

# Nutrition Information in Crisis Situations

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# Highlights

**ETHIOPIA—FOOD SECURITY IMPROVEMENT**—A bumper 2006/2007 *mehar* season has been forecast with an estimated cereal and pulse production of 20.1 million tonnes. This is about 50% above the average of previous five years. The number of people in need of emergency assistance in 2007 is, therefore, lower than in recent years and is estimated at 1.36 million, compared to 2.6 in 2006. Moreover, around 7.3 million chronically food-insecure people will be entitled to the Productive Safety Net Program.

**KENYA—FOOD INSECURITY PERSISTS**—Most parts of eastern Kenya remain extremely food-insecure after the floods that affected the area at the end of 2006. Moreover, as a consequence of the floods, these districts have also been hit by an outbreak of Rift Valley Fever, a disease that affects livestock and is transmitted to humans.

**SOMALIA—IMPROVED FOOD SECURITY, BUT INCREASING INSECURITY**—Somalia has experienced an upsurge in violence over the last few months, which resulted in dozens of civilian casualties and the flight of an estimated 20,000 to 40,000 people. Despite these adverse effects, the overall humanitarian situation has generally improved, following the *deyr* season.

About 990,000 people, compared to 1.8 M in 2006, are estimated to require humanitarian assistance and livelihood support from January to July 2007, including 400,000 IDPs and 590,000 people in the south of the country. The most affected regions are Middle and Lower Juba, Gedo and Bakool.

**SUDAN—GOOD FOOD SECURITY PROSPECTS, EXCEPT IN CONFLICT-AFFECTED AREAS**—A record cereal harvest of 6.64 m MT is forecast this year in Sudan. This represents an increase of about 22% compared to last year and is 36% above the average of the previous five years. However, 4.6 m people will need emergency food assistance during 2007, mainly due to civil unrest in Darfur, but also because of structural factors such as poor infrastructure, weak marketing systems, and economic isolation.

**BURUNDI—INCREASING CONCERNS**—Floods at the end of last year have affected at least 7 of the 17 provinces of Burundi. The majority of the November and January crops have been affected. This phenomenon has compounded an already fragile food security situation caused by the previous prolonged dry season, and structural weaknesses. An estimated 2 m people, representing 25% of Burundi's population, have been affected.

**MOZAMBIQUE—HIT BY SEVERAL NATURAL DISASTERS**—Mozambique has been hit by several natural disasters in the last few months. The major impacts of these disasters are the destruction of shelter, infrastructure, farmlands, water sources and assets, as well as the lost of economic activities. Funds from the Central Emergency Response Fund and several donors were rapidly made available. Food and non-food items have been distributed to the affected population. Seed and tool distributions were also planned. The government of Mozambique has launched an appeal of US\$ 71 m for recovery and reconstruction. The United Nations and humanitarian partners have also launched an appeal of US\$ 17.7 m to provide relief and assistance to 435,000 affected people for six months.

**LEBANON—FOOD INSECURITY PERSISTS IN THE SOUTH**—A food security assessment conducted in 20 villages in Marjaayoun, Hasbaya and Bint Jbeil Cazas, South Lebanon showed that farmers' households have been badly affected by last summer's war. Farmers lack investment capacity, having lost most of last year's crop. This will impact negatively on the upcoming agricultural season. These areas were already some of the poorest before the war. There are very few programmes and organisations aimed at improving food security in the area.

## 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>KENYA</b> Kakuma refugee camp	<b>SOMALIA</b> IDPs in Bossaso	<b>SUDAN</b> Orash IDP camp, Nyala, South Darfur	<b>SUDAN</b> Abu Shok and Es Salam IDP camps, North Darfur	<b>NIGER</b> Madaoua, Bouza and Birmin Konni district, Tahoua region
Nutritional risk category	II	II	I	I	III
<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

A bumper 2006/2007 *meher* season has been forecast with an estimated cereal and pulse production of 20.1 million tonnes. This is about 50% above the average of previous five years (FAO/WFP, 23/02/07). The number of people in need of emergency assistance in 2007 is, therefore, lower than in recent years and is estimated at 1.36 million, compared to 2.6 in 2006 (GoE, 12/02/07). About 150,000 MT of food is needed, of which about 90,000 MT will be carry-over pledges and stock from 2006. In addition, US\$ 128, 944,676 is required to address the needs in the non-food sector, including flood rehabilitation/recovery gaps. About 70% and 17% of the emergency-affected population are located in Somali and the lowlands of Oromia regions, respectively (FEWS,

27/02/07). Food distributions will be conducted following more specific area-by-area

and case-by-case assessments than in the past (GoE, 12/02/07). Moreover, around 7.3 million chronically food-insecure people will be entitled to the Productive Safety Net Program, which supports a large-scale public works initiative which pays wages to food-insecure but able-bodied people. For those physically unable to work, the programme provides direct grants.

The outbreak of Acute Watery Diarrhoea has continued, affecting Afar, Somali and pockets of SNNP and Oromia regions especially (OCHA, 26/02/06).

TABLE 1 PREVALENCE OF ACUTE MALNUTRITION, ETHIOPIA, 2006  
(ENCU, 31/12/06)

Survey Area	Date	Acute Malnutrition (%) (95% CI)		Severe Acute Malnutrition (%) (95% CI)		Oedema (%)
<b>SNNPR</b>						
Lanfuro district, Silti zone	Sept-06	5.7	4.0-7.4	0.4	0.0-1.0	0.1
Boloso Sorie district, Wolayita zone	Dec-06	3.0	1.5-4.5	0.6	0.0-1.2	0.2
Coffee Livelihood zone, Dale & Aleta Wondo districts, Sidama zone	Dec-06	5.6	4.1-7.1	0.3	0.0-0.7	0.1
Mareko district, Gurage zone	Dec-06	6.0	3.9-8.0	0.3	0.0-0.6	0.1
<b>OROMIA REGION</b>						
Shashemane district, West Arsi zone	Oct-06	8.0	5.3-10.6	1.0	0.2-1.8	0.2
Haromaya district, East Hararghe zone	Dec-06	4.9	3.2-6.5	1.0	0.0-2.1	0.6
Doba district, West Hararghe zone	Dec-06	5.6	3.9-7.4	0.6	0.1-1.2	0.4
<b>AFAR REGION</b>						
Teru district, zone 4	Nov-06	9.3	6.8-11.9	0.6	0.2-1.1	0
Yalo district, zone 4	Nov-06	11.3	9.0-13.5	0.7	0.2-1.2	0.0
<b>SOMALI REGION</b>						
Fik, Hamero, Sege & Dehun districts, Fik zone	Oct-06	12.2	9.5-14.9	0.4	0.0-0.8	0.3
Cherati town, Afder zone	Sept-06	16.4	13.7-19.2	0.7	0.0-1.3	0.1

## Acceptable nutrition situation in cropping areas but situation still of concern in pastoral areas

Nutrition surveys conducted in SNNPR and Oromia regions at the end of 2006 during harvest or post-harvest seasons, showed acceptable situations, which had improved compared to pre-harvest season, when comparison was possible (table 1) (ENCU, 31/12/06).

On the other hand, the nutrition situation was still of concern in Afar and Somali regions

(table 1) (ENCU, 31/12/06). Measles vaccination coverage and mortality rates were also generally poorer in these regions.

## Overall

Ethiopia has seen a general food security improvement. However, there is a significant number of people still in need of assistance, especially in the Somali region.

## Kenya Rift Valley Fever outbreak

Most parts of eastern Kenya remain extremely food-insecure after the floods that affected the area at the end of 2006 (see map) (FEWS, 02/07). Moreover, as a consequence of the floods, these districts have also been hit by an outbreak of Rift Valley Fever, a disease that affects livestock and is transmitted to humans (see map). As of February 2007, 150 people had died from the disease. Market, movement and slaughter restrictions were imposed and a livestock vaccination campaign launched. As of end February, the situation seemed to have improved in Garissa, Ijara, Mander and Wajir districts, where the ban was lifted (OCHA, 28/02/07). A range of interventions, including health and nutrition have been implemented in the highly food-insecure areas (FEWS, 22/01/07).

