugees	-	UNHCR	3.0	0.7-9.1	0.5	0.0-5.4	-
Nyarugusu	Sept-05	Refugees	-	UNHCR	1.6	0.7-3.3	0.1	0.0-1.3	-
Muyovosi	Sept-05	Refugees	-	UNHCR	2.2	1.1-4.1	0.1	0.0-1.2	-
Mtabila I	Sept-05	Refugees	-	UNHCR	4.0	2.5-6.6	0.3	0.0-1.6	-
Mtabila II	Sept-05	Refugees	-	UNHCR	2.1	1.1-4.1	0.3	0.0-1.6	-
Lugufu I	Sept-05	Refugees	-	UNHCR	1.1	0.4-2.6	0.2	0.0-1.4	-
Lugufu II	Sept-05	Refugees	-	UNHCR	1.1	0.4-2.7	0.1	0.0-1.2	-

\*Acute malnutrition (children aged 6-59 months): weight-height < - 2 Z-scores and/or oedema

\*\* Severe acute malnutrition (children aged 6-59 months): weight-height < - 3 Z-scores and/or oedema

<sup>§</sup>95% Confidence Interval; not mentioned if not available from the survey report

<sup>1</sup> Wasting, not including oedema

NOTE: see at the end of the report for guidance in interpretation of indicators

Measles immunisation coverage (%) <sup>#</sup>		Assessment of Micro-nutrient deficiencies	Vitamin A distribution coverage, within the past 6 months	Women's anthropometric status (%)	Crude Mortality (/10,000/day) (95% CI) <sup>§</sup>	Under 5 Mortality (/10,000/day) (95% CI) <sup>§</sup>		
Proved by card	Card + history							
35.6	74.4	-	72.5	-	0.35	0.34		
-	-	-	-	-	0.4	0.3-0.5	1.7	1.4-1.9
-	-	-	-	-	0.2	0.1-0.3	0.3	0.1-0.7
-	-	-	-	-	0.4	0.1-0.6	1.4	0.2-2.6
-	-	-	-	-	0.3	0.2-0.5	1.2	0.7-1.8
-	-	-	-	-	0.3	0.2-0.5	1.3	0.8-1.8
-	-	-	-	-	0.5	0.3-0.6	2.1	1.4-2.9
-	-	-	-	-	0.5	0.3-0.6	1.7	1.1-2.3
-	-	-	-	-	0.7	0.5-0.9	2.2	1.4-3.0
-	-	-	-	-	0.4	0.2-0.6	1.1	0.4-1.8
21.9	61.7	-	-	MUAC ≤ 220: 7.3%	0.54	0.34-0.74	1.97	1.24-2.71
13.7	52.9	-	-	MUAC ≤ 220: 6.1%	0.45	0.23-0.67	1.63	0.79-2.47
2.1	42.5	-	-	MUAC ≤ 220: 17.3%	0.54	0.22-0.85	1.73	0.71-2.74
29.7 <sup>1</sup>	-	See p 14	7.3 <sup>2</sup>	BMI <sup>3</sup> < 18.5: 19.7 BMI ≥ 25: 6.3	-		-	
44.5	85.9	-	41.2	-	0.43		0.83	
-	-	See p 18	-	-	-		-	
-	-	See p 18	-	-	-		-	
-	-	See p 18	-	-	-		-	
-	-	See p 18	-	-	-		-	
-	-	See p 18	-	-	-		-	
-	-	See p 18	-	-	-		-	
-	-	See p 18	-	-	-		-	
-	-	See p 18	-	-	-		-	
-	-	See p 18	-	-	-		-	
-	-	See p 18	-	-	-		-	

