

Nutrition Information in Crisis Situations

United Nations System
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Highlights

ETHIOPIA—FAILURE OF THE LAST SEASONAL RAINS—The failure of the last seasonal rains has affected cereal and root crops as well as livestock conditions. As a result, the number of emergency beneficiaries has increased from an estimated 2.2 million in April to 4.6 million in June 2008. The most affected areas are in SNNPR, Oromya and Somali regions. Deteriorating situations have also been reported in Afar and Amhara regions. Although the rains have recently improved and humanitarian interventions have been put in place, the emergency has not yet been fully addressed.

KENYA—DISPLACEMENT LED BY POLITICAL INSTABILITY—Following the violence which took place during the presidential elections in December 2007, about 400,000 people were displaced. As of mid-June 2008, it was estimated that around 77,000 remained in 110 camps while 89,000 had been recorded in transit camps near their place of residence.

In Molo district, an inter-agency assessment in the transit camps, where around 38,000 people were residing, showed a precarious situation. Peace and reconciliation activities had been insufficient and IDPs had great fear of violence. Most of the IDPs returned to transit camps and not to their farms of origin, meaning that, because of insecurity, only those in close proximity had access to farms. Although there had been food distributions in some of the transit sites, they had been irregular and insufficient. Other sites did not receive any distributions. Poor standards of basic hygiene and sanitation were also observed.

SOMALIA—WORSENING OF THE SITUATION—The situation in Somalia has further worsened due to rocketing food prices, a significant devaluation of the Somali shilling, increasing civil insecurity and deepening of the drought following the poor start of the April-June rains. According to new estimates, the number of people in need of food aid was 2.6 million as of May 2008, which represents an increase of more than 40% since January 2008. This increase includes 600,000 urban poor, 60,000 pastorals in Bakool and Central regions where the drought is worsening, and an increased number of displaced people.

SUDAN—BLEAK FUTURE IN DARFUR—The security situation has remained highly precarious over the past months and the future is grim. Because of security problems, WFP has been obliged to cut rations by half since May. Additionally about 58,000 people could not be reached in April and May. This is especially worrying as the hunger-gap season is just starting. Moreover, cereal prices are double what they were at the same time last year for a number of reasons including a poor 2007 harvest and global food and oil prices.

LIBERIA—PRECARIOUS SITUATION IN MONROVIA—Although there has been improvement since the cessation of hostilities and the election of the current president at the end of 2005, many people are still vulnerable and suffering humanitarian needs, including the lack of basic services. According to a nutrition survey conducted in Greater Monrovia in December 2007, the nutrition situation was critical and under-five mortality rate was above alert threshold. This could be partly attributed to the rise in food prices as inhabitants of Monrovia are mostly dependent on purchase of food, which represents 52% of household expenditure. Food prices have increased by 25% between May 2007 and January 2008.

MYANMAR—GRIM SITUATION—Cyclone Nargis hit Myanmar's central coast on 2-3 May 2008. According to the last estimates, 138,373 people were killed or went missing. In addition, an estimated 2.4 million people were affected across Ayeyarwady and Yangon divisions. Some of the affected households gathered in camps, which were progressively closed. Preliminary findings of joint assessments showed that 59% of the households were severely damaged. Forty-two percent of food stocks were destroyed. A MUAC assessment showed a nutrition situation which was not critical. So far, out of the estimated 2.4 million affected, it is estimated that 1.3 million have been reached by international aid agencies. As of the end of June 2008, food assistance had reached approximately 684,000 people in the Ayeyarwady division, while cash assistance was provided to 45,000 people in Yangon.

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.

	KENYA North-West Wajir district	KENYA South-East Wajir district	GUINEA Beyla prefecture, Guinée Forestière	LIBERIA Greater Monrovia	YEMEN Kharaz refugee camps
Nutritional risk category	II/III	II	II	II	III
FOOD SECURITY					
Households' livelihoods	☹	☹	☹	☹	☹
External assistance	☹	☹	☹	☹	☹
PUBLIC HEALTH ENVIRONMENT					
Availability of water and access to potable drinking water	☹	☹	?	☺	☹
Health care	☹	☹	☹	☹	☹
Sanitation	☹	☹	?	☺	☹
SOCIAL AND CARE ENVIRONMENT					
Social environment	?	?	?	?	?
Child feeding practices	☹	☹	☹	?	?
DELIVERY OF ASSISTANCE					
Accessibility to population	☹	☹	☹	☺	☹
Resources for humanitarian Intervention	☹	☹	?	☹	☹
Availability of information	☺	☺	☺	☺	☹

☺ ADEQUATE

☹ MIXED

☹ INADEQUATE

Greater Horn of Africa



Djibouti

Djibouti is currently undergoing a food crisis, which is especially affecting pastoral and urban areas. Poor rainy seasons in 2007 have led to poor pasture and livestock conditions, as well as to an increase in the price of staple foods (FEWS, 22/04/08). According to the government, about 50% of livestock have died and 80,000 people are in need of food aid, which is 49% more than current WFP food aid beneficiaries (USAID, 21/05/08; FEWS, 22/04/08). In addition, due to high prices of food and other essential commodities, 200,000 people in urban areas are estimated to be highly or extremely food insecure (FEWS, 08/05/08). Staple food costs are currently 46 % above the five-year average and the total expenditure basket is 63 % above the lowest paid salaries in urban areas. The government of Djibouti recently waived customs tax on some commodi-

ties, but these taxes represent only a fraction of the overall price increases.

This food security crisis might exacerbate the already poor nutrition situation. The last nutrition survey, conducted in December 2007, showed a prevalence of global acute malnutrition of 16.8%, including 2.4% severe malnutrition (FEWS, 05/02/08). The northern pastoral livelihood zone showed the most critical situation with 24.8% of acute malnutrition. Prevalence of acute malnutrition seems to have remained within the same range for the past five years.

Emergency food, nutrition, water and sanitation interventions were under way but available resources were inadequate.

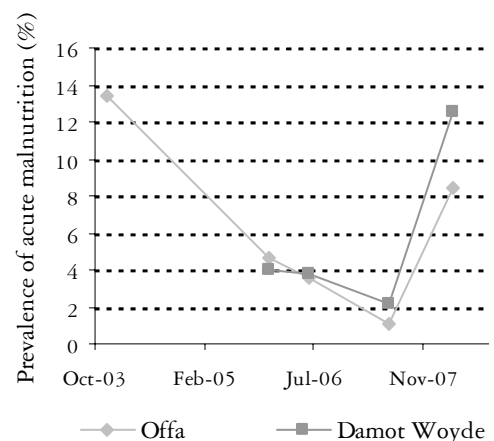
Ethiopia

The failure of the last seasonal rains has affected cereal and root crops as well as livestock conditions (GoE/Joint, 12/06/08). As a result, the number of emergency beneficiaries has increased from an estimated 2.2 million in April to 4.6 million in June 2008. The net food requirement is 391,651 MT and the total food and non-food resource requirement is estimated at more than US \$ 325 million. The most affected areas are in SNNPR, Oromya and Somali region, with 1,341,290; 1,045,191 and 1,025,030 beneficiaries, respectively. Deteriorating situations have also been reported in Afar and Amhara regions (OCHA, 20/06/08).

Although the rains have recently improved and humanitarian interventions have been put in place, the emergency has not yet been fully addressed. As of June 2008, more than 9,000 and 6,000 children were receiving therapeutic care in SNNPR and Oromyia, respectively. Rises in admissions to therapeutic feeding programmes were still reported in these regions (OCHA, 27/06/08). Food distributions were taking place in the affected areas.

Nutrition assessment or surveys conducted in SNNPR showed critical to serious situations in several districts of Sidama, Bona and Borena zone (OCHA, 20/06/08). In addition, two randomly-selected nutrition surveys in Wolaita zone, SNNPR also showed serious nutrition situations (Concern, 04/08). These contrasted with acceptable situations previously recorded in the same areas (figure 1).

FIGURE 1 TRENDS IN PREVALENCE OF ACUTE MALNUTRITION, WOLAITA ZONE, SNNPR, ETHIOPIA



According to the surveys, the food security was significantly threatened due to successive poor rains, and there was a significant increase in families sourcing food from market compared to the same season in more favourable times. In Damot Woyde and Dugna Fango, number of admissions to therapeutic feeding programmes had risen from 80 in April 2007 to 700 in April 2008.

As of the end of June, it was estimated that there was a shortfall of about 78% in food aid needs (FEWS, 20/06/08), and an appeal of US\$ 20 million had been made to the Central Emergency Response Fund (OCHA, 27/06/08). Identified gaps in nutrition intervention included shortage of supplies in some woreda and disruption of RUTF pipeline.

Kenya

Displaced people due to political violence

Following the violence which took place during the presidential elections in December 2007, about 400,000 people were displaced (see NICS 16). As of mid-June 2008, it was estimated that around 77,000 remained in 110 camps while 89,000 had been recorded in transit camps near their place of residence (OCHA, 18/06/08). There has been report of forced return and resettlement (MSF, 16/05/08). It seems that some of the 12,000 Kenyans who sought refuge in Uganda have also returned (UNHCR, 13/05/08).

In Molo district, an inter-agency assessment in the transit camps, where around 38,000 people were residing, showed a precarious situation (OCHA, 06/08). Peace and reconciliation activities had been insufficient and IDPs had great fear of violence. Moreover, it was observed that there was hardly any interaction between returnees and host community. The main means of livelihood of returnees were agriculture, trading, and casual labour. Most of the IDPs returned to transit camps and not to their farms of origin, meaning that, because of insecurity, only those in close proximity had access to farms. Although there had been food distributions in some of the transit sites, they had been irregular and insufficient. Other sites did not receive any distributions. Access to markets was hampered for several reasons. Some markets were destroyed or not back to normal and the cost of food had increased. Some IDPs also expressed security concerns about going to the market. Assessment of the nutrition situation and implementation of nu-

trition programmes were scarce. Poor standards of basic hygiene and sanitation were also observed, including non-availability of soap. Access to health care was limited due to distance, insecurity, lack of money, and lack of medicine and supplies at the health facility level. Assessments were on-going in the transit camps in other districts.

Arid lands

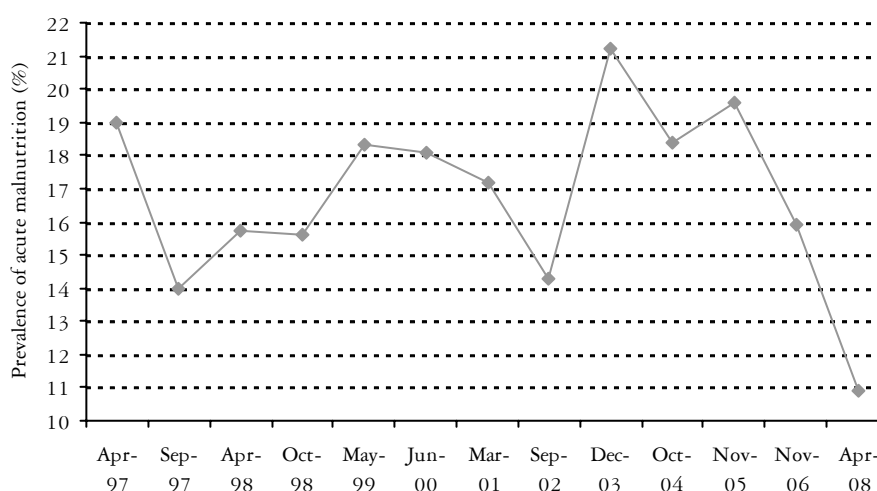
Pastoral areas have received fair rains within the last few months (FEWS, 06/06/08). However, recovery is undermined by conflict, livestock disease and high prices of cereals and other essential goods. Turkana, Mandera and Southern Marsabit are reported as continuing to show a high prevalence of malnutrition.

Nutrition surveys conducted in Wajir district in April 2008 and Garissa district in December 2007 showed serious to critical nutrition situations (table 1) (AAH-US; 12/07; Merlin, 04/08). South-East Wajir, especially, showed a high prevalence of acute malnutrition and the under-five mortality rate was of concern. The prevalence of acute malnutrition was significantly lower in the North-West, compared to that recorded in a survey including the overall district, conducted in April 2007. On the other hand, the prevalence in South-East Wajir was comparable to that of April 2007. About 70% of the population had received food aid, compared to the 29% targeted by the food distribution. This might reflect the sharing of food aid between families. Outpatient therapeutic feeding centres and supplementary feeding centres were implemented by Merlin and were covering all Wajir district. The number of beneficiaries was significantly lower in March 2008 compared to the same period in

TABLE 1 RESULTS OF NUTRITION SURVEYS, KENYA (AAH-US; 12/07; MERLIN, 04/08)

Location	Acute malnutrition (%) (95% CI)	Severe acute malnutrition (%) (95% CI)	Mortality rate (/10,000/day)	Under-five mortality rate (/10,000/day)
WAJIR DISTRICT				
Buna, Gurar, Bute, Griftu, Eldas & Hadado divisions	13.4 (11.2-15.7)	1.1 (0.4-1.8)	0.30 (0.10-0.50)	0.60 (0.30-0.90)
Central, Wajir-bor, Kotulo, Sabuli, Habaswein, Diff & Tarbaj divisions	21.2 (18.4-24.0)	2.0 (1.0-3.0)	1.1 (0.7-1.5)	2.1 (1.1-3.2)
Riverine livelihood group, Garissa district	15.9 (12.4-19.4)	1.0 (0.0-2.1)	0.51 (0.24-0.79)	0.56 (0.10-1.03)
GARISSA DISTRICT				
Pastoral livelihood group, Garissa district	14.4 (11.1-17.8)	1.3 (0.4-2.1)	0.22 (0.07-0.37)	0.24 (0.00-0.53)

FIGURE 2 TRENDS IN PREVALENCE OF ACUTE MALNUTRITION, KAKUMA CAMP, KENYA



2007, showing an overall improvement of the situation. However, food security analysis showed that most of the population was still food insecure, especially in the South East.

Refugees

A nutrition survey conducted in Kakuma camps in April 2008 showed a precarious nutrition situation, which has nevertheless improved compared to 2006 (figure 2) (IRC, 04/08). On the other hand, anaemia in children was still extremely high (77.1%) and within the same range as of November 2006. Anaemia in women of reproductive age was also significant at 37.7%. General food distributions had been good for the past months with 100% of the full ration distributed. Also, meal was distributed

instead of grains, which avoided cost of milling for refugees and reduced cooking time. In addition to the general ration, UNHCR provided groundnuts or green grams alternatively in the food distribution cycle. Refugees exchanged part of the food they received for diversifying their diets with vegetables, sugar or meat and to buy firewood, soap or clothes. It seemed that the nutrition situation among the refugee population was far better than among the host population.