## Improved nutrition situation in Isiolo district

The nutrition situation had significantly improved in Isiolo district in November 2006 compared to May the same year (figure 1) (see NICS 10). This follows the same pattern as that observed in Mander district (see NICS 11) and might be explained partly by seasonal variation, November being a more favourable season than May. Moreover, about 60% of the population received a full general food ration and blanket feeding was provided to pregnant and lactating women as well as children under-five. Selective feeding programmes were also in

AREAS AFFECTED BY FLOODS AND RIFT VALLEY FEVER (FEWS, 02/07)

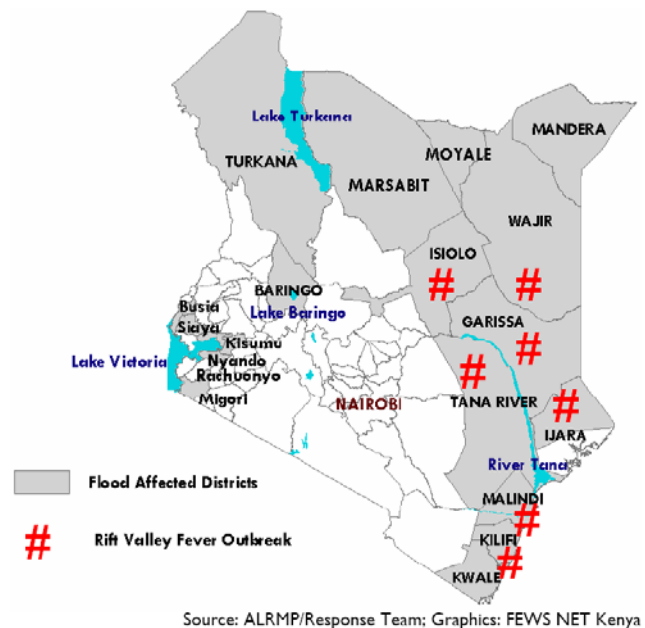


FIGURE 1 PREVALENCE OF ACUTE MALNUTRITION AND MORTALITY RATES, ISIOLO DISTRICT, KENYA

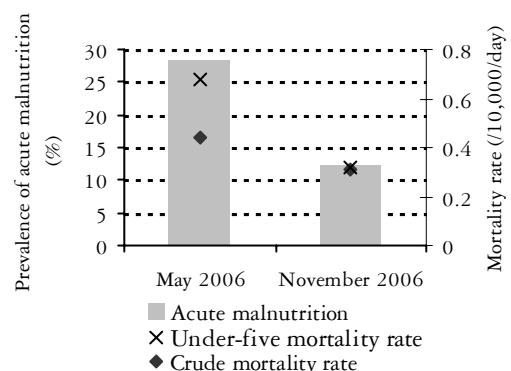
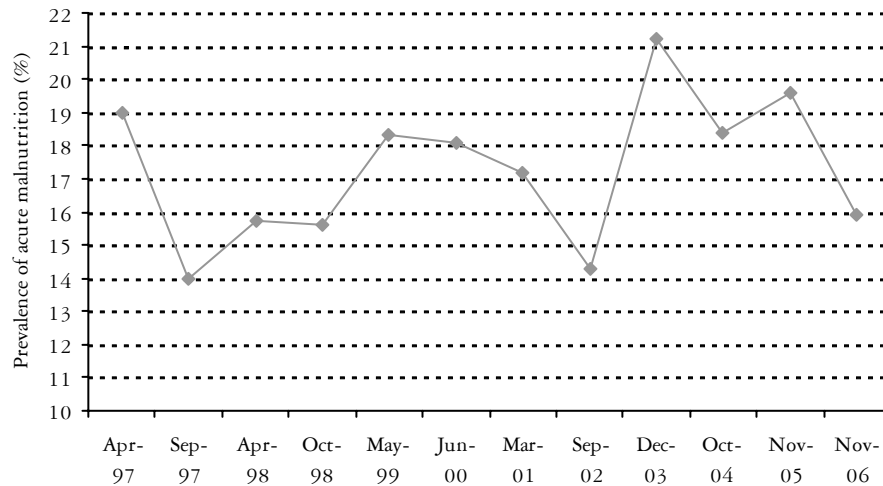


FIGURE II PREVALENCE OF ACUTE MALNUTRITION, KAKUMA REFUGEE CAMP, KENYA



place. However, the situation was still highly precarious, 80% of the people interviewed being highly reliant on food distribution, and access to meat and milk remaining limited.

### Nutrition situation still precarious in Kakuma refugee camp

According to a nutrition survey conducted in Kakuma refugee camp in November 2006, the nutrition situation remains precarious, although it was significantly better than in December 2003 (figure 2) (IRC, 11/06). The general food distribution was regular in 2006, but about three quarters of the population sold part of their food ration, mainly to buy charcoal, soap, sugar, vegetables, milk and meat. Infant feeding practices were poor with only 25% of exclusive breastfeeding. Mothers introduced mostly plain or sugared water. Bottle feeding was used by 30% of the mothers. Fre-

quency of feeding, and dietary diversity score were low for complementary feeding.

Anaemia among children was very high (81.7% of the 6-59 month-olds had haemoglobin < 11 g/dl) and was similar to the level found in 2004.

### Recommendations

*From the survey in Sericho and Merti divisions, Isiolo district*

- Continue food distribution and blanket supplementary feeding
- Continue selective feeding programmes and nutrition surveillance
- Reinforce MCH antenatal care
- Increase access to health facilities through mobile clinics

### Somalia

Somalia has experienced an upsurge in violence over the last few months. The military forces of the Transitional Federal Government and Ethiopia has dislodged the Union of Islamic Court from the eight administrative regions they were controlling (UNSC, 24/02/07). The Security Council adopted a resolution authorising the deployment of an African Union/

Intergovernmental Authority on Development force to protect the Transitional Federal Government, based in Baidoa at the time of the resolution, but which subsequently moved to Mogadishu at the beginning of March (IRIN, 13/03/07).

Increasing violence in Mogadishu in February 2007 resulted in dozens of civilian casualties and the flight of an estimated 20,000 to 40,000 people (OCHA, 28/02/07; UNHCR,

02/03/07). They moved mainly to Lower and Middle Shabelle, Bay, Gedo, Hiran, Somaliland and North Mogadishu.

Access to the population has remained hampered by insecurity (OCHA, 28/02/07). Cross-border movement of humanitarian supplies, however, has increased between Kenya and Somalia, while cross-border movement of asylum-seekers has remained impossible.

Following the end of last year's floods, acute watery diarrhea has spread in Hiran, Middle Shabelle, Lower Shabelle and Lower Juba regions, with 3,633 cases reported as of 2 March 2007, and 143 deaths (OCHA, 28/02/07). The response was on-going and new cases were declining. On the other hand, cases were on the rise in Mogadishu. Suspected cases of Rift Valley Fever have also been reported in the south (WHO, 31/01/07).

TABLE 2 ESTIMATED RURAL POPULATION BY REGION IN HUMANITARIAN EMERGENCY AND ACUTE FOOD AND LIVELIHOOD CRISIS (FSAU, 14/02/07)

Affected regions	Acute food and livelihood crisis	Humanitarian emergency	Total Affected as % of the region population
Bakool	80,00	0	26
Bay	10,000	0	2
Gedo	90,000	110,000	61
Hiraan	10,000	10,000	6
Lower Juba	90,000	40,000	34
Middle Juba	80,000	70,000	63
Lower Shabelle	0	0	0
Middle Shabelle	0	0	0
<b>Total</b>	<b>360,000</b>	<b>230,000</b>	<b>8 (as % of the whole country population)</b>

## General improvement of the humanitarian situation

Despite these adverse effects, the overall humanitarian situation has generally improved, following the *deyr* season (FSAU, 14/02/07).

About 990,000 people, compared to 1.8 M in 2006, are estimated to require humanitarian assistance and livelihood support from January to July 2007, including 400,000 IDPs and 590,000 people in the south of the country. The most affected regions are Middle and Lower Juba, Gedo and Bakool (table 2) (see map). Moreover, the humanitarian situation of the riverine populations in Juba, Gedo and Hiran is critical and deteriorating due to the compounding impact of the previous drought and severe flooding. On the other hand, the most notable improvements have been recorded in the northern and central parts of the country which have been all downgraded to the phase of chronic food-insecurity, and among pastoralists and agro-pastoralists in Bay and Bakool regions.

The nutrition situation also showed a significant improvement in the north, but was critical in riverine areas of Hiran and Bakool (see map).

Several nutrition surveys conducted at the end of last years showed average to poor situations in the North and Central regions while situations of concern were recorded in the south and among IDPs (figure 3).

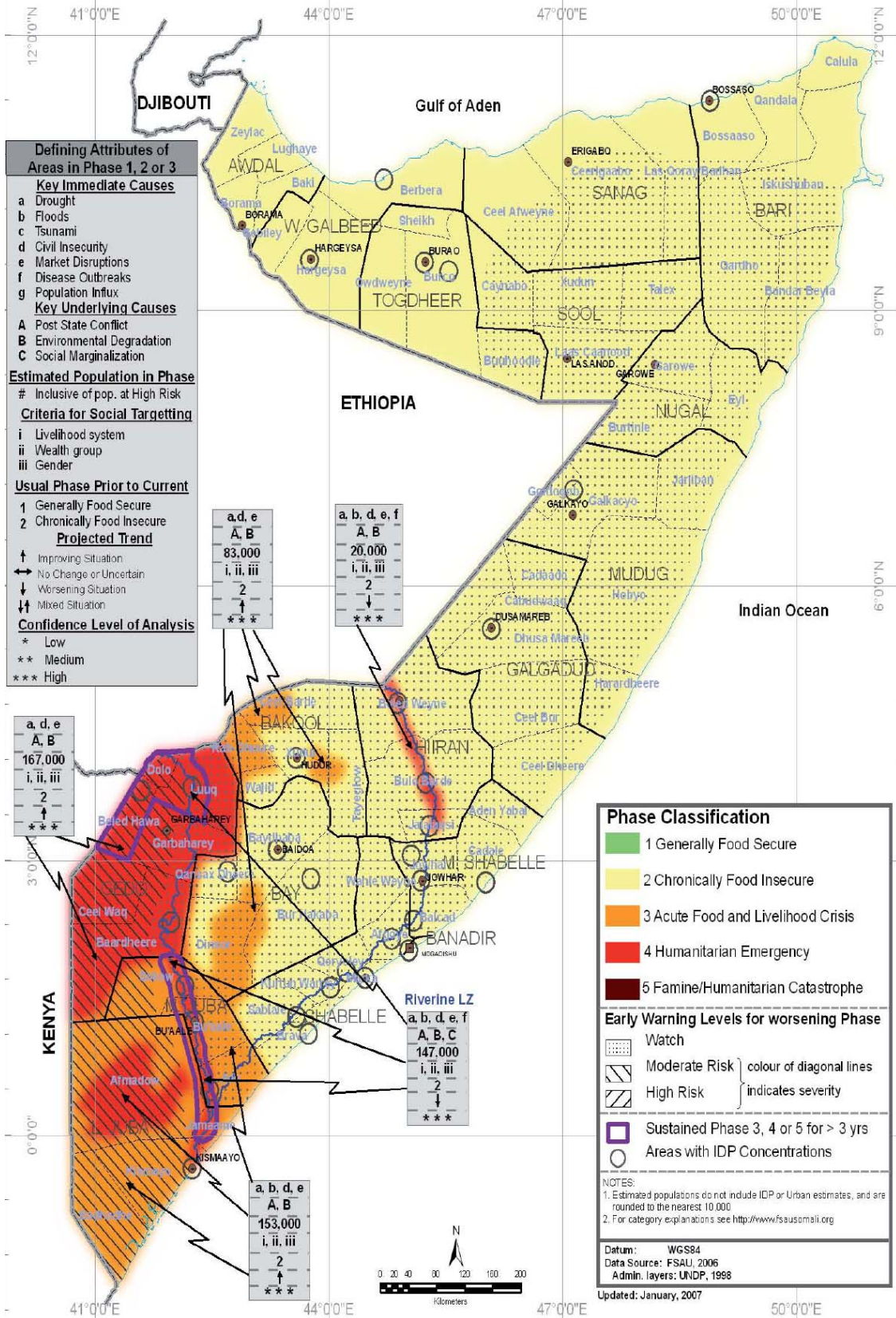
In the hawd of Hargeisa, Somaliland, the nutrition situation was average (FSAU/joint, 11/06). People had access to a diversified diet due to improved access to livestock products and income. On the other hand, child-feeding practices were below recommended, and access to safe water and sanitation facilities was poor.