<sup>#</sup> Measles vaccination coverage for children aged 9-59 months

<sup>1</sup> Children 12-23 months old

<sup>2</sup> According to cards

<sup>3</sup> Women 15-49 years

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI) <sup>§</sup>	Severe Acute Malnutrition** (%) (95% CI) <sup>§</sup>	Oedema (%)	
<b>DEMOCRATIC REPUBLIC OF CONGO</b>								
Malemba N'Kulu health zone	Aug-05	Residents	170,000	AAH-US	4.5 2.9-7.0	0.2 0.0-1.4	0	
Lwamba health zone	Aug-05	Residents	96,000	AAH-US	5.3 3.5-7.9	0.3 0.0-1.6	0.2	
<b>UGANDA</b>								
IDP camps, Acholi region	Jul-05	Displaced	1,191,735	WHO/joint	-	-	-	
IDP camps, Gulu district	Jul-05	Displaced	462,580	WHO/joint	-	-	-	
Unrecognised camps, Gulu municipality	Jul-05	Displaced	99,535	WHO/joint	-	-	-	
IDP camps, Kitgum district	Jul-05	Displaced	310,110	WHO/joint	-	-	-	
IDP camps, Pader district	Jul-05	Displaced	319,510	WHO/joint	-	-	-	
Impevi and Rhino camps, Arua district	Nov-05	Refugees	56,710	DDHS Arua	7.9	2.8	-	
Adjumani refugee settlement	Sept-05	Refugees	63,260	AHA	9.7	3.2	1.8	
<b>CHAD</b>								
Guereda area, Wadi Fira region	Jun-05	Residents	23,130	AAH-US	19.3 16.1-22.4	0.9 0.0-2.0	0	
<b>SOUTHERN AFRICA</b>								
<b>ANGOLA</b>								
Parts of Kwanza Sul province	Apr-05	Residents	-	CDRA	8.1 5.8-11.2	1.1 0.4-2.7	0.2	
Parts of Bie province	Apr-05	Residents	-	CDRA	7.4 5.2-10.4	1.3 0.5-3.1	0.1	
Parts of Huambo province	Apr-05	Residents	-	CDRA	7.8 5.5-10.8	0.9 0.3-2.4	0.1	
Parts of Benguela province	Apr-05	Residents	-	CDRA	8.9 6.5-12.1	0.9 0.3-2.4	0.4	

\*Acute malnutrition (children aged 6-59 months): weight-height < - 2 Z-scores and/or oedema

\*\* Severe acute malnutrition (children aged 6-59 months): weight-height < - 3 Z-scores and/or oedema

<sup>§</sup>95% Confidence Interval; not mentioned if not available from the survey report

NOTE: see at the end of the report for guidance in interpretation of indicators

Measles immunisation coverage (%) <sup>#</sup>		Assessment of Micro-nutrient deficiencies	Vitamin A distribution coverage, within the past 6 months	Women's anthropometric status (%)	Crude Mortality (/10,000/day) (95% CI) <sup>§</sup>	Under 5 Mortality (/10,000/day) (95% CI) <sup>§</sup>		
Proved by card	Card + history							
35.6	74.4	-	72.5	-	1.1	-		
83.4	69.8	-	-	-	1.0	-		
-	-	-	-	-	1.54	1.38-1.71	3.18	2.81-3.56
-	94.8 <sup>1</sup>	-	-	-	1.22	1.00-1.44	2.31	1.76-2.86
-	95.7 <sup>1</sup>	-	-	-	1.29	1.04-1.53	2.49	1.79-3.18
-	85.1 <sup>1</sup>	-	-	-	1.91	1.45-2.37	4.04	3.17-4.91
-	90.6 <sup>1</sup>	-	-	-	1.86	1.53-2.19	4.24	3.4-5.08
75.1	89	-	-	-	-	-		
-	-	-	-	-	-	-		
-	-	-	-	-	0.36	0.13-0.59	0.33	0.0-0.72
-	-	-	-	-	-	-		
-	-	-	-	-	-	-		
-	-	-	-	-	-	-		
-	-	-	-	-	-	-		

<sup>#</sup> Measles vaccination coverage for children aged 9-59 months

<sup>1</sup> Children 9 months to 14 years

# Survey methodology

## The Greater Horn region

### Ethiopia

#### FIK & HAMARO DISTRICTS, SEGEG AND DUHUN DISTRICTS, FIK ZONE, SOMALI REGION

Two surveys were conducted in Fik and Hamarero districts and in Segeg and Duhun districts, respectively, by SC-UK in May 2005.