Recommendations

Major recommendations from the inter-agency assessment in transit sites in Molo districts

- Immediate response on food aid with sufficient rationing until the crop harvest and markets have returned to normal
- Food security and livelihood assessment
- Rapid nutritional assessment to determine needs
- Expansion of existing activities, including vitamin supplementation and deworming
- Clarification of plan for peace building and reconciliation
- Improvement of administrative and community based security
- Improvement of water supply and sanitation
- Provision of immediate basic health care
- Livelihood recovery efforts

Somalia

The situation in Somalia has further worsened due to rocketing food prices, a significant devaluation of the Somali shilling, increasing civil insecurity and deepening of the drought following the poor start of the April-June rains (FSAU, 09/05/08). According to new estimates, the number of people in need of food aid was 2.6 million as of May 2008, which represents an increase of more than 40% since January 2008 (see map). This increase includes 600,000 urban poor, 60,000 pastorals in Bakool and Central regions where the drought is worsening, and an increased number of displaced people. This figure could even increase to 3.5 million towards the end of the year if the prevailing unfavourable circumstances continue (FEWS, 14/05/08).

Persistent insecurity has led to further displacement of people and attacks against aid workers has hampered the proper delivery of aid (OCHA, 27/06/08). It was estimated that 42,000 people were newly displaced in April and that around 20,000 people sought refuge in Kenya this year despite the border being shut (OCHA, 05/08; Reuters, 18/06/08). Most of the displaced are located in Shabelle and Galgaduud regions (see map).

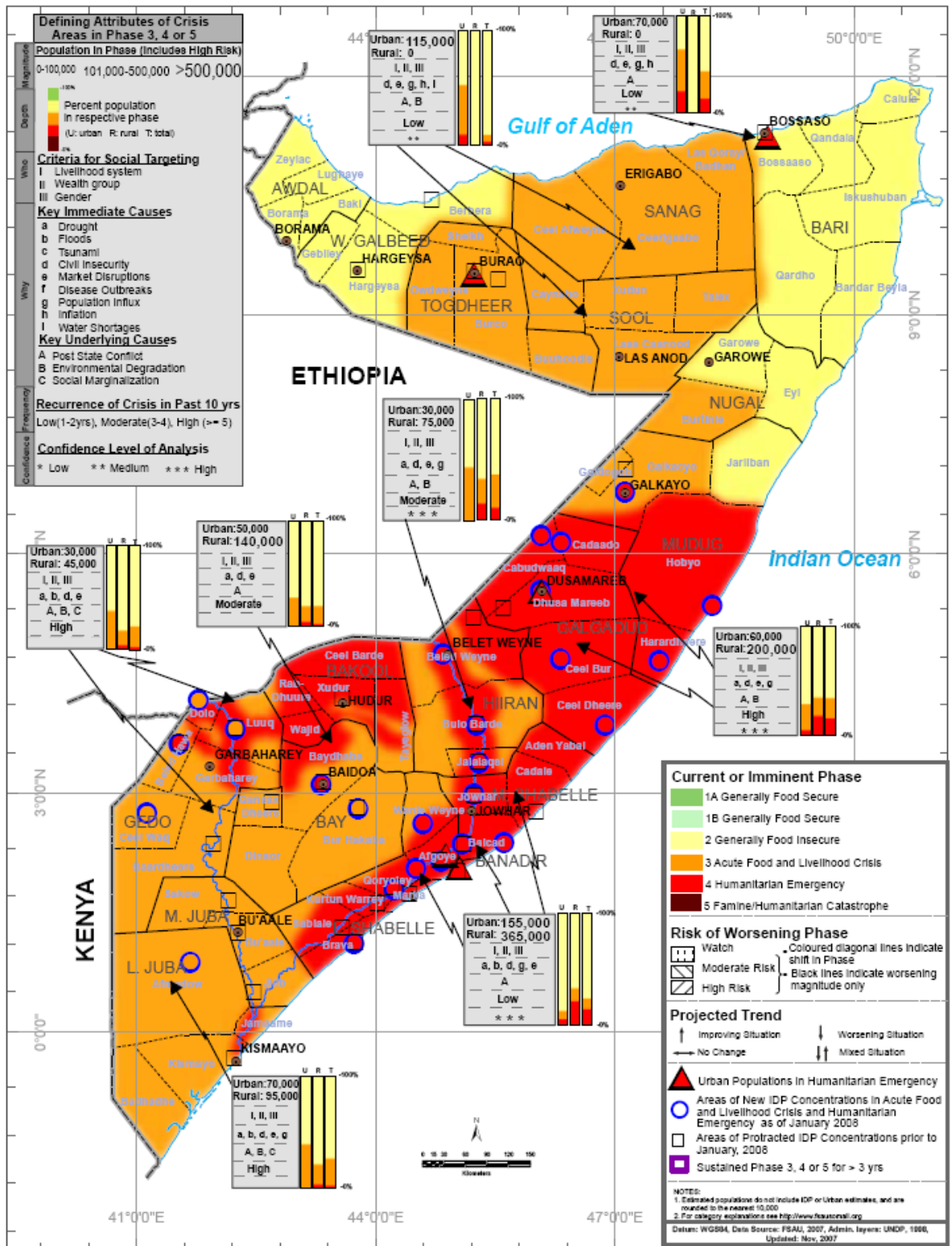
Humanitarian operators have witnessed the degradation of the situation while humanitarian intervention has remained extremely difficult (ICRC, 30/06/08; OCHA, 27/06/08). Food distributions are in place and 1.2 million beneficiaries were reached in April 2008 (OCHA,

05/08). In addition, 50,000 vulnerable people have received cooked food rations in Mogadishu. However, food distributions do not entirely cover the needs (see map). Selective feeding programmes were in place in Bay, Bakool and Afgoi IDP corridor. However, insecurity has continued to present challenges in the implementation of surveillance and nutrition interventions.

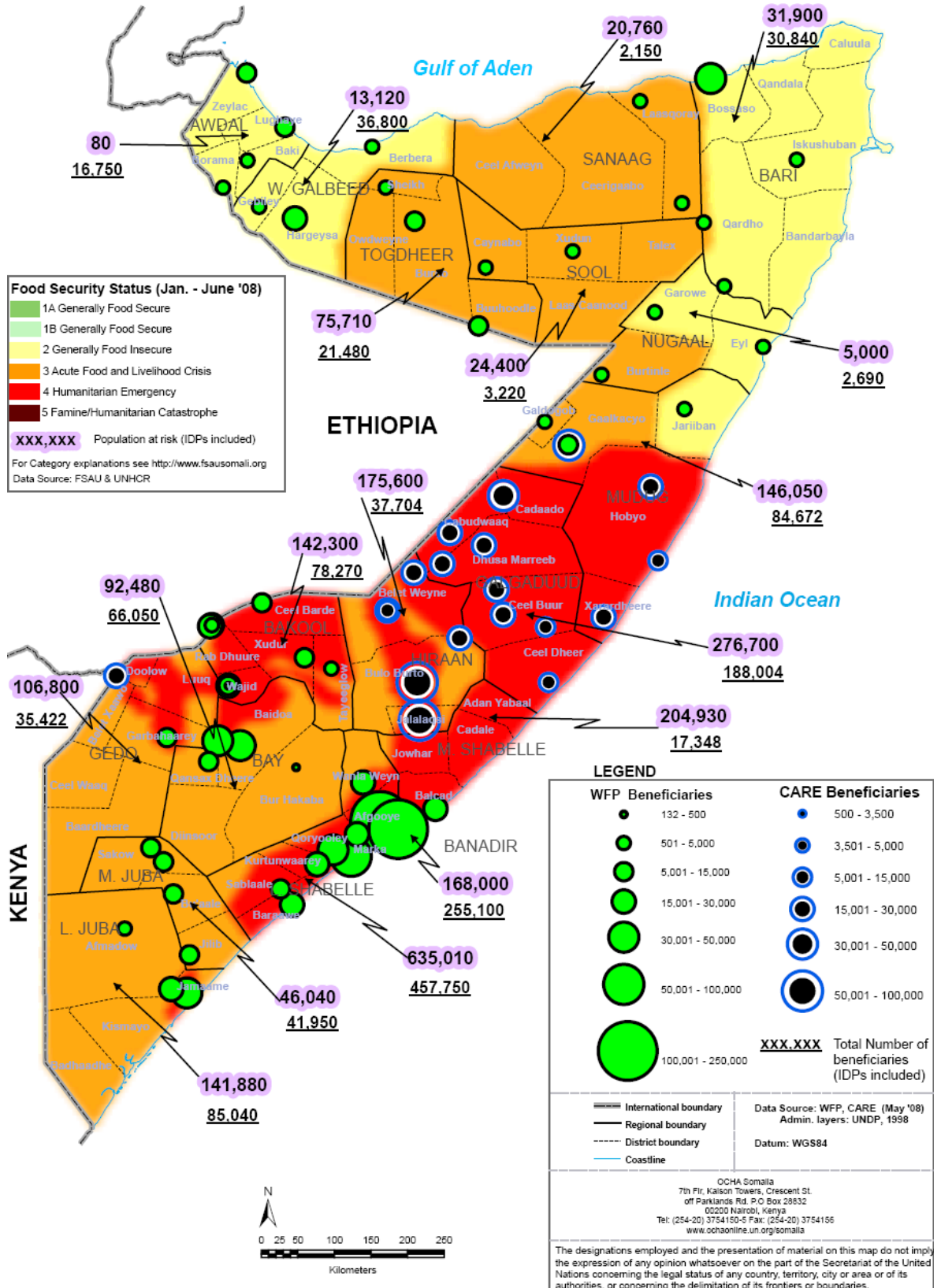
Urban Food Security Crisis

An assessment was conducted in April in 27 towns throughout Somalia, including 16 main towns and 11 rural settlement towns (FSAU, 05/08). Results show that the minimum basket (including minimum food basket at 2,100 Kcal/pers/day and essential non-food items, such as soap, water, firewood/charcoal) increased by 55% to 130% throughout Somalia, with the exception of the north-west, where the increase was lower. On the 27 towns surveyed, it was found that the poor could not cover the cost of the minimum basket in 21 of them. The greatest gaps were recorded in the main towns, and especially, Afgoi, Dhusamareb and Bossaso, all with a deficit of 30% or more. The urban poor are adopting a number of coping strategies, such as reducing quantities purchased. According to the assessment, 120,000 people from Burao (Toghdeer region), Bossaso (Puntland region), Dhusamareb (Galgadud), Afgoi (Middle Shabelle) and Mogadishu were identified as being in a state of humanitarian emergency, while 456,000 were in acute food and livelihood crisis.

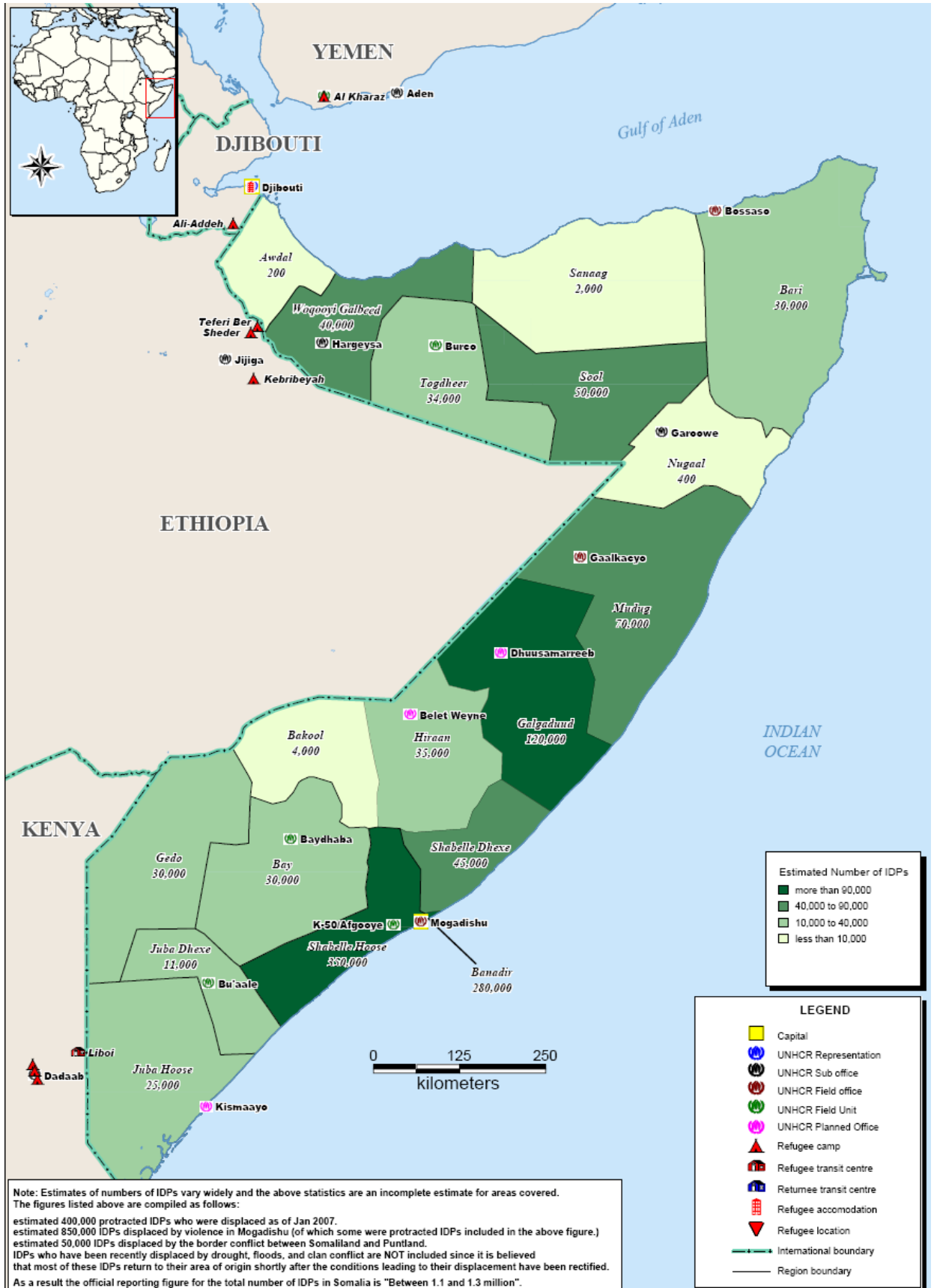
**SOMALIA INTEGRATED PHASE CLASSIFICATION MAP:
RURAL, URBAN AND IDP POPULATIONS: PROJECTIONS TO THE END OF JUNE '08
(FSAU, 05/08)**



SOMALIA FOOD AID DISTRIBUTION- APRIL/MAY 2008 (OCHA, 05/08)



INTERNALLY DISPLACED PERSONS IN SOMALIA AS OF JUNE 2008 (UNHCR, 06/08)



Critical prevalence of acute malnutrition

Several random nutrition surveys showed critical levels of acute malnutrition in South and Central regions (figure 3 & 4) (FSAU, 06/08). The less critical situations were seen in Shabelle, including among the displaced population, and this might be due to humanitarian interventions, which have mitigated the situation, leading to a stabilisation, compared to November 2007. In Gedo region, the nutrition situation seems to have slightly deteriorated compared to November 2007, although the confidence intervals of the nutrition survey results overlap.