In Bari region, the nutrition situation was poor in October 2006, before the onset of *deyr* season (FSAU/joint, 10/06) and similar to that in 2002 and 2004.

In Goldogob district, Mudug region, the situation was of concern (FSAU, 12/06). About 70% of the population had access to a diversi-



# SOMALIA FOOD SECURITY SITUATION ANALYSIS: POST-DEYR 06-07 PROJECTION, JANUARY THROUGH JUNE 2007 (FSAU, 01/07)





SOMALIA NUTRITION SITUATION JANUARY 2007 (FSAU/N, 01/07)

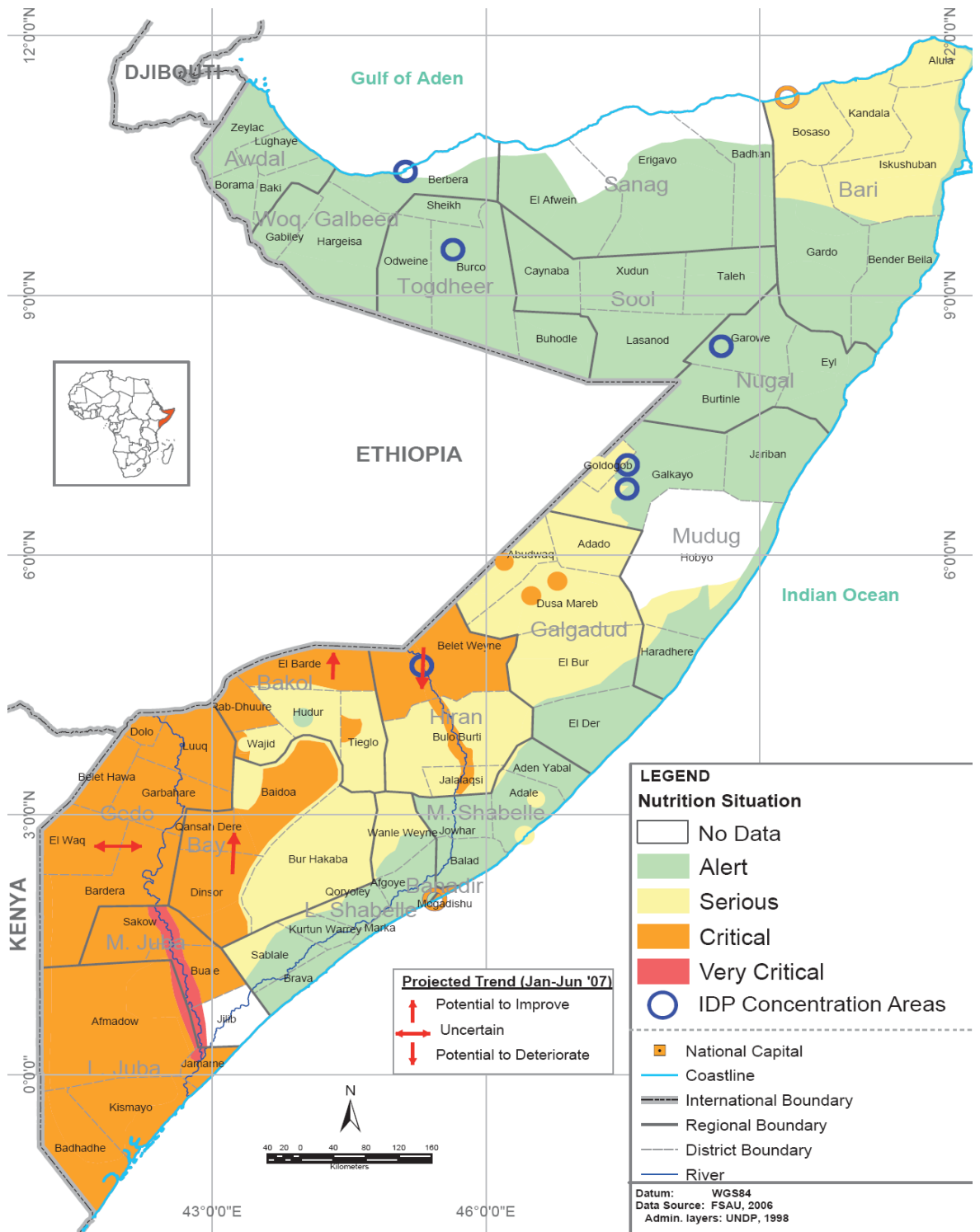
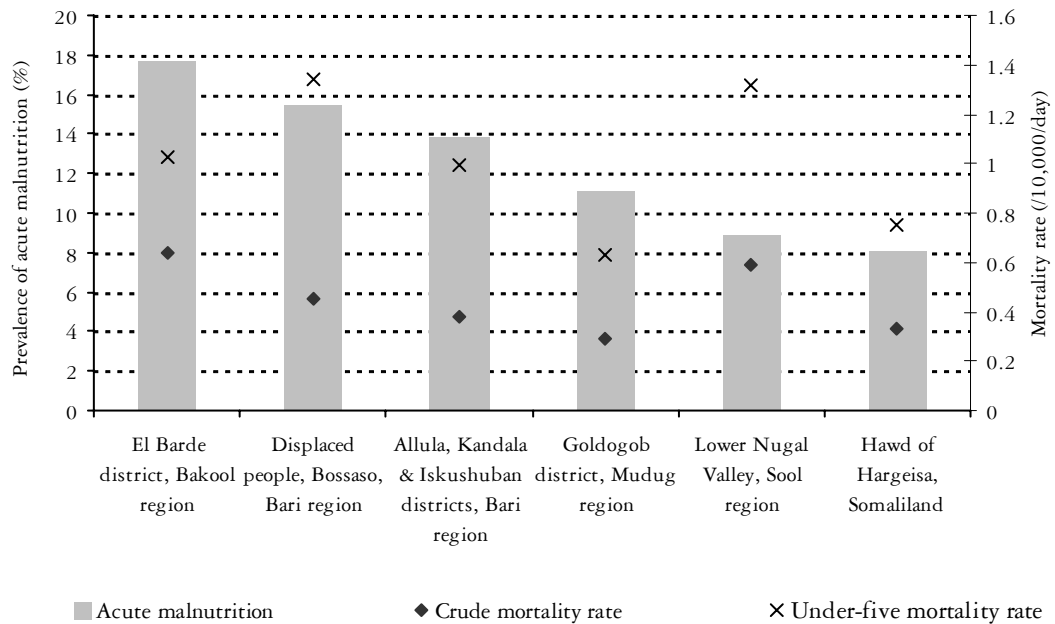


FIGURE III RESULTS OF NUTRITION AND MORTALITY SURVEYS, SOMALIA, SEPTEMBER-DECEMBER 2006 (FSAU, 10/06; FSAU 12/06)



fied diet. Children feeding practices were poor, as was access to safe water and sanitation.

In Lower Nugal Valley, the nutrition situation was average and about 90% of the population had access to a diversified diet (FSAU, 12/06). Poorer situations were recorded among IDPs in Bossasso and El Barde district, Bakool region (FSAU, 12/06; FSAU/joint, 10/06). A rapid assessment conducted in Qansah Dere among displaced children in February 2007 also showed a critical situation with more than 20% acute malnutrition (FSAU, 02/07).

## Overall

Following a good *Deyr* season, the food-security situation has improved in most parts of the country. However, the southern areas and especially the riverine areas continue facing dire conditions partly due to the consequences of last year floods. Moreover, the security situation will play a major role in the development of the situation in the forthcoming months.