A two-stage cluster sampling methodology of 45 clusters was used to measure about 900 children in each survey.

The surveys also estimated measles vaccination coverage.

#### DEHANA DISTRICT, WAG HAMRA ZONE, AMHARA REGION

The survey was conducted by SC-UK in June 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure about 900 children between 6-59 months. The survey also estimated measles vaccination and vitamin A coverage, crude and under-five mortality rates and various food security and public health indicators.

#### SEKOTA DISTRICT, WAG HAMRA ZONE, AMHARA REGION

The survey was conducted by SC-UK in June 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure about 900 children between 6-59 months. The survey also estimated measles vaccination and vitamin A coverage, crude and under-five mortality rates and various food security and public health indicators.

#### KUNI DISTRICT, WEST HARAGHE ZONE, OROMIA REGION

The survey was conducted by GOAL in June 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 961 children between 6-59 months. The survey also estimated measles vaccination and vitamin A coverage, crude and under-five mortality rates and various food security and public health indicators.

#### ABALA DISTRICT, ZONE 2, AFAR REGION

The survey was conducted by GOAL in October 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure about 900 children between 6-59 months. The survey also estimated measles vaccination and vitamin A coverage, crude and under-five mortality rates and various food security and public health indicators.

#### DALE DISTRICT, SIDAMA ZONE, SNNPR

The survey was conducted by GOAL in June 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure about 900 children between 6-59 months. The survey also estimated measles vaccination and vitamin A coverage, crude and under-five mortality rates and various food security and public health indicators.

#### AWASSA ZURIA DISTRICT, SIDAMA ZONE, SNNPR

The survey was conducted by SC-UK in September 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure about 900 children between 6-59 months. The survey also estimated measles vaccination and vitamin A coverage, crude and under-five mortality rates and various food security and public health indicators.

#### OFFA DISTRICT, WOLAYITA ZONE, SNNPR

The survey was conducted by Concern in December 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure about 900 children between 6-59 months. The survey also estimated measles vaccination and vitamin A coverage, crude and under-five mortality rates and various food security and public health indicators.

#### DAMOT WOYDE DISTRICT, WOLAYITA ZONE, SNNPR

The survey was conducted by Concern in December 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure about 900 children between 6-59 months. The survey also estimated measles vaccination and vitamin A coverage, crude and under-five mortality rates and various food security and public health indicators.

## Somalia

### IDP CAMPS, MOGADISHU

A random-sampled nutrition survey was conducted by UNICEF/joint in September 2005. A two-stage 30-by-30 cluster sampling methodology was used to measure 920 children between 6-59 months. The survey also estimated measles vaccination and vitamin A distribution coverage, and various food security and public health indicators.

### IDP/RETURNEE SETTLEMENTS, HARGEISA

A random-sampled nutrition survey was conducted by FSAU/joint in September 2005. A two-stage 30-by-30 cluster sampling methodology was used to measure 924 children between 6-59 months. The survey also estimated measles vaccination and vitamin A distribution coverage, and various food security and public health indicators.

### DANGOROYO & EYL DISTRICTS, NUGAAL REGION

A random-sampled nutrition survey was conducted by FSAU/joint in September 2005. A two-stage 30-by-30 cluster sampling methodology was used to measure 909 children between 6-59 months. The survey also estimated measles vaccination and vitamin A distribution coverage, crude and under-five mortality rates and various food security and public health indicators.

## Sudan

### AFFECTED POPULATIONS, GREATER DARFUR

A random-sampled nutrition survey was conducted by WFP/joint in September 2005. Thirty clusters of 25

households were surveyed in North, West and South Darfur. The survey also estimated measles vaccination and vitamin A distribution coverage, crude and under-five mortality rates over the previous seven and a half months and various food security and public health indicators.

#### **AFFECTED POPULATIONS, GREATER DARFUR**

A random-sampled mortality survey was conducted by WHO/MOH in June 2005. Thirty clusters of 20 households were surveyed among IDPs in camps, IDPs in host populations and residents in North and West Darfur. In South Darfur, 27 clusters of 20 households were surveyed among IDPs in camps. The recall period was 7 months (from November 2004 to May 2005). The survey also estimated access to health facilities, safe drinking water and food distribution.

