

Nutrition Information in Crisis Situations

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Highlights

REFUGEES AND INTERNALLY DISPLACED PERSONS

— In the past year, the movement of people within their country, and from one country or even continent to another has continued to rise. According to UNHCR (06/10) there were over 43 million forcibly displaced people worldwide at the end of 2009, which is the highest number since the mid-1990s. Out of these, about 15 million were refugees and 27 million were internally displaced persons (IDPs).

The majority (about 80%) of the world's refugees are to be found in developing countries, many of them in an arc of conflict and crisis that stretches from Southwest Asia through the Middle East to the Horn, Great Lakes and central regions of Africa. The largest number of refugees worldwide was hosted by Pakistan, followed by the Islamic Republic of Iran and the Syrian Arab Republic (according to Government estimates). Furthermore, the four largest IDP crises of 2009 were reported in the Democratic Republic of the Congo, Pakistan, Somalia and Yemen.

Of note, more people are now forced to leave their homeland due to environmental disasters than war. It is estimated that about 25 million people could currently be classified as being environmental refugees. These are referred to as 'environmental migrants' (IOM 11/07) or 'climate refugees' (Glogov). So far, there is no internationally recognised legal term for people who migrate as a result of environmental degradation and climate change.

The 1951 UN Convention relating to the Status of Refugees (1951 Geneva Convention) is the principal international legal instrument benefiting refugees. Its focus is on those people who are unable or unwilling to be in their country of origin due to fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinion. The Convention does not accommodate for forced environmental displacement in particular due to floods, sea-level rise or drought and desertification. This gap needs to be recognised and immediate and long-term solutions to protect those most at risk need to be identified (EJF, 05/08 and NRC 2009).

In 2009 UNHCR and its partners assessed the nutritional status of the vulnerable populations that fall under their mandate and live in camps and settlements in a number of these countries. The results are presented in this report.

Ethiopia— International organizations estimate that over 300 000 people are internally displaced due to conflict. Ethiopia is also host to more than 170 000 refugees, the largest group coming from Somalia, followed by Eritrea and Sudan. Health and nutrition information from mid-2009 is now available from seven refugee camps in Ethiopia. Depending on the camp, initiation of breastfeeding within the first hour after birth is practiced by 74% to 94% of mothers; however, 5% to 48% of the infants received prelactal food during the first three days of life.

Chad— The country hosts some 270 000 Sudanese refugees in 12 camps along its eastern border with Sudan, and 81 000 Central African refugees in 11 camps along its southern border with CAR. By mid-2010, an estimated 170 000 people were internally displaced in eastern Chad and living in 38 camps. Results from a rapid nutrition assessment conducted by UNHCR and partners in Amnaback Camp are now available.

Yemen— Political instability is threatening the food security situation of Yemen's already vulnerable refugee and IDP population. Host to some 155 000 refugees and over 300 000 IDPs, most of whom are reliant on food aid. Rising food prices are also affecting the general population's access to food and it is estimated that upwards of 2 million people are in need of targeted food assistance. Nutrition surveys revealed similar GAM rates of above 9% among both refugee and host population.

Bangladesh— Rohingya Muslims from Myanmar fled to Bangladesh in the early nineties. Although most of these refugees have since returned home, some 28 000 are still living in two refugee camps in the Cox's Bazaar District in southeastern Bangladesh. Results are now available from a nutrition survey conducted by Helen Keller International in 2009 that showed a severe nutrition situation among the refugee population.

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.

	ETHIOPIA Awbarre Refugee Camp	KENYA Dadaab Refugee Camp	SUDAN Um Gargour Refugee Camp	CHAD Abéché Ville	UGANDA Moroto, Karamoja
Nutritional risk category	II/III	II	I	I/II	II
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

Ethiopia

The transformation of the strong centralized state into a Federal Democratic Republic, with nine ethnic-based regional states and two federally administered city-states, has not dampened conflict. Internal armed conflicts flare up regularly in most of the regions, including Oromiya, Tigray, Somali, Southern Nationalities and Peoples Republic (SNNPR), Afar, Gambella, and Benishangul-Gumuz. Harsh climatic conditions and a succession of poor seasonal rains contribute to poverty and food insecurity, further fueling these conflicts

More than 170 000 refugees in need of assistance

Even though it is difficult to quantify the number of people displaced by conflict and human rights violations, the UN and other international organizations estimate that over 300 000 people are internally displaced due to conflict (FEWS, 10/10). In addition, as many as 25 000 people were displaced in the Afar region, and another 8 000 in Amhara, following torrential rains in July 2010. Damage to crops, livestock, and infrastructure was extensive (EC/FAO, 06/10).

Ethiopia is also host to more than 170 000 refugees, the largest group coming from Somalia, followed by Eritrea and Sudan. They are spread over five regions of the country and remain in need of food and non-food assistance.

Escalating violence in neighboring Somalia has driven up the number of people seeking refuge in Ethiopia. In response, UNHCR and the Government of Ethiopia (GoE) opened three refugee camps - Sheder, Aw-Barre and Dollo-Ado - which now host some 44 000 Somali refugees. As the number of those seeking asylum from Eritrea also rises, a new camp at May'aini was also opened. Two more camps are planned in Asayta and Berhale in the Northeast.

Most refugees in Ethiopia are prohibited by law from working. This prompts many of them

to embark on risky secondary journeys to other countries in search of employment. In 2008, UNHCR initiated a group resettlement programme, which led to the referral of some 8 200 Somali refugees in Kebribeyah camp, and some 6 900 Eritreans from May'aini, for resettlement in third countries. UNHCR hopes this comprehensive approach to durable solutions can provide an alternative to irregular secondary movements (UNHCR website, 11/10).



Malnutrition rates in refugee camps show diverse picture

In May/July 2009, UNHCR, in collaboration with the Government Administration for Refugee-Returnees Affairs (ARRA) and WFP, conducted health and nutrition surveys in seven refugee camps. Survey results indicated GAM rates between 4.3% and 12.5%. Out of the seven camps, four showed GAM rates above 10% with two of these having SAM rates above 2% (table 1).

TABLE 1: RESULTS OF NUTRITION SURVEYS, REFUGEE CAMPS, ETHIOPIA, JUNE-JULY 2009 (UNHCR/JOINT, 07/10)

Camp	Date of Survey	GAM (%) ²	SAM (%) ²	Anaemia ¹ (%) ²
Sherkole	Jun-09	7.9	1.3	21.5
Pugnido	Jun-09	10.1	1.9	42.3
Awbarre	Jul-09	12.5	2.5	32.1
K/Beyah	Jun-09	10.6	1.5	38.2
Sheder	Jun-09	7.8	2.4	38.0
Mayaini	Jul-09	4.3	0	-
Shimelba	Jul-09	11.0	0.5	22.1

¹ Haemoglobin < 11g/dl

² CI are defined in the Results Table

Prevalence of anaemia among children aged 6-59 months ranged between 21.5% and 42.3% and among non pregnant women between 6.3% and 27.6%, indicating a moderate to severe public health problem. Exclusive breastfeeding of infants was practiced by the majority of mothers (between 51% and 95.9%) (table 2). Bottle feeding of children aged 6-23

TABLE 2: INFANT AND YOUNG CHILD FEEDING PRACTICES IN REFUGEE CAMPS, ETHIOPIA, (UNHCR/JOINT, 07/10)

Camp	Date of Survey	Early initiation of breast-feeding (%)	Prelactal feed (%)	Infants exclusively breastfed (<6 month) (%)	Children bottle fed (6-23 month) (%)	Children breastfed (18-23 months) (%)	SFP coverage (%)
Sherkole	Jun-09	90.1	4.5	95.5	18.0	92.9	36.6
Pugnido	Jun-09	94.2	3.8	95.9	13.7	81.1	41.7
Awbarre	Jul-09	84.0	26.9	72.0	25.5	37.3	155.0
K/Beyah	Jun-09	97.5	8.9	91.1	12.1	79.4	90.9
Sheder	Jun-09	73.8	47.5	51.0	38.6	56.3	191.0
Mayaini	Jul-09	-	-	-	-	-	100.0
Shimelba	Jul-09	89.4	5.8	93.6	15.6	38.2	121.9

months was found highest in Awbarre Camp (25.5%) and Sheder Camp (38.6%). The latter two camps also showed poorer IYCF practices and had SAM rate above 2%.

The selective feeding program (SFP) in all camps includes community based management of severe acute malnutrition, targeted supplementary feeding for those moderately malnourished, blanket feeding for pregnant women, lactating mothers, medical/ social cases and IYCF for children 6-23 months.

The survey calculated the coverage of the SFP. In three of the camps coverage rates of above 100% were estimated. The survey report concluded this was related to a lack of adherence to established admission and discharge criteria as well as to errors in growth monitoring (UNHCR/Joint, 07/10).

***Meher* eastern highly food insecure**

Food security has improved in some parts of the country following the start of the 2010 *meher* harvest. Overall *meher* season production is expected to be average to above-average this year following the *kiremt* season rains. The National Meteorology Agency predicts a good *bega* season rain (October to January) and

normal rainfall distribution and quantity are expected for the west and northwest regions of the country. It is anticipated to be drier than average weather in the eastern half of the nation (FEWS, 10/10).

Food security, therefore, is expected to deteriorate in the eastern parts of SNNPR beginning in February/March, with a decline in the production of transitional crops, mainly sweet potato, the likely result. Poor rains will also decrease the availability of water, both for human and livestock consumption, in the southern zones of Somali Region, neighboring lowlands of Bale, Borena and Guji zones of Oromia region and South Omo zone of SNNPR.

An estimated 5.2 million people will require food aid until the start of the new *meher* harvest in December 2010. Pockets of severe food insecurity have already been reported in SNNPR and in the southern pastoral and agro-pastoral parts of the country (FAO/GIEWS, 09/10).

Serious nutrition situation

Nutrition surveys conducted by Concern Worldwide in Amhara and SNNPR Region in 2009 reported a serious nutrition situation in

both regions, confirming previous results found by GOAL (UNSCN 12/09 and 03/10). Following national DPPC guidelines, GAM rates were above 10% in 4 woredas and between 5 and 10% in three woredas, all in the presence of aggravating factors (figure 1).

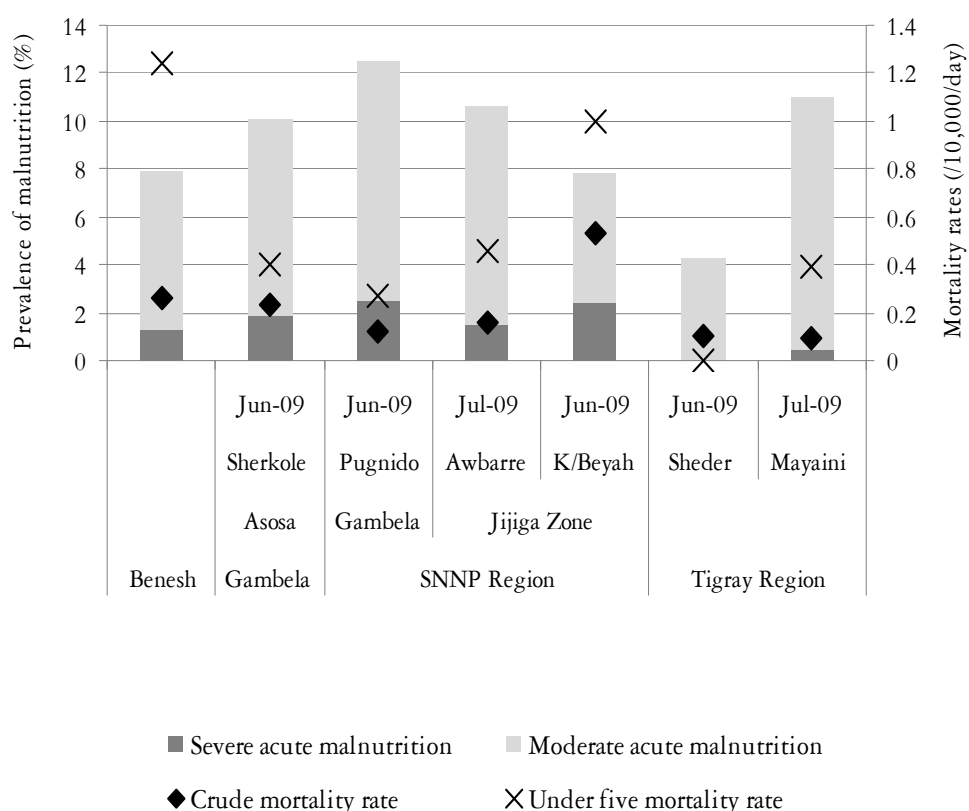
In February 2010 Concern Worldwide conducted a nutrition survey in Ambassel Woreda where they are implementing a TFP, and estimated a GAM rate of 8.6% (CI: 5.6-11.6). They also measured diet diversity and found that it was low for adults and poor for children 6-59 months. Based on the relatively low GAM rate, it was recommended to phase out their therapeutic supplementary feeding program (TSFP) and to actively continue the operation of the governmental Enhanced Outreach Strategy - Targeted Supplementary Feeding Programme (EOS-TSF), which includes the strengthening of health and nutrition educa-

tion related to appropriate IYCF practices (Concern, 02/10).

Exclusively breastfeeding 20% only

In Worebabo Woreda GAM rate was estimated to be 11.1% (CI 8.6-13.5) with a very low SAM rate of 0.6% (CI 0.1-1.2). Crude mortality rate was 0.37 (CI: 0.04-0.71) and under five mortality rate was 1.33 (CI: 0-2.98). The mean diet diversity score (24h recall period) of 4.2 from a total of 12 for adults and 1.6 from the total of 8 for children under five, which indicates low diet diversity. Exclusive breastfeeding up to 6 months was practiced by only 20% of the mothers, indicating inappropriate IYCF practices. The survey results also found that only one-third of the population is self-sufficient in food production, while another third relies on food aid (Concern, 09/09).

FIGURE 1 RESULTS OF NUTRITION SURVEYS, AMHARA REGION, ETHIOPIA, (CONCERN, 2009, 2010) (ENCU, 06-09/08; GOAL, 07/08; CONCERN 09/08)



Kenya

Following the 2007 national elections and the subsequent outbreak of violence in December that year, over half a million people were displaced within the country. According to the Ministry of State for Special Programmes most of them have returned home. The 3 500 households yet to return home are living in 25 transit sites in three districts (Molo, Uasin Gishu/Wareng, and Trans Nzoia West/Kwanza) and receiving food assistance from the government. Moreover, there are almost 7 000 families organized in 19 Self-Help Groups that refuse to return home. The government has committed to purchase land and allocate 2.25 acres to each household and resettle them in an eco-village (OCHA, 02/10).

Kenya hosts some 340 000 refugees

Large numbers of asylum-seekers from Somalia, Ethiopia, and the eastern areas of the Democratic Republic of the Congo (DRC) continue to arrive in the country almost daily. Most of the refugees are confined to designated camps despite the UNHCR's appeals to allow them freedom of movement. There are three camps around the town of Dadaab in northeastern Kenya and one camp near Kakuma in the Rift Valley (UNHCR, 08/10).

Nutrition situation in Dadaab refugee camps

To accommodate a steady stream of new arrivals from Somalia, UNHCR has expanded the three existing refugee camps in Dadaab (Dagahaley, Hagadera and Ifo camp), which is located in Garissa District, approximately 80km from the Somali border. The camps were established in 1991 and 1992 and hosted a population of 283,800 as of July 2009. In addition a new camp was established in 2009.

UNHCR conducted nutrition surveys in the Dadaab refugee camps in August 2009. In all three camps the average GAM rate was estimated at around 12% (table 3). In addition, approximately three out of four children (70-77%) ages 6-59 months and almost three out of

four non pregnant women were found to be anaemic (children 6-59 months: Hb<11g/dl; non pregnant women: Hb<12g/dl).

TABLE 3: NUTRITION SURVEY RESULTS, REFUGEE CAMPS, KENYA (AAH-US, 10/09; UNHCR, 08/09)

Camp	D a t e	GAM (6-59 months) (%)	SAM (6-59 months) (%)	Anaemia ¹ (6-59 months) (%)
Kitui District	Oct-09	8.9	1.5	-
Mwingi District	Oct-09	8.3	0.6	-
Kajiado and Loitokrok Districts	Jun-09	11.5	1.8	-
Dagahaley camp	Aug-09	12.1	1.2	77.4
Hagadera camp	Aug-09	12.7	1.1	70.6
Ifo camp	Aug-09	12.6	-	73.1

¹ Haemoglobin < 11g/dl

The prevalence of timely initiation of breast-feeding (within 1 hour after birth) was around 80% in all camps (CI: 77.9% - 86.9%). Exclusive breastfeeding was practiced for 43.3% to 47.8% of children below 6 months. The minimum dietary diversity (≥ 4 food groups out of 7 based on a 24h recall) among children ages 6-23 months was attained by 28.6% to 52.4%. Additional food and dietary based strategies were recommended to be put into place, such as scaling up programmes aimed at increasing the availability of fruits and vegetables (table 4).

Nutrition survey results from March 2009 in Dagahaley camp, which assessed the situation within the radius of MSF interventions, estimated very high GAM rates of 22.3% (CI: 19.4-25.1) among the refugee population and 26% (CI: 16.9-35.1) among the host community. The rate of SAM among the refugee population was at 7.1% (CI: 5.3-8.9) (MSF, 04/09). According to UNHCR, GAM was at 12.1% and SAM at 1.2% five months later in August 2009. The difference was not discussed in the report (UNHCR, 08/09).

TABLE 4: IYCF PRACTICES AND DIETARY DIVERSITY, REFUGEE CAMPS, KENYA
(ACF 10/09 AND UNHCR 08/09)

Camp	Date of Survey	Early initiation of breast-feeding (%)	Prelactal feed ² (%)	Infants exclusively breastfed <6 month (%)	Children breastfed (12-15m) (%)	Minimum dietary diversity (6-23m) ³ (%)	Household dietary diversity ⁴ Mean	SFP coverage ⁵ (%)
Kitui District	Oct-09	-	-	-	-	-	4.4/12	-
Mwingi District	Oct-09	-	-	-	-	-	3.4/12	-
Kajiado and Loitoktok Districts	Jun 09	94.4	77.9	29.2	88.96	-	8.2/15	n.a.
Dagahaley camp	Aug 09	77.9	42.5	44.8	48.1	28.6	6.1/15	57.1
Hagadera camp	Aug 09	86.9	27.7	47.6	52.5	36.1	6.9/15	70.4
Ifo camp	Aug 09	80.4	27.7	43.3	47.8	52.4	7.6/15	58.1

² Children got something else than breastmilk during the first three days of life, before the child started to breastfeed regularly

³ Children had received meals from more than 4 food groups out of 7 food groups assessed.

⁴ Number of food groups used out of total number of food groups assessed.

⁵ SFP: selective feeding program: Coverage is calculated by number of children admitted in the programme divided by the number of cases categorized by the percent of median (ACF 10/09)

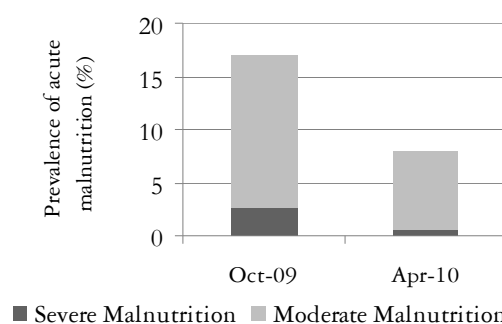
Kakuma refugee camp

Kakuma Camp is located in Turkana district, Rift Valley Province, about 110km from the Sudanese border and 50km from the Ugandan boarder. The camp was established in 1992 to accommodate southern Sudanese refugees fleeing the civil war. The camp has been continuously affected by protracted drought. The areas around the camp are characterized by high insecurity due to bandits. At the time of the survey, the refugee population was about 67 000. Originally the camp was populated mainly by Sudanese refugees, but that has changed over time. Currently, the majority of refugees are Somalis, with smaller groups from Ethiopia, Uganda, Rwanda, Congo, Burundi, Liberia, Angola and Eritrea.