## Sudan

A record cereal harvest of 6.64 m MT is forecast this year in Sudan (FAO/WFP, 01/02/07). This represents an increase of about 22% compared to last year and is 36% above the average of the previous five years. However, 4.6 m people will need emergency food assistance during 2007, mainly due to civil unrest, but also because of structural factors such as poor infra-

structure, weak marketing systems, and economic isolation.

## Darfur

Continuing violence in Darfur has led to a new wave of displacement of about 80,000 people since the beginning of the year (OCHA, 28/02/06). These displacements were due to the Government of Sudan, militia and rebel attacks as well as to inter-tribal fighting. The

majority of displacements was recorded in South Darfur (54,450 people) while about 10,000 people were displaced in both North and West Darfur. IDP camps were approaching capacity, especially around El Fasher town. Because of the insecurity, 23% of the affected population could not be reached in January/February.

A food security assessment conducted in Gereida town and IDP camps, South Darfur, at the end of last year showed a precarious situation (ACF-F, 12/06). Almost no IDPs were able to cultivate in 2006, mainly because of insecurity. Moreover, it was estimated that only 11% had a source of income. Only about half of the general food distribution was consumed, with the rest used for essential milling costs, education costs and buying of food and necessary non-food items. Nutrition surveys conducted in the camps in January 2005 and June 2006 showed a worrying situation (see NICS 10). Residents in Gereida town have also been significantly affected by the conflict. Loss of livestock has been widespread and access to land has been significantly reduced. Food availability through normal sources has, therefore, decreased significantly and depletion of assets has increased. The assessment recommended that interventions to improve food security of the residents be urgently undertaken as no humanitarian aid was directed towards them.

The nutrition situation was precarious in Otash camp, Nyala town, South Darfur, in December 2006 (ACF-F, 12/06) (table 3). Moreover, mortality rates were above alert thresholds. A nutrition survey conducted in Abu

Shok and As Salaam camps, North Darfur in November 2006 showed a critical nutrition situation (table 3) that has remained stable for the past 2 years (ACF-F, 11/06). A survey conducted in Umshalaya among residents, displaced people and refugees from Chad in October 2006 revealed 13.1% acute malnutrition and an under-five mortality rate of 2.09 deaths/10,000/day, which might have been due in part to a recent hepatitis E outbreak (UNICEF, 11/06).

### South Sudan

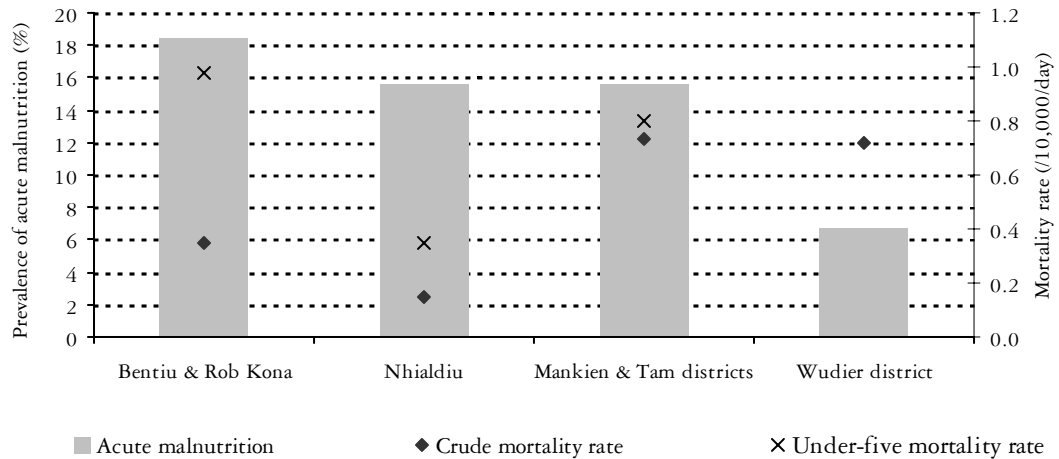
As of February 2007, the food security situation was stable, after a normal harvest and good environmental conditions for livestock (FEWS, 16/02/07). However, 350,000 to 450,000 people were estimated as being food insecure, including returnees and residents affected by localised conflict or poor food production. The situation is expected to worsen during the traditional hunger-gap period between May and August with a moderate deterioration in the food security. About 1.7 m people will be food insecure, including 500,000 returnees. However, if there are high levels of population return, combined with persistent localised conflict, the situation could worsen.

Returns of displaced people and refugees continue. It is estimated that about one million people have returned since the signing of the peace agreement (IOM, 27/02/07). Facilitated repatriations of IDPs are on-going (IOM, 27/02/07; IOM, 16/03/07). In addition, assisted repatriation of refugees from Central African Republic, DRC, Uganda, Kenya and Ethiopia has reached more than 30,000 refu-

TABLE 3 RESULTS OF NUTRITION AND MORTALITY SURVEYS, DARFUR SUDAN, 2006 (ACF-F, 11/06; ACF-F, 12/06)

Survey Area	Acute Malnutrition (%) (95% CI)		Severe Acute Malnutrition (%) (95% CI)		Oedema (%)	Crude Mortality (/10,000/day)	Under 5 Mortality (/10,000/day)
Otash camp, Nyala, South Darfur	15.6	12.5-19.3	1.8	0.8-3.6	0.1	1.98	2.58
Abu Shok & As Sallam IDP camps, North Darfur	22.6	18.9-26.7	2.7	1.5-4.8	0.3	0.74	1.82

FIGURE IV RESULTS OF NUTRITION AND MORTALITY SURVEYS, UNITY STATE, SUDAN  
(AAH-US, 09/06; AAH-US, 11/06; ACF-F, 02/07)



gees (UNHCR, 30/01/07). About 340,000 Sudanese refugees remain in exile. Returnees face considerable challenges and many host communities are struggling to absorb them, due to, among other things, poor infrastructure and insufficient basic services (UNHCR, 06/03/07). UNHCR has launched an appeal of US\$ 56.1 m to rehabilitate boreholes, health clinics and schools.

A meningitis outbreak has spread over South Sudan with about 1,800 cases identified in January-February. A vaccination campaign targeting 800,000 people is on-going (Reuters, 24/02/07).

Nutrition surveys conducted in Unity state showed an average nutrition situation in Wudier district (figure 4) that might be ex-

plained by the acceptable food security situation at this time of the year (AAH-US, 09/06). On the other hand, the situation was precarious in Mankien and Tam districts at the same period (figure 4) (AAH-US, 11/06). In Bentiu, Rob Kona and Nhialdiu, a high prevalence of acute malnutrition was recorded at the beginning of the year (ACF-F, 02/07). The situation has not improved for the last five years.

## Overall

Good food security prospects are anticipated for 2007 in Sudan. However, more than four million people are still at high risk due to conflict, especially in Darfur.

# West Africa

## Niger

The food security situation has remained stable for the beginning of the year with good grain availability and access (FEWS, 15/03/07). Millet prices have declined in major markets and stabilised in other markets. Water availability was also good in most parts of the country. However, pastoralists in the north of Tahoua, Zinder and Diffa regions were facing food insecurity, which is usual for this time of the year, due to food stock depletion and decrease in water availability.

### Improved nutrition situation compared to 2005 but still poor

The preliminary results of a nationwide nutrition survey conducted in October and November last year seemed to show an improvement

in the nutrition situation (FEWS, 15/03/07). Similarly, results of nutrition surveys conducted in three districts of Tahoua region in November 2006 (MSF-S, 11/06) showed average nutrition situations (table 4) that were similar to April 2006 and better than in October 2005 in the entire Tahoua region. Mortality rates were also average (table 4).



TABLE 4 ACUTE MALNUTRITION AND MORTALITY, TAHOUA DISTRICT, NIGER (MSF-S, 11/06)

Survey Area	Acute Malnutrition (%) (95% CI)		Severe Acute Malnutrition (%) (95% CI)		Oedema (%)	Crude Mortality (/10,000/day)	Under 5 Mortality (/10,000/day)
Madaoua district, Tahoua region	7.8	6.2-9.8	0.3	0.0-1.0	0.1	0.6	1.6
Bouza district, Tahoua region	9.2	7.4-11.3	0.9	0.4-1.8	0	0.4	1.1
Birmin Konni district, Tahoua region	9.8	8.0-12.0	1.0	0.4-1.9	0.1	0.5	1.6

# Central Africa

## Burundi

Floods at the end of last year have affected at least 7 of the 17 provinces of Burundi (IRIN, 09/02/07). The majority of the November and January crops have been affected. This phenomenon has compounded an already fragile food security situation caused by the previous prolonged dry season, the "cassava mosaic virus" and structural weaknesses (FAO-CAUR, 02/07). As of the beginning of 2007, food prices were on the rise and people were relying on coping mechanisms such as the consumption of "hunger foods", reduction in the quan-

tity and number of meals, selling of animals and assets, and migration. An estimated 2 m people, representing 25% of Burundi's population, have been affected (WFP, 06/02/07). WFP has requested US\$ 12 m to cover food aid requirements until July. Due to pipeline breaks, reduced rations were delivered at the beginning of the year. The Government of Burundi has put in place a solidarity fund to help flood-affected families (IRIN, 09/02/07).