Overall

The situation in Somalia is deteriorating due to several factors, including deepening of drought, continuous civil insecurity, rocketing prices of food and basic commodities, and inflation. Humanitarian intervention has remained severely hampered.

FIGURE 3 PREVALENCE OF ACUTE MALNUTRITION AND MORTALITY RATES, SOUTH SOMALIA (FSAU, 06/08)

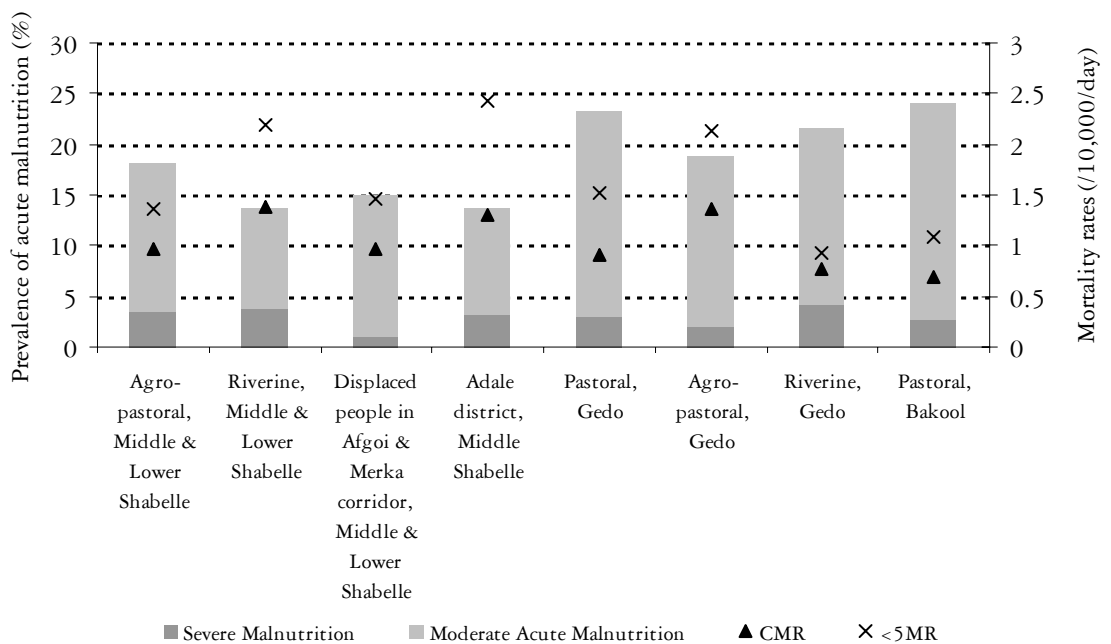
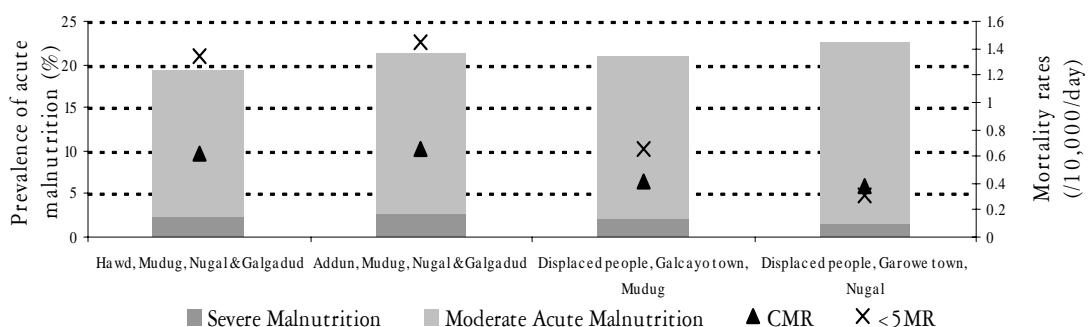


FIGURE 4 PREVALENCE OF ACUTE MALNUTRITION AND MORTALITY RATES, CENTRAL SOMALIA (FSAU, 06/08)



Sudan Darfur

The security situation has remained highly precarious over the past months and the future is grim (OCHA, 15/05/08). Because of security problems, WFP has been obliged to cut rations by half since May (OCHA, 28/06/08). Additionally about 58,000 people could not be reached in April and May (UNICEF, 06/08). This is especially worrying as the hunger-gap season is just starting. Moreover, cereal prices are double what they were at the same time last year for a number of reasons including a poor 2007 harvest and global food and oil prices.

Since the peacekeeping force was transferred from the African Union to the UN leadership six months ago, barely any new battalions or air transport have reinforced the operation, which accounted for about 9,000 troops in June 2008 instead of the expected 26,000 (AFP, 25/06/08).

A joint statement by several UN agencies has recently been issued, following a high level UN team visit (UN Joint, 22/06/08). Among several declarations, they press the government of Sudan to ensure that food convoys with escorts are organised a minimum every 48 hours on main routes into Darfur. In addition, in order to return the food ration to normal levels, the authorities must permit food relief trucks to travel into Darfur every day, regardless of whether escorts are in place or not. The statement also urged all armed groups operating in Darfur who bear responsibility for attacks on humanitarians to cease hijacking of vehicles and assets and to demonstrate full respect for International Humanitarian Law and principles. Moreover, the UN agencies state that the Government of Sudan must urgently enact its agreement to release the results of technically cleared humanitarian surveys - including nutritional and crop surveys - and minimise delays in publishing future survey findings.

FIGURE 5 ADMISSIONS TO SUPPLEMENTARY FEEDING CENTRES, DARFUR (UNICEF, 06/08)

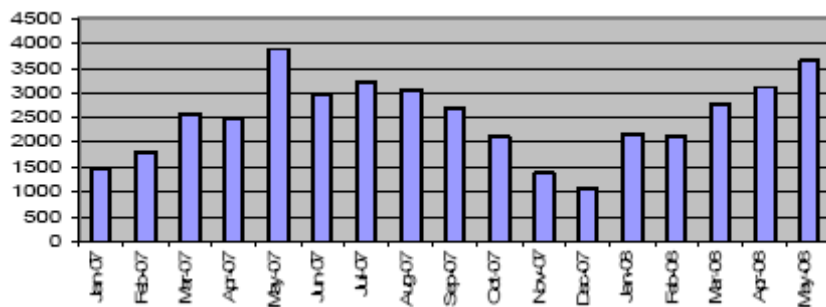
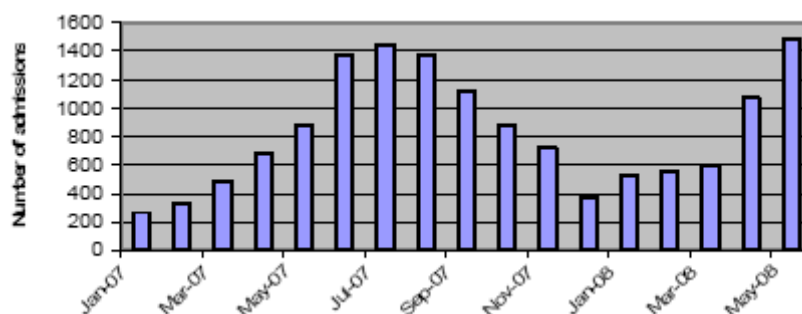


FIGURE 6 ADMISSIONS TO THERAPEUTIC FEEDING CENTRES, DARFUR (UNICEF, 06/08)



Admissions to therapeutic and supplementary feeding programmes have been on the rise since the beginning of the year which is in line with seasonality (figures 5 & 6) (UNICEF, 06/08). The number of admissions is higher this year than in 2007 for the same period. This is mainly attributed to higher prevalence of malnutrition among the new displaced people and in over-crowded camps, and to the addition of new centres and active case finding. Performance of supplementary and therapeutic feeding programmes was below Sphere standards.

A number of nutrition surveys which were conducted in the second half of 2007 and early 2008 have recently been cleared for release (UNICEF, 05/08; UNICEF, 06/08). Most of these surveys were done after the harvest period. They showed precarious to serious situations (figure 7), for most of them comparable to that of the previous year.

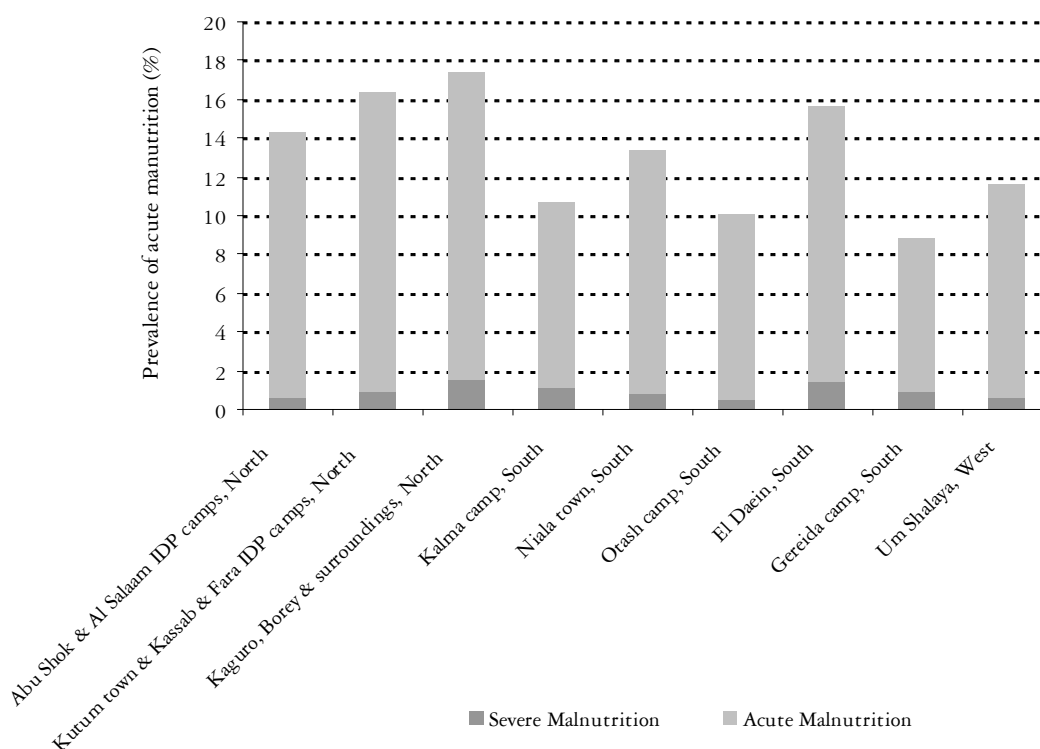
Southern Sudan

Most of the area is expected to be generally food secure, except Aweil West, North, East and South, and Gogrial and Twic in the west, because of localised conflict which disrupted supply routes, high numbers of returnees and unavailability of the seasonal subsidised sorghum provided by the government (FEWS, 06/08). Nyirol, Waat Diror, Wuror and Akobo in the east will also be highly food insecure until the next harvest in October 2008, because of last year's flood losses, persistent inter-clan conflict, and market isolation.

Several nutrition surveys conducted in Warrap, Jonglei and Northern Bahr el Ghazal states showed situations still precarious but which were comparable or slightly better than in 2006 and 2007 (table 2). Mortality rates were under control.

A conflict erupted in Abyei town between Sudanese government troops and the Sudan Peo-

FIGURE 7 PREVALENCE OF ACUTE MALNUTRITION, DARFUR (UNICEF, 06/08)



ple's Liberation Movement/Army (SPLM/A) in mid-May 2008 (IRIN, 16/05/08). The oil-rich Abyei region has been in a political and administrative vacuum since the implementation of the 2005 Comprehensive Peace Agreement, because of disagreement over its status. Following the conflict, most residents of Abyei town fled southwards to the areas of Abtok, Awal Wunpeth, Malual Alio and Agok and into Twic county (OCHA, 27/06/08). It was estimated that 50,000 people were displaced and a further 40,000 were affected by the crisis. The last head count confirmed 26,000 displaced people at the end of May. The security situation has remained generally calm in the areas of displacement and access to the population in need was good. As of the end of June, WFP has assisted about 72,000 people with the provision of a full food basket. Only 5-10 litres per person and per day of safe potable water were available. Construction of shelters

and latrines was under way. A significant number of malnourished children have been identified and feeding programmes were in place. According to a nutrition survey conducted in December 2007 in Abyei town and Agoc area, the nutrition situation was already critical at that time with 21.0% (18.1-23.9) acute malnutrition, including 1.6% (0.6-2.5) severe acute malnutrition (GOAL, 12/07).

North Sudan

A nutrition survey conducted in IDP camps around Kasala and in several areas of Kasala state showed a serious nutrition situation, which seemed slightly poorer than in the past two years (GOAL, 11/07). The prevalence of acute malnutrition was 18.5% (15.1-21.9), including 1.4% (0.5-2.2) severe acute malnutrition.

TABLE 2 RESULTS OF NUTRITION AND MORTALITY SURVEYS, SOUTHERN SUDAN (AAH-US, 02-06/08; CONCERN, 04/08)

Survey Area	Date	Acute Malnutrition (%) (95% CI)	Severe Acute Malnutrition (%) (95% CI)	Crude Mortality (/10,000/day) (95% CI)	Under 5 Mortality (/10,000/day) (95% CI)
WARRAP					
Gogrial West (all districts except Akon North & South)	Feb-08	14.5 (11.1-17.8)	1.7 (0.5-2.9)	0.21 (0.00-0.44)	0.43 (0.00-1.18)
Gogrial East	Mar-08	13.5 (10.5-16.5)	0.8 (0.2-1.5)	0.17 (0.02-0.31)	0.37 (0.00-0.84)
JONGLEI					
Khorfulus & Atar areas	May-08	23.9 (20.4-27.4)	1.9 (0.9-2.9)	0.36 (0.18-0.54)	0.53 (0.01-1.05)
NORTHERN BAHR EL GHAZAL					
Aweil East county	Jun-08	16.9 (13.4-20.3)	1.7 (0.5-2.8)	0.41 (0.16-0.67)	0.92 (0.10-1.94)
Aweil North & West counties	Apr-08	18.8 (16.4-21.5)	1.8 (1.1-2.9)	0.19	0.26

West Africa

Guinea

Guinea is ranked as one of the least developed countries according to the Human Development Index, being 160th out of 177 countries (UNDP, 2007-08). Moreover, the political situation has been very tense over the past two years.