#### **KEBKABIYA, NORTH DARFUR**

The survey was conducted by ACF-F in October 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 960 children between 6-59 months. The survey also estimated measles vaccination coverage and retrospective mortality rate over three months prior to the survey.

#### **ABU SHOK AND AS SALAAM CAMPS, NORTH DARFUR**

The survey was conducted by ACF-F in June 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 960 children between 6-59 months. The survey also estimated measles vaccination coverage and retrospective mortality rate over three months prior to the survey.

#### **JEBEL MARA, WEST DARFUR**

The survey was conducted by GOAL in October 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 946 children between 6-59 months. The survey also estimated measles vaccination and vitamin A distribution coverage, retrospective mortality rate over three months prior to the survey and various food security and public health indicators.

#### **SELEIA AND KULBUS, WEST DARFUR**

The survey was conducted by Concern in July 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 968 children between 6-59 months. The survey also estimated retrospective mortality rate over three months prior to the survey and various food security and public health indicators.

#### **SANYA AFENDU AND SURROUNDING VILLAGES, SOUTH DARFUR**

The survey was conducted by ACF-F in November 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 960 children between 6-59 months. The survey also estimated measles vaccination coverage and retrospective mortality rate over three months prior to the survey.

#### **KALMA IDP CAMP, SOUTH DARFUR**

The survey was conducted by ACF-F in August 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 960 children between 6-59 months. The survey also estimated measles vaccination coverage and retrospective mortality rate over three months prior to the survey.

#### **NYALA TOWN, SOUTH DARFUR**

The survey was conducted by ACF-F in September 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 960 children between 6-59 months. The survey also estimated measles vaccination and retrospective mortality rate over three months prior to the survey.

#### **PORT SUDAN, RED SEA**

The survey was conducted by ACF-F in August 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 968 children between 6-59 months. The survey also estimated measles vaccination and vitamin A coverage.

#### **ADRAMA AND DEBLAWET IDP CAMP, KASSALA STATE**

Two exhaustive surveys were conducted by GOAL in May 2005. 781 and 790 children between 6-59 months were surveyed in Adraman and Dablawet, respectively.

#### **AYAAT AND GOMJUER DISTRICTS, AWEIL WEST COUNTY, MALUAL WEST, MALUAL CENTRE, MALUAL NORTH AND ARIATH DISTRICTS, AWEIL NORTH COUNTIES, BHAR EL GHAZAL**

The survey was conducted by Concern in November 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure about 900 children between 6-59 months. The survey also estimated mortality rates.

#### **JUBA TOWN, BHAR EL JEBEL**

The survey was conducted by ACF-F in September 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 954 children between 6-59 months. The survey also estimated measles vaccination coverage.

#### **MVOLO DISTRICT, MVOLO COUNTY, WESTERN EQUATORIA**

An exhaustive survey was conducted by AAH-US in September 2005. 663 children between 6-59 months were surveyed. The survey also estimated measles vaccination coverage and mortality rates over three months prior to the survey.

#### **OLD FANGAK, UPPER NILE**

The survey was conducted by AAH-US in October 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 723 children between 6-59 months. The survey also estimated measles vac-

ination coverage and mortality rates over the previous three months.

#### **PAGAK & TURU DISTRICTS, MAIWUT COUNTY, EASTERN UPPER NILE**

The survey was conducted by AAH-US in November 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 866 children between 6-59 months. The survey also estimated measles vaccination and retrospective mortality rate over three months prior to the survey.

#### **AKOBO & NYANDIT DISTRICTS, AKOBO COUNTY, UPPER NILE**

The survey was conducted by AAH-US in September 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 925 children between 6-59 months. The survey also estimated measles vaccination coverage and mortality rates over the previous three months.

#### **NIMNI DISTRICT, GUIT COUNTY, UPPER NILE**

The survey was conducted by AAH-US in November 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 788 children between 6-59 months. The survey also estimated measles vaccination coverage.