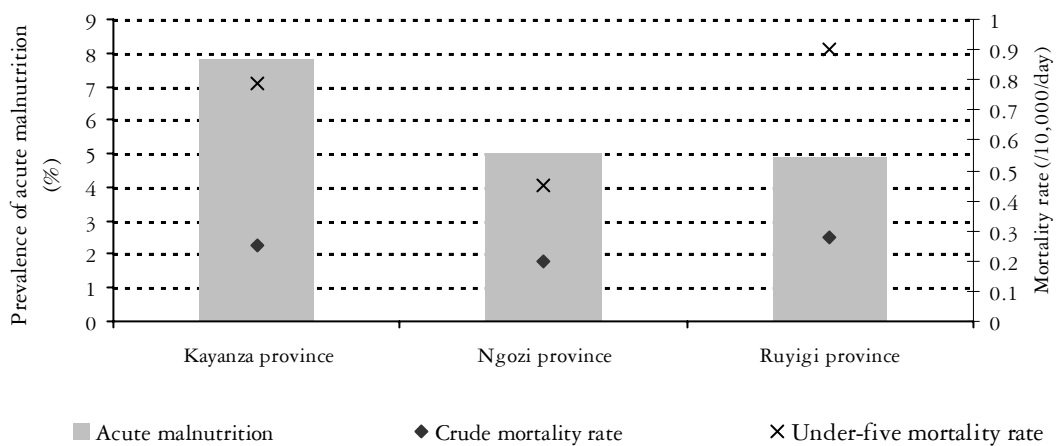


The last rebel group in Burundi signed a peace agreement in September 2006 (AFP, 19/02/07).

In 2006, about 43,000 refugees returned to Burundi (OCHA, 10/12/06).

Nutrition surveys showed acceptable situations in Ngozi and Ruyigi provinces while the situation was average in Kayanza province (ACF-F, 11/06; ACF-F, 01/07) (figure 5). Mortality rates were below alert thresholds. However, floods might have a negative impact on the nutrition situation.

FIGURE V RESULTS OF NUTRITION AND MORTALITY SURVEYS, BURUNDI (ACF-F, 11/06; ACF-F, 11/06; ACF-F, 02/07)



## Chad

Violence has continued in Eastern Chad, leading to new displacements. As of January, there were an estimated 112,000 displaced people (USAID, 30/01/07). Most of the displaced have lost their food stocks and their herds (ACF, 13/03/07). Food distributions have been planned but insecurity hampers delivery

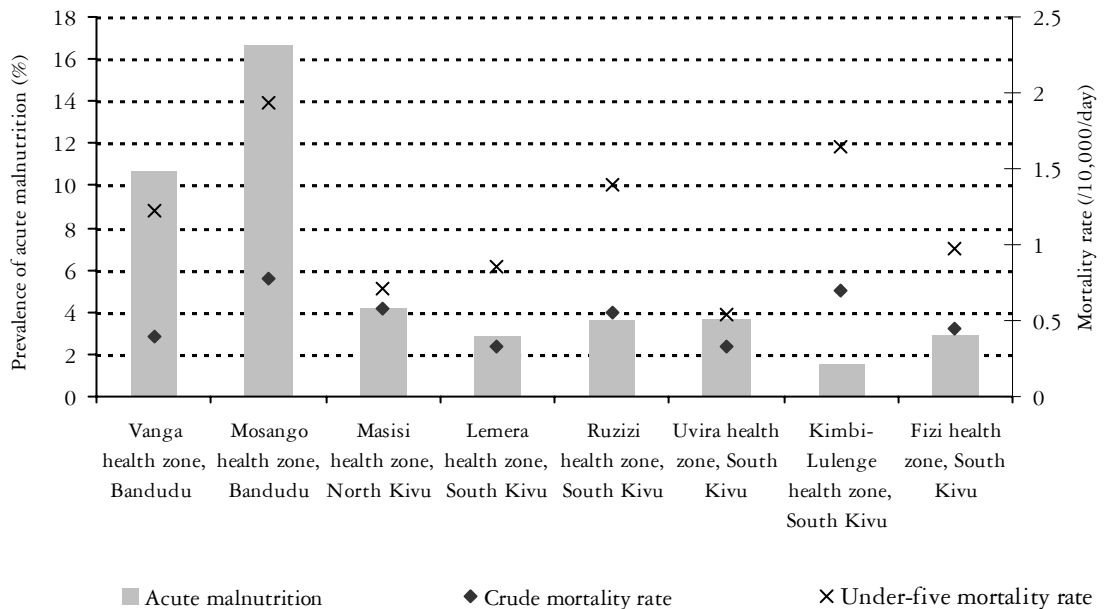
(USAID, 30/01/07). Food prices have increased abnormally, due to the difficulty of transportation caused by insecurity prevailing in the region (FEWS, 01/07). The government of Chad is not ready to accept the deployment of a peace-keeping force on its border with Sudan, but will accept forces composed of gendarmes and police (IRIN, 01/03/07).

## Democratic Republic of Congo

Nutrition surveys conducted in South Kivu and North Kivu at the end of last year showed acceptable situations (figure 6) and an overall improvement in the situation when comparisons with previous surveys were possible (AAH-US/UNICEF, 10/06-12/06, SC/PRONANUT, 11/06). Mortality rates were average.

On the other hand, the nutrition situations were poor in Vanga and Mosango health zones, Bandudu province and under-five mortality rates were near alert threshold (figure 6) (AAH-US/UNICEF, 10/06). No information on possible explanations of the poor nutrition status was available in the draft survey reports.

FIGURE VI RESULTS OF NUTRITION AND MORTALITY SURVEYS, DRC  
(AAH-US, 10/06, AAH-US, 11/06; AAH-US, 12/06; SC, 11/06)



## Southern Africa

### Mozambique

Mozambique has been hit by several natural disasters in the last few months. Between October 2006 and January 2007 heavy rains flooded the provinces of Maputo, Gaza, Inhambane, Sofala, Manica Tete, Zambeze Nampula and Niassa, affecting 46,5000 people (UNRC, 05/07). In January and February, the Zambezi valley was flooded leading to the displacement of 107,000 people. They are sheltered in accommodation and resettlement centres. About 56,000 people were also affected but not displaced. In late February, the Buzi river basin was also inundated and 13,000 people affected. Furthermore, in late February, a tropical cyclone hit Inhambanhe, Sofala and Manica provinces, affecting approximately 150,000 people. The major impacts of these disasters are the destruction of shelter, infrastructure, farmlands, water sources and assets, as well as the loss of economic activities.

The National Disaster Management Institute (INGC) has implemented a contingency plan, and response to the disaster is on-going (UNRC, 05/07). The IASC cluster approach that aims at coordinating humanitarian response has also been implemented (OCHA, 16/03/07). Funds from the Central Emergency Response Fund and several donors were rapidly made available. Food and non-food items have been distributed to the affected population. Seed and tool distributions were also planned. The government of Mozambique has launched an appeal of US\$ 71 m for recovery and reconstruction (OCHA, 13/03/07). The United Nations and humanitarian partners have also launched an appeal of US\$ 17.7 m to provide relief and assistance to 435,000 affected people for six months.

As of beginning of March, the floods subsided but some camps reported continuous arrivals





(OCHA, 16/02/07). This was attributed to food shortages in rural areas while food was available at the centres. On the other hand, some people were returning to their villages. The government of Mozambique was planning the distribution of take-home kits to promote resettlement.

Some 6,913 children have been screened in four flood-affected provinces. Among them about 600 children were found moderately malnourished and provided with high energy biscuits, and 35 severely malnourished children were referred to hospital for treatment (OCHA, 16/03/07).

## Asia

### Afghanistan

Following last year's drought, above normal precipitation took place from October to December 2006 (FEWS, 01/07). However, high temperatures in January caused an early snow melt that might have a negative impact on the availability of irrigation water for the upcoming growing season. Moreover, avalanches and floods have affected Uruzgan, Helmand, Badghis and Ghor provinces (IRIN, 20/03/07). Delivery of assistance were planned but might be hampered by bad road conditions.

A nutrition survey conducted in November 2006 in Miramor, Sharestan and Nili districts,



Day Kundi province showed an acceptable nutrition situation (ACF-F, 11/06). The prevalence of acute malnutrition was 3.0% (1.4-4.5), including 0.8% (0.2-1.7) severe acute malnutrition. Death rates were average: CMR=0.19 (0.12-0.27) and U5MR=0.70 (0.39-1.02). The nutrition situation was under control despite the food insecurity in the area that followed several years of drought.

## Middle East

### Lebanon

A food security assessment conducted in 20 villages in Marjaayoun, Hasbaya and Bint Jbeil Cazas, South Lebanon showed that farmers' households have been badly affected by last summer's war (ACH-S, 02/07). As the conflict occurred during the harvest season and farmers were not able to access their fields, it is estimated that about 80% of their crops were lost. Moreover, about 50% of fruit trees were damaged, including olive trees. More than half of the livestock was also lost during the war. Some of the irrigation systems, tractors and refrigerators were destroyed. About 25% of agricultural land remains unexploited due to

the presence of unexploded ordnance. Market prices of food stuffs have increased by an average 36% with an increase of more than 100% for vegetables. Farmers lack investment capacity, having lost most of last year's crop. This will impact negatively on the upcoming agricultural season. These areas were already some of the poorest before the war. There are very few programmes and organisations aimed at improving food security in the area.