A random-sampled nutrition survey was conducted in Beyla prefecture, Guinée Forestière region in November 2007, just a few weeks after the harvest (ACH-S, 11/07). This prefecture was described as the most food insecure among all the prefectures of the region, and one of the most food insecure among the whole country. Food insecurity seemed to be caused, among other things, by the isolation of the area due to poor roads, limited availability of economic activities, and constraints to agriculture. The results showed a critical nutrition situation with mortality rates above alert thresholds (table 3). Only two supplementary

and therapeutic feeding centres, with limited resources, were running in the area. The recommendations of the survey included the strengthening of nutritional activities and the implementation/reinforcement of a safety net.



TABLE 3 RESULTS OF A NUTRITION AND MORTALITY SURVEY, BEYLA PREFECTURE, GUINEA, NOVEMBER 2007 (ACH-S, 11/07)

Acute Malnutrition (%) (95% CI)	Severe Acute Malnutrition (%) (95% CI)	Crude Mortality (/10,000/day) (95% CI)	Under 5 Mortality (/10,000/day) (95% CI)
16.5 (12.7-20.2)	2.7 (1.4-4.1)	1.71 (1.04-2.38)	2.36 (1.05-3.67)

Liberia

Although there has been improvement since the cessation of hostilities and the election of the current president at the end of 2005, many people are still vulnerable and suffering humanitarian needs, including the lack of basic services (OCHA, 2008). Liberia is now started a process of development but resource mobilisation is subject to delay, while humanitarian aid is gradually being withdrawn. However, an appeal has been launched to cover the critical humanitarian gaps during this transition period.

According to a nutrition survey conducted in Greater Monrovia in December 2007, the nutrition situation was critical and under-five mortality rate was above alert threshold (table 4) (ACF-F, 02/08). When compared to a nutrition survey conducted in Greater Monrovia in December 2006 (WFP, 07/07), prevalence of acute malnutrition seems to have almost doubled. This could be partly attributed to the rise in food prices as inhabitants of Monrovia are mostly dependent on purchase of food, which represents 52% of household expenditure

(ACF-F, 06/08). Food prices have increased by 25% between May 2007 and January 2008. Moreover, the increase in the price of oil could also have had a significant effect as transportation is the second main expenditure of people. With the hunger-gap season, the situation can only further worsen. To mitigate it several actions have been proposed by the government, such as removal of tariffs on rice imports, and direct assistance to most vulnerable households. The World Bank will contribute to this programme (WB, 29/05/08).

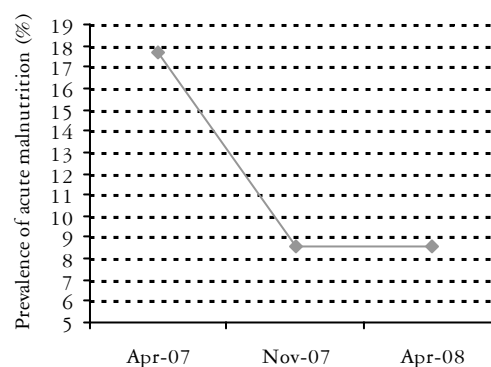
TABLE 4 RESULTS OF A NUTRITION AND MORTALITY SURVEY, GREATER MONROVIA, LIBERIA, FEBRUARY 2008 (ACF-F, 02/08)

Acute Malnutrition (%) (95% CI)	Severe Acute Malnutrition (%) (95% CI)	Crude Mortality (/10,000/day) (95% CI)	Under 5 Mortality (/10,000/day) (95% CI)
17.6 (14.0-21.3)	1.0 (0.3-1.7)	0.97 (0.63-1.30)	2.82 (1.27-4.36)

Niger

The food security situation is expected to be stable with crop yields forecast to be equal to or above the long-term average (FCPN, 06/08). Several nutrition surveys conducted in April 2008 nevertheless showed average to precarious nutrition situations (ACH-S, 04/08; MSF-B, 04/08) (table 5). In Maradi region, the prevalence of acute malnutrition in Abalak and Keita departments were comparable to that found in the same departments in November 2007. In Tahoua region, the nutrition situation in the areas situated within 15 km of the health centres supported by MSF-B has significantly improved compared to April 2007, and was comparable to that of November 2007 (figure 8). In the same district, the areas situated between 15 and 30 km of the health centres supported by MSF-B showed a significantly higher prevalence of acute malnutrition

FIGURE 8 TRENDS IN ACUTE MALNUTRITION, DAKORO HEALTH DISTRICT, MARADI REGION, NIGER



than the areas nearer to the health centres. The overall reasons for this were not investigated but the report mentioned that MSF-B intervention can play a role.

TABLE 5 RESULTS OF NUTRITION AND MORTALITY SURVEYS, MARADI AND TAHOUA REGIONS, NIGER, APRIL 2008 (ACH-S, 04/08; MSF-B, 04/08)

Survey Area	Acute Malnutrition (%) (95% CI)	Severe Acute Malnutrition (%) (95% CI)	Crude Mortality (/10,000/day) (95% CI)	Under 5 Mortality (/10,000/day) (95% CI)
MARADI				
Dakoro health district ²	8.6 (6.6-10.6)	0.7 (0.1-1.2)	0.1 (0.0-0.2)	0.2 (0.0-0.4)
Dakoro health district ³	14.7 (11.7-17.7)	1.0 (0.3-1.6)	0.1 (0.0-0.2)	0.3 (0.1-0.5)
TAHOUA				
Abalak department	10.0 (6.8-13.2)	0.4 (0.1-1.0)	0.40 (0.09-0.70)	1.0 (0.0-2.05)
Keita departement	11.8 (8.7-14.8)	1.5 (0.6-2.3)	0.41 (0.12-0.71)	0.35 (0.13-0.82)
Tchintabaraden department	9.2 (7.1-11.4)	0.8 (0.0-1.5)	0.53 (0.19-0.88)	0.94 (0.18-1.7)

² areas within 15 km of the health centres supported by MSF-B; ³ areas between 15 and 30 km of the health centres supported by MSF-B

Central Africa

Chad

Insecurity is still widespread in eastern Chad where around 250,000 refugees and 180,000 displaced people are gathered (OCHA, 09/06/08; UNHCR, 16/06/08). Humanitarian aid continues to be delivered, but food rations distributed to the refugees have been lowered to 80% of the cereal needs due to logistic and security constraints. Seed protection rations were however able to be provided to 160,000 IDPs. In addition, 150,000 people among the host community will be assisted through food for work. Admissions to feeding centres in IDP camps have been reported to be on the rise, especially in Goz Amir and Dar Sila (FEWS, 06/08; USAID, 27/06/08). Hygiene and sanitation indicators seemed alarming in some of

the sites hosting IDPs, such as Habile, Dogdore, Kerfi, Gozbagar and Alacha (WHO, 08/06/08).



The South of Chad hosts about 57,000 refugees from Central African Republic. The 10,000 refugees who entered at the beginning of the year have been transferred to a new camp (OCHA, 09/06/08). Food ration distributions have been disrupted but the area where the camps are located offers more opportunities for food self-sufficiency than Eastern Chad (FEWS, 06/08) and there are therefore plans to gradually reduce food rations for the refugees.

Democratic Republic of Congo

The security situation has remained precarious in the east of the country, despite the signature of a peace agreement between the armed groups in North and South Kivu and the government of DRC (RFI, 23/01/08; OCHA, 27/06/08).

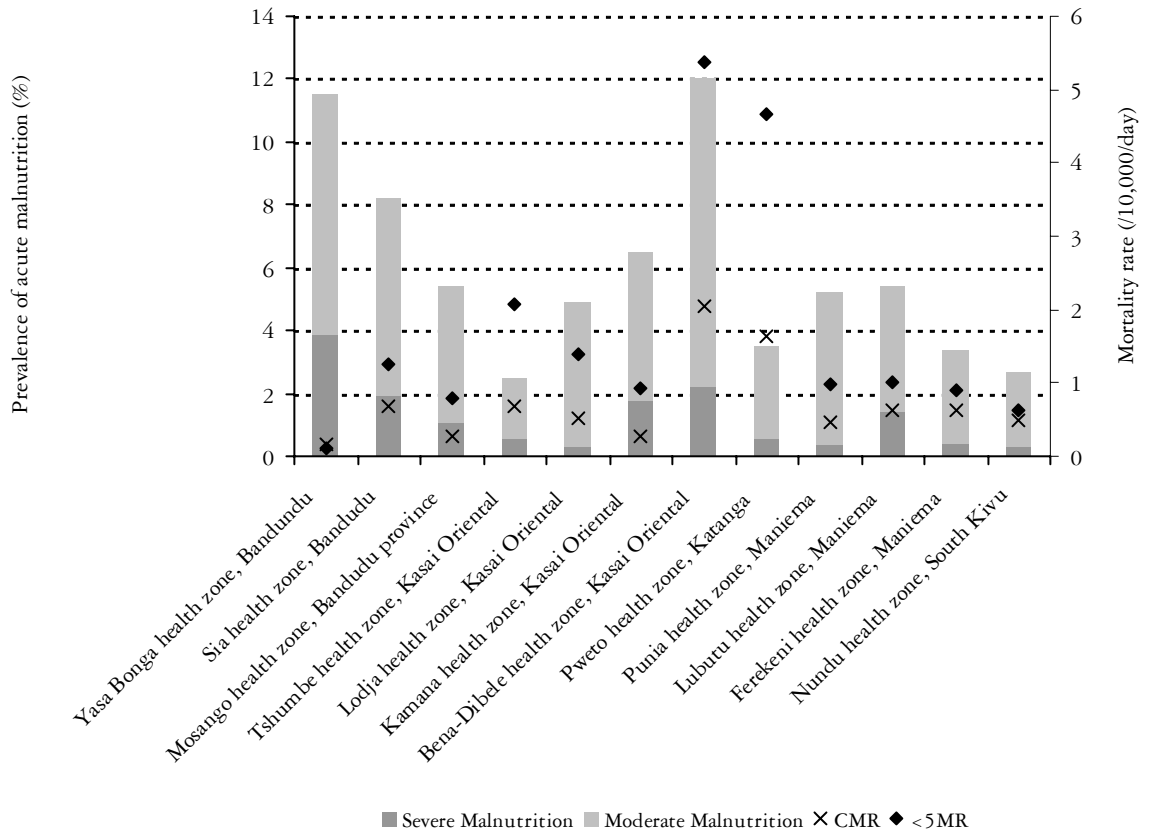
Around 50,000 people arrived in provinces bordering Angola (especially Bandudu and Kasai Occidental) in May/June 2008 during a new wave of expulsion from Angola (OCHA, 21/06/08). Expelled people are reported to have experienced violence, including sexual abuse, and have been robbed of their goods. There is an urgent need for deployment of aid to these people in the concerned provinces.

Nutrition surveys conducted in Maniema, South Kivu and Katanga provinces showed nutrition situations which were not worrying (figure 9) (AAH-US, 01/08; AAH-US, 03/08;

MSF-S, 03/08). However, mortality rate was above emergency threshold in Katanga. The main causes of mortality were measles, watery diarrhoea and fever/malaria. In Nundu health zone, South Kivu, prevalence of acute malnutrition was one third that of December 2005 and one fifth that of November 2003, showing an impressive improvement in the situation.

In Bandudu and Kasai Orientale provinces, the nutrition situation varied from acceptable to precarious, depending on the health zone (figure 9) (AAH-US, 01/08; AAH-US, 02/08). In Bena-Dibele health zone, mortality rates were above emergency thresholds, probably due to some epidemics, although causes of mortality were not reported. In Mosango health zone, the prevalence of acute malnutrition has halved compared to October 2006.

FIGURE 9 RESULTS OF NUTRITION AND MORTALITY SURVEYS, DRC, 2008 (AAH-US, 01-03/08; MSF-S, 03/08)



Uganda

Improvement in Northern Uganda

Although the leader of the Lord's Resistance Army failed to appear to sign a final peace deal in April 2008 after 2 years of negotiations (Reuters, 11/04/08), calm has prevailed in the north-east (OCHA, 06/08). Displaced people have continued to return, with, in Acholi and Teso regions, only about 47% of original camp population remaining in displaced camps, 30% of the displaced having returned to transit camps and 23% having resettled in their villages of origin. Food assistance is gradually being replaced by agricultural assistance, especially as rainfall has been good. An outbreak of hepatitis E has been reported in Kitgum district and spread to Gulu and Pader is feared.

Two nutrition surveys were conducted in May 2008 by AAH-US, one in Oyam and Apac dis-

tricts, and another in Lira district (AAH-US, 05/08). They showed under control to average nutrition situations, and mortality rates below alert thresholds (table 6). At the time of the surveys, all IDPs had left the camps. The nutrition situation was comparable to previous years.

Increased hardship in Karamoja

As the 2007 harvest was poor, the hunger season started in February 2008, two months earlier than usual (FEWS, 05/08). Around 275,000 people received food aid as of April, but the number of people in need was expected to rise. Moreover, the current rainy season is poor so far, and the food security situation is further worsening as food prices have increased dramatically since the end of 2007 (OCHA, 06/08). Last year nutrition surveys showed already precarious nutrition situations (see NICS 14), which are likely to worsen.

TABLE 6 RESULTS OF NUTRITION AND MORTALITY SURVEYS, NORTHERN UGANDA, MAY 2008
(AAH-US, 05/08)

Survey Area	Acute Malnutrition (%) (95% CI)	Severe Acute Malnutrition (%) (95% CI)	Crude Mortality (/10,000/day) (95% CI)	Under 5 Mortality (/10,000/day) (95% CI)
Oyam & Apac districts	5.9 (4.1-7.7)	0.3 (0.0-0.7)	0.71 (0.43-0.99)	1.75 (0.89-2.61)
Lira district	4.2 (2.6-5.8)	0.0	0.54 (0.27-0.82)	1.06 (0.39-1.73)

Asia

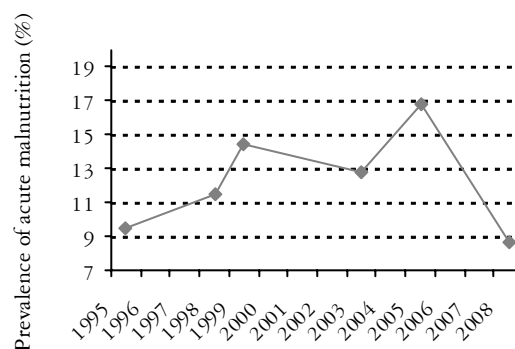
Bangladesh

Bangladesh hosts about 26,000 refugees from Myanmar in two refugee camps located in Cox's Bazaar district.

A nutrition survey conducted in February 2008 (HKI, 05/08) showed a halving of the prevalence of acute malnutrition compared to December 2005 (figure 10). Anaemia in children 6-59 months also decreased from 65.4% in 2005 to 47.5% in the current survey. On the other hand, the percentage of children with visible clinical signs of riboflavin deficiency was comparable to that of 2005, with 17.2% and 13.8%, respectively. No explanation for these improvements was given in the report. It might however be related to the increase in funding and activities dedicated to nutrition and women health.