GAM rates dropped significantly

In October 2009 GAM and SAM rates in Kakuma refugee camp were reported as serious, at

FIGURE 2 RESULTS OF NUTRITION SURVEY IN KAKUMA REFUGEE CAMP, KENYA (IRC, 04/10)



17% (CI: 14.5-19.9) and 2.6% (CI: 1.6-4.3). New arrivals formed 30% of the total camp population during the time of the survey. In addition, the survey took place during an outbreak of watery diarrhea, which was responsible for high levels of morbidity among children and probably compromised their nutritional status.

A survey conducted by the International Rescue Committee (IRC) in April 2010 showed a significant decrease in GAM rate to 7.9% (CI: 6.1-10.1) and of SAM rate to 0.6% (CI: 0.3-1.6%) (figure 2). (AAH-US, 10/09).

The improvements in the nutritional status of the children were attributed to an increased scope and intensity of activities that was made possible through increased funding. This led to an increase in coverage of the supplementary feeding and outreach therapeutic feeding programme. Also, the mosquito bed net utilization increased in 2010 compared to 2009. However, immunization coverage remained below acceptable levels, with one third of children ages 12-23 months not fully immunized.

TABLE 5: INFANT AND YOUNG CHILD FEEDING PRACTICES, KAKUMA REFUGEE CAMP, KENYA (IRC, 04/10)

% of children who are: exclusively breastfed (<6 months)	51.9
% of children who are: still breastfed at one year of age (12-15 months)	65.7
% of children who received: foods from a minimum of 2 meals or more per day (apart from breast milk) (6-8 months)	65.5
% of children who received: meals the minimum number of 3 times per day (9-23 months)	48.7
% of children who receive: foods from 4 or more food groups (6-23 months)	58.8

The IYCF practices were not optimal to ensure adequate growth and development of the young children (table 5). Investigators found it challenging to determine the age of children among the new arrivals because mothers or caregivers did not possess birth certificates and the event calendar used was not appropriate for all those surveyed.

Favorable food security in pastoral areas

Food security in the pastoral areas has remained favorable through most of 2010, even during the lean seasons, due to the continued availability of grazing resources (FEWS, 10/10). This is confirmed by data collected through the Arid Lands Resource Management Program (ALRMP), which shows a decreasing trend in the number of children identified as 'at risk of malnutrition' (MUAC < 135mm for children 6-59 months). According to ALRMP the proportion of children 'at risk of malnutrition' is 10-30% below five year averages in Baringo, Kajiado, Moyale, Narok, Mandera, Turkana, Tana River, Ijara, and Wajir. There are, however, areas where the level is still over 20%, like Moyale, Isiolo, Marsabit, Samburu, and Wajir. This is most likely due to the migration of milking livestock and subsequent reduction in milk availability at the household level, following a long and poor rainy season (FEWS, 10/10).

Poor dietary diversity in Kitui and Mwingi District

In October 2009, AAH-US conducted a series of nutrition, food security and livelihood surveys in Kitui and Mwingi Districts. GAM rates were found to be of 8.9% (CI: 6.8-11.7) and 8.3% (CI: 6.1-11.3) respectively. SAM rates were 1.5% (CI: 0.7-3.0) in Kitui District and 0.6% (CI: 0.2-1.5) in Mwingi District. In both districts mortality rates were well below one. Mean dietary diversity score was 4.4 (Kitui District) and 3.4 (Mwingi District) out of 12 based on a 24 recall period, meaning that the choice of different foods was very limited, especially lacking in fish, meat and fruits.

Malnutrition in Kajiado and Loitoktok Districts

The results of a nutrition survey conducted by Concern Worldwide in June 2009 indicated a serious nutrition situation in the Kajiado and Loitoktok Districts (GAM 11.5%, CI: 8.5-15.4; SAM 1.8%, CI: 1.0-3.1). The crude

mortality rate was 0.47 (CI: 0.23-0.96) and the U5MR was 0.56 (CI: 0.16-1.95), both within the acceptable range.

Nearly all infants (94.4%) were breastfed within the first hour of birth and 90% of them had received colostrum. Prelactals, e.g. water, sweetened water, infant formula, were given to

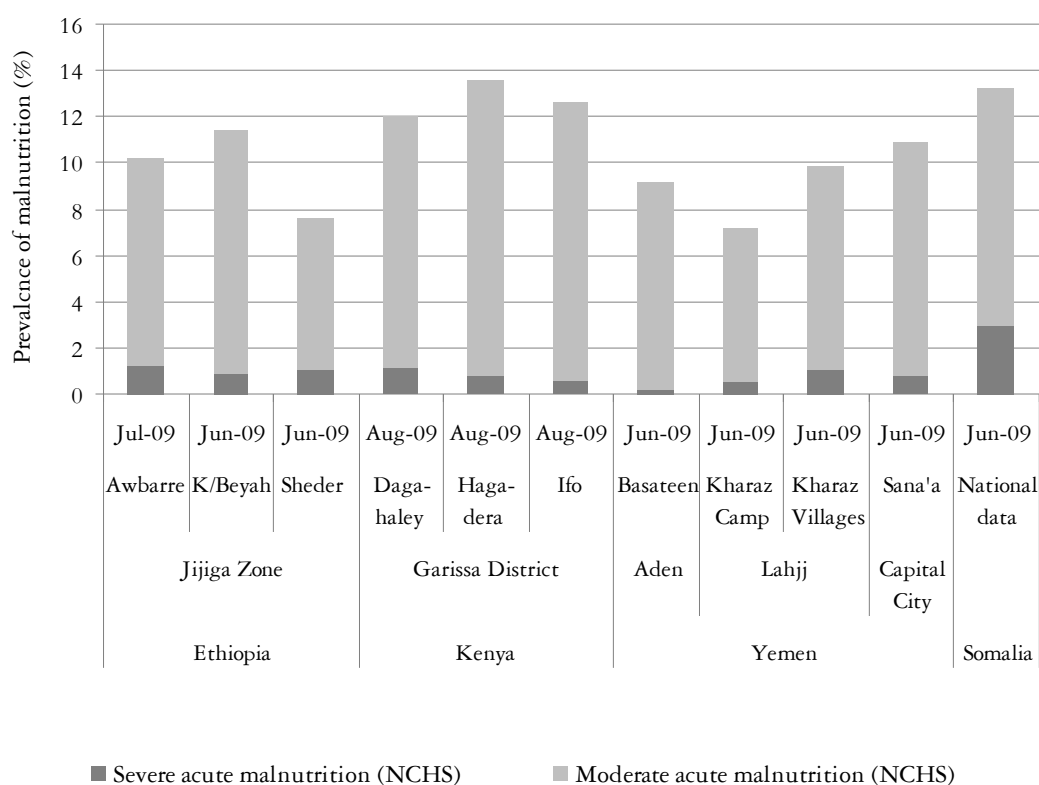
77% of newborns. Exclusive breastfeeding was practiced for only 29% of infants less than 6 months of age. Breastfeeding was continued for 70% of children 18-23 months. The percentage of households reporting usage of treated bed nets in Kajiado District, a malaria endemic area, was 47%, a significant increase since the last survey period in 2005 (6%) (Concern, 06/09).

Somalia

Somalia is still divided into three regions: Somaliland (a self-proclaimed independent state, not internationally recognized), Puntland (a semi-autonomous region) and the South Central Region (governed by a Transitional Federal Government). The Transitional Federal Government that came to power in January 2009 continues to face overwhelming challenges, as armed opposition groups repeatedly attack the Government and African Union peacekeeping

forces and maintain control of large swathes of territory. The ongoing conflict continues to generate mass population, both internally and abroad. There are almost 600 000 refugees in neighboring countries, mainly Kenya, Yemen, Ethiopia, Eritrea, Djibouti, Tanzania and Uganda. Another 1.4 million people are internally displaced, having settled mainly in Somaliland and South-Central regions. Mogadishu and the regions of Galgaduud, and Hiran were especially hard hit during the first few months of 2010, when as many as 200 000 people were forced to leave their homes. Approximately

FIGURE 3 NUTRITION SURVEY RESULTS IN REFUGEE CAMPS IN GREATER HORN OF AFRICA AND NATIONAL RESULTS IN SOMALIA (FSNAU, 03/10)



have of them fled to the Afgoye Corridor and the rest are scattered in and around Mogadishu (UNHCR, 05/10).

In 2009 several surveys assessed the nutritional status of Somali refugees in camps in Ethiopia, Kenya and Yemen. Except for one camp in Kenya, GAM rates were below the 2009 national Somali rate of 13.2%. SAM rates were also well below the national Somali rate of 2.9% (figure 3) (FSNAU, 03/10).

Conflicts affects humanitarian interventions

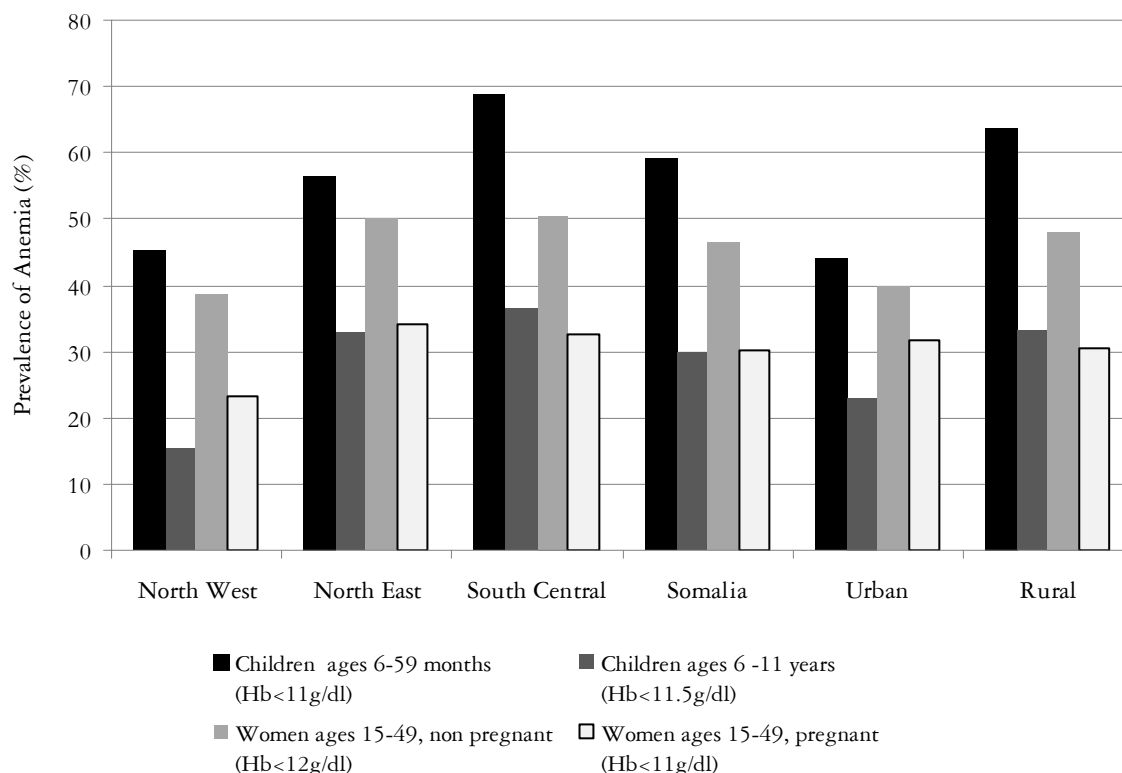
Insecurity in Somalia has affected trade activities and led to increases in staple food prices. Food and non-food supplies to food-deficit areas are restricted and transportation costs have in-

creased. Prices of sorghum and maize continue to increase, even in key production areas like Qorioley, Beletweyne, and Buale. Of particular concern are the current impediments to humanitarian interventions, which will further aggravate the food security and livelihood situation in the country, especially in the southern and central regions where food assistance has been suspended. With the prevailing insecurity and targeting of humanitarian workers, it is unlikely that aid operations will resume. Urgent steps are needed to facilitate the delivery of much-needed humanitarian assistance (FEWS, 03/10).

High prevalence of anaemia

The findings of a FSNAU-led multiagency national micronutrient and anthropometric nutrition survey conducted between March and Au-

FIGURE 4 PREVALENCE OF ANAEMIA, SOMALIA, MARCH TO AUGUST 2009 (FSNAU, 05/10)



gust 2009 indicate that Somali women and children are suffering from high levels of anaemia and vitamin A deficiency. According to the results, the levels of anaemia are among the highest in Africa: with 46.6% (CI: 41.3-51.9) of women of reproductive age, 29.8% (CI: 24.9-35.2) of school aged children and 59.3% (CI: 54.8-63.6) of children under five years being classified as anaemic (figure 4). A prevalence of anaemia above 40% is considered a severe public health problem (WHO, 2007).

Survey results also showed that one-third of all children and half of women of reproductive age are affected by vitamin A deficiency (figure 5). According to FSNAU, the causes of anaemia in Somalia include frequent exposure to infectious diseases which are often untreated, and the consumption of a predominantly cereal based diet poor in key vitamins and minerals. Nutrient rich foods, such as meat, eggs, fish, vegetables, and fruits are often too expensive for poor households. The problem is further exacerbated by poor sanitation and inadequate IYCF practices. Unexpectedly, the report showed that iodine deficiency is not of concern; in fact, high urinary iodine concentrations were reported in both school-aged children and women of reproductive age (FSNAU, 06/05/10). Given that the visible goitre prevalence in women is 2.0% at

national level and that in the context of high levels of dehydration the iodine concentration in urine may increase, there is a need for further research on the iodine situation in the country.

GAM above 10% nationwide

At national level, the micronutrient and anthropometric study results estimated a GAM rate of 13.9% and SAM rate of 4.0%. According to the survey report, the median national figure derived from 34 representative surveys (FSNAU 2009 technical series Report No VI 25, presented in NICS v20) showed a GAM prevalence of 19% and a SAM prevalence of 4.6%. The South Central part of the country is most affected by childhood malnutrition (GAM 16.5%) (table 6).

With regard to IYCF practices, the rate of exclusive breastfeeding was found to be extremely low (5.3%) and the percentage of women who initiate breastfeeding within the first hour after birth was below 25% nationwide (table 7).

Undernutrition (BMI<18.5 kg/m²) was found to be of concern among women living in both rural and urban areas. Moreover, overweight (BMI>25kg/m²) appears to be a growing problem in urban areas. On a national average

FIGURE 5 PREVALENCE OF VITAMIN A DEFICIENCY, SOMALIA, MARCH TO AUGUST 2009 (FSNAU, 05/10)

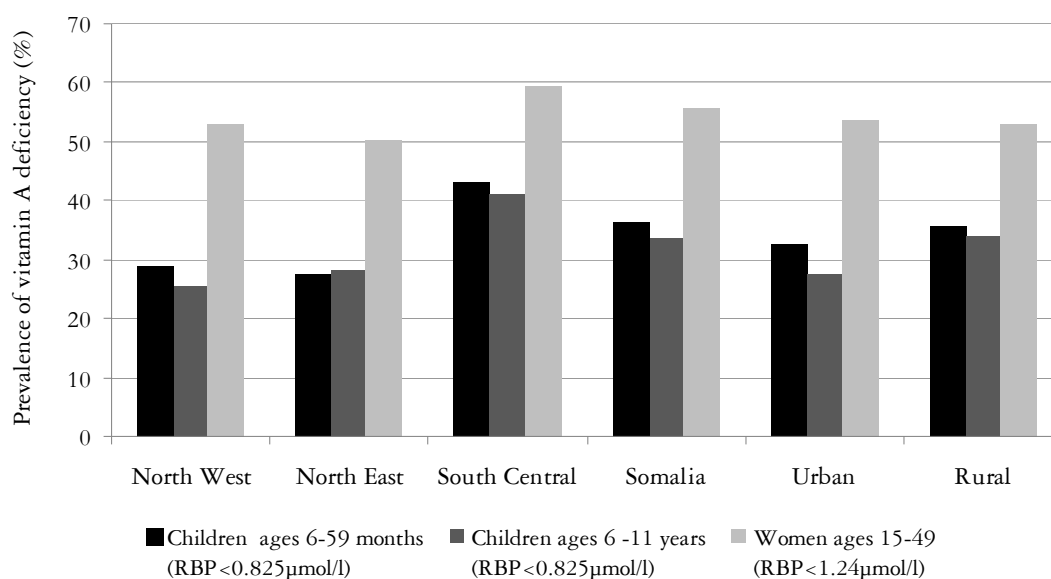


Table 6: MALNUTRITION RATES, SOMALIA, MARCH TO AUGUST 2009 (FSNAU, 05/10)

Region	GAM (6-59 months) (%; CI)		SAM (6-59 months) (%; CI)		BMI ¹ <18.5kg/m ² (%)	BMI ¹ >25kg/m ² (%)	BMI ¹ >30kg/m ² (%)
Somalia	13.9	(11.9-16.9)	4.0	(3.1-4.9)	21.5	20.7	6.7
North West	13.9	(11.9-16.0)	4.1	(3.0-5.6)	21.0	27.3	8.7
North East	10.7	(8.6-12.7)	1.3	(0.5-2.0)	14.7	32.7	12.2
South Central	16.5	(13.0-20.6)	5.9	(3.9-8.7)	24.0	13.8	4.1
Urban	-		-		14.9	33.6	11.9
Rural	-		-		24.4	15.3	4.8

¹ BMI= Body Mass Index; non pregnant women aged 15-49 years

nearly as many women were found to be underweight (21.5%) as were overweight (20.7% including 6.7% obesity) (table 6). When interpreting the data, it has to be taken into consideration that because of insecurity, not all regions were fully accessible during the survey and some of the results might not completely reflect the situation. The report suggests a high fat diet coupled with low levels of physical activity may contribute to the increase in over-

weight adults and notes that this is more likely to occur in urban areas.

Improved livelihood in pastoral areas

Early and beneficial rains were received in many parts of the country and have improved water availability and grazing conditions in drought-

Table 7: INFANT AND YOUNG CHILD FEEDING PRACTICES, SOMALIA (FSNAU 05/10)

Region	Early initiation of breast-feeding (%, 95%CI)		Infants exclusively breastfed (%, 95%CI)		Children breastfed (12-15months) (%, 95%CI)	
Somalia national	23.4	(18.5-29.1)	5.3	(3.1-9.2)	60.8	(50.6-70.1)
North West	39.8	(30.6-49.4)	12.7	(6.7-22.7)	60.3	(45.7-73.3)
North East	27.0	(17.2-39.7)	6.3	(1.6-21.6)	45.0	(32.9-57.8)
South Central	17.4	(11.7-25.1)	2.8	(0.9-8.2)	64.4	(49.4-77.1)

affected pastoral areas, including the Sool Plateau, most of the Northwest and Northeast regions, and also parts of the Central and Southern regions. In November 2009, Saudi Arabia lifted a nine-year ban on Somali livestock imports which has led to an increase in live animal exports through the ports of Berbera and Bosasso. The 2009 exports were 9% higher than in 2008. The increased demand for export-quality animals has also increased producer prices, thereby improving household income and food access in pastoral areas (FEWS, 03/10).

Results of the March 2010 Togdheer Agropastoral nutrition assessment estimated the GAM rate at 12.2% (CI: 9.3-15.8), with 2.3% (CI: 1.6-3.5) of severe cases. No case of oedema was reported. Although this is a serious situation, the data indicate an improvement compared to

the situation in November 2009 when GAM was reported at 16.1%.

An interagency rapid assessment was conducted in the Bari region in March 2010, following a prolonged dry spell. It found that the proportion of acutely malnourished children was 13.9%, with 2.5% severely malnourished. Food security indicators show signs of stress from the cumulative effects of poor rainfall over several seasons. Although recent rains will bring some relief, the food security and nutrition situation remains unchanged since the Post Deyr '09/10 (FSNAU, 03/10).