#### **KODOK TOWN, UPPER NILE**

An exhaustive survey was conducted by GOAL in June 2005. 482 children between 6-59 months were surveyed. The survey also estimated measles vaccination coverage, morbidity and mortality rates over the previous six months.

#### **MALAKAL TOWN, UPPER NILE**

The survey was conducted by GOAL in June 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 933 children between 6-59 months. The survey also estimated measles vaccination coverage.

## **West Africa**

### **Ghana**

#### **BUDUBURAM REFUGEE CAMP**

The survey was conducted by UNHCR in May 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 974 children between 6-59 months. The survey also estimated measles vaccination and vitamin A distribution coverage and retrospective mortality rate over three months prior to the surveys.

### **Niger**

#### **WHOLE COUNTRY AND REGIONS**

The survey was conducted by UNICEF/CDC in October 2005. 5324 children between 6-59 months were measured. The survey was designed to be representative at regional level. Retrospective mortality was also

measured. Further details on the methodology will be available when the final report is released.

#### **AGRICULTURAL, AGRO-PASTORAL AND PASTORAL ZONES OF MARADI AND TAHOUA REGIONS**

The surveys were conducted by ACH-S in October 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 1061, 1040 and 746 children between 6-59 months in the agricultural, agro-pastoral and pastoral zones, respectively. The surveys also estimated measles vaccination coverage and retrospective mortality rate over three months prior to the surveys. MUAC of mothers was also measured

#### **RURAL SURROUNDINGS OF ZINDER TOWN**

The survey was conducted by Epicentre/MSF-CH in August 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 908 children between 6-59 months. The survey also estimated measles vaccination coverage and retrospective mortality rate over seven months prior to the survey.

## **Central Africa**

### **Burundi**

#### **NATIONAL**

The survey was conducted by MOH/joint in February 2005. A cluster sampling methodology was used. 480 clusters of 15 households were surveyed. The survey also estimated measles vaccination and vitamin A distribution coverage. Vitamin A status was assessed by the measurement of serum retinol of 390 children 7-14 6-59 months old children. Urinary iodine was measured among 390 children aged 7 to 12 years.

#### **MUTAMBU, MUHUTA AND MUKIKE COOMUNES, Bujumbura Rural**

The survey was conducted by Concern in November 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 927 children between 6-59 months. 25% of the population was excluded from the sampling universe because of insecurity. The survey also estimated measles vaccination and vitamin A distribution coverage and retrospective mortality rate over three months prior to the surveys.

### **Democratic Republic of Congo**

#### **MALEMBA N'KULU AND LWAMBA HEALTH ZONES, KATANGA**

The surveys were conducted by AAH-US in August 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 930 children and 929 children between 6-29 months in Malemba and Lwamba health zones. The surveys also estimated measles vaccination coverage, and retrospective mortality over the previous 3 months.

## Uganda

### IDP CAMPS, GULU DISTRICT

A random-sampled mortality survey was conducted by WHO/joint in July 2005. Thirty clusters of 32 households were surveyed among IDPs in Gulu district, Gulu municipality, Kitgum and Pader districts. The recall period was about 6 months (from January 2005 to July 2005). The survey also estimated various public health indicators.

### ADJUMANI REFUGEE SETTLEMENTS

The survey was conducted by AHA in September 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 929 children between 6-59 months.

### RHINO AND IMPEVI REFUGEE CAMPS

The survey was conducted by DDHS Arua in November 2005. A two-stage cluster sampling methodology of 30 clusters was used to measure 829 children between 6-59 months. The survey also estimated measles vaccination coverage.

## United Republic of Tanzania

### REFUGEE CAMPS

Twelve surveys were conducted by UNHCR/joint in September 2005. Two-stage cluster sampling meth-

odologies of 30 clusters were used. The surveys also estimated measles vaccination. Measurement of haemoglobin was performed directly in the household using a portable photometer 'Hemocue B-haemoglobin' Photometer.

## Chad

### GUEREDA AREA, WADI FIRA REGION

The survey was conducted by AAH-US in June 2005. A two-stage cluster sampling methodology of 30 x 30 was used to measure approximately 960 children. The survey also estimated retrospective mortality over the previous 3 months.