FIGURE 10 TRENDS IN ACUTE MALNUTRITION, KUTU-PALONG & NAYAPARA REFUGEE CAMPS, BANGLADESH



Myanmar

Cyclone Nargis hit Myanmar's central coast on 2-3 May 2008. According to the last estimates, 138,373 people were killed or went missing (DPA, 27/06/08). In addition, an estimated 2.4 million people were affected across Ayeyarwady and Yangon divisions (OCHA, 26/06/08). Some of the affected households gathered in camps, which were progressively closed (USAID, 18/06/08). Forced returns of

displaced people in order to get them back on their land to begin reviving the agricultural sector, have been reported (RI, 30/05/08).

According to an assessment conducted about one week after the passage of the cyclone, in Bogale township, one of the three most severely affected townships in Ayeyarwady division, there were 23,000 displaced people in camps in Bogale town (ACF-F, 11/05/08). Most of the food stocks were lost and the next

planting season of paddy rice was expected to be compromised because of lack of seeds and deaths of buffaloes, which are used for ploughing. Availability of food in the market was limited and food prices had increased. Moreover job opportunities had dramatically decreased with the destruction of companies and disruption of agricultural and fishing activities. People were eating wild plants and spoiled rice, and their food consumption was considerably reduced.

Preliminary findings of joint assessments of humanitarian needs and damage components, conducted in 30 townships, showed that 59% of the households were severely damaged, and that there was a major shift from wooden houses to less solid bamboo houses (ASEAN/GoM/UN, 29/06/08).

Forty-two percent of food stocks were destroyed and around 60% of the households were purchasing food from the market while 45% had received food through humanitarian assistance.

Livelihoods were disrupted with income sources from agriculture and fisheries decreasing from 34% to 22% and from 16% to 8%, respectively (OCHA, 26/06/08). However, 47% of arable land was not flooded and part of the flooded land could still be cropped. More than half of village leaders suggested there were not enough seeds for the next planting season; and 78% of households have reported a lack of access to credit to rebuild their livelihoods.

Access to clean water was inadequate for about 60% of households, increasing to 75% in the most affected areas. Defecation in the open has increased due to destroyed latrines. On the other hand, no outbreaks of disease have been reported so far (WHO, 30/06/08).

Infrastructure suffered with 72% of schools and education facilities, 57% of religious institutions, and 23% of health facilities in need of rehabilitation.

A MUAC assessment, using convenience sampling, was conducted in the camps of eight of

the most affected townships of Ayeyarwady and Yangon divisions between 17 and 23 May 2008 (MOH/UNICEF, 10/06/08). It showed a nutrition situation which was not alarming. Among the 832 children measured, 6.5% and 3.9% of the children surveyed had a MUAC below 125 mm, in Ayeyarwady and Yangon, respectively. Less than 1% of the children had a MUAC less than 110 mm in both divisions.

The response plan for nutrition included effective management of acute malnutrition in children and pregnant and lactating women, prevention of micronutrient deficiencies, support and promotion of appropriate infant feeding practices and identification of areas of particular vulnerability using rapid nutrition assessments, surveys, screening and surveillance (NC, 27/06/08).

Access to the affected areas and delivery of aid have been slow, with restricted access granted by the government (DPA, 26/05/08). It seemed that access eased at the end of May (IRIN, 29/05/08), although travel permission and aid distribution clearance are still required (HRW, 12/06/08).

A tripartite core group, consisting of high-level representatives of the government of Myanmar, the Association of South-East Asian Nations (ASEAN) and the UN was formed to oversee the coordination of relief assistance (OCHA, 26/06/08). The cluster approach was also established. The humanitarian appeal was 66% funded as of June 2008.

So far, out of the estimated 2.4 million affected, it is estimated that 1.3 million have been reached by international aid agencies (OCHA, 26/06/08). As of the end of June 2008, food assistance had reached approximately 684,000 people in the Ayeyarwady division, while cash assistance was provided to 45,000 people in Yangon. Cash assistance was provided because markets were functioning and people had access to goods from market (WFP, 20/05/08). However, cash transfer activities were then totally discontinued following notification of a definitive ban on this programme (OCHA, 30/06/08). Prohibition of

local purchases of rice makes regional procurement a priority to avoid a pipeline break. People also received non-food items (USAID, 25/06/08).

Although some aid has been distributed to revive livelihoods such as agriculture and fish-

eries, it is likely that people will need emergency, recovery and livelihood assistance for some more months (IRIN, 27/06/08). In Yan- goon division, households from farming and fishing villages reported that it will take more than one year to fully re-establish livelihood (WFP, 20/05/08).

Middle East

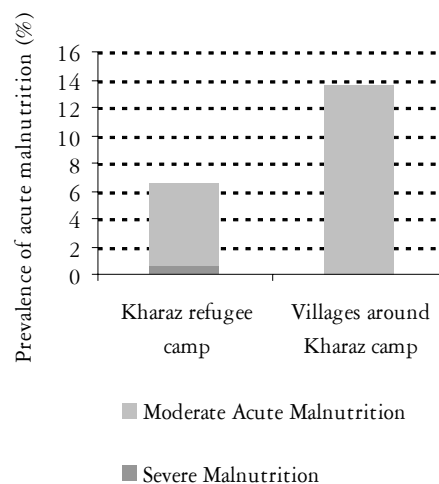
Yemen

Yemen hosts several hundred thousand mi- grants. Most of them come from Ethiopia and Somalia. Somali people are automatically granted refugee status by the government, while such status is given on a case by case ba- sis for other nationalities. In 2008, the number of people entering Yemen was particularly high, due to the renewed crisis in Somalia and drought in Ethiopia. Around 18,000 have ar- rived in Yemen this year, which is twice as many compared to the same period last year (UNHCR, 16/05/08). People face terrible conditions during the journey through the Gulf of Aden on smugglers' boats (MSF, 19/06/08). In 2007, over 1,400 dead and missing were re- ported while 400 have already perished in 2008. Although humanitarian aid has in- creased, such as the tripling of UNHCR budget and the increase by 10,000 of the num- ber of beneficiaries of WFP food distributions (IRIN, 07/02/08; IRIN, 20/05/08), there is an urgent need for more aid.

Refugees are mainly scattered in the main cit- ies. In addition, around 10,000 live in Karaz camp, which was build in 2000-2001 and is located in a desert area in Lahj Governorate. Those refugees are highly dependent on exter- nal assistance. A nutrition survey conducted in January showed an average nutrition situation, which was however better than in the host population surrounding the camp (figure 11) (Valid/Joint, 02/08).

Civil unrest in Sa'adah governorate, north Yemen, which, since it started in 2004, has alternated between periods of calms and of re- newed fighting, has led to the displacement of

FIGURE 11 PREVALENCE OF ACUTE MALNUTRITION, KHARAZ REFUGEE CAMP AND SURROUNDING VIL- LAGES, LAHJ GOVERNORATE, YEMEN, JANUARY 2008 (VALID/JOINT, 02/08)



around 77,000 people (UNHCR, 05/08). The majority of them took refuge with relatives and friends within Sa'adah, while around 10% are scattered in camps and around Sa'adah city. UNHCR has called for increase funding for the IDPs, following the last upsurge in violence at the end of last year, which made additional displacements. According to an ICRC assess- ment conducted in June 2007, only 15% of the IDPs had the means to cover 100% of their essential needs while 85%, or around 36,000 lack capacity and manpower to generate any income (WFP, 09/07). According to the same assessment, around 30-45% of the displaced were lacking some essential micronutrients. These 36,000 people are supported by WFP with a full food basket.

Results of surveys

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI) [§]	Severe Acute Malnutrition** (%) (95% CI) [§]	Oedema (%)	MUAC [¶] (%)
GREATER HORN OF AFRICA								
ETHIOPIA								
Damot Woyde and Dugna Fango districts, Wolaita zone, SNNPR	Apr-08	Residents	217,080	Concern	12.5 9.1-16.0	1.4 0.3-2.6	0.5	MUAC < 11.0 cm: 1.4 MUAC < 12.5 cm: 13.3
Offa district, Wolaita zone, SNNPR	Apr-08	Residents	110,665	Concern	8.4 6.4-10.3	0.7 0.1-1.2	0.1	MUAC < 11.0 cm: 0.3 MUAC < 12.5 cm: 7.9
KENYA								
NORTH EASTERN PROVINCE								
Buna, Gurar, Bute, Griftu, Eldas & Hadado divisions, North-West Wajir	Apr-08	Residents	-	Merlin	13.4 11.2-15.7	1.1 0.4-1.8	0.0	-
Central, Wajirbor, Kotulo, Sabuli, Habaswein, Diff & Tarbaj divisions, South-East Wajir	Apr-08	Residents	-	Merlin	21.2 18.4-24.0	2.0 1.0-3.0	0.0	-
Riverine livelihood group, Garissa district	Dec-07	Residents	46,452	AAH-US	15.9 12.4-19.4 17.6 ¹ 14.1-21.2	1.0 0.0-2.1 3.8 ² 1.4-6.3	0.0	MUAC < 11.0 cm: 0.3 MUAC < 12.0 cm: 1.4
Pastoral livelihood group, Garissa district	Dec-07	Residents	106,452	AAH-US	14.4 11.1-17.8 16.1 ¹ 12.9-19.4	1.3 0.4-2.1 3.9 ² 2.6-5.2	0.0	MUAC < 11.0 cm: 0.6 MUAC < 12.0 cm: 1.4
Kakuma refugee camp	Apr-08	Refugees	54,985	IRC	10.9 9.0-13.1	1.2 0.6-2.2	-	MUAC < 11.0 cm: 0.4 MUAC < 12.5 cm: 1.8
SOMALIA								
MIDDLE & LOWER SHABELLE								
Agro-pastoral	May-08	Residents	-	FSAU/joint ²	18.1 14.4-21.8 19.8 ¹ 16.9-22.8	3.5 1.7-5.3 7.2 ² 5.3-9.1	0.9	-
Riverine	May-08	Residents	-	FSAU/joint ²	13.7 9.6-17.7 13.2 ¹ 10.6-15.8	3.8 1.8-5.9 4.6 ² 2.9-6.2	0.3	-
Displaced people in Afgoi & Merka corridor	May-08	Displaced	-	FSAU/joint ²	15.0 11.5-18.4 15.5 ¹ 12.9-18.1	1.0 0.2-1.8 5.2 ² 3.6-6.9	0.5	-
Adale district, Middle Shabelle	May-08	Residents/Displaced	46,720	FSAU/joint ²	13.6 9.2-18.0 13.9 ¹ 11.1-16.8	3.2 1.6-4.9 5.1 ² 3.2-7.0	0.7	-
GEDO								
Pastoral	May-08	Residents	-	FSAU/joint ²	23.3 18.9-27.7 22.8 ¹ 18.2-27.4	3.0 1.8-4.2 5.1 ² 0.3-6.9	0.2	-
Agro-pastoral	May-08	Residents	-	FSAU/joint ²	18.8 15.2-22.3 19.0 ¹ 15.3-22.7	1.9 0.9-2.9 4.9 ² 3.2-6.6	0.4	-
Riverine	May-08	Residents	-	FSAU/joint ²	21.5 17.6-25.4 22.0 ¹ 17.4-26.7	4.2 2.2-6.3 6.0 ² 3.8-8.2	0.1	-

*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

[§]95% Confidence Interval; not mentioned if not available from the survey report

[¶] Mid Upper Arm Circumference

¹ According to WHO 2006 Child Growth Standards (<http://www.who.int/childgrowth/en/>)

² From FSAU Nutrition Update

Continued...

Measles immunisation coverage (%) [#]		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) [§]		Under 5 Mortality (/10,000/day) (95% CI) [§]	
Proved by card	Card + history							
15.8	70.2	-	81.6	-	0.54	0.14-0.94	1.85	0.44-3.26
19.3	74.7	-	69.7	-	0.44	0.10-0.77	0.91	0.0-2.1
-	88.6	-	86.9	MUAC < 23.0 cm: 35.1	0.30	0.10-0.50	0.60	0.30-0.90
-	89.4	-	56.6	MUAC < 23.0 cm: 49.1	1.1	0.7-1.5	2.1	1.1-3.2
31.8	91.9	-	-	-	0.51	0.24-0.79	0.56	0.10-1.03
32.7	85.4	-	-	-	0.22	0.07-0.37	0.24	0.00-0.53
-	91.0	See p	79.2	MUAC < 23.0 cm: 2.7 MUAC < 21.0 cm: 0.7	-	-	-	-
-	42.2	-	40.6	-	0.97	0.29-1.66	1.36	0.16-2.57
-	61.7	-	62.9	-	1.39	0.01-2.79	2.20	0.01-7.27
-	63.5	-	54.2	-	0.96	0.12-1.81	1.47	0.96-1.99
-	27.1	-	54.6	-	1.31	0.91-1.70	2.43	0.98-3.88
-	77.0	-	77.1	-	0.9	0.49-1.32	1.52	0.77-2.36
-	39.3	-	52.3	-	1.37	0.79-1.95	2.14	0.68-3.60
-	81.1	-	81.4	-	0.76	0.28-1.24	0.92	0.58-2.42

[#] Measles vaccination coverage for children aged 9-59 months

[§]95% Confidence Interval; not mentioned if not available from the survey report