Sudan

In April 2010, Sudan held its first multiparty elections since 1986, fulfilling a major requirement of the 2005 Comprehensive Peace Agreement (CPA), and giving millions of Sudanese an opportunity to vote for the first time in their lives. The election included contests for national, state, and Southern Sudan legislatures, state governors, president of Sudan, and president of the regional Government of Southern Sudan (GOSS) (USAID, 04/10). According to FEWS estimates, there are currently about 6.8 million food insecure people in the country including 2.3 million IDPs and refugees.

Eastern Sudan

Since the Eastern Sudan Peace Agreement of 2006 the three eastern states have struggled to address the chronic vulnerabilities that keep the region poor and prone to instability. Eastern Sudan continues to face some of the worst human development indicators in all of Northern Sudan. The area hosts some 100 000 refugees, mostly from Eritrea – the largest population in Northern Sudan. A steady flow of refugees, including some from Ethiopia, Somalia, Chad, and the DRC, continued from July to September,

with an average of 1 800 new arrivals each month. This community joins some 68 000 IDPs already living in Kassala, mostly from the three eastern states and Southern Sudan. The refugee camps are classified as (1) Land-based camps where each refugee household is allocated some land for agricultural use by the government and (2) Wage-based camps located in agricultural areas providing refugees with employment as field laborers in the fields. The latter are generally located near towns where other forms of employment can also be found. The camps are distributed across 4 states in Eastern Sudan. These states are Kassala, Gadaref, Sennar and Gezira (UNHCR/joint, 02/09).

Nutrition situation in refugee camps in Eastern Sudan

Kassala and Red Sea states continued to have the highest malnutrition rates in the north, with global acute malnutrition rates in many locations above the 15% emergency threshold (OCHA, 06/10).

UNHCR conducted a joint nutrition and health survey in eight of the refugee camps in Eastern Sudan in February 2009. The camps covered included: Um Gargour, Fau 5, Abuda, Girba,

Kilo 26, Shagarabs Camps I-III, and Suki Camp I-III. Results showed that GAM rates were above 10% in three of the camps and above 20% in two. Even more worrisome was the prevalence of anaemia among children aged 6-59 months, which ranged from 49.0% to 70.0% (figure 6).

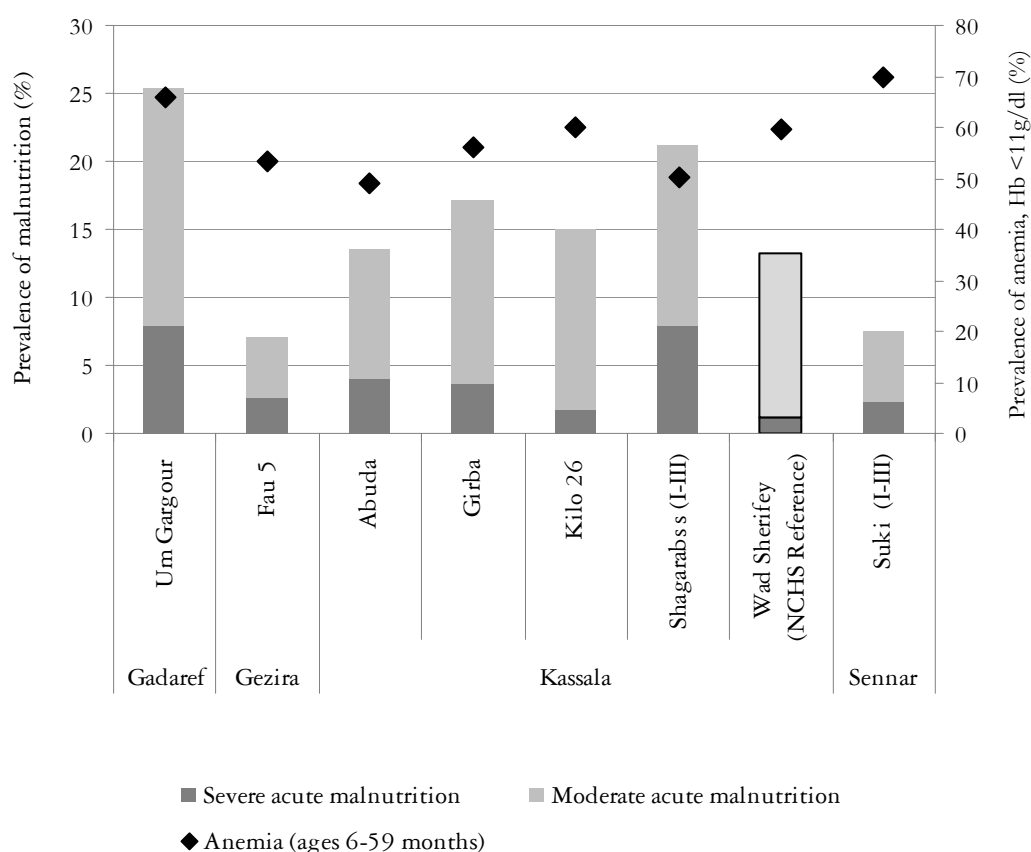
Demographic indicators were assessed in the three main camps of the area: Wad Sherifey, Kilo 26 and Shagarab. Around 92% of the refugees had stayed in the camps for more than five years already. The assessment of IYCF practices showed that 84.2% of women initiated breast-feeding within the first hour after birth and that 57.8% of mothers continued to exclusively breastfeed until 6 months of age.

Darfur

Insecurity in several locations has destabilized local communities. This deterioration is charac-

terized by several elements, including tribal fighting, tensions in IDP camps, and armed clashes. Inter-tribal violence during the 3rd quarter of 2010 mainly involved renewed clashes between the Misseriyah and Rezeigat tribes over land and access to migration routes around Kass. Violence near Tawilla in North Darfur, suspected to have begun as a tribal dispute, resulted in an attack on the market in Tabarat that killed 35 and injured 37. Reports indicate that around 3 000 people were displaced to Tawilla. In July, political disagreements among IDPs (particularly between “pro-Doha” and “anti-Doha” peace process supporters) flared into violence in Kalma camp in South Darfur – until recently home to an estimated 82 000 displaced people – and later on also in Hamediya camp in West Darfur. Calm gradually returned to the camp in August and September. In Hamediya camp, with a population of 44 000 residents, almost all Fur, significant tensions between factions lead to the expulsion of one faction from the camp.

Figure 6 RESULTS OF HEALTH AND NUTRITION SURVEYS IN 7 REFUGEE CAMPS, EASTERN SUDAN (UNHCR/JOINT, 02/09)

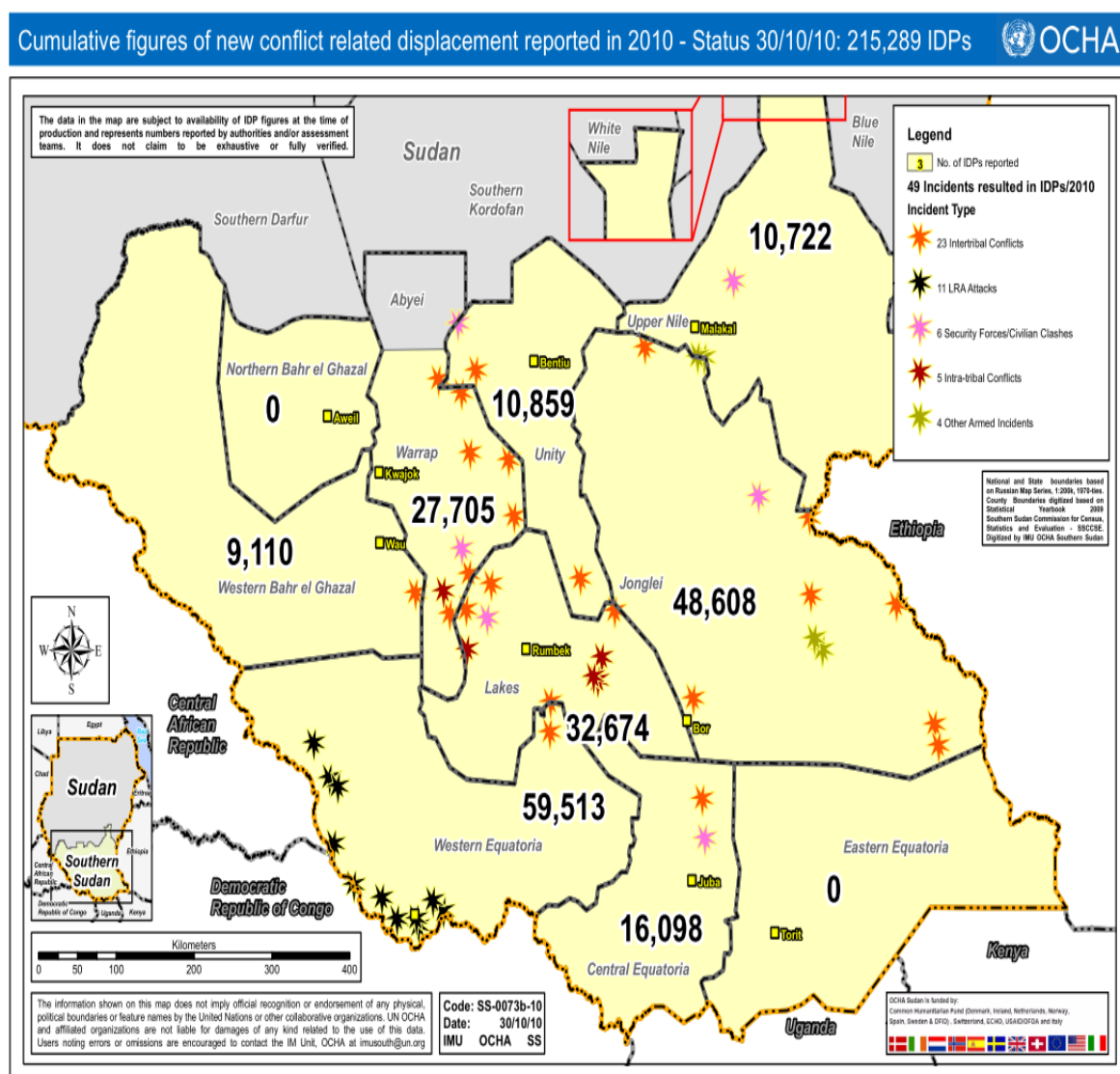


In addition to inter-tribal fighting and tensions in some IDP camps, armed conflict continued in Eastern Jebel Marra. Straddling all three Darfur states, the Jebel Marra region has been a stronghold of the SLA-Abdul Wahid faction. SLA-government clashes that began in February 2010 are estimated to have displaced up to 100 000 people. Meanwhile, in other parts of Darfur, fighting between the government and the Justice and Equality Movement (JEM) destabilized some communities. The government forced JEM out of South Darfur, and the movement is now mostly located in the far north of

North Darfur, near the borders with Chad and Libya (OCHA, 06/10).

An inter-agency rapid assessment in all three states of Darfur in October 2010 pointed to critical needs in health, WASH, nutrition, child protection and food security. No health facilities are believed to be fully operating, and many water points are thought to have stopped functioning, raising fears of possible public health emergencies. The report also found that more than 100 000 people were newly displaced in Darfur between January and October of this year.

MAP 1: CONFLICTS AND DISPLACEMENTS IN SOUTH SUDAN (OCHA, 10/10)



Abyei County

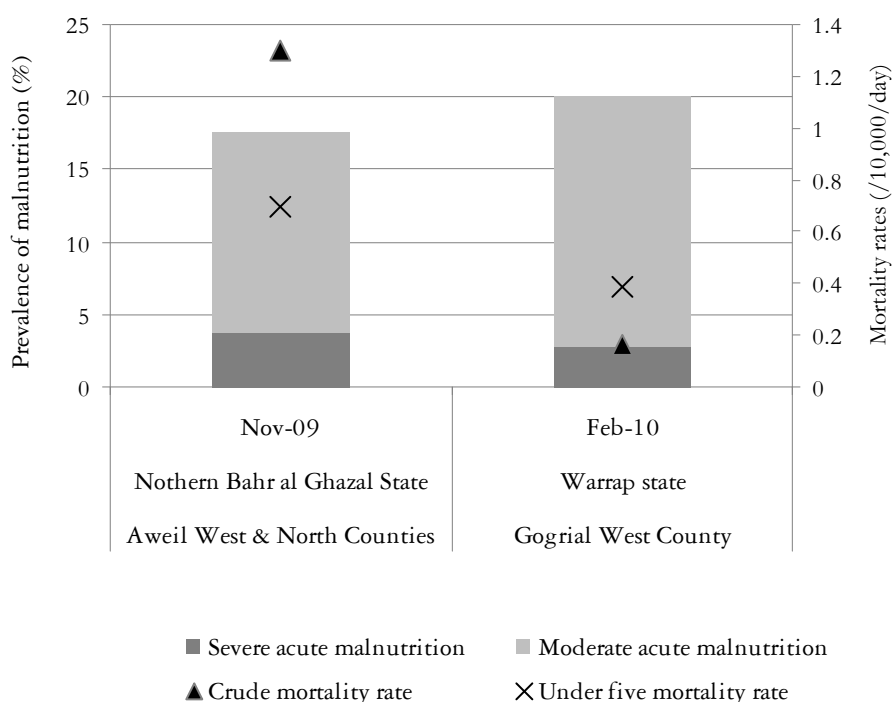
In the contested border area of Abyei, which bridges the North and the South of Sudan, tensions between the Dinka and Misseriyah communities remain significant despite the mostly peaceful northward migration of Misseriyah nomads through the area. The upcoming referendum that will decide whether or not to join Southern Sudan has prompted several clashes. The Dinka mostly support unity with the South, whereas the Misseriyah generally oppose it. As many as 3 000 formerly displaced people returned to Abyei County in the first half of 2010, and local authorities estimate that some 75 percent of the original population remains displaced. Access to them by humanitarian support was particularly complicated from June to October due to the rainy season. By the end of June, an estimated 52 000 people were receiving food aid (OCHA, 06/10).

Southern Sudan

The humanitarian situation in Southern Sudan remains fragile, with new flooding and worsening disease outbreak in parts of the region adding to existing pressures due to violence and food shortages. Local authorities and assessment teams report that between July and September, more than 150 people were killed in a string of incidents, and over 25 000 were displaced in hot spots across the South. These incidents raised the cumulative total of newly displaced people in 2010 to over 212 200 (map1).

Prospects for improved food security increased as the lean season came to an end in August and September. Preliminary results from a joint assessment indicate that, in light of the timely onset and distribution of rains this year, agricultural production in 2010 is likely to improve over 2009 levels. Malnutrition is also expected to ease as the food security situation improves,

Figure 7 RESULTS OF NUTRITION SURVEYS IN AWEIL WEST AND GOGRIAL WEST, SOUTHERN SUDAN
(CONCERN, 11/09; AAH-US, 02/10)



following an earlier spike in admissions to feeding centers in April and May this year. Despite these gains, initial observations indicate that agricultural improvements may be reduced in some areas due to crop damage caused by flood waters (OCHA, 06/10; FEWS, 09/10)

Aweil and North Counties

Concern Worldwide conducted a nutrition survey in Aweil and North Counties within the Northern Bahr el-Ghazal Region of Southern Sudan in November 2009. The nutrition situation was found to be serious, with a GAM rate of 17.6% (CI: 15.2-20.3) and SAM of 3.7% (CI: 2.6-5.2). Measles immunization and vitamin A distribution coverage were found to be very low at 27.8% and 33.1% respectively. Farming is the main source of livelihood for the population in Aweil (92% households). However, 75% of households cultivated less than 1 hectare (ha).

The average size cultivated was only 0.7 ha per household, which is considered insufficient to ensure household food security in this area with a median household size of 7 persons. In addition, IYCF practices were found to be far from optimal. The rationale for administering pre-lacteal feeds was the perceived “inability of mothers to produce sufficient breast milk” due to “lack of adequate food for mothers”.

In Gogrial West, Warrap State in Southern Sudan, the nutrition situation was also estimated to be serious with GAM of 20.0% (CI: 16.5-23.4) and SAM of 2.7% (CI: 1.4-4.0). The under five mortality rate, however, was not alarming at 0.39 (CI: 0.12-1.32) (figure 7). About 53% of mothers reported that they exclusively breastfed their infant up to six months of age. Water and sanitation facilities were found to be very poor; only 59% of households had access to improved water sources and only 4% had access to latrine facilities (AAH-US, 02/10).

West Africa

West Africa is characterized by a particularly high level of intra-regional migration, with an estimated ten times more people moving within the region than towards Europe or other destinations. In addition to this movement, West Africa is receiving refugees and migrants from other regions of Africa and the wider world, while environmental degradation is aggravating the pressure for people to move from poorer to relatively more prosperous areas within the region (IOM, 11/10).

Moreover, the people of West Africa remain confronted with a wide range of threats to their livelihoods and protection. Much of the Sahel region, the east in particular, faces high levels of food insecurity due to poor cash crop production and falling livestock prices. In the coming months, food insecurity is likely to persist among poor households in Niger, west and central Chad, northeastern Mali and Burk-

ina Faso, north-west and central Mauritania, and far northern Nigeria (OCHA,

14/07/10). According to ReliefWeb, an estimated 7 million people in Niger, 1.6 million in Chad, 600 000 in Mali and 300 000 in Mauritania are affected and at risk of food insecurity and malnutrition (map2).

To date, under the Emergency Operation for the Sahel, the WFP assists supplementary feeding centers in the six Sahel regions, providing monthly assistance to malnourished children. The number of supported centers is projected to increase by the end of the year. Between October and December 2010, WFP food assistance included blanket feeding for children aged 6 to 23 months and protection rations for



MAP 2 : THE SAHEL — FOOD AND MALNUTRITION CRISIS, AS OF 20 JULY 2010 (RELIEFWEB, 07/10)



their families, as well as to children under five suffering from moderate malnutrition in health facilities, and to pregnant and lactating women. Food for work projects dedicated to improving or creating community assets and the rehabilitation and protection of livelihoods are also being developed. The European Com-

mission doubled its financial commitment to the Sahel for humanitarian and food assistance to the most vulnerable sections of the population, bringing its total financial aid for the Sahel in 2010 to 74 million Euros (ReliefWeb, 22/11/10).

Niger

Since 2007 the government of Niger has been involved in a conflict with the “Nigerien Movement for Justice”, which is mostly active in the region of Agadez. On February 22nd 2010, a military coup ousted the president, newly elected in 2009. The coup resulted in Niger being expelled from the African Union. The rest of the international community, however, was cautious in condemning the coup, urging new elections as soon as possible. In a departure from the former administration’s treatment of famine as a taboo topic, the military junta has appealed to international donors for massive assistance to support the enormous efforts Niger is making to cope with the current famine (FEWS, 09/10).

Over 7 million people in need of assistance

Niger is in the midst of a serious crisis resulting from the drought and subsequent failed harvest in 2009. According to the April 2010 National Household Food Security Vulnerability Survey, 7.1 million people, or nearly half of the population, are in a situation of moderate (25%) or severe (22%) food insecurity. This represents a significant increase in the number of severely food-insecure people, from 2.6 million in December 2009 to 3.3 million people in April 2010. The most affected regions are Maradi, Tahoua and Tillabery. There is a high level of vulnerability in urban areas, particularly among new migrants, as well as a higher rate of severe

food insecurity among women. While the overall food security situation of the country is classified as 'critical', or stage II according to the National Contingency Plan, some departments are classified as stage III, which indicates an 'extreme food and nutrition situation' (OCHA, 06/10).

The situation in pastoral areas is increasingly critical, where severe fodder shortfalls and lack of water are affecting livestock herds. Large concentrations of animals have been observed in the regions of Tahoua, Maradi, Zinder and Diffa. Animal mortality has increased sharply and many pastoralists have resorted to selling their cattle at very low prices. Emergency destocking measures are recommended by humanitarian partners.