## Southern Africa

### Angola

#### PARTS OF BENGUELA, BIE, HUAMBO AND KWANZA SUL PROVINCES

The surveys were conducted by the Consortium for Development Relief in Angola (CDRA) in April 2005. In each province, a two-stage cluster sampling methodology of 30 clusters was used to measure children between 6-59 months in CDRA operational areas.

## Abbreviations and acronyms

AAH-US	Action Against Hunger USA
ACF-F	Action Contre la Faim France
ACH-S	Action Contra El Hambre Spain
AFP	Agence France Presse
AHA	Africa Humanitarian Action
BMI	Body Mass Index
CDC	Center for Disease Control
CDRA	Consortium for Relief and Development in Angola
CMR	Crude Mortality Rate
< 5 MR	Under-five Mortality Rate
DDHS	District Directorate of Health Services
DPA	Deutsche Presse Agentur
DPPC	Disaster Prevention and Preparedness Commission
FAO	Food & Agricultural Organization of the United Nations
FEWS	Famine Early Warning System
FSAU	Food Security Analysis Unit for Somalia
HIC	Humanitarian Information Centre
IDP	Internally Displaced Person
IRIN	International Regional Information Network
MOH	Ministry of Health
MUAC	Mid-upper arm circumference
NGO	Non-governmental Organisation
OCHA	Office for the Co-ordination of Humanitarian Assistance
SC-UK	Save the Children-United Kingdom
UNHCR	United Nations High Commission on Refugees
UNICEF	United Nations International Children's Emergency Fund
UNMIL	United Nations Mission in Liberia
WFP	World Food Programme
WHO	World Health Organization



# Indicators and risk categories

The methodology and analysis of nutrition and mortality surveys are checked for compliance with internationally agreed standards (SMART, 2002; MSF, 2002; ACF, 2002).

Most of the surveys included in the Reports on Nutrition Information in Crisis Situations are random sampled surveys, which are representative of the population of the targeted area. The Reports may also include results of rapid nutrition assessments, which are not representative of the target population but rather give a rough idea of the nutrition situation. In that case, the limitations of this type of assessments are mentioned. Most of the nutrition survey results included in the Reports target children between 6-59 months but may also include information on other age groups, if available.

Detailed information on the methodology of the surveys which have been reported on in each issue, is to be found at the end of the publication.

## Nutrition indicators in 6-59 month olds

Unless specified, the Reports on Nutrition Information in Crisis Situations use the following internationally agreed criteria:

- . **WASTING**, defined as weigh-for-height index (w-h) < -2 Z-scores.
- . **SEVERE WASTING**, defined as weigh-for-height index < -3 Z-scores.
- . **OEDEMATOUS MALNUTRITION OR KWASHIORKOR**, diagnosed as bilateral pitting oedema, usually on the upper surface of the feet. Oedematous malnutrition is always considered as severe malnutrition.
- . **ACUTE MALNUTRITION**, defined as the prevalence of wasting (w-h < -2 Z-scores) and/or oedema
- . **SEVERE ACUTE MALNUTRITION**, defined as the prevalence of severe wasting (w-h < -3 Z-scores) and/or oedema.
- . **STUNTING** is usually not reported, but when it is, these definitions are used: stunting is defined as < -2 Zscores height-for-age, severe stunting is defined < -3 Zscores height-for-age.
- . **MID-UPPER-ARM CIRCUMFERENCE (MUAC)** is sometimes used to quickly assess nutrition situations. As there is no international agreement on MUAC cut-offs, the results are reported according to the cut-offs used in the survey.
- . **MICRO-NUTRIENT DEFICIENCIES**  
Micro-nutrient deficiencies are reported when data are available.

## Nutrition indicators in adults

No international consensus on a definitive method or cut-off to assess adult under-nutrition has been reached (SCN, 2000). Different indicators, such as Body Mass Index (BMI, weight/height<sup>2</sup>), MUAC and oedema, as well as different cut-offs are used. When reporting on adult malnutrition, the Reports always mention indica-

tors and cut-offs used by the agency providing the survey.