Survey Area	Date	Popula- tion	Estimated Popula- tion Number	Survey Con- ducted by	Acute Malnutrition* (%) (95% CI) [§]	Severe Acute Malnutrition** (%) (95% CI) [§]	Oedema (%)	MUAC [#] (%)	
BAKOOL									
Pastoral livelihood	Apr-08	Residents	-	FSAU/ joint ²	24.1 18.5-29.7 26.5 ¹ 22.5-30.5	2.8 1.2-4.4 5.8 ¹ 3.6-7.9	0	-	
MUDUG, NUGAL & GALGADUD									
Hawd livelihood	May-08	Residents	-	FSAU/ joint ²	19.3 15.6-23.0 20.5 ¹ 16.9-24.6	2.3 0.9-3.8 4.5 ¹ 2.8-7.2	0.3	-	
Addun livelihood	May-08	Residents	-	FSAU/ joint ²	18.4 14.9-21.8 21.6 ¹ 17.4-26.5	2.8 1.2-4.4 5.1 ¹ 3.2-8.1	0.2	-	
MUDUG									
Displaced people, Galcayo town	May-08	Displaced	-	FSAU/ joint ²	21.1 - 22.9	2.2 - 5.8	0.5	-	
NUGAL									
Displaced people, Garowe town	May-08	Displaced	-	FSAU/ joint ²	22.6 - 19.8	1.5 - 5.6	0.3	-	
SUDAN									
NORTH DARFUR									
Abu Shok & Al Salaam IDP camps	Nov-07	Displaced	-	ACF-F ³	14.3 11.3-17.9	0.6 0.1-2.0	-	-	
Kutum town & Kassab & Fata IDP camps	Jan-08	Displaced/ Residents	73,105	GOAL	16.4 14.0-18.9	0.9 0.2-1.6	0	-	
Kaguro, Borey & surrounding	Nov-07	-	-	ACF-F ³	17.4 13.9-21.5	1.5 0.6-3.4	-	-	
SOUTH DARFUR									
Kalma camp	Aug-07	Displaced	-	ACF-F ³	15.0 11.9-18.7	1.3 0.5-2.9	-	-	
Kalma camp	Mar-08	Displaced	-	ACF-F ³	10.7 8.1-14.0	1.1 0.4-2.7	-	-	
Niala town	Sept-07	Displaced/ Residents	-	ACF-F ³	13.4 10.5-17.0	0.8 0.2-2.3	-	-	
Otash camp	Dec-07	Displaced	-	ACF-F ³	10.1 7.6-13.3	0.5 0.1-1.8	-	-	
Ed Daein	Nov-07	Displaced	-	Tearfund ³	15.7 13.5-18.2	1.4 0.8-2.5	-	-	
Gereida camp	Feb-08	Displaced	-	ICRC ³	8.9 7.2-11.0	0.9 0.4-1.8	-	-	
WEST DARFUR									
Um Shalaya	Nov-07	-	-	Concern ³	11.6 8.8-15.0	0.6 0.1-2.0	-	-	
WARRAP									
Gogrial West (all districts except Akon North & South)	Feb-08	Residents	368,825	AAH-US	14.5 11.1-17.8 14.3 ¹ 10.7-18.0	1.7 0.5-2.9 2.8 ¹ 1.5-4.2	0.1	MUAC < 11.0 cm: 0.4 MUAC < 12.0 cm: 3.0	
Gogrial East	Mar-08	Residents	216,180	AAH-US	13.5 10.5-16.5 14.6 ¹ 11.3-17.9	0.8 0.2-1.5 2.1 ¹ 1.0-3.2	0.1	MUAC < 11.0 cm: 0.7 MUAC < 12.0 cm: 1.8	
JONGLEI									
Khorfulus & Atar areas	May-08	Residents	43,190	AAH-US	23.9 20.4-27.4 24.1 ¹ 20.6-27.5	1.9 0.9-2.9 3.9 2.3-5.5	0	MUAC < 11.0 cm: 0.3 MUAC < 12.0 cm: 5.0	

* 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)

[§] 95% Confidence Interval; not mentioned if not available from the survey report

[#] Mid Upper Arm Circumference

¹ According to WHO 2006 Child Growth Standards (<http://www.who.int/childgrowth/en/>)

² From FSAU Nutrition Update

³ From UNICEF Darfur Nutrition Update

Continued...

Measles immunisation coverage (%) [#]		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) [§]		Under 5 Mortality (/10,000/day) (95% CI) [§]	
Proved by card	Card + history							
-	32.6	-	32.9	-	0.69	0.0-1.39	1.08	0.0-2.17
-	20.9	-	52.1	-	0.62	0.30-0.93	1.35	0.4-2.3
-	8.8	-	51.6	-	0.65	0.39-0.91	1.45	0.72-2.18
-	31.0	-	61.2	-	0.41	-	0.66	-
-	2.0	-	2.2	-	0.38		0.31	
-	-	-	-	-	-		-	
54.8	92.2	-	98.2	-	0.28	0.13-0.43	1.13	0.16-2.42
-	-	-	-	-	-		-	
-	-	-	-	-	-		-	
-	-	-	-	-	0.60	-	1.16	-
-	-	-	-	-	-		-	
-	-	-	-	-	-		-	
-	-	-	-	-	0.55		1.27	
-	-	-	-	-	-		-	
-	-	-	-	-	-		-	
8.3	58.8	-	-	-	0.21	0.00-0.44	0.43	0.00-1.18
13.8	56.1	-	-	-	0.17	0.02-0.31	0.37	0.00-0.84
26.9	59.2	-	-	-	0.36	0.18-0.54	0.53	0.01-1.05

[#] Measles vaccination coverage for children aged 9-59 months

[§]95% Confidence Interval; not mentioned if not available from the survey report

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI) [§]	Severe Acute Malnutrition** (%) (95% CI) [§]	Oedema (%)	MUAC [#] (%)
NORTHERN BAHR EL GHAZAL								
Aweil East county	Jun-08	Residents	180,398	ACF-F	16.9 13.4-20.3 <i>19.9 16.1-23.8</i>	1.7 0.5-2.8 <i>3.8¹ 1.9-5.6</i>	-	MUAC < 11.0 cm: 0.4 MUAC < 12.0 cm: 3.0
Aweil West & North counties	Apr-08	Residents	-	Concern	18.8 16.4-21.5	1.8 1.1-2.9	0.5	MUAC < 11.0 cm: 0.5 MUAC < 12.5 cm: 6.3
SOUTH KORDOFAN								
Abyei town & Agok, Abyei county	Dec-07	Residents/Returnees	95,960	GOAL	21.0 18.1-23.9	1.6 0.6-2.5	0	-
KASSALA								
IDP camps around Kassala & Albutana, Hangola, Al-gafala & Shanagdameeb areas	Nov-07	Residents/Displaced	62,955	GOAL	18.5 15.1-21.9	1.4 0.5-2.2	0.0	-
WEST AFRICA GUINEA								
Beyla prefecture, Guinée Forestière	Nov-07	Residents	201,460	ACH-S	16.5 12.7-20.2	2.7 1.4-4.1	0.9	MUAC < 11.0 cm: 3.6 MUAC < 12.0 cm: 19.0
LIBERIA								
Greater Monrovia	Dec-07	Residents	812,530	ACF-F	17.6 14.0-21.3 <i>18.9 15.6-22.3</i>	1.0 0.3-1.7 <i>4.5¹ 2.9-6.1</i>	0.1	MUAC < 11.0 cm: 0.3 MUAC < 12.0 cm: 3.6
NIGER MARADI								
Dakoro health district ²	Apr-08	Residents	159,275	MSF-B	8.6 6.6-10.6 <i>9.0 6.9-11.1</i>	0.7 0.1-1.2 <i>1.3¹ 0.5-2.1</i>	0	MUAC < 11.0 cm: 0.0 MUAC < 12.5 cm: 2.9
Dakoro health district ³	Apr-08	Residents	143,645	MSF-B	14.7 11.7-17.7 <i>16.2 12.9-19.6</i>	1.0 0.3-1.6 <i>3.5¹ 2.1-4.9</i>	0	MUAC < 11.0 cm: 0.4 MUAC < 12.5 cm: 5.1
TAHOUA								
Abalak department	Apr-08	Residents	-	ACH-S	10.0 6.8-13.2 <i>10.3¹ 7.1-13.6</i>	0.4 0.1-1.0 <i>2.5¹ 1.2-3.8</i>	0	MUAC < 11.0 cm: 0.0 MUAC < 12.5 cm: 7.3
Keita departement	Apr-08	Residents	-	ACH-S	11.8 8.7-14.8 <i>13.3¹ 10.4-16.2</i>	1.5 0.6-2.3 <i>3.0¹ 1.6-4.4</i>	0.2	MUAC < 11.0 cm: 0.8 MUAC < 12.5 cm: 11.7
Tchintabaraden department	Apr-08	Residents	-	ACH-S	9.2 7.1-11.4 <i>9.9 7.1-11.4</i>	0.8 0.0-1.5 <i>1.1¹ 0.4-1.9</i>	0	MUAC < 11.0 cm: 0.2 MUAC < 12.5 cm: 6.7

*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)

[§]95% Confidence Interval; not mentioned if not available from the survey report

[#] Mid Upper Arm Circumference

¹ According to WHO 2006 Child Growth Standards (<http://www.who.int/childgrowth/en/>)

² areas within 15 km of the health centres supported by MSF-B; ³ areas between 15 and 30 km of the health centres supported by MSF-B

Continued...

Measles immunisation coverage (%) [#]	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) [§]		Under 5 Mortality (/10,000/day) (95% CI) [§]	
	Proved by card	Card + history						
19.0	38.8	-	-	-	0.41	0.16-0.67	0.92	0.10-1.94
-	-	-	43.3	-	0.19	-	0.26	-
19.0	59.3	-	60.2	-	-	-	0.56	0.09-1.20
26.1	47.2	-	12.4	-	0.33	0.11-0.54	0.63	0.10-1.15
18.5	51.5	-	-	-	1.71	1.04-2.38	2.36	1.05-3.67
45.1	83.1	-	73.0	-	0.97	0.63-1.30	2.82	1.27-4.36
68.1	80.5	-	-	-	0.1	0.0-0.2	0.2	0.0-0.4
58.3	71.4	-	-	-	0.1	0.0-0.2	0.3	0.1-0.5
-	-	-	-	-	0.40	0.09-0.70	1.0	0.0-2.05
-	-	-	-	-	0.41	0.12-0.71	0.35	0.13-0.82
-	-	-	-	-	0.53	0.19-0.88	0.94	0.18-1.7

[#] Measles vaccination coverage for children aged 9-59 months

[§]95% Confidence Interval; not mentioned if not available from the survey report

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI) [§]		Severe Acute Malnutrition** (%) (95% CI) [§]		Oedema (%)	MUAC [#] (%)
CENTRAL AFRICA										
DRC										
BANDUDU										
Yasa Bonga health zone	Feb-08	Residents	173,540	AAH-US	11.5 <i>13.8[†]</i>	7.5-15.4 <i>9.1-18.4</i>	3.9 <i>5.6[†]</i>	1.7-6.2 <i>3.3-7.8</i>	3.8	MUAC < 11.0 cm: 3.4 MUAC < 12.5 cm: 18.0
Sia health zone	Feb-08	Residents	89,665	AAH-US	8.2 <i>8.5[†]</i>	5.6-10.8 <i>6.1-10.9</i>	1.9 <i>2.5[†]</i>	0.8-3.1 <i>1.2-3.7</i>	1.6	MUAC < 11.0 cm: 0.2 MUAC < 12.5 cm: 7.9
Mosango health zone	Feb-08	Residents	95,360	AAH-US	5.4 <i>5.7[†]</i>	3.6-7.2 <i>3.7-7.7</i>	1.1 <i>1.7[†]</i>	0.1-2.0 <i>0.7-2.7</i>	0.9	MUAC < 11.0 cm: 0.5 MUAC < 12.5 cm: 9.6
KASAI ORIENTAL										
Tshumbe health zone	Jan-08	Residents	76,890	AAH-US/ Joint	2.5 <i>2.6[†]</i>	1.5-3.5 <i>1.7-3.5</i>	0.6 <i>0.6[†]</i>	0.1-1.2 <i>0.1-1.2</i>	0.6	MUAC < 11.0 cm: 0.9 MUAC < 12.5 cm: 5.9
Lodja health zone	Jan-08	Residents	158,185	AAH-US	4.9 <i>5.1[†]</i>	3.2-6.6 <i>3.0-7.3</i>	0.3 <i>0.3[†]</i>	0.0-0.8 <i>0.0-0.8</i>	0.3	MUAC < 11.0 cm: 0.4 MUAC < 12.5 cm: 7.3
Kamana health zone	Jan-08	Residents	151,660	AAH-US	6.5 <i>8.1[†]</i>	4.2-8.9 <i>5.5-10.6</i>	1.8 <i>2.1[†]</i>	0.3-3.3 <i>0.6-3.6</i>	1.7	MUAC < 11.0 cm: 0.9 MUAC < 12.5 cm: 8.4
Bena-Dibele health zone	Feb-08	Residents	69,495	AAH-US/ Joint	12.0 <i>13.4[†]</i>	8.7-15.2 <i>9.5-17.3</i>	2.2 <i>3.5[†]</i>	1.1-3.3 <i>1.9-5.1</i>	1.7	MUAC < 11.0 cm: 1.9 MUAC < 12.5 cm: 14.4
KATANGA										
Pweto health zone	Mar-08	Residents	99,500	MSF-S	3.5 <i>4.8[†]</i>	2.2-4.8 <i>3.2-6.3</i>	0.6 <i>0.9[†]</i>	0.1-1.0 <i>0.2-1.6</i>	0.5	MUAC < 11.0 cm: 0.7 MUAC < 12.5 cm: 7.8
MANIEMA										
Punia health zone	Mar-08	Residents	81,235	AAH-US	5.2 <i>5.6[†]</i>	3.6-6.9 <i>3.8-7.5</i>	0.4 <i>0.9[†]</i>	0.0-0.8 <i>0.2-1.7</i>	0.3	MUAC < 11.0 cm: 0.3 MUAC < 12.5 cm: 5.4
Lubutu health zone	Mar-08	Residents	87,760	AAH-US/ Joint	5.4 <i>5.9[†]</i>	3.4-7.5 <i>4.1-7.6</i>	1.4 <i>1.8[†]</i>	0.4-2.4 <i>0.7-3.0</i>	1.4	MUAC < 11.0 cm: 0.3 MUAC < 12.5 cm: 5.4
Ferekeni health zone	Mar-08	Residents	58,955	AAH-US	3.4 <i>3.1[†]</i>	2.2-4.6 <i>1.9-4.3</i>	0.4 <i>0.4[†]</i>	0.0-0.8 <i>0.0-0.8</i>	0.4	MUAC < 11.0 cm: 0.1 MUAC < 12.5 cm: 4.7
SOUTH KIVU										
Nundu health zone	Jan-08	Residents	170,510	AAH-US	2.7 <i>3.7[†]</i>	1.2-4.3 <i>2.1-5.3</i>	0.3 <i>0.3[†]</i>	0.0-0.8 <i>0.0-0.8</i>	0.3	MUAC < 11.0 cm: 0.0 MUAC < 12.5 cm: 2.8

*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)

[§]95% Confidence Interval; not mentioned if not available from the survey report

[#] Mid Upper Arm Circumference

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

Continued...