The situation has deteriorated to such a degree that an Emergency Humanitarian Action Plan (EHAP) was launched in April 2010 to provide immediate assistance to the 7.1 million food insecure people, further underscoring the determination of Niger's new national authorities to tackle the food crisis. The Emergency Humanitarian Action Plan (EHAP) identified the following as urgent interventions: assistance to pastoralists, nutrition, including water, sanitation and health activities related to the treatment of SAM cases with medical complications, and preventive actions such as intensifying the promotion of breastfeeding to protect infants 6 months and under.

Various assistance efforts are ongoing, operated jointly by the government and humanitarian partners. The WFP and UNICEF implemented a blanket supplementary feeding operation at the end of April 2010 aimed at preventing acute malnutrition among 644 000 children aged 6 to 23 months. Furthermore, medical treatment of SAM among children under five and of moderate acute malnutrition (MAM) in children and pregnant/lactating women is being provided.

WFP, in collaboration with the government, began food distributions during the lean season in mid-May, targeting approximately 1.5 million people in particularly vulnerable zones.

In addition, the subsidized sale of cereals and cash for work activities to improve access to 30% of food-insecure populations for three months, the subsidized sale of animal fodder to improve access to animal feed for pastoralists, and destocking activities have been implemented. Cash transfer activities are also being operated by NGOs in seven regions.

Malnutrition rates exceed emergency threshold

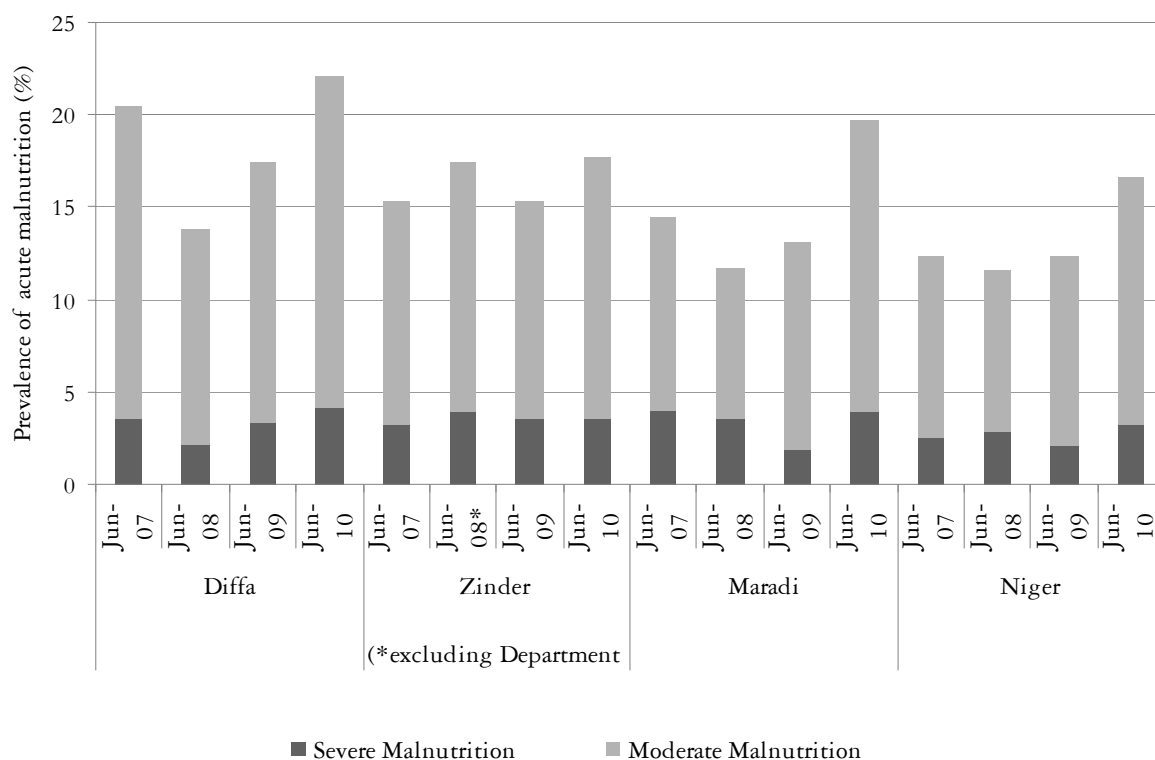
Preliminary results from the 2010 national nutrition survey confirm the magnitude of the nutritional crisis among children. The survey revealed a global acute malnutrition (GAM) rate of 16.7% among children aged 6 to 59 months. This represents a significant increase over 2009 results, when GAM was recorded at 12.3%. The prevalence of severe acute malnutrition (SAM) also rose, from 2.1% to 3.2% (figure 8) (INS-Niger/joint, 06/10).

Trends of malnutrition 2007-2009 compared to 2010

The nutrition situation in the country is monitored by the National Bureau of Statistics (INS) and Ministry of Public Health, with a focus on malnutrition and child care. Monitoring reports are made available regularly. The joint national nutrition survey conducted in May and June 2009, indicated that GAM rates were above 15% and SAM rates above 3% in Diffa (17%, CI: 13.3-22.5 and 3.4%, CI: 2.0-5.9) and Zinder Region (15.4%, CI: 12.8-18.4 and 3.6%, CI: 2.5-5.1) (figure 8). Together with the Maradi Region (GAM: 13.1%, CI: 10.7-15.9 and SAM: 1.8%, CI: 1.3-2.5) these had been the hotspots of the 2005 famine.

Lowest GAM rates were found in Tillabéri (8.6%, CI: 6.6-11.1). In the two urban clusters, Niamey and Agadez, GAM rates were slightly above 10% (10.1%, CI: 8.0-12.6 and 11.7%, CI: 8.7-15.5) indicating a serious nutrition situation as well. In comparison to previous years, GAM rates remained at high levels. However, some improvements were observed in SAM, with a significant decrease in Maradi

Figure 8: Acute malnutrition rates, Niger between 2007 and 2010
(INS-NIGER 10/09 and 10/10)



Region. According to the survey report mortality rates decreased compared to results from previous years, but CMR and U5MR values were not reflected in the report.

Detailed analysis of the 2009 survey results revealed that national GAM rates were found to be significantly higher among children 6-35 months of age (15.8%, CI: 14.4-17.4) as compared to children 36-59 months of age (7.1%, CI: 5.9-8.5). This was also reflected in the results from urban Agadez, and from the regions of Dosso, Maradi, and Zinder. SAM rates were also significantly higher in the younger group (3.0%, CI: 2.4-3.6 versus 0.8%, CI: 0.5-1.3), both nationally and in the Dosso and Zinder Regions. Broken down even further, it was found that infants 6-11 months old had the highest rates of all age groups (figure x). In addition, boys were more often affected by global acute malnutrition (GAM 13.4%, CI: 11.9-15.0) than girls (GAM 11.1%, CI: 9.8-

12.7) at national level and in the two regions of Maradi and Tahoua (INS-Niger, 10/09).

Infant and young child feeding practices were also investigated in 2009. According to the results, the initiation of breastfeeding within the first hours after birth was carried out by 40% of mothers and within the first day by another 43% of mothers. In the group of children below one year of age, 86% had received colostrum. Only 9.9% of infants below 6 months were exclusively breastfed and 51% of them had received water in addition to breast milk, which is a common practice in the country especially during the dry season when the survey was conducted. Complementary food was given to 52.6% of children aged 6-9 months; no information was provided on frequency or quality of complementary foods. At the age of 12-15 month, 92.4% of children were still breastfed.

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Sierra Leone

The food security outlook is very poor throughout the country. FAO/GIEWS (09/10) has put Sierra Leone on the list of “countries in crisis requiring external assistance for food”. The Government of Sierra Leone, still struggling to recover from years of civil war and reeling from the economic effects of its devalued currency and subsequent high inflation, is poorly equipped to deal with the magnitude of the situation. According to a 2009 WFP assessment, nearly 50 percent of household expenditures are allocated to food purchases (GIEWS, FAO, 14/04/2009). WFP forecast this as a long-term problem, while IFPRI warned of an extremely alarming food security situation (IFPRI, 2009).

High unemployment rates among youth and former soldiers

According to a context analysis conducted by WFP in 4 districts in the east and south of the country, the rehabilitation of former soldiers has suffered setbacks as a result of high unemployment rates. There are continued fears over the growing youth population, which remains largely unemployed, disaffected, and disenfranchised despite government efforts. Post-conflict government policies have included measures to stimulate recognition for, and enforcement of, the rights of youth as embodied in the constitution, and even political bodies for youth representation, such as the National Youth Coalition. However, the effectiveness of these bodies is questioned. Addressing urban youth employment and social inclusion is considered a prior-

ity by some regional governments. However, the low skills and educational levels of many youth make it difficult to incorporate them into positions of responsibility (WFP, 10/09).

Constraints on education system

Along with the short supply of teachers, many schools are overcrowded and lack the necessary supplies. Only 17% of girls and 21% of boys attend secondary school. Common reasons cited by parents for not sending their son or daughter to secondary school are the long distance to the school, and the prohibitive costs for tuition, travel and lodging. Teenage pregnancies and early marriage often force girls to drop out of school at an even younger age (WFP 10/09).

Household vulnerability in Freetown

GOAL conducted its annual community survey in the capital, Freetown, in November 2009. According to the results, the vulnerability to household food insecurity increased greatly in comparison to the previous year. In 2009, more households relied solely on food items bought in shops or on the market (69.6%) than in 2008 (47.5%). Many households had only one source of cash income, most commonly petty trade (70% households), which is judged to be an unreliable source of income (GOAL, 03/10).

The exclusive breastfeeding rate of infants observed in 2009 was still extremely low at only 11.7%. However, the higher proportion of exclusively-breastfed infants compared to the group of older siblings suggests that there has

been some improvement. The traditional practice of giving water at birth greatly reduces the number of infants classified as exclusively breastfed and this practice was found to be slowly decreasing. Only 45.9% of children aged 6-23 months had received the minimum number of meal frequency on the day prior to the survey.

Global acute malnutrition was assessed using MUAC measurements. GAM (based on

MUAC<12.5cm) was estimated at 5.0%, including a SAM rate (based on MUAC<11.5cm) of 1.9%. No confidence intervals were reported. The global underweight prevalence rate was estimated at 13.3% (CI: 10.8-15.8), with no significant difference from previous survey results in 2008 (12.4%). Severe underweight was 2.7% (CI: 1.2-4.2) (GOAL, 03/10).

Central Africa

Chad

The root causes of the humanitarian situation in Chad are the spill-over from the conflict in Sudan's Darfur region, the prevailing insecurity in northern Central African Republic (CAR), and the inter-ethnic and political tensions in Chad itself. According to the Internal Displacement Monitoring Center (IDMC), 3 million displaced people are living in the regional "conflict triangle" of eastern Chad, Darfur, and northern CAR (IDMC, 07/10).

In 2010, Chad, Sudan, and CAR were included on the list of the world's ten most failed states, with Chad at number two after Somalia. By mid-2010, an estimated 170 000 people were internally displaced in eastern Chad and living in 38 camps, the majority of them having little or no means of sustaining themselves, thereby completely reliant on humanitarian assistance. The country also hosts 270 000 Sudanese refugees in 12 camps along its eastern border with Sudan, and 81 000 Central African refugees in 11 camps along its southern border with CAR.

A rapid nutrition assessment was conducted by UNHCR and partners in Amnaback Camp in

the Kobé District close to the border with Sudan. The refugees in this camp come primarily from the Zaghawa ethnic group. Since its creation in June 2004, Amnaback Camp has been considered as a point of transit. However, as the refugees share the same ethnicity as the local community, many of them have settled in the area, making it difficult to relocate the refugees. Survey results estimate that global acute malnutrition rate was at 6% (MUAC<12.5cm). In comparison with previous results, this indicates a stable nutrition situation (figure 9) (UNHCR/joint, 03/09).

Food security crisis in 2009/10

Changing weather patterns resulted in a severe drought in 2009/10, resulting in a 34% fall in agricultural production and the loss of large numbers of livestock. The World Food Programme estimated that around 18% of the population is facing severe food shortages, which may in turn lead to further population movements in the country (IRIN, 9 March 2010). The government called for food assistance to help nearly 2 million vulnerable people



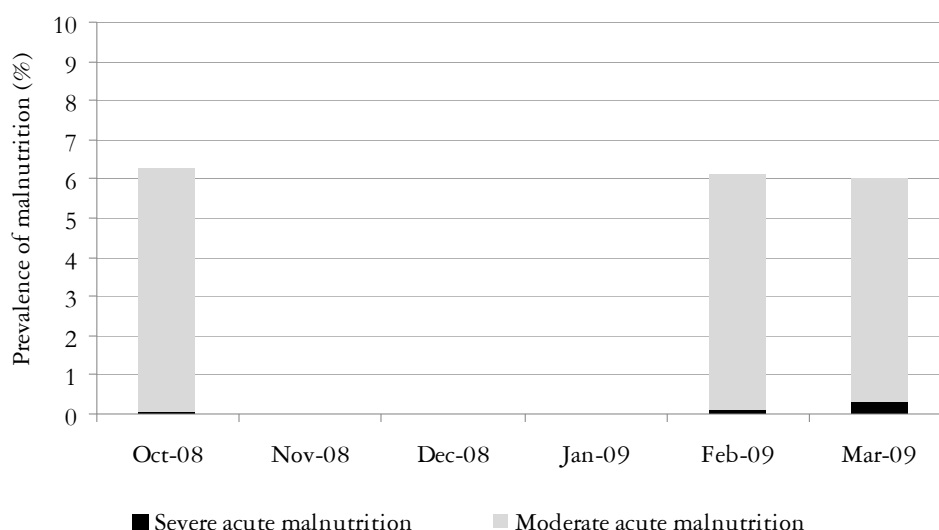
(OCHA, 03/10). In response, the Chadian government and its partners launched a response program, including subsidized grain sales by the government in April/May, distributions of food by the WFP, and the distribution of animal feed and seed aid by the FAO (FEWS, 05/10).

A combination of factors such as decreased food availability, less income from cash crop sales and gainful employment, and rising grain prices has seriously weakened the household food security situation. Households are increasingly dependent on local markets for their food supplies while, at the same time, access to the markets has become more difficult. The most common coping strategies employed by poor households include stepped up out-migration, the collection of wild foods, and temporary rural-urban migration by the entire household (FEWS, 05/10).

The extreme food insecurity in the agropastoral area of the east basin (Niger, Nigeria, and Chad) has been progressively reduced by continued humanitarian assistance. A more diversified distribution of food aid, including beans and cooking oil in addition to cereals, and a wider coverage of the population in the targeted villages (from 40 % to 70%) was implemented in September 2010. Increases in milk production, healthier livestock, and the early harvest of tubers, millet, and cowpeas have also ameliorated the situation.

However, food insecurity is expected to continue in some areas due to the recurrent effects of the crisis and the impact of recent flooding. Pastoral households that have lost their livelihoods, indebted agropastoralists, and the urban poor are likely to be most affected. External assistance will be required beginning in Janu-

Figure 9 Results of rapid nutrition assessment in Amnaback Camp, Chad
(UNHCR/Joint, 03/09)



ary 2011 in the pastoral and agropastoral areas of Niger, Chad, and the far north of Nigeria (FEWS, 09/10).

Good harvest forecast for cereals

Due to heavy rains this year, the cereal harvest in the Sahelian regions of Chad are predicted to be better than last year. According to a crop evaluation mission in early October 2010, the cereal harvest is expected to be 10% above the five-year average, despite recent floods that have affected 175 000 people and destroyed some 100 000 hectares of crops. The harvest of fonio, normally collected in November and December, and an important cereal for poor households in the Sahel, began early and is considered a good indicator. That said, some flood affected regions, North Kanem for example, will need to import more food than usual to compensate for lost crops.

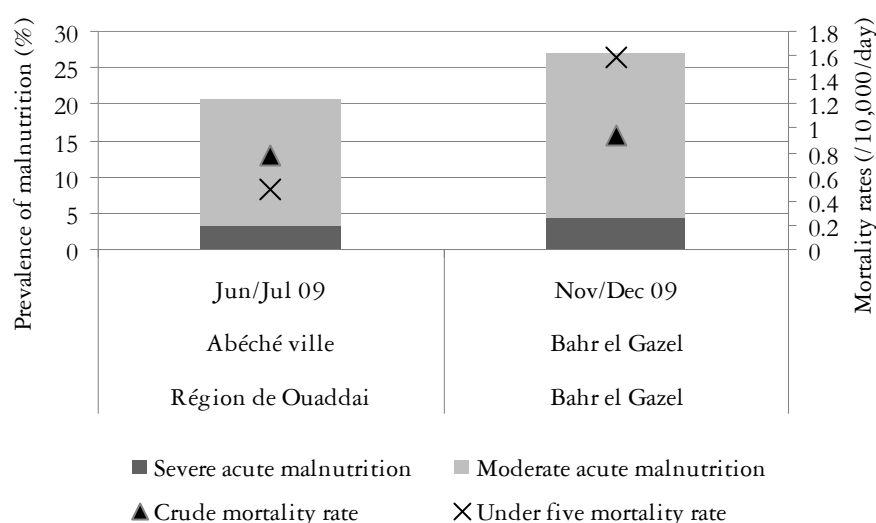
Abéché and Bahr El Gazel

Between June and July 2009, ACF-F conducted a nutrition survey in the city of Abéché in the Oura Department, Ouaddaï Region.

GAM rate was at 22.7% (CI: 18.9-26.6) and the SAM rate was 6.3% (CI: 4.7-8.0), indicating a serious nutrition situation. While mortality rates were below the emergency threshold (CMR=0.78, CI: 0.48-1.09 and U5MR=0.49, CI: 0-1.0), the report indicates that an increase in under five mortality can be expected if SAM rates are not brought down (figure 10) (ACF-F, 07/09).

According to FEWS, a survey in Bahr El Gazel conducted in late November 2009 by ACF-F revealed rates of malnutrition well above emergency levels. GAM was estimated at 26.9% (CI: 23.4-30.4), while the prevalence of SAM was 4.5% (CI: 2.9-6.2). Mortality rates, while high, were below emergency thresholds (figure 10). The high rates of malnutrition were all the more concerning because households are typically better off during November/December, when the crops have just been harvested and milk in generally is good supply (FEWS, 13/01/2010). For comparison, the most recent National Vulnerability Assessment was completed at the peak of hunger season (April/June 2009) and estimated a GAM rate of 23.8% for the Kanem Region.