# 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
CMR	Crude Mortality Rate
< 5 MR	Under-five Mortality Rate
ENCU	Emergency Nutrition Coordination Unit
FAO	Food & Agricultural Organization of the United Nations
FEWS	Famine Early Warning System
FSAU	Food Security Analysis Unit for Somalia
GoE	Government of Ethiopia
IOM	International Organisation on Migration
IRC	International Rescue Committee
IRIN	International Regional Information Network
MOH	Ministry of Health
MSF-S	Médecins sans frontières - Spain
MUAC	Mid-upper arm circumference
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
UNRC	United Nations Resident Coordinator
UNSC	United Nations Security Council
USAID	US Agency for International Development
WFP	World Food Programme
WHO	World Health Organization

## References

### Greater Horn of Africa

#### Ethiopia

ENCU	31/12/06	Emergency Nutrition Quarterly Bulletin (Fourth Quarter 2006).
FAO/WFP	23/02/07	FAO/WFP crop and food supply assessment mission to Ethiopia
FEWS	27/02/07	Ethiopian government requests emergency assistance for 1.3 million
GoE	12/02/07	2007 Humanitarian Appeal for Ethiopia. A joint government and humanitarian partners' appeal
OCHA	26/02/07	Relief bulletin: Weekly humanitarian highlights in Ethiopia

#### Kenya

FEWS	02/07	Kenya food security update
FEWS	22/01/07	Kenya food security emergency– Rift Valley Fever and flooding compound pastoral insecurity
MoH/SC	11/06	Report of nutrition and mortality in Merti-Sericho division, Isiolo district-Kenya
IRC	11/06	Nutrition surveys 2006, Kakuma refugee camp. Kenya

#### Somalia

FSAU/Joint	09/06	Allula Kandala & Iskushuban districts, Bari region, North East zone, Somalia
FSAU/Joint	10/06	Bossaso IDP, Bari region, Somalia
FSAU/Joint	11/06	Nutrition assessment, Hawd of Hargeisa, Balli-Gubadle and Saahley, Somaliland
FSAU/N	12/06	Nutrition Update
FSAU/N	01/07	Nutrition Update
FSAU/N	02/07	Nutrition Update
FSAU	14/02/07	Food Security and Nutrition, Special Brief-Post Deyr 06/07 analysis
IRIN	13/03/07	Somalia: Government moves to Mogadishu
OCHA	28/02/07	Humanitarian situation in Somalia: Monthly analysis, Feb 2007
UNNews	02/03/07	Exodus from Somalia's capital in face of violence, nearing 20,000: UN

UNSC	24/02/07	Report of the Secretary-General on the situation in Somalia
WHO	31/01/07	Rift Valley Fever in Kenya and Somalia—update 3

## Sudan

AAH-US	09/06	Nutritional anthropometric survey, children under five years old, final report, Wudier district, Longuchok county, Upper Nile state
AAH-US	11/06	Nutritional anthropometric survey, children under five years old, Final report, Mankien and Tam districts, Mayom county, Unity state
ACF-F	12/06	Nutritional anthropometric and retrospective mortality survey, children 6 to 59 months, Otash camp, Nyala, South Darfur, Sudan
ACF-F	12/06	Nutritional anthropometric and retrospective mortality survey, children 6 to 59 months, Abu Shok & As Salaam IDP camps, North Darfur state, Sudan
ACF-F	12/06	Food security assessment, Gereida town and IDP camps, South Darfur state
ACF-F	02/07	Nutritional anthropometric and retrospective mortality survey, children 6 to 59 months, Bentiu-Rob Kona and Nhialdiu, Unity state
FAO/WFP	01/02/07	FAO/WFP crop and food supply assessment mission to Sudan
Fews	16/02/07	Southern Sudan: Food security outlook February to July 2007
IOM	27/02/07	IDP returns from Khartoum gain momentum
IOM	16/03/07	Sudan: IDP returns from Wau beg
OCHA	28/02/07	Sudan humanitarian overview 1-28 February 2007
Reuters	24/02/07	Meningitis outbreak spreads in south Sudan-WHO
UNHCR	30/01/07	UNHCR briefing notes
UNHCR	06/03/07	UNHCR briefing notes
UNICEF	11/06	Darfur nutrition update

## West Africa

### Niger

FEWS	15/03/07	Niger: Rapport mensuel sur la sécurité alimentaire Janvier 2007
MSF-S	11/06	Enquête nutritionnelle et de mortalité rétrospective , districts de Madoua, Bouza and Birmin Konni, Tahoua région, Niger

## Central Africa

### Burundi

ACF-F	11/06	Enquête nutritionnelle anthropométrique et de mortalité rétrospective, province de Kayanza, Burundi
ACF-F	11/06	Enquête nutritionnelle anthropométrique et de mortalité rétrospective, province de Ngozi, Burundi
ACF-F	01/07	Enquête nutritionnelle anthropométrique et de mortalité rétrospective, province de Ruyigi, Burundi
AFP	19/02/07	Last rebel group in Burundi joins panel to monitor truce
IRIN	09/02/07	Une aide d'urgence pour les 300,000 victimes des inondations
FAO/CAUR	02/07	Conséquences des perturbations climatiques sur la sécurité alimentaire en début d'année 2007
OCHA	10/12/06	Weekly situation report
WFP	06/02/07	WFP and NGOs warn of looming crisis facing 2 million flood victims

### Chad

ACF	13/03/07	Une grave crise humanitaire menace des dizaines de milliers de déplacés tchadiens
FEWS	01/07	Tchad– rapport mensuel sur la sécurité alimentaire
IRIN	01/03/07	Chad: Government wants police not troops
USAID	30/01/07	Chad: Complex Emergency Fact Sheet #2 (FY 2007)

### DRC

AAH-US	10/06	Rapport d'enquête nutritionnelle anthropométrique, zone de santé de Mosango, province de Bandudu, République Démocratique du Congo
AAH-US	10/06	Rapport d'enquête nutritionnelle anthropométrique, zone de santé de

AAH-US	10/06	Wanga, province de Bandudu, République Démocratique du Congo
AAH-US	10/06	Rapport d'enquête nutritionnelle anthropométrique, zone de santé d'Uvira, province du Sud Kivu, République Démocratique du Congo
AAH-US	11/06	Rapport d'enquête nutritionnelle anthropométrique, zone de santé de la Plaine de Ruzizi, province du Sud Kivu, République Démocratique du Congo
AAH-US	12/06	Rapport d'enquête nutritionnelle anthropométrique, zone de santé de Lemera, province du Sud Kivu, République Démocratique du Congo
AAH-US	08/06	Rapport d'enquête nutritionnelle anthropométrique, zone de santé Du Kimbi-Lulenge, province du Sud Kivu, République Démocratique du Congo
SC	11/06	De Fizi, province du Sud Kivu, République Démocratique du Congo Rapport d'enquête nutritionnelle: anthropométrie et mortalité

## South Africa

### Mozambique

OCHA	13/03/07	UN agencies in Mozambique seek US\$ 17.7 million for 435,000 flood and cyclone affected people
OCHA	16/03/07	Mozambique: Floods OCHA situation report No 13
UNRC	05/03/07	Mozambique Emergency Situation

## Asia

### Afghanistan

ACF-F	11/06	Report of nutrition and mortality survey in children of families targeted by a food distribution in Day Kundi province (Afghanistan): pre-distribution assessment
Fews	01/07	Afghanistan food security update
IRIN	20/03/07	Afghanistan: Floods and avalanches kill dozens and displaced hundreds

## Middle East

### Lebanon

ACH-S	02/07	Food security assessment in Marjaayoun, Hasbaya and Bint Jbeil Cazas, South Lebanon
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# 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>SNNPR</b>									
Lanfuro district, Silti zone	Sept-06	Residents	105,350	SC-US <sup>1</sup>	5.7	4.0-7.4	0.4	0.0-1.0	0.1
Boloso Sorie district, Wolayita zone	Dec-06	Residents	326,120	IMC <sup>1</sup>	3.0	1.5-4.5	0.6	0.0-1.2	0.2
Coffee Livelihood zone, Dale & Aleta Wondo districts, Sidama zone	Dec-06	Residents	-	ACF-F <sup>1</sup>	5.6	4.1-7.1	0.3	0.0-0.7	0.1
Mareko district, Gurage zone	Dec-06	Residents	105,350	ACF-F <sup>1</sup>	6.0	3.9-8.0	0.3	0.0-0.6	0.1
<b>OROMIA REGION</b>									
Shashemane district, West Arsi zone	Oct-06	Residents	233,145	GOAL <sup>1</sup>	8.0	5.3-10.6	1.0	0.2-1.8	0.2
Haromaya district, East Hararghe zone	Dec-06	Residents	202,585	SC-UK/IMC <sup>1</sup>	4.9	3.2-6.5	1.0	0.0-2.1	0.6
Doba district, West Hararghe zone	Dec-06	Residents	124,435	SC-UK/IMC <sup>1</sup>	5.6	3.9-7.4	0.6	0.1-1.2	0.4
<b>AFAR REGION</b>									
Teru district, zone 4	Nov-06	Residents	43,435	Concern <sup>1</sup>	9.3	6.8-11.9	0.6	0.2-1.1	0
Yalo district, zone 4	Nov-06	Residents	23,950	Concern <sup>1</sup>	11.3	9.0-13.5	0.7	0.2-1.2	0.0
<b>SOMALI REGION</b>									
Fik, Hamero, Sege & Dehun districts, Fik zone	Oct-06	Residents	-	SC-UK <sup>1</sup>	12.2	9.5-14.9	0.4	0.0-0.8	0.3
Cherati town, Afder zone	Sept-06	Residents	-	MSF-B <sup>1</sup>	16.4	13.7-19.2	0.7	0.0-1.3	0.1
<b>KENYA</b>									
Merti & Sericho divisions, Isiolo district	Nov-06	Residents	36,970	MoH/SC	12.3 <i>12.1<sup>2</sup></i>	10.4-14.2 <i>10.0-14.3</i>	0.5 <i>1.4<sup>2</sup></i>	0.1-0.9 <i>0.6-2.2</i>	0
Kakuma refugee camp, Turkana district	Nov-06	Refugees	92,400	IRC	15.9 <i>13.2<sup>2</sup></i>	13.6-18.2 <i>11.2-15.4</i>	1.7 <i>2.5<sup>2</sup></i>	1.0-2.7 <i>1.7-3.7</i>	0
<b>SOMALIA</b>									
Allula, Kandala & Iskushuban districts, Bari region	Sept-06	Residents	87,110	FSAU/ UNICEF	13.8	11.0-16.6	1.6	0.9-2.4	0.2
Displaced people, Bossaso, Bari region	Oct-06	Displaced	-	FSAU/joint	15.5		2.3		0.1
Hawd of Hargeisa, Somaliland	Nov-06	Residents	3,785	FSAU/ UNICEF	8.1	6.5-10.1	1.9	1.2-3.1	0
Lower Nugal Valley, Sool region	Nov-06	Residents	180,000	FSAU/joint	8.9	7.2-11.0	1.4	0.8-2.5	0.2
Goldogob district, Mudug region	Nov-06	Residents	42,435	FSAU/joint	11.1	8.6-13.6	1.6	0.3-1.5	0.2
El Barde district, Bakool region	Dec-06	Residents	-	FSAU/joint	17.7	15.3-20.3	3.2	2.2-4.6	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