## Mortality rates

In emergency situations, crude mortality rates and under-five mortality rates are usually expressed as number of deaths/10,000 people/day.

## Interpretation of indicators

Prevalence of malnutrition and mortality rates are late indicators of a crisis. Low levels of malnutrition or mortality will not indicate if there is an impending crisis. Contextual analysis of health, hygiene, water availability, food security, and access to the populations, is key to interpret prevalence of malnutrition and mortality rates.

Thresholds have been proposed to guide interpretation of anthropometric and mortality results.

A prevalence of acute malnutrition between 5-8% indicates a worrying nutritional situation, and a prevalence greater than 10% corresponds to a serious nutrition situation (SCN, 1995). The Crude Mortality Rate and under-five mortality rate trigger levels for alert are set at 1/10,000/day and 2/10,000/day respectively. CMR and under-five mortality levels of 2/10,000/day and 4/10,000/day respectively indicate a severe situation (SCN, 1995).

Those thresholds have to be used with caution and in relation to contextual analysis. Trend analysis is also recommended to follow a situation: if nutrition and/or mortality indicators are deteriorating over time, even if not above threshold, this indicates a worsening situation.

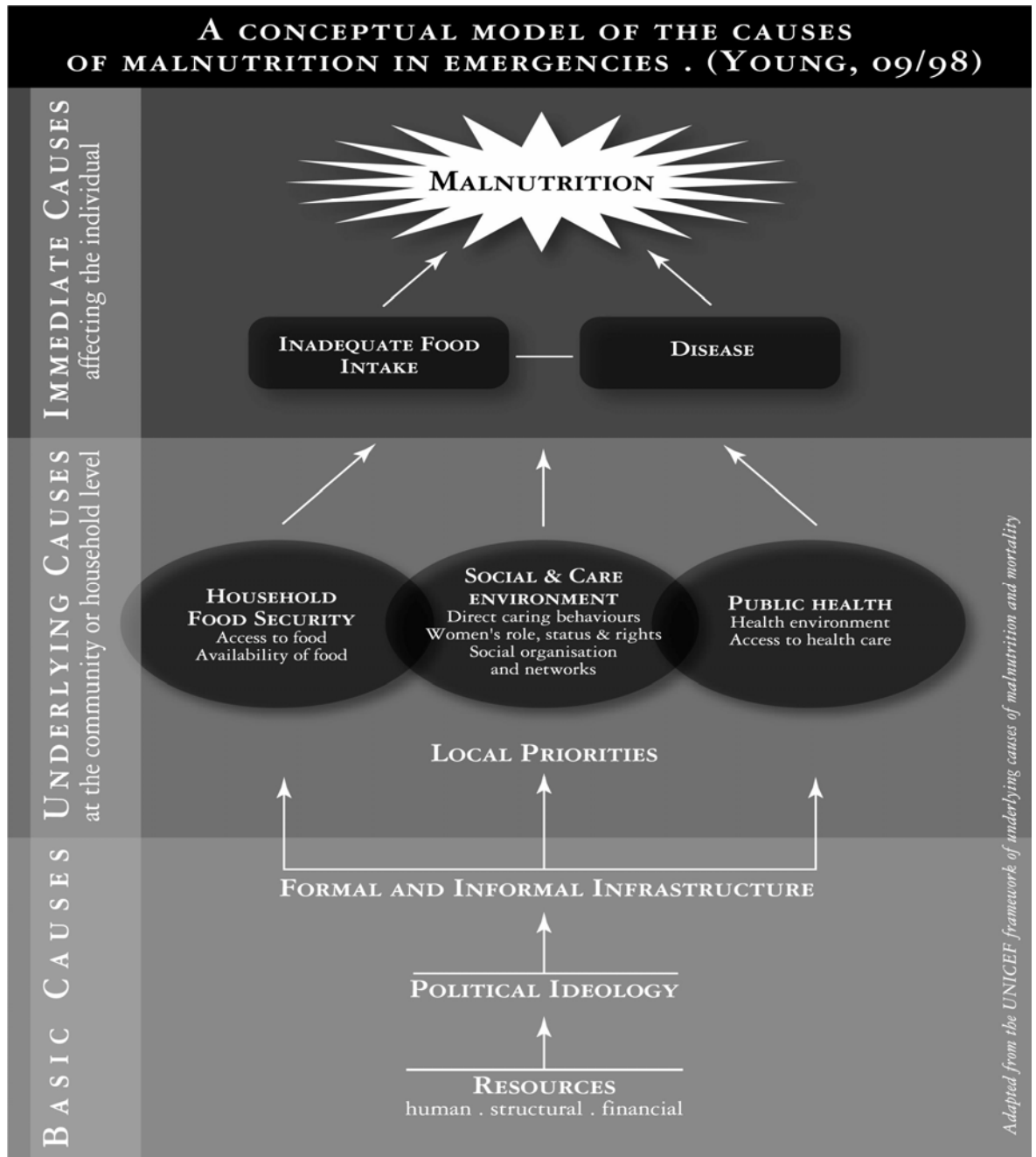
## Classification of situations

In the Reports, situations are classed into five categories relating to risk and/or prevalence of malnutrition. The prevalence/risk is indirectly affected by both the underlying causes of malnutrition, relating to food, health and care, and the constraints limiting humanitarian response. These categories are summations of the causes of malnutrition and the humanitarian response:

- Populations in *category I* – the population is currently in a critical situation; they either have a *very high risk* of malnutrition or surveys have reported a very high prevalence of malnutrition and/or elevated mortality rates.
- Populations in *category II* are currently at *high risk* of becoming malnourished or have a high prevalence of malnutrition.
- Populations in *category III* are at *moderate risk* of malnutrition or have a moderately high prevalence of malnutrition; there may be pockets of high malnutrition in a given area.
- Populations in *category IV* are *not* at an elevated nutritional risk.
- The risk of malnutrition among populations in *category V* is *not known*.

## Nutrition causal analysis

The Reports on Nutrition Information in Crisis Situations have a strong public nutrition focus, which assumes that nutritional status is a result of a variety of inter-related physiological, socio-economic and public health factors (see figure). As far as possible, nutrition situations are interpreted in line with potential underlying determinants of malnutrition.