Figure 10 Results of nutrition surveys, Chad (ACF-F 06-07/09, 11-12/09)



Democratic Republic of the Congo

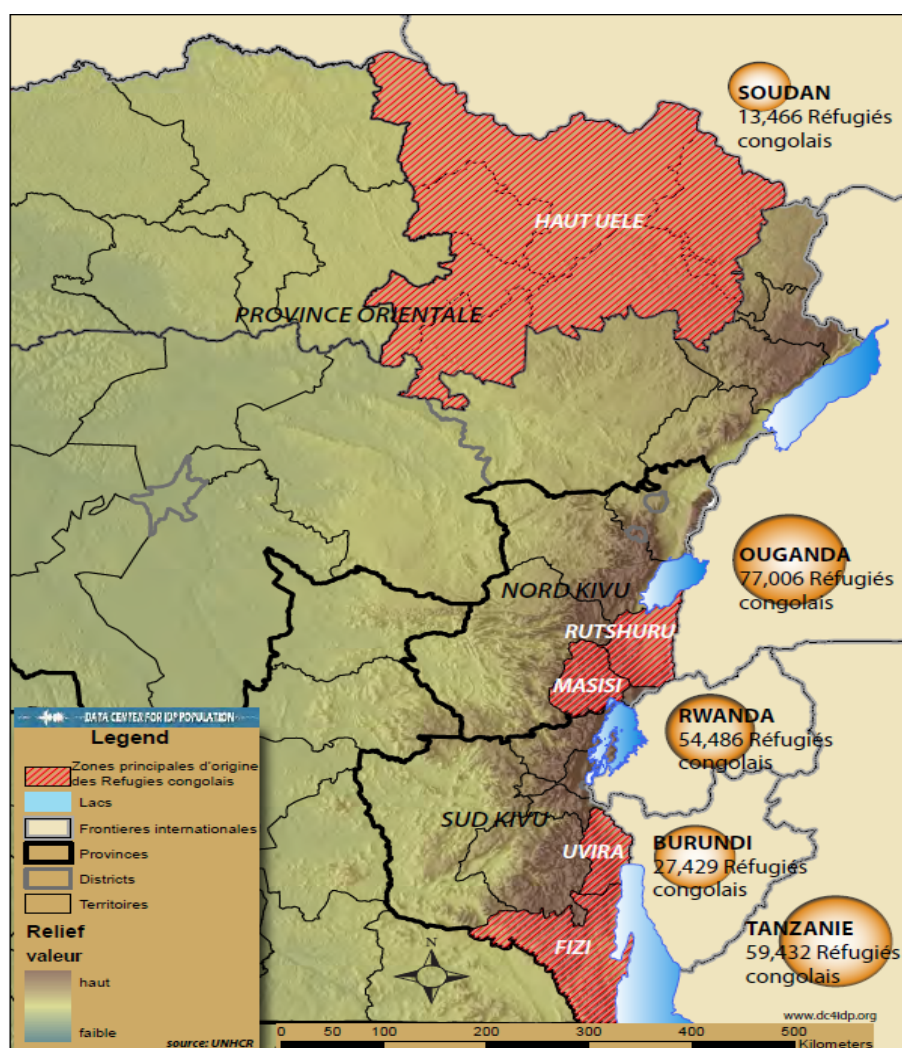
Congo is experiencing one of the world's worst humanitarian crises. The eastern part of the country remains highly affected by armed conflict. More than 5 million people have died as a result of the conflict and its effects, including malnutrition and disease, since the mid-1990s. Tensions have remained high due to the presence of foreign and local armed groups, both of which hinder state control and prey on the ci-

vilian population (ECHO, 10/10). In addition to a larger internally displaced population, the country is also burdened by refugees from other countries (UNHCR, 10/10).

Massive internal displacement

While close to a million displaced people have returned home over the last 18 months, the number of IDPs continues to rise due to ongoing military operations against rebel groups and reprisal attacks against the population. As of August 2010, the total number of IDPs in

MAP 3: DEMOCRATIC REPUBLIC OF THE CONGO - SITUATION OF CONGOLESE REFUGEES IN THE EASTERN NEIGHBOURING COUNTRIES
(UNOPS AND UNHCR, 18/10/2010)



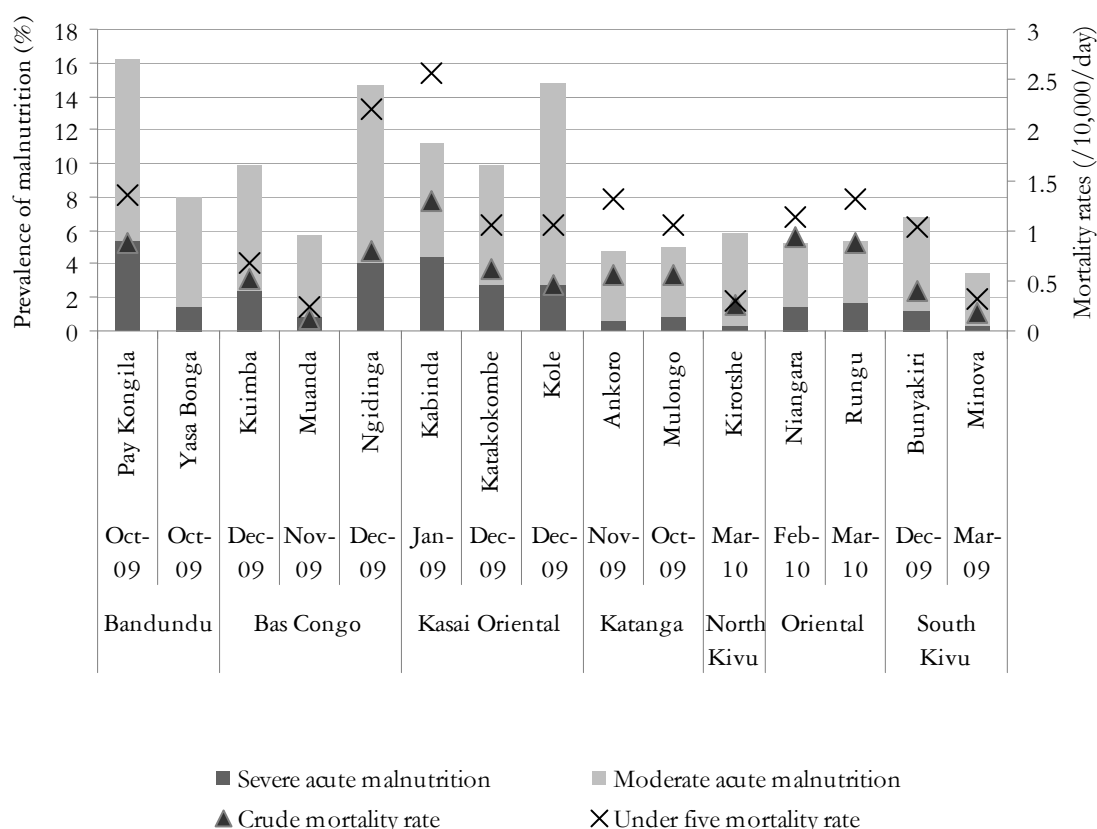
the country is now over 1.9 million, according to estimates from the different "Provincial Commissions of Movement of Population". Over three quarters of those affected are from the North and South Kivu Provinces (OCHA, 09/10). Most have lost all of their possessions, including homes, land, and livelihoods. The social and economic support network has been severely compromised, further complicating the situation. Civilians have been the victims of deliberate attacks and many have been displaced multiple times (Human Rights Watch, 09/10). According to OCHA, North Kivu continues to be the scene of human right abuses against civilians by elements of the Armed Forces of the Democratic Republic of the Congo (FARDC). These attacks have caused widespread panic, increasing the huge number of preventable displacements. In his report, the representative of the Secretary-General on the human rights of internally displaced persons pointed out that the human rights situation in the DRC has not improved and remains of serious concern. It was

noted in particular that the Government has neglected its responsibilities to protect and assist internally displaced persons and returnees (UN General Assembly, 08/10). Some 430 000 Congolese refugees have fled to other African countries, most frequently to eastern neighbouring countries (map 3).

Food Security and Livelihoods at risk

According to the Integrated Food Security Phase Classification (IPC), seven territories in Orientale Province are classified as being in a phase III, or severe, food insecurity situation. The affected territories include: Dungu, Faradje and Niangara in Haut Uele; Ango and Poko in Bas Uele; Irumu in Ituri and Bafwasende in Tshopo. The causes of food insecurity are the persistent instability related to the presence of armed groups, a disorganized market, as well as the frequent displacement of the population. The two territories of Basoko and Yahuma could not be assessed due to logistic related con-

Figure 11 Results of nutrition surveys in seven regions, DRC (AAH-US, 01/09-03/10)



straints. Other territories of the province were classified as phase II, which is defined as a situation of limited food insecurity with a risk for deterioration (OCHA, 10/10).

Nutrition situation in resident population

UNICEF launched a pilot project on nutritional surveillance, food security, and early warning in Katanga Province. This initiative, run in collaboration with the Ministries of Agriculture, Health and Planning, will allow the systematic gathering of information on nutrition, mortality, and food security at the household level. For the pilot phase, 24 sentinel sites were put into operation (OCHA, 10/10).

Between January 2009 and March 2010, AAH-US conducted a series of at least 23 nutrition surveys among resident populations throughout the country, some of which the results have already been presented in previous

NICS editions (UNSCN 12/09 and 03/10). According to the results of the 15 survey reports presented below, GAM rates vary between 3.4% (CI: 2.5-4.4) in the Minova health zone of South Kivu and 16.2% (CI: 13.1-19.4) in Pay Kongila health zone, Bandundu Province (figure 11). When compared to the previous year, the GAM rate in Pay Kongila more than doubled (AAH-US 10/09). The survey report underlines that the data assessment took place at the same time of the year and thus excludes seasonal variations as a possible factor in this increase. The report does not further explore possible causes. When comparing the assessments across the regions, differences in seasonality have to be considered; for example the data in Pay Kongila in Bandundu Province and Ngidinga in Bas Congo Province were observed during/towards the end of the dry season, where as assessments in the health zones of Kirotshé in North Kivu and Bunyakiri in South Kivu took place during times of better household food security.

Uganda

The humanitarian context in Uganda remained largely unchanged throughout 2010. As a result of the disarmament process and ensuing peace in Karamoja, many internally displaced people have started returning to the region. However, the lack of basic social services remains a concern in northern Uganda and in Teso. Without improvements in access to safe water, sanitation, healthcare, and protection in their villages of origin, the situation for returning IDPs remains unclear.

The return and resettlement of IDPs continues steadily in the Amuria and Katakwi districts of the Teso Sub-region. Coordinated camp phase-out activities are ongoing in all 60 former camps in the Sub-region. Fear of attacks from the Karamojong in return- and resettlement areas, the presence of landmines, and land disputes are the main obstacles to closing the camps (OCHA, 12/10/10).

Improving food insecurity in Karamoja

As of June, an estimated 37% of Karamoja's population – or some 400 000 people – were dependent on food aid to make up food deficits of 40-70%. Chronic food insecurity in the region, coupled with limited or weak coping mechanisms and extremely poor sanitation and access to safe water, have contributed to the population's high vulnerability.

Food availability and access have improved considerably in the last six months owing to a good rainy season and above-normal crop production and better grazing conditions. Markets are well supplied and the prices of many staple foods have declined. The majority of households are not likely to suffer any acute food insecurity through December 2010, and food assistance should not be required during this period. Pastoral and agropastoral households, however, are at risk of increasing food insecurity.

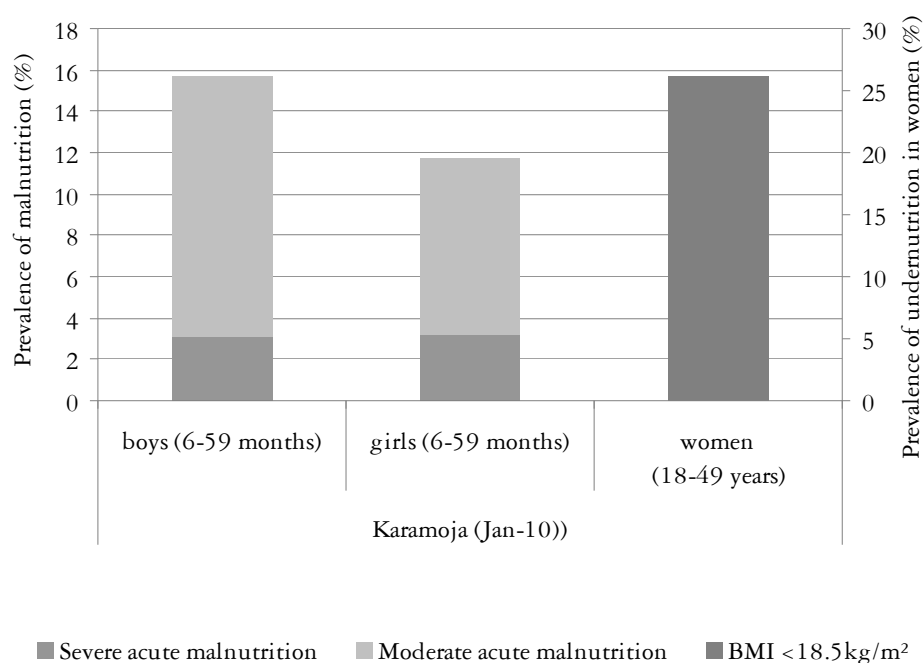
rity through December 2010, and food assistance should not be required during this period. Pastoral and agropastoral households, however, are at risk of increasing food insecurity between January and March 2011 due to limited resources to sustain their livelihoods as they recover from previous hazards. Households adjusted their livelihood strategies by moving from individual production to market purchases (FIC/SC, 11/10).

Outbreak of cholera and the persistence of hepatitis E have together infected over a thousand people. Access to HIV/AIDS treatment still remains very low. This situation is of serious concern and an indicator of inadequate health service delivery (OCHA, 07/10).

In September 2009, the German Government began supporting a food and nutrition security

and conflict management programme in the Karamoja Region. The nutrition baseline survey estimated a GAM rate of 12.7% (CI: 9.7-15.7), including a SAM rate of 3.2% (CI: 1.6-4.7). More than a quarter of non pregnant women (26%) were found to be undernourished (BMI <18.5kg/m²) (figure 12). When asked to name their major problems, 83% of heads of households cited food shortages due to drought and the loss of crops. Inadequate access to health services was the second major problem, a point emphasized by the fact that the nearest health centre is more than 5km away for over three-quarters of those surveyed. Poor access to safe water was also mentioned and may account for inadequate hygiene practices (GTZ, 05/10).

Figure 12 Results of nutrition survey, Karamoja Region, North Uganda (GTZ, 05/10)



Decline in hygiene practices in Pader District

A knowledge, attitudes and behaviour study conducted by GOAL in Pader District in Northern Uganda (GOAL, 05/09) showed a significant decline in latrine use from 70% in March 2008 to 32% in May 2009. The number of those who reported washing their hands after defecation also fell, from 76% of respondents in March 2008 to 56% in May 2009.

However, the knowledge about the causes and preventive measures of diarrhoea was high among the respondents. In households that reported deterioration in health status, a change in health and hygiene behaviours was acknowledged as a possible reason. The observed changes are possibly a reflection of population movements as people have returned home to places where facilities have not yet been rehabilitated or rebuilt.

Southern Africa

Madagascar

In March 2009, President Ravalomanana stepped down, handing the government over to the military, which in turn conferred the presidency on opposition leader Andry Rajoelina. Rajoelina has declared himself "President of the High Transitional Authority" and pledged to hold presidential elections by October 2010, a pledge that was not kept. Madagascar held a referendum on a new draft constitution lowering the minimum age for a president to 35 years, allowing Rajoelina to stay in office until elections now scheduled for May 2011. On 17 November 2010, dissident officers declared a takeover of power, but the military leadership vowed to crush any rebellion while security forces dispersed a crowd that gathered to back the rebels. The African Union imposed sanctions on Rajoelina in March and in June the European Union announced that it would continue to suspend 600 million Euros (\$740 million) in development aid for another year. Madagascar's political deadlock masks an increasingly fragile humanitarian situation that stands to deteriorate if no solution is found.

Global financial, fuel and food crisis affects the country's economy

Economic growth in the country plummeted

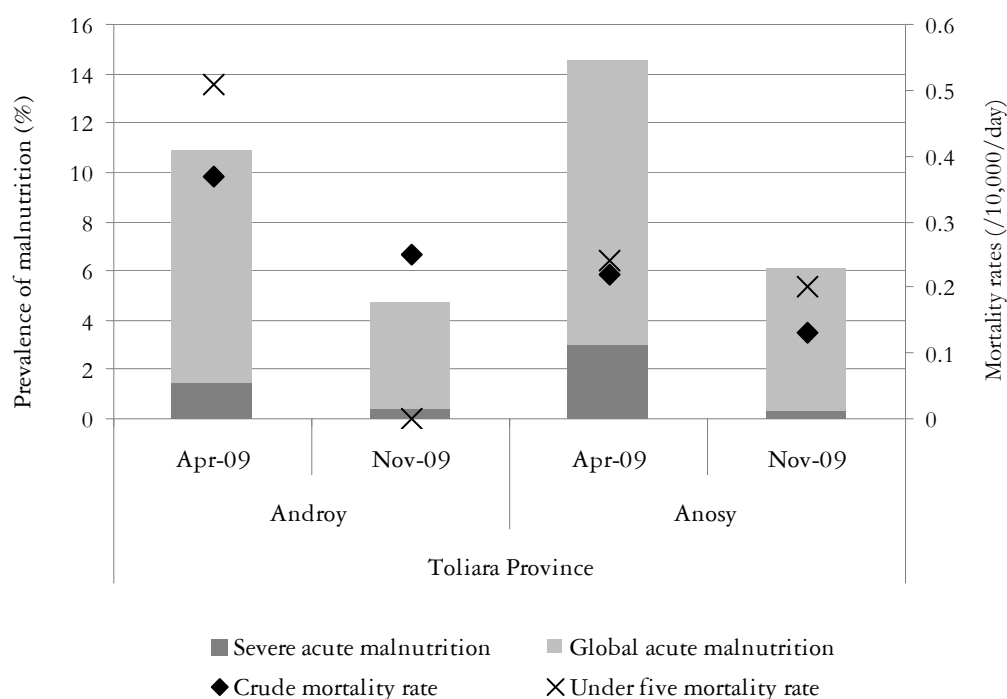
from 7% in 2008 to just 0.6% in 2009.

Other reports indicate that public investment is down by around 30%, construction by 40%, imports by 22%, and energy consumption by 15% (IRIN, 03/10). Education has been seriously affected in urban areas. According to the results of the Multi-cluster Rapid Assessment Mechanism in eleven urban areas (fokontany) of Antananarivo, 52% of parents reported that the quality of teaching has deteriorated during the crisis. Between May and November 2009, school dropout rates tripled and more than three out of four households reported difficulties in paying their children's school expenses. Furthermore, the increase in public school enrolment may reflect a need to reduce expenses and an overall decrease in purchasing power (IRIN, 03/10).

Children and women have been particularly affected by economic instability and the decline in the functioning of basic social services such as those in the health sector. An increase in acts of violence perpetrated against women and children has also been noted.



Figure 13 Results of nutrition surveys, South of Madagascar (UNICEF, 04/09 and 11/09)



Immunization coverage jeopardized

UNICEF and its partners estimate that at least US\$ 54 million are required in 2010 in order to provide the population with a minimum health package that will ensure access to basic health care. Vaccination, childbirth services, free access to essential drugs to all children under five and pregnant women, and highly subsidized drugs to the population are regarded as high priorities. If the present situation remains unchanged, 770 000 children under one year of age and 870 000 pregnant women will not be vaccinated on time, which could lead to serious long-term consequences (UNICEF, 02/10).

250 000 children at risk of malnutrition

The effects of climate change have also become

increasingly real, as evidenced by recurrent drought in the south and ever more frequent and powerful cyclones (UNICEF, 02/10). The latest tropical storm, Hubert, struck Madagascar's east coast on 10th of March 2010, killing at least 36 people and leaving some 37 000 people homeless (IRIN, 18/03/10).

Drought continues to have a major impact, particularly in the south of the country. Successive poor harvests have severely affected food security at the household level and by the end of 2008, almost 400 000 people were living in food-insecure districts nationwide. A nutrition survey carried out by UNICEF in five districts in Toliara Province, which covers among others the Anosy and Antandroy population, in April 2009 found that as many as 250 000 children were at risk of disease and malnutrition. The survey also indicated that global acute malnutrition rates in children under the age of five had reached serious levels. GAM rates were estimated to be 10.9% (CI: 8.5-13.9) in Androy and 14.5% (CI: 12.2-17.2) in

2009 estimated a much lower GAM rate of 4.7% (CI: 3.2-6.9) in Androy Region and 6.1% (CI: 4.3-8.7) in Anosy Region (figure 13). As there is a strong seasonality in these

areas, the differences are likely related to household food security, access to water, and disease patterns.

Zimbabwe

Although Zimbabwe's humanitarian situation remains stable and has improved somewhat since 2009, it remains fragile and the needs are still substantial. Infrastructural degradation in the basic sectors of health, water and sanitation, and food insecurity perpetuate underlying vulnerabilities, keeping the country in a situation of generalized humanitarian need. The recurrent cholera and measles outbreaks, which would otherwise be easily contained in a functional health system, underlie this fragility. The continued need for agricultural input support, food aid, and income generating projects are also evidence of the same.