Measles immunisation coverage (%) [#]		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) [§]		Under 5 Mortality (/10,000/day) (95% CI) [§]	
Proved by card	Card + history							
38.9	88.2	-	95.4	-	0.16	0.02-0.33	0.11	0.00-0.32
3.7	90.2	-	92.5	-	0.69	0.39-0.98	1.26	0.61-1.91
43.3	93.3	-	93.7	-	0.28	0.09-0.47	0.79	0.27-1.31
6.9	81.4	-	91.2	-	0.67	0.39-0.96	2.07	1.20-2.94
4.9	64.4	-	82.1	-	0.51	0.31-0.70	1.38	0.62-2.14
30.0	68.6	-	86.0	-	0.27	0.10-0.44	0.93	0.31-1.55
15.1	86.7	-	83.6	-	2.05	1.31-2.79	5.36	3.15-7.57
24.4	73.3	-	-	-	1.63	1.04-2.22	4.67	2.31-7.03
11.5	77.2	-	80.6	-	0.47	0.26-0.67	0.97	0.21-1.72
15.0	85.9	-	86.5	-	0.64	0.29-0.99	1.00	0.31-1.69
21.0	92.5	-	93.4	-	0.62	0.31-0.93	0.91	0.36-1.45
66.6	95.3	-	98.0	-	0.49	0.25-0.73	0.64	0.19-1.10

[#] Measles vaccination coverage for children aged 9-59 months

[§]95% Confidence Interval; not mentioned if not available from the survey report

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI) [§]		Severe Acute Malnutrition** (%) (95% CI) [§]		Oedema (%)	MUAC [#] (%)
UGANDA										
Oyam & Apac districts, Northern province	May-08	Returnee/Residents	-	AAH-US	5.9 7.1 ¹	4.1-7.7 5.2-9.1	0.3 0.7 ¹	0.0-0.7 0.2-1.2	-	MUAC < 11.0 cm: 0.6 MUAC < 12.0 cm: 5.7
Lira district, Northern province	May-08	Returnees/Residents	-	AAH-US	4.2 4.4	2.6-5.8 3.0-5.9	0.0 0.0 ¹	0.0-0.0 0.0-0.0	0.0	MUAC < 11.0 cm: 0.2 MUAC < 12.0 cm: 4.2
ASIA										
BANGLADESH										
Kutupalong & Nayapara refugee camps	Feb-08	Refugees	26,200	HKI	8.6		0.3		-	-
MIDDLE EAST										
YEMEN										
Kharaz refugee camp, Lahj governorate	Jan-08	Refugees	10,000	Valid/Joint	6.5	3.7-9.4	0.7	0.1-1.3	0	-
Villages around Kharaz camp, Lahj governorate	Jan-08	Residents	-	Valid/Joint	13.6	-	0	-	0	-

*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)

[§]95% Confidence Interval; not mentioned if not available from the survey report

[#] Mid Upper Arm Circumference

¹According to WHO 2006 Child Growth Standards (<http://www.who.int/childgrowth/en/>)

Measles immunisation coverage (%) [#]		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) [§]		Under 5 Mortality (/10,000/day) (95% CI) [§]	
Proved by card	Card + history							
37.8	83.7	-	-	-	0.71	0.43-0.99	1.75	0.89-2.61
42.5	84.7	-	-	-	0.54	0.27-0.82	1.06	0.39-1.73
-	-	-	-	BMI < 18.5: 24%	-		-	
29.9	41.2	-	85.5	-	-		-	
45.7	50.9	-	100	-	-		-	

[#] Measles vaccination coverage for children aged 9-59 months

[§]95% Confidence Interval; not mentioned if not available from the survey report

Survey methodology

The Greater Horn region

Ethiopia

DAMOT WOYDE AND DUGNA FANGO WOREDA, WOLAYTA ZONE, SNNPR

A two-stage 40 cluster sampling methodology nutrition survey was completed by Concern in April 2008. A total of 768 children 6-59 months were measured for anthropometry, 480 households for mortality and 160 households for food security. Vaccination coverage, mortality rates and food security indicators were also surveyed.

OFFA WOREDA, WOLAYTA ZONE, SNNPR

A two-stage cluster sampling methodology nutrition survey was completed by Concern in April 2008. A total of 763 children 6-59 months were measured for anthropometry, 480 households for mortality and 160 households for food security. Vaccination coverage, mortality rates and food security indicators were also surveyed.

Kenya

PASTORAL & RIVER BANK COMMUNITIES, GARISSA, NORTH EASTERN PROVINCE

Two surveys were conducted by AAH-US in December 2007. Two-stage cluster sampling methodologies of 42 and 33 clusters were used in pastoral and river bank areas, where 739 and 731 children 6-59 months were measured. Vaccination coverage, mortality rates and food security indicators were also surveyed.

NORTH-WEST AND SOUTH-EAST WAJIR, NORTH EASTERN PROVINCE

Two surveys of 30x30 clusters were conducted by Merlin in North-West and South-East Wajir in April 2008. Vaccination coverage, mortality rates and food security indicators were also surveyed.

KAKUMA REFUGEE CAMP, TURKANA DISTRICT, KENYA

A two-stage 30 by 30 cluster nutrition survey was completed by IRC in April 2008. A total of 974 children 6-59 months were measured. Vaccination coverage, mortality rates and food security indicators were also surveyed.

Somalia

BOSSASO IDP CAMPS, BOSSASO DISTRICT, BARI REGION, PUNTLAND

Episcentre/MSF-E carried out a standard two-stage 30-by-30 cluster sampled nutrition survey in the 19 IDP camps surrounding Bossaso in November 2007. A total of 924 children 6-59 months were included in the study. In addition to information collected on vaccination and mortality rates, several food security and demographic indicators were also included.

DINSOR TOWN, DINSOR DISTRICT, BAY REGION

MSF-CH carried out a standard two-stage 30-by-30

cluster sampled nutrition survey in November 2007. A total of 927 children 65-109.9cm were included in the study. Vaccination, mortality rates and food security and indicators were also surveyed.

Sudan

GOGRIAL WEST & EAST COUNTIES, WARRAP STATE-SOUTH SUDAN

Two nutrition surveys were conducted by AAH-US in February-March 2008. The first, a two-stage 35-by-20 cluster survey, was conducted in Gogrial West (all districts except Akon North & South) and included a total of 705 children 6-59 months. The second, carried out in Gogrial East, consisted of 33 clusters of 20 children each, for a total of 706 in the final analysis. The surveys also estimated measles vaccination and vitamin A distribution coverage, crude and under-five mortality rates and various food security and public health indicators.

KHORFULÉUS & ATAR AREAS, JONGLEI STATE, SOUTH SUDAN

AAH-US performed a two-stage 36-by-20 cluster sampling methodology nutrition survey in May 2008. In all, 740 children between the ages of 6-59 months were included in the study. Other data collected for the survey included estimates of measles vaccination and vitamin A distribution coverage and crude and under-five mortality rates.

AWEIL EAST COUNTY, NORTHERN BAHR EL GHAZA, SOUTH SUDAN

ACF-F performed a two-stage 40-by-20 cluster sampling methodology nutrition survey in June 2008. Anthropometric data were collected among children 6-59 months. Other data collected for the survey included estimates of measles vaccination and vitamin A distribution coverage and crude and under-five mortality rates.

AWEIL WEST & NORTH COUNTIES, NORTHERN BAHR EL GHAZAL, SOUTH SUDAN

Concern performed a two-stage 30-by-30 cluster sampling methodology nutrition survey in June 2008. Anthropometric data were collected among children 6-59 months. Other data collected for the survey included estimates of measles vaccination and vitamin A distribution coverage and crude and under-five mortality rates.

ABYEI COUNTY, NORTHERN BAHR EL GHAZAL, NORTH SUDAN

GOAL performed a two-stage cluster sampling methodology nutrition survey in accessible areas of Abyei town and Agok in December 2007. Anthropometric data were collected among 837 children 6-59 months. Other data collected for the survey included estimates of measles vaccination and vitamin A distribution coverage and crude and under-five mortality rates and various public health and food security indicators.

KASSALA STATE, NORTH SUDAN

GOAL performed a two-stage 30-by-30 cluster sampling methodology nutrition survey in IDP camps around Kassala, and Albutana, Hangola, Algafala and Shanagdameeb areas in November 2007. Anthropometric data were collected among 969 children 6-59 months. Other data collected for the survey included estimates of measles vaccination and vitamin A distribution coverage and crude and under-five mortality rates and various public health and food security indicators.

West Africa

Guinea

BEYLA PREFECTURE, GUINÉE FORESTIÈRE

A two-stage 36-by-19 cluster sampling methodology nutrition survey was completed by ACH-S in November 2007. 693 children 6-59 months were included in the sample. The survey also estimated measles vaccination coverage, retrospective mortality rates and various public health and food security indicators.

Liberia

GREATER MONROVIA

ACF_F carried out a two-stage 35-by-33 households cluster sampled nutrition survey in February 2008, measuring a total of 796 children between the ages of 6-59 months. The survey also estimated measles vaccination, vitamin A distribution coverage, retrospective mortality rates and various public health and food security indicators.

Niger

DAKORO DEPARTMENT, MARADI REGION

Two surveys were conducted by MSF-B in April 2008, in areas less than 15 km of the health centres supported by MSF-B and in areas between 15 and 30 km of the health centres supported by MSF-B. A two-stage cluster sampling methodology was used to measure 920 and 919 children between 65-110 cm, respectively. The survey also estimated measles vaccination and crude and under-five mortality rates.

ABALAK, KEITA AND TCHINBARADEN DEPARTMENTS, TAHOUA REGION

Surveys were conducted in the villages where ACH-S projects were implemented in the three departments, in April 2008. A two-stage cluster sampling methodology was used to measure 479, 543 and 531 children between 65-110 in Abalak, Keita and Tchintabaraden, respectively. The surveys also estimated measles vaccination and crude and under-five mortality rates.

Central Africa

Democratic Republic of Congo

YASA BONGA HEALTH ZONE, BANDUDU PROVINCE

The survey was conducted by AAH-US in February 2008. A two-stage 30-by-30 cluster sampling meth-

odology was used to measure children between 6-59 months. The survey also estimated measles vaccination and vitamin A distribution coverage, and retrospective mortality rates.

SIA HEALTH ZONE, BANDUDU PROVINCE

The survey was conducted by AAH-US in February 2008. A two-stage 30-by-30 cluster sampling methodology was used to measure children between 6-59 months. The survey also estimated measles vaccination and vitamin A distribution coverage, and retrospective mortality rates.

MOSANGO HEALTH ZONE, BANDUDU PROVINCE

The survey was conducted by AAH-US in February 2008. A two-stage 30-by-30 cluster sampling methodology was used to measure children between 6-59 months. The survey also estimated measles vaccination and vitamin A distribution coverage, and retrospective mortality rates.

TSHUMBE HEALTH ZONE, KASAI ORIENTAL PROVINCE

The survey was conducted by AAH-US/Joint in January 2008. A two-stage 30-by-30 cluster sampling methodology was used to measure children between 6-59 months. The survey also estimated measles vaccination, vitamin A distribution coverage and retrospective mortality rates.

LODJA HEALTH ZONE, KASAI ORIENTAL PROVINCE

A random sampled 30-by-30 cluster survey was performed by AAH-US in January 2008. Data collected included anthropometry on children 6-59 months, as well as measles vaccination and Vitamin A supplementation coverage, and crude and under-five mortality rates.

KAMANA HEALTH ZONE, KASAI ORIENTAL PROVINCE

A standard 30-by-30 cluster sampled nutrition survey was carried out by AAH-US in January 2008. Data collected included anthropometry on children 6-59 months, as well as measles vaccination and Vitamin A supplementation coverage, and crude and under-five mortality rates.

BENA-DIBELE HEALTH ZONE, KASAI ORIENTAL PROVINCE

The survey was conducted by AAH-US in February 2008. A two-stage 30-by-30 cluster sampling methodology was used to measure children between 6-59 months. The survey also estimated measles vaccination and vitamin A distribution coverage, and retrospective mortality rates.

PWETO HEALTH ZONE, KATANGA PROVINCE

MSF-S carried out a nutrition survey in January 2008. A two-stage 30-by-30 cluster sampling methodology was used to measure children between 6-59 months. The survey also measured measles vaccination

coverage, Vitamin A distribution coverage and crude and under-five mortality rates.

MANIEMA PROVINCE

AAH-US completed three standard 30-by-30 cluster sampled nutrition surveys in the health zones of Punia, Lubutu, and Ferekeni in March 2008. Children ages 6-59 months were selected for anthropometric measurements. Information was also collected on measles vaccination and Vitamin A distribution coverage and well as retrospective mortality rates.

NUNDU HEALTH ZONE, SOUTH KIVU PROVINCE

The survey was conducted by AAH-US in January 2008. A two-stage 30-by-30 cluster sampling methodology was used to measure children between 6-59 months. The survey also estimated measles vaccination and vitamin A distribution coverage, and retrospective mortality rates.

Uganda

OYAM AND APAC DISTRICTS, NORTH UGANDA

The survey was conducted by AAH-US in May 2008. A cluster sampling methodology was used to measure children between 6-59 months. The survey also estimated measles vaccination and vitamin A distribution coverage, and retrospective mortality rates.

LIRA DISTRICT, NORTH UGANDA

The survey was conducted by AAH-US in May 2008. A cluster sampling methodology was used to measure children between 6-59 months. The survey also estimated measles vaccination and vitamin A distribution coverage, and retrospective mortality rates.

Asia

Bangladesh

KUTUPALONG & NAYAPARA REFUGEE CAMPS

A nutrition survey, using a simple random sampling from the list of children, was conducted by HKI in February 2008. The survey also estimated anaemia and various public health and food security indicators.

Middle East

Yemen

KARAZ REFUGEE CAMP AND SURROUNDING AREAS

Two nutrition surveys were conducted in January 2008 by Valid International/UNHCR/WFP. A systematic random sampling was used in Kaharaz camp to measure 430 children 6-59 months. An exhaustive survey was conducted in the villages surrounding the camps. 177 children were surveyed. The survey also estimated measles vaccination and vitamin A distribution coverage.