<sup>1</sup> From ENCU quarterly bulletin (ENCU, 30/06/06). The details of the methodology are not reported but the methodology is in accordance with the ENCU specifications for nutritional surveys, which are in line with international standards.

<sup>2</sup> According to WHO 2006 Child Growth Standards (<http://www.who.int/childgrowth/en/>)

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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							
5.9	93.5	-	-	-	0.32	0.10-0.54	0.16	0.0-0.31
37.0	80.4	-	82.6	-	0.54	0.22-0.87	0.55	0.0-1.15
11.2	93.4	-	59.8	-	0.14	0.0-0.3	0.13	0.0-0.42
6.0	91.6	-	74.5	-	0.35	0.13-0.57	0.81	0.2-1.41
5.2	72.6	-	82.5	-	0.11	0.02-0.33	0.19	0.01-1.11
33.0	70.4	-	85.7	-	0.24	0.07-0.40	0.28	0.12-0.69
2.4	55.8	-	70.2	-	0.29	0.12-0.45	0.72	0.06-1.38
5.3	8.0	-	28.0	-	0.49	0.08-0.9	1.4	0.12-2.67
21.3	34.0	-	74.4	-	0.42	0.17-0.81	1.22	0.18-2.63
0.9	37.2	-	33.5	-	0.33	0.17-0.49	0.97	0.46-1.48
56.2	80.5	-	29.8	-	0.63	0.33-0.93	1.94	0.96-2.93
51.1	90.5	-	-	MUAC < 23 cm: 20.3% <sup>3</sup>	0.32	0.1-0.5	0.31	0.0-0.7
79.6	87.3	See p 7	91.6	-	-	-	-	-
-	-	-	48.0	-	0.38	0.18-0.59	0.99	0.26-1.73
-	58.6	-	71.7	-	0.45	-	1.34	-
-	34.9	-	36.2	-	0.33	0.15-0.51	0.75	0.21-1.28
-	74.1	-	57.4	-	0.59	0.31-0.87	1.32	0.47-2.18
-	24.5	-	28.3	-	0.29	0.10-0.49	0.63	0.02-1.24
-	-	-	-	-	0.64	0.28-1.01	1.03	0.39-1.68

<sup>#</sup> Measles vaccination coverage for children aged 9-59 months<sup>3</sup> Female caregivers aged 15 to 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>SUDAN</b>							
Otash IDP camp, Nyala, South Darfur	Dec-06	Displaced	58,190	ACF-F	15.6 12.5-19.3	1.8 0.8-3.6	0.1
Abu Shok & As Sallam IDP camps, North Darfur	Nov-06	Displaced	95,795	ACF-F	22.6 18.9-26.7	2.7 1.5-4.8	0.3
Wudier district, Longuchok county, Upper Nile	Sep-06	Residents	22,940	AAH-US	6.7 4.6-9.6	0.5 0.1-1.9	0
Mankien and Tam districts, Mayom county, Unity state	Nov-06	Residents	48,445	AAH-US	15.6 12.4-19.3	2.4 1.2-4.4	0.4
Bentiu & Rob Kona, Unity state	Feb-07	Residents/Displaced	99,511	ACF-F	18.4 15.1-22.3	1.3 0.5-2.9	0
Nhialdiu, Unity state	Feb-07	Residents/Displaced	7,450	ACF-F	15.6 11.1-21.3	1.6 0.4-4.6	0.2
<b>NIGER</b>							
Madaoua district, Tahoua region	Nov-06	Residents	374,030	MSF-S	7.8 6.2-9.8	0.3 0.0-1.0	0.1
Bouza district, Tahoua region	Nov-06	Residents	325,320	MSF-S	9.2 7.4-11.3	0.9 0.4-1.8	0
Birmin Konni district, Tahoua region	Nov-06	Residents	425,330	MSF-S	9.8 8.0-12.0	1.0 0.4-1.9	0.1
<b>BURUNDI</b>							
Kayanza province	Nov-06	Residents	545,290	ACF-F	7.8 5.5-10.1	0.8 0.1-1.5	-
Ngozi province	Nov-06	Residents	610,290	ACF-F	5.0 3.6-6.4	0.4 0.0-0.9	-
Ruyigi province	Jan-07	Residents	323,330	ACF-F	4.9 3.1-6.7	0.3 0.1-0.6	-
<b>DEMOCRATIC REPUBLIC OF CONGO</b>							
<b>BANDUDU PROVINCE</b>							
Vanga health zone	Oct-06	Residents	209,135	AAH-US/UNICEF	10.7 8.1-14.0	2.3 1.2-4.3	-
Mosango health zone	Oct-06	Residents	86,220	AAH-US/UNICEF	16.7 13.4-20.5	4.4 2.7-6.8	-
<b>NORTH KIVU PROVINCE</b>							
Masisi health zone	Nov-06	Residents	316,200	SC/PRONA-NUT	4.2 2.8-5.7	1.4 0.5-2.3	1.3
<b>SOUTH KIVU PROVINCE</b>							
Lemera health zone	Nov-06	Residents	-	AAH-US/UNICEF	2.8 1.6-4.9	0.3 0.0-1.5	-
Ruzizi health zone	Oct-06	Residents	-	AAH-US/UNICEF	3.6 2.2-5.9	0.3 0.0-1.5	-
Uvira health zone	Oct-06	Residents	-	AAH-US/UNICEF	3.7 2.2-6.0	0.3 0.0-1.5	-
Kimbi-Lulenge health zone	Dec-06	Residents	112,140	AAH-US/UNICEF	1.5 0.6-3.2	0.2 0.0-1.4	0.2
Fizi health zone	Dec-06	Residents	-	AAH-US/UNICEF	2.9 1.6-4.1	0.2 0.0-0.5	-

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

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

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



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						
14.9	37.2	-	-	-	1.98		2.58	
13.2	93.0	-	-	-	0.74		1.82	
0.8	10.4	-	-	-	0.72	0.31-1.31	-	
7.0	52.4	-	-	-	0.73	0.33-1.13	0.80	0.19-1.41
38.7	66.3	-	-	-	0.35		0.98	
16.5	52.6	-	-	-	0.15		0.35	
-	-	-	-	-	0.6		1.6	
					0.4		1.1	
					0.5		1.6	
69.3	96.5	-	95.0	-	0.25	0.09-0.41	0.79	0.04-1.62
73.9	96.8	-	96.3	-	0.20	0.07-0.32	0.45	0.05-0.84
52.8	93.5	-	90.6	-	0.28	0.13-0.44	0.90	0.29-1.50
49.4	94.8	-	93.5	-	0.40	0.19-0.62	1.23	0.38-2.09
17.0	96.7	-	97.1	-	0.78	0.51-1.06	1.93	1.06-2.81
-	85.4	-	88.0	-	0.58	0.25-0.9	0.71	0.26-1.16
8.0	62.0	-	94.1	-	0.33	0.16-0.51	0.86	0.25-1.46
4.0	48.5	-	80.0	-	0.55	0.25-0.85	1.39	0.67-2.12
12.9	63.8	-	85.1	-	0.33	0.15-0.52	0.54	0.13-0.96
43.2	59.6	-	84.4	-	0.70	0.39-1.00	1.64	0.70-2.58
13.6	69.1	-	92.1	-	0.45	0.24-0.65	0.98	0.34-1.62

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

<sup>§</sup> Pregnant and lactating women aged 15-49 years

# Survey methodology

## The Greater Horn region

### Kenya

#### MERTI AND SERICHO DIVISIONS, ISIOLO DISTRICT

The survey was conducted by SC in November 2006. A two-stage cluster sampling methodology of 30 clusters was used to measure 941 children between 6-59 months. The survey also estimated measles vaccination coverage and mortality rates over the previous 90 days and various food security and public health indicators.