Early recovery support needed

In this context and to consolidate the positive changes recorded so far, there is a need to reinforce ongoing early recovery activities and to explore new ways of addressing the underlying vulnerabilities to the extent possible, while remaining mindful of the basic needs (OCHA, 09/10)

The food security situation remains stable. Data collected in July 2010 through the Agriculture and Food Security Monitoring System (AFSMS) from 198 sentinel sites across the country show that individual production remains the primary source of food for nearly half of all households, although it should be noted that this is a decreasing trend. Purchases and casual labor activities continue to play an important role in closing the gap, for 31% and 17% of households respectively. Thanks to improved rainfall patterns, this year's harvest was significantly better than last year, but food insecurity is still major challenge for the majority of the population. Agricultural inputs like seeds, fertilizer, etc. are still in short supply, and draught animal power is lacking as

many households were forced to sell their livestock during the past lean period.

Almost 3 million still need food aid

According to FEWS projections, most rural households have already exhausted their own cereal stocks. The most likely scenario is a deterioration of food security status across a greater part of the country, with the notable exception of the central area which is traditionally a grain surplus region. An increasing number of people in other parts of the country are likely to become moderately food insecure throughout the lean season period from October 2010 to March 2011 (FEWS, 10/10).

Recent food security analysis updates indicate a significant narrowing of the projected cereal gap from 385 000 MT in May at the start of the consumption period to 111 000 MT in November – this is a 71% reduction, and a direct result of on-going food import programs, both commercial and food aid. The 2010/11 rainy season generally starts in November. The high cost of agricultural inputs in Zimbabwe remains a serious concern as there are fears that farmers might fail to access costly inputs and therefore lose out on the benefits from the predicted favorable rains. There are plans to continue a national input subsidy program (FEWS, 19/11/10).

Given the prevailing context of ongoing food insecurity, a high HIV prevalence, poor water and sanitation systems, GOAL began supporting the Ministry of Health and Child Welfare (MoHCW) in three rural districts with the roll out of Community Based Management of Acute Malnutrition (CMAM) in March 2009. The target has been to increase the number of health facilities providing CMAM services to 18 (nearly half of health facilities) in Makoni District, Manicaland Province (OCHA, 2010).

In November 2009, GOAL conducted a survey on knowledge, attitudes and behaviour in Mankoni District. Food was identified as the main monthly household expenditure for 66% of households. Individual production was the major food source for 55% of households and food aid the second main food source for 52%. The prevalence of GAM (MUAC below 12.5 cm) was estimated at 10.7%, including a SAM rate (MUAC below 11.5 cm) of 1.1% (CI: 0.02-2.2). The survey assessed IYCF practices and

found that the initiation of breastfeeding within the first hour after delivery was practiced by 62% (CI: 53.1-70.0) of mothers, comparable to previous results. The prevalence of exclusively breastfeeding of infants below 6 months was estimated at 33%. However, there was a wide uncertainty around this value (CI: 0-99.3). About 80% of children 6-8 months old received complementary food on the day prior to the survey (CI: 66.4-93.6).

Asia

Bangladesh

More than 250 000 Rohingya Muslims from Myanmar arrived in Bangladesh in 1991-1992. Most of the refugees have since returned to Myanmar, but 28 000 are still living in two refugee camps in the Cox's Bazaar District in southeastern Bangladesh. Helen Keller International conducted its annual nutrition survey in 2009 in order to assess the nutritional status of children below the age of six, adolescent girls, and pregnant or lactating women with children younger than two years of age. The results from this survey showed a severe nutrition situation among the refugee population.

Increase in GAM and decrease in anaemia

The average prevalence of GAM in the two camps was 18.7% (CI: 16.2-21.2), and a SAM rate of 2.0% (CI: 1.1-2.9) (figure 14). This indicates a worsening of the situation compared to the previous year when the GAM rate was 8.2% (CI: 6.5-9.9). On the other hand, anaemia rates among children aged 6-59 months old decreased from 47% in 2008 to 28.9% in 2009 (table 8). The survey report suggests this reduction could be attributed to the use of "Pushtika" powder, the micronutrient sprinkles. Anaemia was significantly

higher among children in Nayapara camp compared to children in Kutupalong camp. There was also a significant difference in anaemia prevalence between age groups: children aged 6-23 months showed higher prevalence rates compared to those aged 24-59 months. Breastfeeding was a common practice, but exclusive breastfeeding of infants below 6 months of age was practiced by only 8% of mothers (HKI, 09/09).

Figure 14: Results of nutrition survey in two refugee camps, Bangladesh (HKI, 09/09)

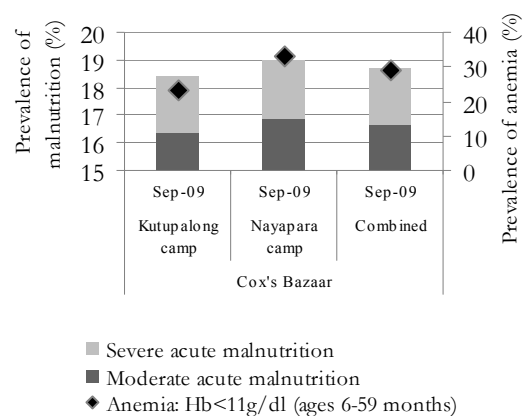


TABLE 8: NUTRITIONAL STATUS IN TWO REFUGEE CAMPS, COX'S BAZAAR DISTRICT, BANGLADESH (HKI, 09/09)

Camp	Nayapara	Kutpalong	combined
Anemia ¹ (6-59 months) (%)	33.3 (28.2-38.4)	23.2 (18.0-28.4)	28.9 (25.2-32.6)
Anemia ² (adoles girls) (%)	24.4 (19.6-29.2)	24.8 (19.4-30.2)	24.5 (20.9-28.1)
Anemia ¹ (pregnant women) (%)	35.3 (23.9-46.7)	42.3 (28.9-55.7)	38.3 (29.6-47.0)
Anemia ² (lactating mothers) (%)	35.6 (29.1-42.1)	29.5 (22.3-36.7)	33.0 (28.2-37.8)
Angular stomatitis (6-59 months) (%)	3.8	4.7	4.2
Glositis (6-59 months) (%)	0.8	2.7	1.6
Cheilosis (6-59 months) (%)	0	1.2	0.5

¹ Anemia: Hb<11g/dl

² Anemia: Hb<12g/dl

Middle East

Yemen

Situated on an ancient migration route, Yemen faces specific and unique challenges characterised by mixed migration flows. While some flee war and persecution in the Horn of Africa, others look for economic opportunities in the Gulf States and beyond. Yemen is host to some 155 000 refugees, the majority of whom are Somalis who have been granted *prima facie* refugee status by the government. Other refugees in the country include Iraqis, Ethiopians, and Eritreans, most of them living in Sana'a and Aden. Moreover, there were 316 332 registered IDPs as of 14 June 2010 (OCHA, 06/10). Such numbers place increasing strain on the government's already limited resources.

The security situation in Yemen's northern governorates remains volatile, particularly in

parts of Sa'ada Governorate and in Harf Sufyan, northern Amran Governorate, where there

have been a number of clashes. Although peace committees continue to meet, implementation of the ceasefire is slow. The situation in parts of southern Yemen is increasingly volatile, with continued violent demonstrations, and an increase in the number and severity of attacks against security forces.

Yemeni internally displaced persons (IDPs) in the north and mainly Somali refugees in the south are particularly reliant on food assistance programs. Disruptions to these programs will lead to higher food insecurity for households as they continue to recover livelihoods.



2 million people in need of food assistance

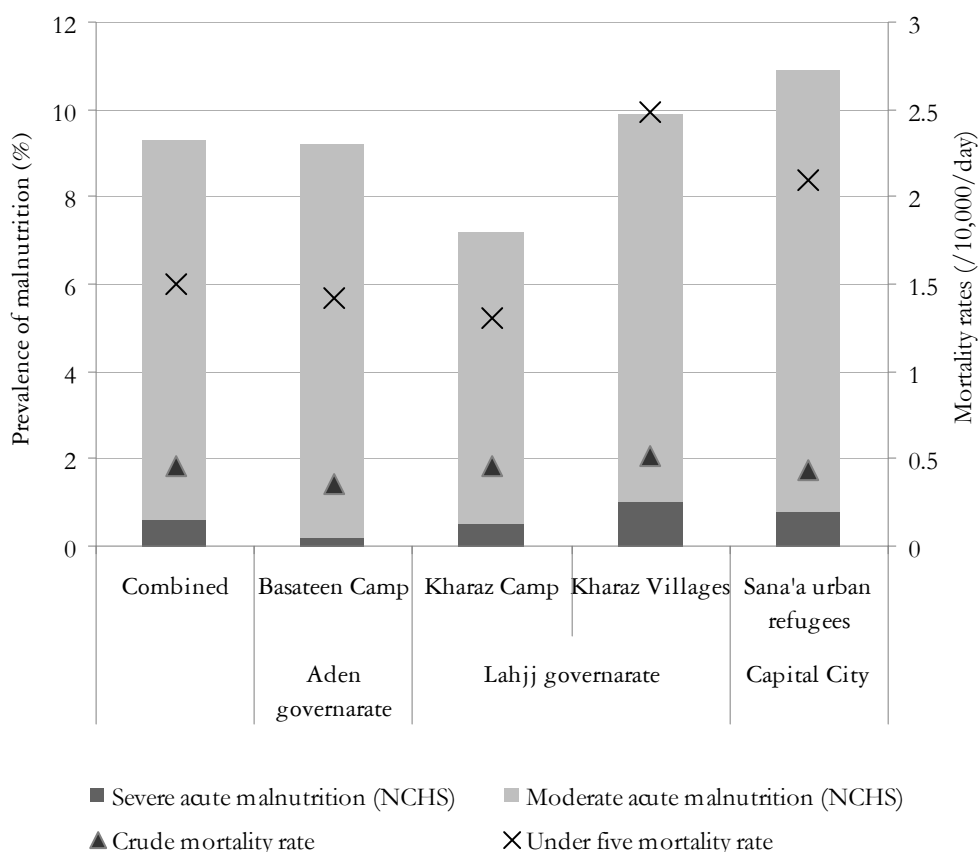
In December 2009, FAO and WFP conducted a joint food security assessment mission. They concluded that 2 million people, including conflict affected, refugees, and other vulnerable population groups, are likely to face increased food insecurity and therefore require targeted food assistance, estimated at about 100 000 MT during 2010 (FAO/WFP, 12/09). The 2010 Yemen Humanitarian Response Plan (YHRP) was launched in November 2009 for a total of 186 million US\$. According to the Financial Tracking System of humanitarian aid flows, 63% were funded as of November 2010 (ReliefWeb, 21/11/10). Nutrition activities received 63% of funding, and food and agricul-

ture activities about 64%. Lowest priority for funding was given to education (only 19% of estimated needs) and early recovery activities (23%).

High food prices

According to FEWnet (05/10), nominal retail prices of rice, red beans and lentil increased in Sana'a, Aden, Taiiz and Hodeida between February and March 2010, bringing about changes in access to food. These changes in prices can be attributed to tension between the north and south. Rice is imported through the southern port of Aden and transported to Sana'a and any tension between the south and the government affects trade flow to the capital Sana'a and causes prices to spike.

Figure 15: Results of nutrition surveys among refugees in June 2009, Yemen (UNHCR/joint, 06/09)



In close collaboration with the Government of Yemen, UNHCR re-established its operations in Yemen in 1992, following the large influx of Somali refugees. The main programme objective has been to provide international protection to registered refugees, asylum seekers, internally displaced persons, and other people of concern in camp and urban situations. The operation provides basic humanitarian assistance and support that is aimed at attaining durable solutions. As of the end February 2009, approximately 140 000 refugees were being assisted and supported by UNHCR in Yemen. Most of these came from Somalia, Ethiopia, Iraq, and Eritrea. The majority of the refugees are in urban areas and about 11,500 refugees reside in Kharaz camp. The Somali refugees are of great concern as they live predominantly in the urban area of Basate'en, in Aden, where access to services is limited and living conditions are poor.

Refugee and host community population affected by malnutrition

Monitoring and screening in Hajjah Governorate has revealed that the incidence of acute malnutrition, diarrhoea and anaemia is on the rise among all population groups – IDPs in the camps, scattered IDPs, and host communities. This is likely to be the result of harsh weather

conditions: low temperatures at night in winter, oppressive heat and humidity during the summer months. Reduced food rations are likely to exacerbate the situation. The ability to cope with these conditions is diminished by the fact that many basic necessities are not available on the market and prices are soaring (OCHA, 06/10).

Between March and June 2009, UNHCR and the Mentor Initiative jointly conducted a nutrition survey in Kharaz refugee camp, Basateen camp, Sana'a urban refugee population. The Kharaz refugee camp hosts some 13 500 people (UNHCR, 2010). According to the survey results, the overall GAM rate among the refugees was 9.3% (CI: 8.1-10.8 based on NCHS reference), with a SAM rate of 1.4% (CI: 0.9-2.0), indicating a worrisome situation (figure 15). The prevalence of GAM was highest among refugees in the city of Sana'a, Yemen's capital (10.9%, CI: 8.0-14.6) and the lowest rates were found in Kharaz camp, with GAM being at 7.2% (CI: 5.4-9.5). A prevalence of GAM of 9.9% (CI: 6.5-14.8) was estimated in the host community in Kharaz village. Anaemia prevalence among children 6-59 months old was estimated at 44.3% in the urban refugee population of Sana'a city. Overall, 30.8% of non pregnant women of reproductive age were affected by anaemia.

Caribbean

Haiti

Months after the earthquake that killed an estimated 230 000 people and injured another 300 000, the country is still struggling to recover. A staggering 2.3 million people – nearly one quarter of the population – were displaced in Port-au-Prince, Jacmel, and other surrounding towns, and nearly one year later, the number of people in relief camps still stands at approximately 1.6 million. While



many have settled in well managed camps, others survive in spontaneous settlements without electricity, running water, or sewage disposal.

The biggest challenge is the lack of available land on which to build, either because land ownership is unclear or because plots are blocked by debris. Clarifying land rights is a major obstacle. It is essential that the authori-

ties address the problem and enable large scale transitional shelter construction and ultimately, permanent housing solutions.

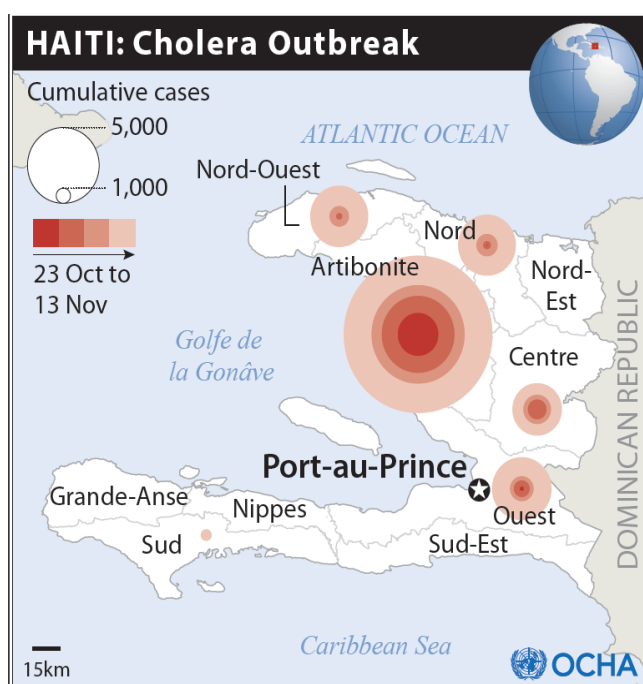
Cholera outbreak

At the end of October 2010, the Ministry of Health (MSPP) reported close to 19 000 confirmed cases of cholera and more than 1 100 deaths since the start of the epidemic in October (map 4). Originating in the rural department of Artibonite, it has since spread to other departments and the capital city. The situation is evolving rapidly. Civil unrest erupted November 15, hindering attempts to respond to the outbreak. The overall case mortality rate, which includes deaths outside hospitals, is estimated at 2.3%. Standardization of chlorination levels, management of dead bodies, and disposal of excreta remain key issues (OCHA, 17/11/10).

The health cluster continues to ramp up the response to cholera and has set up cholera treatment centres (CTCs) and units (CTUs) in affected areas. Health cluster partners are supporting the MSPP cholera response strategy through the establishment of additional CTCs/CTUs, the reinforcement of existing medical structures, and support for oral rehydration centres as first-line response.

The Nutrition Cluster's response strategy is two-fold: the prevention of new cases, particularly among children, and addressing care of affected patients. Special attention has been given to breastfeeding promotion and IYCF as a means to prevent cholera in infants and young children. The establishment of baby tents and community outreach through community health workers at the community level are high priorities. In terms of care, cholera treatment protocols now also include zinc, ORS, and supplementary and therapeutic feeding in CTCs and CTUs for both adults and children. All nutrition partners are encouraged to offer support, although it is recognized that the capacities of partners are limited (GNC, 19/11/10).

Food assistance is being provided to hospital personnel and caregivers to avoid cross contamination, and to patients both during convalescence and at discharge. WFP continues to provide people in affected areas with meals-ready-to-eat (MREs), and where appropriate, dry rations. WFP also delivers Plumpynut, a high energy supplement, to children 6-59 months old. The nutrition cluster and the WFP are developing a joint plan on how best to treat moderately and acutely malnourished patients in hospitals and CTCs (OCHA, 30/10/10).