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
BMI	Body Mass Index
CMR	Crude Mortality Rate
< 5 MR	Under-five Mortality Rate
DPA	Deutsche Presse Agentur
FCPN	Food Crises Prevention Network
FEWS	Famine Early Warning System
FSAU	Food Security Analysis Unit for Somalia
GoE	Government of Ethiopia
GoM	Government of Myanmar
HKI	Helen Keller International
HRW	Human Rights Watch
ICRC	International Committee of the Red Cross
IRC	International Rescue Committee
IRIN	International Regional Information Network
MSF	Médecins Sans Frontières
MSF-B	Médecins sans frontières - Belgique
MUAC	Mid-upper arm circumference
NC	Nutrition Cluster
NGO	Non-governmental Organisation
OCHA	Office for the Co-ordination of Humanitarian Assistance
RFI	Radio France International
RI	Refugees International
RUTF	Ready-to-Use Therapeutic Food
UNDP	United Nations Development Programme
UNHCR	United Nations High Commission on Refugees
UNICEF	United Nations International Children's Emergency Fund
USAID	US Agency for International Development
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization

References

Greater Horn of Africa

Djibouti

FEWS	05/02/08	Djibouti Food Security Alert
FEWS	22/04/08	Djibouti Food Security Alert: Poor pastures, high prices cause extreme food insecurity in pastoral areas
FEWS	08/05/08	Djibouti Food Security, Alert 8 May 2008— Food costs remain above emergency level and continue to rise
USAID	21/05/08	Disaster declaration: Djibouti

Ethiopia

Concern	04/08	Preliminary nutrition survey report of Damot Woyde and Dugna Fango woreda, Wolayta zone, SNNPR
Concern	04/08	Preliminary nutrition survey of Offa woreda, Wolayta zone, SNNPR
FEWS	20/06/08	Ethiopia food security alert, 20 June 2008—Food aid pipeline faces serious shortfalls
GoE/Joint	12/06/08	Revised humanitarian requirements for 2008
OCHA	20/06/08	Situation report: drought/food crisis in Ethiopia
OCHA	27/06/08	Situation report: drought/food crisis in Ethiopia

Kenya

AAH-US	12/07	Nutritional anthropometric surveys, final report. Pastoral and riverbank communities of Garissa, Ladgera and Fafi districts (formally Garissa district), North Eastern province, Kenya
FEWS	08/06/08	Kenya food security alert, 6 June 2008—Pastoralists' food security remains precarious in spite of fair rains
IRC	04/08	Nutrition survey- Kakuma refugee camp, Kenya
Merlin	04/08	Survey report. Integrated health, nutrition, food security and causes of malnutrition, Greater Wajir
MSF	16/05/08	MSF witnesses forced return and resettlement in a camp in western Kenya
OCHA	18/06/08	Humanitarian Update vol 24
OCHA	06/08	Narrative report, Inter-Agency assessment of transit sites, Molo district, 10 & 11 June 2008
UNHCR	13/05/08	More than 300 Kenyan refugees return home from Uganda

Somalia

FEWS	14/05/08	Somalia Food Security alert— Rising food prices, deepening drought push 2.6 million into crisis
FSAU	05/08	Somalia's Urban Food Security Crisis
FSAU	09/05/08	Food Security & Nutrition— Quarterly Brief
FSAU	06/08	Nutrition Update, May-June 2008
ICRC	30/06/08	Somalia: Humanitarian crisis deepens amid growing insecurity
OCHA	05/08	Monthly Cluster Report, Humanitarian Response in Somalia—April 2008
OCHA	05/08	Food Aid distributions (April-May 2008)
OCHA	27/06/08	Somalia: Situation report No 25—27 June 2008
Reuters	18/06/08	Somali refugees pour into Kenya despite shut border
UNHCR	06/08	Internally Displaced Persons in Somalia

Sudan

ACF-F	06/08	Preliminary results— Nutritional anthropometric and retrospective mortality surveys—children aged 6-59 months, Aweil East county, Northern Bahr el Ghazal state, South Sudan
AAH-US	03/08	Nutritional anthropometric survey, children under five years of age, Gogrial West and East counties, Warrap state
AAH-US	05/08	Nutritional anthropometric survey, children under five years of age, Khorfulus & Atar areas, Jonglei state
AFP	25/06/08	Darfur hopes dim six months into UN peacekeeping
Concern	04/08	Nutrition survey report, Aweil West and North counties, Northern Bahr el Ghazal region, South Sudan

FEWS	06/08	South Sudan food security update
GOAL	11/07	Report of the multi indicator cluster sample survey 10th-17th November 2007, Kassala state, North Sudan
GOAL	12/07	Abyei county, North Sudan
IRIN	16/05/08	Sudan: Abyei town deserted following fresh clashes
OCHA	15/05/08	Humanitarian action in Darfur, weekly bulletin no 15, 15 May 2008
OCHA	19/06/08	Humanitarian action in Darfur, weekly bulletin no 21, 26 June 2008
OCHA	27/06/08	Southern Sudan—Abyei displacement, OACH situation report No 18, reporting period 20th—27th June 2008
UNICEF	05/08	Darfur Nutrition Update
UNICEF	06/08	Darfur Nutrition Update
UN Joint	22/06/08	FAO, IOM, UNICEF, UNHCR, UNJLC, OCHA, WFP and WHO. Statement on the humanitarian situation in Darfur

West Africa

Guinea

ACH-S	11/07	Enquête nutritionnelle et de mortalité, Beyla prefecture, Guinée Forestière
UNDP	2007-08	Human Development Report 2007-2008

Liberia

ACF-F	02/08	Nutritional anthropometric and retrospective mortality survey, children aged 6 to 59 months, Gretaer Monrovia, Montserrado, Liberia
ACF-F	06/08	Surge in basic commodity prices, Liberia case study
OCHA	2008	Critical Humanitarian Gaps in Liberia, 2008
WB	29/05/08	World Bank approves US\$ 10 million grant for Liberia's emergency food crisis response program
WFP	07/07	Greater Monrovia, Comprehensive food security and nutrition survey (CFSNS), conducted December 2006

Niger

ACH-S	04/08	Enquête nutritionnelle et de mortalité rétrospective-départements de Keita, Abalak et Tchintabaraden, Niger
FCPN	06/08	Food Security Information Note
MSF-B	04/08	Enquête nutritionnelle et de mortalité retrospective, District sanitaire de Dakoro, Région de Maradi

Central Africa

Chad

FEWS	06/08	Chad food security update, May-June 08
OCHA	09/06/08	Humanitarian action in Chad: facts and figures, snapshot report, 9 June 2008
UNHCR	16/06/08	UNHCR concerned for refugees in Chad as security deteriorates
USAID	27/06/08	Chad—Complex emergency
WHO	08/06/08	Health Action in Crises, highlights No 211

DRC

AAH-US/ Joint	01/08	Rapport d'enquête nutritionnelle anthropométrique, Zone de santé de Tshumbe, Province du Kasai Oriental, RDC
AAH-US	01/08	Enquête nutritionnelle anthropométrique, Zone de santé de Lodja, Province du Kasai Oriental, RDC
AAH-US	01/08	Enquête nutritionnelle anthropométrique, Zone de santé de Kamana, Province du Kasai Oriental, RDC
AAH-US	01/08	Enquête nutritionnelle anthropométrique, Zone de santé de Nundu, Province du Sud Kivu, RDC
AAH-US/ Joint	02/08	Enquête nutritionnelle anthropométrique, Zone de santé de Bena-Dibele, Province du Kasai Oriental, RDC
AAH-US	02/08	Enquête nutritionnelle anthropométrique, Zone de santé de Mosango, Province du Bandudu, RDC
AAH-US	02/08	Enquête nutritionnelle anthropométrique, Zone de santé de Sia, Province du Bandudu
AAH-US	02/08	Enquête nutritionnelle anthropométrique, Zone de santé de Yasa Bonga,

AAH-US	03/08	Province du Bandudu, RDC Rapport d'enquête nutritionnelle anthropométrique, zone de santé de Ferekeni, Province du Maniema, RDC
AAH-US	03/08	Rapport d'enquête nutritionnelle anthropométrique, zone de santé de Punia, Province du Maniema, RDC
AAH-US	03/08	Rapport d'enquête nutritionnelle anthropométrique, zone de santé de Lubutu, Province du Maniema, RDC
MSF	03/08	Enquête nutritionnelle et de mortalité rétrospective, zone de santé de Pweto, province du Katanga, RDC
OCHA	21/06/08	RD Congo– Rapport de situation 21 juin 2008
OCHA	27/06/08	Situation humanitaire en RDC —Semaine du 23 au 27 juin 2008
RFI	23/01/08	Accord de paix signé à Goma

Uganda

AAH-US	05/08	Nutritional anthropometric surveys, preliminary results summary, Lira district, Uganda
AAH-US	05/08	Nutritional anthropometric surveys, preliminary results summary, Oyam and Apac districts, Uganda
FEWS	05/08	Uganda food security update, April 2008
OCHA	06/08	Uganda humanitarian situation report
Reuters	11/04/08	Uganda rebel Kony seeks guarantees as talks stall

Asia

Bangladesh

HKI	05/08	Report on assessment of malnutrition and micronutrient status of children, pregnant and lactating women living in the Rohingya refugee camps
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Myanmar

ACF-F	11/05/08	Food security and water and sanitation rapid assessment– Ayeyarwaddy division, Bogale township, Union of Myanmar, from 7 to 11 May 2008, final Report
DPA	26/05/08	Médecins sans frontières: thousands still without relief in Myanmar
DPA	24/06/08	Number of dead and mission in Myanmar cyclone raised to 138,000
HRW	12/06/08	New rules further delay relief
IRIN	29/05/08	Myanmar: Access to cyclone-hit delta eases
IRIN	27/06/08	Myanmar: Cyclone farmers await assistance
MOH/UNICEF	10/06/08	Summary report of the MUAC rapid assessment in Cyclone affected areas
NC	27/06/08	Nutrition Cluster response plan
OCHA	26/06/08	OCHA situation report No 35
OCHA	30/06/08	OCHA situation report No 36
RI	30/05/08	Cyclone Nargis: One month later-Burmese regime must stop forcible returns
USAID	1/06/08	Burma—Cyclone; Fact sheet #21, Fiscal Year 2008
USAID	25/06/08	Burma—Cyclone; Fact sheet #22, Fiscal Year 2008
ASEAN/GoM/UN	25/06/08	Relief and early recovery village tract assessment, tripartite core group, post-Nargis joint assessment, PONJA, preliminary findings
WFP	20/05/08	Food security assessment, Cyclone Nargis, Yangon division, Myanmar, 18-20 May 2008
WHO	30/06/08	Myanmar: Health cluster situation report No 30, 30 June 2008

Middle East

Yemen

IRIN	07/02/08	Yemen: WFP to feed 10,500 extra African refugees
IRIN	20/05/08	Yemen-Africa: UNHCR calls for help to stem rising tide of African migrants
MSF	19/06/08	MSF speaks out about the violent conditions faced by thousands of Somalis and Ethiopians crossing the Gulf of Aden
UNHCR	05/08	Supplementary appeal for IDPs and returnees in Yemen, 2008
UNHCR	16/05/08	Somalia:Guterres urges more international help for refugees in Yemen
Valid/Joint	02/08	Nutrition survey in Kharaz refugee camp and surrounding villages, Yemen
WFP	09/07	Yemen EMOP; humanitarian assistance to IDPs in Saada Governorate

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 of the NCHS reference.
- . **SEVERE WASTING**, defined as weigh-for-height index < -3 Z-scores of the NCHS reference.
- . **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)** 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.

Since the release of the WHO Growth Standards in 2006, results calculated using these standards are also reported, when 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/height²), MUAC and oedema, as

well as different cut-offs are used. When reporting on adult malnutrition, the Reports always mention indicators 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.

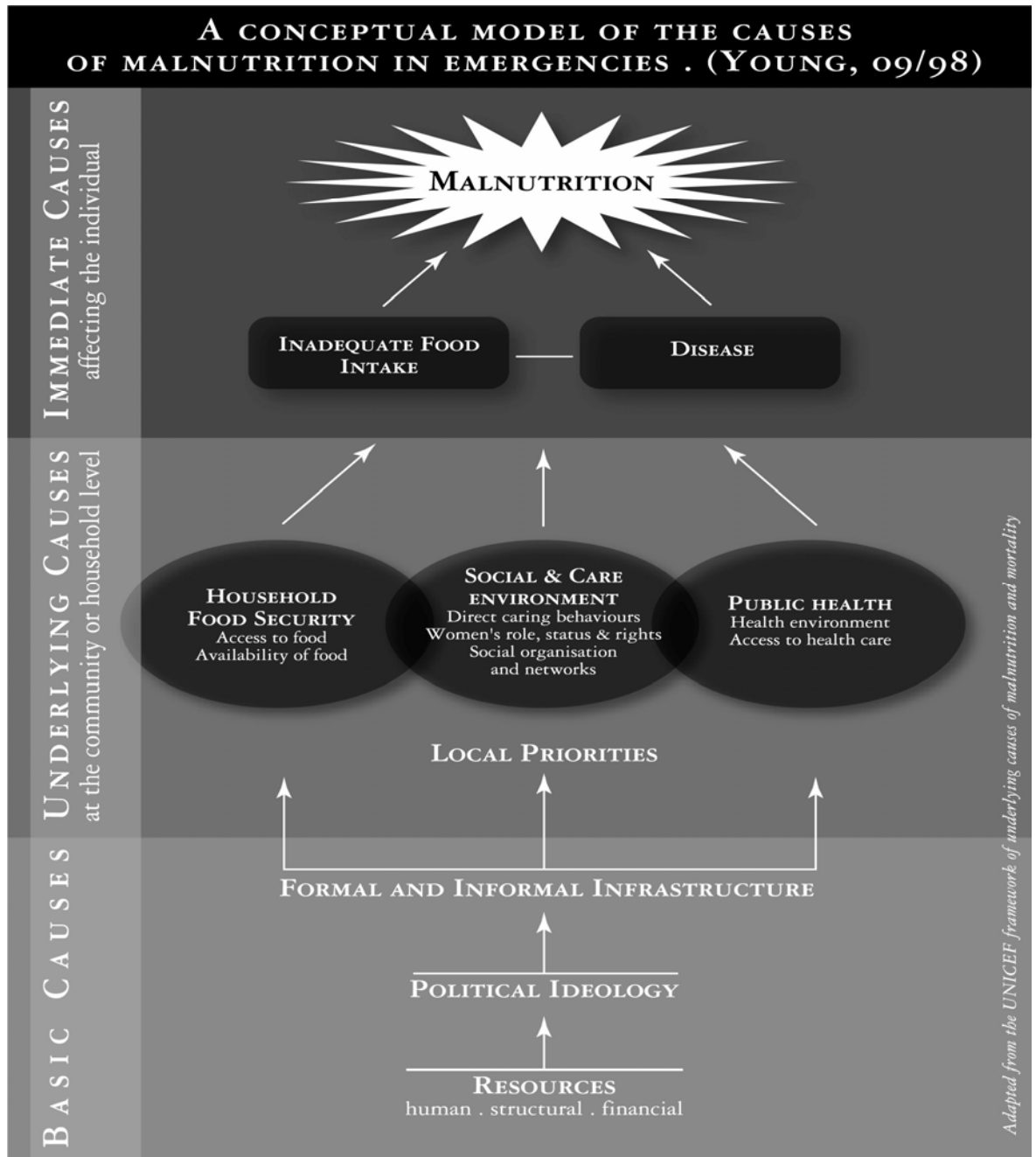
Classification of situations

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.



References

- Action contre la Faim (2002) *Assessment and treatment of malnutrition in emergency situation*. Paris : Action contre la Faim.
- Médecins sans Frontières (2002) *Nutritional guidelines*.
- SCN (2000) *Adults, assessment of nutritional status in emergency affected population*. Geneva: SCN.
- University of Nairobi (1995) *Report of a workshop on the improvement of the nutrition of refugees and displaced people in Africa*. Geneva : SCN.
- SMART (2002) www.smartindicators.org
- Young (1998) Food security assessment in emergencies, theory and practice of a livelihoods approach.
- WHO 2006 Child Growth Standards (<http://www.who.int/childgrowth/en/>)

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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