#### KAKUMA CAMP

The survey was conducted by IRC in November 2006. A two-stage cluster sampling methodology of 30 clusters was used to measure 1061 children 6-59 month olds. The survey also estimated anaemia, vaccination coverage and child's feeding practices.

### Somalia

#### ALLULA, KANDALA & ISKUSHUBAN DISTRICTS, BARI REGION

A random-sampled nutrition survey was conducted by FSAU/joint in September 2006. A two-stage 30-by-30 cluster sampling methodology was used to measure 919 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.

#### DISPLACED PEOPLE, BOSSASO, BARI REGION

A random-sampled nutrition survey was conducted by FSAU/joint in October 2006. An exhaustive survey was conducted. 2,580 children were measured and 2,439 households surveyed. The survey also estimated measles vaccination coverage and crude and under-five mortality rates and various food security and public health indicators.

#### HAWD OF HARGEISA, SOMALILAND

A random-sampled nutrition survey was conducted by FSAU/joint in November 2006. A two-stage 30-by-30 cluster sampling methodology was used to measure 945 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.

#### LOWER NUGAL VALLEY, SOOL REGION

A random-sampled nutrition survey was conducted by FSAU/joint in November 2006. A two-stage 30-by-30 cluster sampling methodology was used to measure 917 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.

#### GOLDOGOB DISTRICT, MUDUG REGION

A random-sampled nutrition survey was conducted by FSAU/joint in November 2006. A two-stage 30-by-30 cluster sampling methodology was used. 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.

#### EL BARDE DISTRICT, BAKOOL REGION

A random-sampled nutrition survey was conducted by FSAU/joint in December 2006. A two-stage 30-by-30 cluster sampling methodology was used to measure 934 children. 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

#### OTASH CAMP, NYALA, SOUTH DARFUR

A random-sampled nutrition survey was conducted by ACF-F in December 2006. A two-stage 30-by-30 cluster sampling methodology was used to measure 960 children. The survey also estimated measles vaccination and vitamin A distribution coverage, crude and under-five mortality rates.

#### ABU SHOK & AS SALLAM IDP CAMPS, NORTH DARFUR

The survey was conducted by ACF-F in December 2006. A two-stage cluster sampling methodology of 30 clusters was used to measure 960 6-59 month-olds. The survey also estimated measles vaccination coverage and retrospective mortality rate.

**WUDIER DISTRICT, LONGUCHOK COUNTY, UPPER NILE**

The survey was conducted by AAH-US in September 2006. A two-stage cluster sampling methodology of 30 clusters was used to measure 931 children between 6-59 months. The survey also estimated measles vaccination coverage and retrospective mortality rate over three months prior to the survey.

**MANKIEN AND TAM DISTRICTS, MAYOM COUNTY, UNITY STATE**

The survey was conducted by AAH-US in November 2006. A two-stage cluster sampling methodology of 30 clusters was used to measure 930 children between 6-59 months. The survey also estimated measles vaccination coverage and retrospective mortality rate over three months prior to the survey.

**BENTIU , ROB KONA AND NHIALDIU, UNITY STATE**

The surveys were conducted by ACF-F in August 2006. A two-stage cluster sampling methodology of 30 clusters was used to measure 960 children between 6-59 months in Bentiu & Rob Kona. In Nhialdiu two-stage cluster sampling methodology of 26 clusters was used to measure 442 children between 6-59 months. The surveys also estimated measles vaccination coverage and retrospective mortality rate over three months prior to the surveys.

## **West Africa**

### **Niger**

**MADOUA, BOUZA AND BIRMIN KONI DISTRICTS, TAHOUA REGION**

The surveys were conducted by MSF-S in November 2006. A two-stage cluster sampling methodology of 30 clusters was used to measure 900 children between 6-59 months

in each district. The surveys also estimated retrospective mortality rates and various food security and public health indicators.

## **Central Africa**

### **Burundi**

**RUYIGI, NGOZI & KAYANZA PROVINCES**

The surveys were conducted by ACF-F between November 2006 and January 2007. A two-stage cluster sampling methodology of 39, 43 and 46 clusters was used to measure 757, 785 and 930 children between 6-59 months in Ruyigi, Kayanza and Ngozi province, respectively. The surveys also estimated measles vaccination and Vitamin A distribution coverage and retrospective mortality rates.

### **Democratic Republic of Congo**

**SEVEN HEALTH ZONES IN BANDUDU AND SOUTH KIVU PROVINCES**

The surveys were conducted by AAH-US between October and December 2006. A two-stage 30 x 30 cluster sampling methodology were used in each survey to measure children between 6-59 months. The surveys also estimated measles vaccination and vitamin A distribution coverage and retrospective mortality rates.

**MASISI HEALTH ZONES , NORTH KIVU PROVINCE**

The surveys were conducted by SC-PRONANUT in November 2006. A two-stage 30 x 30 cluster sampling methodology were used in each survey to measure 923 children between 6-59 months. The surveys also estimated measles vaccination and vitamin A distribution coverage and retrospective mortality rates.

# 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.

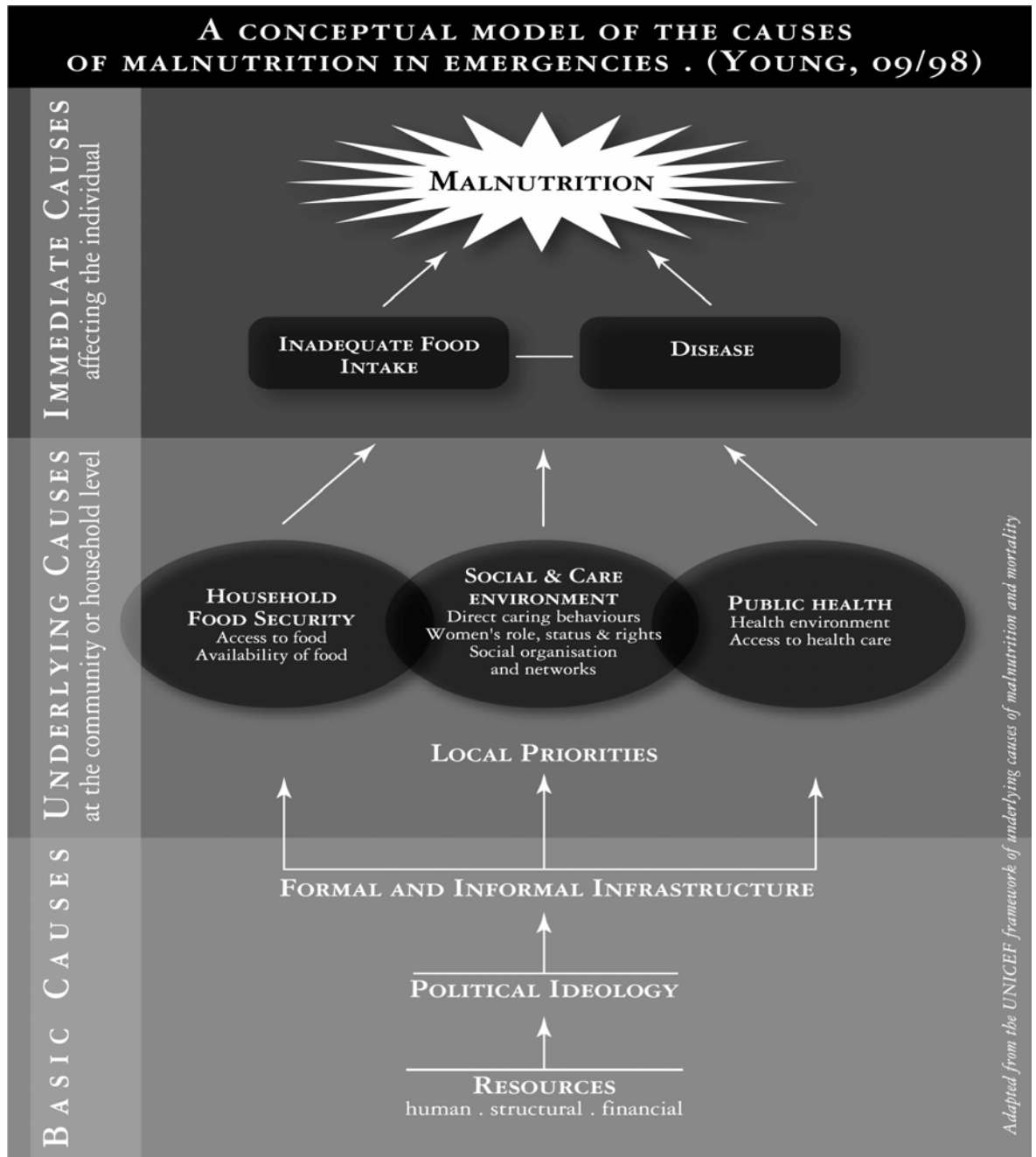
## Classification of situations

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.

This report is issued on the general responsibility of the Secretariat of the UN System/Standing Committee on Nutrition; the material it contains should not be regarded as necessarily endorsed by, or reflecting the official positions of the UNS/SCN and its UN member agencies. The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the UNS/SCN or its UN member agencies, concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

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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:

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