Map 4: Cholera Outbreak – Haiti (OCHA, October 2010)

Results of surveys

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI)§		Severe Acute Malnutrition** (%) (95% CI)§		Oe-dema (%)	MUAC# (%)
GREATER HORN OF AFRICA										
ETHIOPIA										
AMHARA REGION										
North Wollo Zone										
Gubalafto Woreda	Jun-09	Residents	156,816	Concern	8.1 8.4 ^I	5.6-10.6 6.0-11.7	0.3 0.9 ^I	0-0.7 0.4-1.9	0	MUAC <11 cm: 0.3 MUAC <12.5 cm: 8.7
South Wollo Zone										
Ambassel Woreda	Mar-09	Residents	150,264	Concern	11.4 11.1 ^I	8.5-14.5 8.0-14.2	0.9 1.6 ^I	0.1-1.7 0.5-2.8	0	MUAC <11 cm: 0.3 MUAC <12.5 cm: 8.7
Ambassel Woreda	Aug-09	Residents	150,003	Concern	12.8 12.5 ^I	9.9-15.7 9.8-15.2	1.1 1.6 ^I	0.4-1.9 0.5-2.8	0	MUAC <11 cm: 1.1 MUAC <12.5 cm: 13.5
Ambassel Woreda	Feb-10	Residents	127,125	Concern	9.7 8.6 ^I	6.6-12.7 5.6-11.6	0.2 1.1 ^I	0-0.6 0.3-1.9	0	MUAC < 11 cm: 0.2 MUAC <12.5 cm: 16.2
Dessie Zuria Woreda	Sep-09	Residents	172,428	Concern	12.8 14.2 ^I	9.1-16.6 10.4-18.0	6.2 1.3 ^I	4.0-8.4 0.4-2.3	0	MUAC <11 cm: 0.7 MUAC <12.5 cm: 12.8
Worebabo Woreda	Sep-09	Residents	121,402	Concern	9.7 11.1 ^I	7.4-11.9 8.6-13.5	0.0 0.6 ^I	0.0 0.1-1.2	0.2	MUAC <11 cm: 1.1 MUAC <12.5cm: 19.7
BENESHANGULE-GUMUZ REGION										
Asosa Zone										
Sherkole camp	Jun-09	Refugees	-	UNHCR, ARRA, WFP	7.9 7.9 ^I	Exhaustive	0.3 1.3 ^I	Exhaus- tive	-	-
GAMBELA REGION										
Gambela Zone										
Pugnido camp (Fugnido)	Jun-09	Refugees	-	UNHCR, ARRA, WFP	11.4 10.1 ^I	8.4-14.4 7.3-12.8	0.7 1.9 ^I	0-1.4 0.9-2.8	-	-
SNNP REGION										
Hadiya Zone										
Shashago Woreda	Feb-09	Residents	134,296	Concern	6.8 -	4.5-9.1 -	-	-	0	MUAC <11 cm: 0.8 MUAC <12.5 cm: 13.8
Sorro Woreda	Feb-09	Residents	225,120	Concern	12.4 -	8.9-16.0 -	-	-	0	MUAC <11 cm: 2.7 MUAC <12.5 cm: 28.6

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	(%)	(%)	(%)				
16.3	78.9	-	90.6	MUAC <21cm All women: 11.2 Pregnant/lactating women: 7.3	0.17	0.07-0.44	0.37	0.07-2.07
...								
18.9	87.5	-	93.1	MUAC <21cm All women: 10.0 Pregnant/lactating women: 14.7	0.22	0.03-0.41	0.78	0.00-2.57
18.1	82.2	-	93.9	MUAC <21cm All women: 9.5 Pregnant/lactating women: 0.0	0.07	0.00-0.20	0.0	0.0
25.5	87.5	-	95.4	MUAC <21cm: All women: 9.5 Pregnant/lactating women: 0.0	0.09	0.00-0.23	0.0	0.0
30.9	83.4	-	92.9	MUAC <21cm All women: 22.5 Pregnant/lactating women: 9.6	0.48	0.17-0.79	0.89	0.00-2.64
19.1	83.6	-	94.0	MUAC <21cm All women: 16.2 Pregnant/lactating women: 20.3	0.37	0.04-0.71	1.33	0.00-2.98
...								
.								
	97.9	Anaemia: 6-59months <11g/dl: 21.5 non-pregnant <12g/dl: 6.3	Card: 54.5 Card & Recall: 96.3	-	0.26	-	1.24	-
...								
.								
	87.2	Anaemia: 6-59months <11g/dl: 42.3 non-pregnant <12g/dl: 27.6	Card & Recall: 96.3	-	0.23	0.00-0.73	0.4	0.00-1.77
...								
.								
11.0	70.2	-	68.8	-	0.18	0.00-0.36	0.2	0.00-0.57
16.5	64.3	-	71.2	-	0.28	0.01-0.46	0.75	0.00-1.52

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI)§		Severe Acute Malnutrition** (%) (95% CI)§		Oe-dema (%)	MUAC# (%)
Jijiga Zone										
Awbarre camp	Jul-09	Refugees	-	UNHCR, ARRA, WFP	10.2 12.5'	8.0-12.5 9.5-15.5	1.2 2.5'	0.7-1.7 1.7-3.3	-	-
K/Beyah camp	Jun-09	Refugees	-	UNHCR, ARRA, WFP	11.4 10.6'	10.4-12.4 8.9-12.4	0.9 1.5'	0.4-1.5 1.1-2.3	-	-
Sheder camp	Jun-09	Refugees	-	UNHCR, ARRA, WFP	7.6 7.8'	Exhaustive	1.0 2.4'	Exhaus-tive	-	-
TIGRAY REGION										
Mayaini camp	Jul-09	Refugees	-	UNHCR, ARRA, WFP	2.9 4.3'	Exhaustive	0.0 0.0'	Exhaus-tive	-	-
Shimelba camp	Jul-09	Refugees	-	UNHCR, ARRA, WFP	11.9 11.0'	8.6-15.2 7.8-14.1	0.3 0.5'	0-0.7 0.0-1.0	-	-
KENYA										
EASTERN PROVINCE										
Kitui District (Ikutha, Mutomo, Mutonguni and Yatta division)	Oct-09	Residents	628,615	AAH-US	7.9 8.9'	6.0-10.4 6.8-11.7	0.6 1.5'	0.2-1.7 0.7-3.0	0.5	MUAC <11.5 cm: 0.1 MUAC < 12.5 cm: 3.8
Mwingi district (Tseikuru, Ngomeni, Nguni and Nuu division)	Oct-09	Residents	353,060	AAH-US	7.9 8.3'	6.0-10.4 6.1-11.3	0.0 0.6'	0 0.2-1.5	0	MUAC <11.5 cm: 0.9 MUAC < 12.5 cm: 5.1
NORTH EASTERN PROVINCE										
Garissa District – Dadaab Camp										
Dagahaley camp	Aug-09	Refugees	91,648	UNHCR	12.0 12.1'	9.7-14.3 10.0-14.2	1.1 1.2'	0.3-1.8 0.5-2.0	1.1	MUAC <11 cm: 1.4 MUAC <11.5 cm: 2.0 MUAC <12.5 cm: 9.5
Dagahaley camp (MSF intervention radius)	Mar-09	Refugees	-	MSF	20.4 22.3'	16.6-24.2 19.4-25.1	4.1 7.1'	2.2-6.0 5.3-8.9	-	MUAC <11 cm: 0.4 MUAC <12.5 cm: 8.1

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	(%)	(%)		
...					
-	90.9	Anaemia 6-59months <11g/dl: 32.1 non-pregnant women <12g/dl: 14.6	Card: 68.4 Card & Recall: 92.9	-	0.12 0.00-0.26 0.27 0.00-0.82
-	98.2	Anaemia 6-59months <11g/dl: 38.2 non-pregnant women <12g/dl: 13.7	Card: 81.2 Card & Recall: 97.8	-	0.16 0.06-0.27 0.46 0.11-0.80
-	80.8	Anaemia 6-59months <11g/dl: 38.0 non-pregnant women <12g/dl: 18.5	Card: 66.5 Card & Recall: 75.3	-	0.53 0.20-0.87 1.0 0.07-1.92
...					
-	93.1	-	Card: 39.0 Card & Recall: 69.5	-	0.10 - 0.0 -
-	92.0	Anaemia 6-59months <11g/dl: 22.1	Card: 95.6 Card & Recall: 97.0	-	0.09 - 0.39 -
...					
71.7	95.4	-	39.2 once/year 55.1 twice or more 5.7 not received	-	0.03 0.00-0.15 0.0 0.0
59.8	-	-	59.3 once a year 30.1 twice or more 10.6 not received	-	0.12 0.04-0.13 0.29 0.08-1.05
...					
47.3	86.9	Anaemia 6-59month <11g/dl: 77.4 non-pregnant women <7g/dl: 1.3 <12g/dl 73.1	6-59 months: 80.1 lactating women: 71.4	MUAC non-pregnant/non-lactating women <18 cm: 0.0 ≤21 cm: 1.8 pregnant/lactating women: <20.7 cm: 0.6 ≤23cm: 9.0	- - - -
12.7	70.4	-	-	-	0.2 0.00-0.40 0.3 0.0-0.70

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI) [§]		Severe Acute Malnutrition** (%) (95% CI) [§]		Oe-dema (%)	MUAC# (%)
Dagahaley camp (MSF intervention radius)	Mar-09	Host community	-	MSF	19.2 26.0 [†]	11.4-27.0 16.9-35.1	1.0 2.0 [†]	0.0-2.9 0.0-5.2	-	MUAC <11 cm: 2.0 MUAC <12.5 cm: 26.0
Hagadera camp	Aug-09	Refugees	94,124	UNHCR	13.6 12.7 [†]	9.5-17.7 9.1-16.2	0.8 1.1 [†]	0-1.5 0.2-1.9	0.8	MUAC <11 cm: 0.6 MUAC <11.5 cm: 1.2 MUAC <12.5 cm: 6.2
Ifo camp	Aug-09	Refugees	98,027	UNHCR	12.6 12.6 [†]	9.2-15.9 9.4-15.9	0.6 -	0.1-1.2 -	0.2	MUAC <11 cm: 0.8 MUAC <11.5 cm: 1.6 MUAC <12.5 cm: 7.3
SOMALIA										
National	Mar-Aug 09	Residents/ IDPs	-	FSNAU/ joint	13.2 13.9 [†]	11.6-15.0 11.9-16.0	2.9 4.0 [†]	2.1-3.9 3.1-4.9	0.6	MUAC <11 cm: 1.7 MUAC <12.5 cm: 8.4
Northwest	Mar-Aug 09	Residents/ IDPs	1,655,825	FSNAU/ joint	13.6 13.9 [†]	11.0-16.7 11.6-16.5	2.7 4.1 [†]	1.7-4.2 3.0-5.6	-	MUAC <11 cm: 1.8 MUAC <12.5 cm: 7.3
Northeast	Mar-Aug 09	Residents/ IDPs	1,079,188	FSNAU/ joint	9.8 10.7 [†]	8.1-11.5 8.6-12.7	1.0 1.3 [†]	0.3-1.7 0.5-2.0	-	MUAC <11 cm: 1.1 MUAC <12.5 cm: 4.8
South Central	Mar-Aug 09	Residents/ IDPs	4,092,947	FSNAU/ joint	15.6 16.5 [†]	12.2-19.7 13.0-20.6	4.4 5.9 [†]	2.8-7.0 3.9-8.7	-	MUAC <11 cm: 1.8 MUAC <12.5 cm: 9.8
SUDAN										
EASTERN SUDAN										
Um Gargour Camp (Gadaref)	Feb-09	Refugees	8,157	UNHCR/ joint ²	- 25.5 [†]	- 22.0-29.0	- 7.9 [†]	- 5.2-10.5	0.1	MUAC <11 cm: 1.3 MUAC <12.5 cm: 12.5
Fau 5 camp (Al Jazirah)	Feb-09	Refugees	805	UNHCR/ joint ²	- 7.1 [†]	Exhaustive	- 2.6 [†]	Exhaustive	0.0	MUAC <11 cm: 1.3 MUAC <12.5 cm: 18.5
Abuda camp (Kassala)	Feb-09	Refugees	2,600	UNHCR/ joint ²	14.1 13.6 [†]	Exhaustive	2.4 4.0 [†]	Exhaustive	0.2	-

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						
1.0	53.1	-	-	-	-	-	-
62.8	92.6	Anaemia 6-59 month <11g/dl: 70.6 non-pregnant women <7g/dl: 2.9 <12g/dl 64.0	6-59 months: 91.9 lactating women: 66.9	MUAC non-pregnant/non-lactating women <18 cm: 0.0 ≤21 cm: 3.5 pregnant/lactating women: <20.7 cm: 1.2 ≤23cm: 9.6	-	-	-
53.7	91.5	Anaemia 6-59 month <11g/dl: 81.0 non-pregnant women <7g/dl: 1.3 <12g/dl 73.1	6-59 months: 79.1 lactating women: 71.4	MUAC non-pregnant/non-lactating women: <18 cm: 0.0 ≤21 cm: 5.3 pregnant/lactating women: <20.7 cm: 4.4 ≤23cm: 11.4	-	-	-
...							
-	-	Anaemia non-pregnant: <12g/dl 46.6	-	women 15-49 years: BMI < 18,5kg/m ² : 21.5 BMI >25 kg/m ² : 20.7	-	-	-
-	-	Anaemia non-pregnant: 38.5 all women: goiter: 3.3	-	women 15-49 years: BMI < 18,5kg/m ² : 21.0 BMI >25 kg/m ² : 27.3	-	-	-
-	-	Anaemia non-pregnant: <12g/dl 50.2	-	women 15-49 years: BMI < 18,5kg/m ² : 14.7 BMI >25 kg/m ² : 32.7	-	-	-
-	-	Anaemia non-pregnant: 50.5 all women: goiter: 1.4	-	women 15-49 years: BMI < 18,5kg/m ² : 24.0 BMI >25 kg/m ² : 13.8	-	-	-
...							
-	-	Anaemia 6-59 months: <8g/dl: 17.4 <9.5g/dl: 34.1 <11g/dl: 65.9	-	-	0.0	-	0.0
-	-	Anaemia 6-59 months: <8g/dl: 12.2 <9.5g/dl: 32.2 <11g/dl: 53.3	-	-	0.0	-	0.0
-	-	Anaemia 6-59 months: <8g/dl: 6.1 <9.5g/dl: 17.5 <11g/dl: 49.0	-	-	0.0	-	0.0

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI) [§]		Severe Acute Malnutrition** (%) (95% CI) [§]		Oedema (%)	MUAC# (%)
Girba camp (Kassala)	Feb-09	Refugees	5,121	UNHCR/joint ²	16.1 17.2 [†]	11.3-21.0 12.8-21.6	1.7 3.7 [†]	0.3-3.0 1.9-5.6	0.0	MUAC <11 cm: <1.0 MUAC <12.5 cm: 6.7
Kilo 26 camp (Kassala)	Feb-09	Refugees	7,086	UNHCR/joint ²	14.2 15.0 [†]	11.2-17.1 11.1-18.9	0.6 1.8 [†]	0-1.1 0.7-2.9	0.0	MUAC <11 cm: <1.0 MUAC <12.5 cm: 7.8
Shagarabs Camps I-III (Kassala)	Feb-09	Refugees	18,916	UNHCR/joint ²	20.1 21.2 [†]	16.1-24.1 17.3-25.2	3.6 7.9 [†]	2.3-4.8 6.2-9.5	0.2	MUAC <11 cm: 1.0 MUAC <12.5 cm: 13.4
Wad Sherifey (Kassala)	Feb-09	Refugees	14,957	UNHCR/joint ²	13.2 -	10.3-16.2 -	1.2 -	0.5-2.0 -	0.2	MUAC <11 cm: <1.0 MUAC <12.5 cm: 0.3
Suki Camp I-III (Sennar)	Feb-09	Refugees	1,173	UNHCR/joint ²	6.0 7.5 [†]	Exhaustive	1.5 2.3 [†]	Exhaustive	0.0	MUAC <11 cm: 2.2 MUAC <12.5 cm: 8.2
SOUTH SUDAN										
Aweil West & North Counties	Nov-09	Residents, Returnees, IDPs	300,000	Concern Worldwide	17.0 17.6 [†]	14.7-19.6 15.2-20.3	3.0 3.7 [†]	2.0-4.3 2.6-5.2	-	MUAC <11 cm: 0.8 MUAC <12.5 cm: 9.3
Gogrial West County	Feb-10	Residents	583,975 (558,501) ³	AAH-US	19.1 20.0 [†]	16.1-22.0 16.5-23.4	1.6 2.7 [†]	0.5-2.7 1.4-4.0	-	MUAC <11.5 cm: 0.7 MUAC <12.5 cm: 6.0
WEST AFRICA NIGER										
Whole country	Jun-09	Residents	14,693,000	Joint ⁴	11.3 12.3 [†]	10.2-12.6 11.2-13.4	0.8 2.1 [†]	0.6-1.1 1.7-2.5	-	-
Agadez (urban)	Jun-09	Residents	465,000 (total)	Joint ⁴	11.4 11.7 [†]	8.4-15.3 8.7-15.5	0.4 2.5 [†]	0.2-1.1 1.4-4.2	-	-
Diffa Region	Jun-09	Residents	458,000	Joint ⁴	16.8 17.0 [†]	13.1-21.1 13.3-22.5	1.5 3.4 [†]	0.8-2.9 2.0-5.9	-	-
Dosso Region	Jun-09	Residents	1,957,000	Joint ⁴	11.9 12.3 [†]	9.3-15.2 9.6-15.5	0.9 2.5 [†]	0.4-1.8 1.7-3.8	-	-
Maradi Region	Jun-09	Residents	2,927,000	Joint ⁴	10.7 13.1 [†]	8.5-13.4 10.7-15.9	0.8 1.8 [†]	0.5-1.5 1.3-2.5	-	-
Tahoua Region	Jun-09	Residents	2,576,000	Joint ⁴	11.3 10.9 [†]	8.8-14.3 8.6-13.8	0.5 1.6 [†]	0.2-1.3 0.9-2.6	-	-

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				
-	-	Anaemia 6-59 months: <8g/dl: 7.8 <9.5g/dl: 23.5 <11g/dl: 56.2	-	-	0.14 0.02-0.27 0.13 0.00-0.33
-	89.1	Anaemia 6-59 months: <8g/dl: 5.6 <9.5g/dl: 23.2 <11g/dl: 60	84.1	-	0.0 - 0.0 -
-	86.9	Anaemia 6-59 months: <8g/dl: 5.5 <9.5g/dl: 22.1 <11g/dl: 50.3	73.3	-	0.22 0.02-0.42 0.38 0.00-0.77
-	93.1	Anaemia 6-59 months: <8g/dl: 9.0 <9.5g/dl: 18.6 <11g/dl: 59.6	84.6	-	0.0 - 0.0 -
-	-	Anaemia 6-59 months: <8g/dl: 19.5 <9.5g/dl: 39.5 <11g/dl: 70.0	-	-	0.0 - 0.0 -
...					
-	27.8	-	33.1	MUAC (95%CI) pregnant women <20.7 cm: 2.2 (0.4-8.4) <23 cm: 32.6 (23.4-43.3) non-pregnant: <18.5 cm: 1.3 (0.5-3.2) <21 cm: 2.9 (1.5-5.3)	1.3 0.80-2.1 0.7 0.50-1.00
-	0.2	7.1	-	-	0.16 0.07-0.40 0.39 0.12-1.32
...					
39.0	65.5	-	88.0	-	- - - -
63.8	86.7	-	90.9	-	- - - -
43.5	64.0	-	87.6	-	- - - -
46.2	76.8	-	93.9	-	- - - -
38.0	62.0	-	85.5	-	- - - -
43.9	72.2	-	85.2	-	- - - -

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI) [§]		Severe Acute Malnutrition** (%) (95% CI) [§]		Oe-dema (%)	MUAC# (%)
Tillabéri Region	Jun-09	Residents	2,430,000	Joint ⁴	6.8 8.6 [†]	5.2-8.7 6.6-11.1	0.3 0.7 [†]	0.1-1.3 0.3-1.6	-	-
Zinder Region	Jun-09	Residents	2,734,000	Joint ⁴	15.0 15.4 [†]	11.3-19.5 12.8-18.4	1.4 3.6 [†]	0.8-2.5 2.5-5.1	-	-
Niamey (capital district)	Jun-09	Residents	1,146,000	Joint ⁴	9.9 10.1 [†]	7.9-12.2 8.0-12.6	0.9 1.6 [†]	0.4-1.9 0.9-3.0	-	-
TAHOUA REGION										
Illéla Department	Jul-09	Residents	337,628	Concern	8.9 11.5 [†]	- 8.0-16.2	0.7 0.8 [†]	- 0.2-2.8	-	MUAC ⁵ <11 cm: 0.2 MUAC ⁵ ≤12.5 cm: 7.1
Tahoua Department	Jul-09	Residents	460,687	Concern	10.4 13.1 [†]	- 7.5-21.7	0.0 0.2 [†]	- 0.0-1.3	-	MUAC ⁵ <11 cm: 0.3 MUAC ⁵ ≤12.5 cm: 4.4
CENTRAL AFRICA CHAD										
Ouddai Region										
Abéché ville (Capital)	Jul-09	Residents	131,625	ACF-F	20.6 22.7 [†]	17.2-24.1 18.9-26.6	3.2 6.3 [†]	2.1-4.2 4.7-8.0	0.8	MUAC ⁵ <11 cm: 0.7 MUAC ⁵ <12 cm: 5.4
Wadi Fira Region										
Amnaback camp (Kobé district)	Mar-09	Refugees	16,969	UNHCR, UNICEF, IMC, Care	-	-	-	-	-	MUAC ⁵ <11 cm: 0.3 MUAC ⁵ ≤12.5 cm: 6.0
Bahr el Gazel Region										
Bahr El Gazal	Dec-09	Residents/Refugees-	-	ACF-F	26.9	23.4-30.4	4.5	2.9-6.2	-	-
DEMOCRATIC REPUBLIC OF THE CONGO										
Bandundu Province										
Zone de santé de Pay Kongila	Oct-09	Residents	130,169	AAH-US	14.8 16.2 [†]	11.8-17.7 13.1-19.4	2.8 5.4 [†]	1.4-4.2 3.5-7.3	2.0	MUAC ⁵ <11 cm: 4.8 MUAC ⁵ <12 cm: 10.6
Zone de santé de Yasa Bonga	Oct-09	Residents	180,439	AAH-US	7.2 8.0 [†]	5.6-8.9 6.1-9.8	0.4 1.4 [†]	0.0-0.9 0.5-2.3	0.3	MUAC ⁵ <11 cm: 0.7 MUAC ⁵ <12 cm: 2.5
Bas Congo Province										
Zone de santé de Kuimba	Dec-09	Residents	82,653	AAH-US	10.3 9.9 [†]	7.5-13.1 7.1-12.6	1.3 2.4 [†]	0.6-1.9 1.5-3.2	1.2	MUAC ⁵ <11 cm: 0 MUAC ⁵ <12 cm: 1.4