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## NICS quarterly reports

The UN Standing Committee on Nutrition, which is the focal point for harmonizing nutrition policies in the UN system, issues these Reports on Nutrition Information in Crisis Situations with the intention of raising awareness and facilitating action. The Reports are designed to provide information over time on key outcome indicators from emergency-affected populations, play an advocacy role in bringing the plight of emergency affected populations to the attention of donors and humanitarian agencies, and to identify recurrent problems in international response capacity. The Reports on Nutrition Information in Crisis Situations are aimed to cover populations affected by a crisis, such as refugees, internally displaced populations and resident populations.

This system was started on the recommendation of the SCN's working group on Nutrition of Refugees and Displaced People, by the SCN in February 1993.

Based on suggestions made by the working group and the results of a survey of the readers, the Reports on Nutrition Information in Crisis Situations are published every three months.

Information is obtained from a wide range of collaborating agencies, both UN and NGOs. The Reports on Nutrition Information in Crisis Situations are put together primarily from agency technical reports on nutrition, mortality rates, health and food security.

The Reports provide a brief summary on the background of a given situation, including who is involved, and what the general situation is. This is followed by details of the humanitarian situation, with a focus on public nutrition and mortality rates. The key point of the Reports is to interpret anthropometric data and to judge the various risks and threats to nutrition in both the long and short term.

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This report was compiled by Dr Claudine Prudhon of the UNS/SCN Secretariat  
Sarah Philpot assisted in the editing.  
Design concept: Marie Arnaud Snakkers

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The chairman of the UNS/SCN is Catherine Bertini

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If you have information to contribute to forthcoming reports, or would like to request back issues of the report, please contact:

Claudine Prudhon, NICS Coordinator,  
UNS/Standing Committee on Nutrition  
20, avenue Appia, 1211 Geneva 27, SWITZERLAND  
Tel: +(41-22) 791.04.56, Fax: +(41-22) 798.88.91,  
Email: [scn@who.int](mailto:scn@who.int)  
Web: <http://www.unsystem.org/scn>

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