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				
53.7	78.5	-	87.2	-	-
21.4	50.1	-	88.9	-	-
56.9	74.0	-	91.6	-	-
...					
30.2	70.4	-	88.2	-	0.46 0.21-0.70 0.38 0.28-1.05
31.6	61.1	-	88.3	-	0.56 0.26-0.86 0.99 0.19-1.80
...					
...					
49.8	86.2	-	-	-	0.78 0.48-1.09 0.49 0.00-1.00
...					
-	-	-	-	-	-
...					
-	-	-	-	-	0.94 0.67-2.51 1.59 0.53-1.34
...					
42.7	82.7	-	78.9	-	0.88 0.26-1.50 1.35 0.42-2.29
57.1	86.7	-	88.4	-	- - - -
...					
83.6	94.2	-	94.8	-	0.51 0.11-0.90 0.68 0.08-1.28

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI) [§]		Severe Acute Malnutrition** (%) (95% CI) [§]		Oedema (%)	MUAC# (%)
Zone de santé de Muanda	Nov-09	Residents	116,667	AAH-US	5.7 5.7 ⁱ	4.1-7.3 4.4-7.1	0.4 0.8 ⁱ	0.0-0.9 0.3-1.3	0.0	MUAC ⁵ <11 cm: 0.3 MUAC ⁵ <12 cm: 2.2
Zone de santé de Ngidinga	Dec-09	Residents	132,331	AAH-US	14.1 14.7 ⁱ	11.0-17.3 11.2-18.2	2.6 4.1 ⁱ	1.4-3.8 2.8-5.4	1.8	MUAC ⁵ <11 cm: 0.5 MUAC ⁵ <12 cm: 5.1
Kasai Oriental Province										
Zone de santé de Kabinda	Jan-09	Residents	226,768	AAH-US	12.2 11.2 ⁱ	8.8-15.7 8.1-14.3	4.3 4.4 ⁱ	2.3-6.2 2.4-6.5	3.6	MUAC ⁵ <11 cm: 2.7 MUAC ⁵ <12 cm: 9.3
Zone de santé de Kata-kokombe	Dec-09	Residents	98,753	AAH-US	9.6 9.9 ⁱ	6.8-12.4 7.1-12.7	1.2 2.7 ⁱ	0.5-2.0 1.5-3.9	0.4	MUAC ⁵ <11 cm: 1.0 MUAC ⁵ <12 cm: 3.6
Zone de santé de Kole	Dec-09	Residents	81,318	AAH-US	15.7 14.8 ⁱ	12.7-18.8 11.8-17.8	1.2 2.8 ⁱ	0.3-2.0 1.4-4.2	0.4	MUAC ⁵ <11 cm: 0.1 MUAC ⁵ <12 cm: 1.6
Katanga Province										
Zone de santé de Ankoro	Nov-09	Residents	206,528	AAH-US	4.3 4.8 ⁱ	2.6-6.0 3.1-6.5	0.5 0.6 ⁱ	0.1-1.0 0.2-1.1	0.5	MUAC ⁵ <11 cm: 1.1 MUAC ⁵ <12 cm: 2.8
Zone de santé de Mulongo	Oct-09	Residents	260,971	AAH-US	5.0 5.0 ⁱ	3.2-6.8 3.4-6.6	0.1 0.8 ⁱ	0.0-0.3 0.0-1.6	0.1	MUAC ⁵ <11 cm: 0.2 MUAC ⁵ <12 cm: 2.6
North Kivu Province										
Zone de santé de Kirotshé	Mar10	86% Residents ⁶ , 4% IDPs ⁶ , 10% Returnees ⁶	318,655	AAH-US	5.9 5.8 ⁱ	4.2-7.5 4.0-7.6	0.2 0.3 ⁱ	0.0-0.4 0.0-0.6	0.1	MUAC ⁵ <11 cm: 0.2 MUAC ⁵ <12 cm: 1.6
Oriental Province										
Zone de santé de Niangara	Feb-10	Residents	92,477	AAH-US	6.8 5.3 ⁱ	4.6-9.1 3.4-7.1	1.4 1.4 ⁱ	0.5-2.4 0.5-2.4	-	MUAC ⁵ <11 cm: 0.4 MUAC ⁵ <12 cm: 1.1
Zone de santé de Rungu	Mar-10	Residents	88,875	AAH-US	5.3 5.4 ⁱ	3.9-6.7 3.8-7.0	0.7 1.7 ⁱ	0.1-1.3 0.8-2.6	-	MUAC ⁵ <11 cm: 0.6 MUAC ⁵ <12 cm: 2.3
South Kivu Province										
Zone de santé de Bunyakiri	Dec-09	81.6% Residents ⁶ , 18.4% IDPs ⁶	98,315*	AAH-US	6.6 6.8 ⁱ	4.3-8.8 4.4-9.2	0.4 1.2 ⁱ	0.0-0.9 0.5-2.0	0.3	MUAC ⁵ <11 cm: 0.4 MUAC ⁵ <12 cm: 1.6
Zone de santé de Minova	Mar-09	Residents/IDPs	164,385	AAH-US	4.3 3.4 ⁱ	3.0-5.6 2.5-4.4	1.0 0.4 ⁱ	0.4-1.5 0.0-0.8	0.4	MUAC ⁵ <11 cm: 0.4 MUAC ⁵ <12 cm: 2.2

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				
29.7	85.5	-	83.9	-	0.12 0.01-0.22 0.23 0.00-0.53
65.3	97.1	-	95.4	-	0.79 0.45-1.12 2.20 1.11-3.30
...					
47.8	82.5	-	82.7	-	1.29 0.65-1.92 2.57 1.39-3.75
12.9	90.0	-	92.4	-	0.62 0.18-1.07 1.05 0.31-1.80
13.7	64.3	-	87.6	-	0.45 0.09-0.82 1.05 0.25-1.84
...					
19.5	78.7	-	76.1	-	0.55 0.14-0.97 1.32 0.43-2.21
18.6	62.1	-	68.2	-	0.56 0.12-1.00 1.05 0.00-2.11
...					
0.3	89.3	-	93.6	-	0.26 0.06-0.45 0.30 0.00-0.61
...					
3.7	83.0	-	89.7	-	0.94 0.52-1.36 1.14 0.40-1.87
0.4	83.5	-	94.6	-	0.87 0.38-1.35 1.32 0.18-2.46
...					
4.8	79.8	-	90.9	-	0.40 0.24-0.56 1.03 0.44-1.61
4.7	88.2	-	92.0	-	0.17 0.00-0.33 0.31 0.00-0.63

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI) [§]		Severe Acute Malnutrition** (%) (95% CI) [§]		Oe- dema (%)	MUAC# (%)
UGANDA										
Northeastern Region										
Karamoja Subregion	Jan-10	Residents	60,000	GTZ	11.6 12.7 ⁱ	8.7-14.5 9.7-15.7	0.8 3.2 ⁱ	0-1.7 1.6-4.7	-	-
SOUTHERN AFRICA MADAGASCAR										
Androy Re- gion	Apr-09	Residents	70,448	UNICEF	10.6 10.9 ⁱ	8.3-13.4 8.5-13.9	0.8 1.5 ⁱ	0.4-1.9 0.8-2.7	-	-
Androy Re- gion	Nov-09	Residents	70,448	UNICEF	4.5 4.7 ⁱ	3.3-6.0 3.2-6.9	0.1 0.4 ⁱ	0.0-0.8 0.2-1.1	-	-
Anosy Re- gion	Apr-09	Residents	75,116	UNICEF	13.5 14.5 ⁱ	10.9-16.5 12.2-17.2	0.4 3.0 ⁱ	0.1-1.8 2.4-4.0	-	-
Anosy Re- gion	Nov-09	Residents	75,116	UNICEF	6.2 6.1 ⁱ	4.7-8.2 4.3-8.7	0.5 0.3 ⁱ	0.2-1.3 0.1-1.0	-	-
ZIMBABWE										
Makoni Dis- trict (Manicaland Province)	Nov-09	Residents: 96.5% Returnees: 0.3% IDPs: 3.2%	277,049	GOAL	-	-	-	-	-	MUAC <11.5 cm: 1.3 MUAC < 12.5 cm: 10.7
ASIA BANGLADESH										
Chittagong division										
Nayapara and Kutupa- long camp	Sep-09	Refugees	28,284	HKI	17.1 18.7 ⁱ	14.7-19.5 16.2-21.2	0.6 2.0 ⁱ	0.1-1.1 1.1-2.9	0.1	-
Nayapara camp	Sep-09	Refugees	-	HKI	- 19.0 ⁱ	- 15.7-22.3	- 2.1 ⁱ	- 0.9-3.3	0.0	-
Kutupalong	Sep-09	Refugees	-	HKI	- 18.4 ⁱ	- 14.6-22.2	- 2.0 ⁱ	- 0.6-3.4	0.2	-

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							
...								
-	85.5	-	90.4	non-pregnant women (18-49 years): BMI<18.5kg/m²: 26.1 BMI>25kg/m²: 1.2	-	-	-	-
...								
-	-	-	-	-	0.37	0.23-0.61	0.51	0.18-1.44
-	-	-	-	-	0.25	0.15-0.44	0.0	0.0
-	-	-	-	-	0.22	0.11-0.46	0.24	0.06-0.96
-	-	-	-	-	0.13	0.08-0.24	0.20	0.06-0.61
...								
67.9	96.6	-	28.1	-	-	-	-	-
...								

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI)§		Severe Acute Malnutrition** (%) (95% CI)§		Oe- dema (%)	MUAC# (%)
MIDDLE EAST YEMEN										
Aden Governorate, Lahjj Governorate, Sana’a (capital city)										
Kharaz refu- gee camp, Basateen Camp, Sana'a urban refu- gee popula- tion	Jun-09	Refugees	-	UNHCR/ joint ⁷	9.3 <i>9.3¹</i>	5.3-13.1 <i>8.1-10.8</i>	0.6 <i>1.4¹</i>	0.3-1.8 <i>0.9-2.0</i>	0.0	-
Basateen Camp	Jun-09	Refugees	-	UNHCR/ joint ⁷	9.2 -	6.2-13.5 -	0.2 -	0.1-0.9 -	-	-
Kharaz Camp	Jun-09	Refugees	-	UNHCR/ joint ⁷	7.2 -	5.4-9.5 -	0.5 -	0.2-1.2 -	-	-
Kharaz Vil- lages	Jun-09	Refugees	-	UNHCR/ joint ⁷	9.9 -	6.5-14.8 -	1.0 -	0.3-3.5 -	-	-
Sana'a urban Refugees	Jun-09	Refugees	-	UNHCR/ joint ⁷	10.9 -	8.0-14.6 -	0.8 -	0.4-1.7 -	-	-

*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 UNHCR/joint = UNHCR in collaboration with WFP, MoH, COR, HAI, SRC, GHF

³ The survey represents only 96% of the total estimated population due to inaccessibility

⁴ Joint = National Bureau of Statistics of Niger, Ministry of Public Health in collaboration with UNICEF, WFP, HKI, FIDA

⁵ Height ≥ 65 cm

⁶ Among the children measured

⁷ UNHCR/joint=UNHCR in collaboration with MoH, UNICEF, IDF, CSSW, MENTOR Initiative, WFP, WHO, NMCP, MoPHP.

⁸ Anaemia prevalence was assessed in a separate survey by the MENTOR Initiative, using the same sampling method and conducted at the same time as the anthropometric and retrospective mortality survey by UNHCR/joint.

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	(%)	(%)	(%)				
...								
39.5	77.2	-	73.2	-	0.46	0.30-0.83	1.5	0.60-4.34
24.4	73.2	Anaemia ⁸ : 6-59 months: < 7g/dl: 3.7 < 11g/dl: 47.5	60.8	-	0.35	0.23-0.52	1.42	0.67-2.99
48.6	79.1	Anaemia ⁸ : 6-59 months: < 7g/dl: 8.8 < 11g/dl: 77.9	80.7	-	0.46	0.28-0.75	1.30	0.57-2.95
51.6	89.6	Anaemia ⁸ : 6-59 months: < 7g/dl: 6.2 < 11g/dl: 73.9	86.4	-	0.51	0.16-1.63	2.49	0.71-8.37
33.2	66.7	Anaemia 6-59 months: 44.3 women: 30.8	64.7	-	0.43	0.30-0.63	2.10	1.14-3.80

Survey methodology

The Greater Horn region

Ethiopia

GUBALAFTO WOREDA, NORTH WOLLO ZONE, AMHARA REGION

The nutrition survey was conducted by Concern Worldwide Ethiopia in June 2009. A two-stage cluster sampling was used following the guidelines for emergency nutrition surveys in Ethiopia, interim version 2008. Sample size calculation for anthropometric information and mortality rate were calculated using the Emergency Nutrition Assessment (ENA) software version October 2007. Anthropometric measurements were taken from children ages 6-59 months and their mothers. Vaccination coverage, morbidity and mortality rates, water and sanitation situation, family planning service uptake, as well as household dietary diversity scores and household food security were also investigated.

AMBASSEL WOREDA, SOUTH WOLLO ZONE, AMHARA REGION

The nutrition survey was conducted by Concern Worldwide Ethiopia in March 2009. A two-stage random cluster sampling was used to measure 437 children ages 6-59 months. Sample size for anthropometric information and mortality rate were calculated using ENA software version October 2007. Health and food security indicators were also investigated.

AMBASSEL WOREDA, SOUTH WOLLO ZONE, AMHARA REGION

The nutrition survey was conducted by Concern Worldwide Ethiopia in August 2009. A two-stage random cluster sampling was used to measure 514 children ages 6-59 months. Sample size for anthropometric information and mortality rate were calculated using ENA software version October 2007. Health and food security indicators were also investigated.

AMBASSEL WOREDA, SOUTH WOLLO ZONE, AMHARA REGION

The nutrition survey was conducted by Concern Worldwide Ethiopia in February 2010. A two-stage random cluster sampling was used to measure 506 children ages 6-59 months. Sample size calculation for anthropometric information and mortality rate were calculated using ENA software version October 2007. Health and food security indicators were also investigated.

DESSIE ZURIA WOREDA, SOUTH WOLLO ZONE, AMHARA REGION

The nutrition survey was conducted by Concern Worldwide Ethiopia in September 2009. A two-stage cluster sampling was used following the guidelines for emergency nutrition surveys in Ethiopia, interim version September 2008. Sample size for anthropometric

information and mortality rates were calculated using ENA for SMART software version October 2007.

Anthropometric measurements were taken from children ages 6-59 months and their mothers. The survey included an evaluation of the targeted supplementary feeding programme (TFSP) and outpatient therapeutic programme (OTP). The current food security situation was also investigated.

WOREBABA WOREDA, SOUTH WOLLO ZONE, AMHARA REGION

The nutrition survey was conducted by Concern Worldwide Ethiopia in September 2009. A two-stage cluster sampling was used to measure children ages 6-59 months and their mothers. Household food security, water and sanitation, and household socioeconomic indicators, as well as child nutrition and child morbidity were also investigated.

SHASHAGO WOREDA, SHASHAGO WOREDA, HADIYA ZONE, SNNP REGION

The nutrition survey was conducted by Concern Worldwide Ethiopia in February 2009. A two-stage cluster sampling approach was applied and children aged 6-59 months were assessed. The sample sizes were calculated using ENA for SMART software, version August 2008. Gorts (villages) were considered as the smallest administrative unit. Community focus group discussions were organised in each of the clusters. Additional information on immunization status, vitamin A supplementation coverage, child morbidity, as well as data on attendance in nutrition programmes, were collected via a child questionnaire. The household data were selected as part of the child anthropometric survey.

SORRO WOREDA, SORRO WOREDA, HADIYA ZONE, SNNP REGION

The nutrition survey was conducted by Concern Worldwide Ethiopia in February 2009. A two-stage cluster sampling approach was used to measure children ages 6-59 months. The sample sizes were calculated using ENA for SMART software, version August 2008. Villages were considered as the smallest administrative unit. Community focus group discussions were organised in each cluster. Additional information on immunization coverage, vitamin A supplementation coverage, morbidity, and data on attendance in nutrition programmes were collected from a child questionnaire. The household data were collected within the anthropometric survey.

SHERKOLE CAMP, ASOSA ZONE, BENESHANGULE-GUMUZ REGION

The nutrition survey was conducted by UNHCR, ARRA and WFP in June 2009. An exhaustive house-to-house sampling was used to measure children ages 6-59 months. Vaccination status and infant and young child feeding (IYCF) practices for children 0-23 months, as well as haemoglobin level of non-

pregnant women, were investigated.

PUGNIDO CAMP (FUGNIDO), GAMBELA WOREDA, GAMBELA ZONE, GAMBELA REGION

The survey was conducted by UNHCR, ARRA and WFP in June 2009. A two-stage cluster sampling was used to measure children ages 6-59 months. Vaccination status and IYCF practices for children 0-23 months, as well as haemoglobin level of non-pregnant women, were investigated.

REFUGEE CAMPS, SNNP AND TIGRAY REGIONS

UNHCR and partners carried out nutrition surveys in 7 refugee camps in the regions of SNNP and Tigray in June-July 2009. Five of the surveys used standard two-stage 30-by-30 cluster sampled methodology and two used an exhaustive house-to-house sampling (SMART methodology) to collect anthropometric data on children 6-59 months. Vaccination status and IYCF practices for children 0-23 months, as well as haemoglobin level of non-pregnant women, were investigated.

Kenya

RURAL VILLAGES IN TWELVE LOCATIONS WITHIN FOUR DIVISIONS: IKUTHA, MUTOMO, MUTONGUNI AND YATTA DIVISION, KITUI DISTRICT, EASTERN PROVINCE

The nutrition, WASH and livelihood survey was conducted by AAH-USA in October 2009. A two-stage 50-by-13 cluster design with an overall sample size of 650 households was employed based on sampling calculations performed with the SMART methodology using the ENA software. Immunization and vitamin A supplementation coverage, exclusive breastfeeding and child feeding practices, anthropometric measurements and morbidity of children aged 6-59 months, as well as water and hygiene indicators, were assessed.

FOUR DIVISIONS AND THIRTEEN LOCATIONS IN THE LARGER MWINGI DISTRICT: TSEIKURU DIVISION, NGOMENI DIVISION, NGUNI DIVISION AND NUU DIVISION, MWINGI DISTRICT, EASTERN PROVINCE

The nutrition, WASH and livelihood survey was conducted by AAH-USA in October 2009, using the SMART methodology. A two-stage cluster sampling with probability proportional to size (PPS) design was employed. The ENA software of SMART was used. Anthropometric status of children ages 6-59 months, CMR and U5MR, as well as immunization coverage and vitamin A supplementation coverage, were assessed. IYCF and WASH indicators, as well as household food security and livelihood situation, were also investigated.

DAGAHALEY CAMP, DADAAB CAMP, GARISSA DISTRICT, NORTH EASTERN PROVINCE

A nutrition survey was conducted by UNHCR in August 2009. The SMART methodology was used to measure 643 children from 31 clusters. To gather information on IYCF practices, mothers of 120 children ages 0-6 months and 300 children ages 6-24 month were interviewed. Data was collected on the food and nutrition security situation of children ages 6-59 months and women, as well as on micronutrient supplementation coverage for pregnant women.

DAGAHALEY CAMP (MSF INTERVENTION RADIUS), DADAAB CAMP, GARISSA DISTRICT, NORTH EASTERN PROVINCE

The health and nutrition survey was conducted by MSF at Dagahaley refugee camp and its host community in March 2009. A two-stage 30-by-30 cluster sampling was conducted within the MSF-OCG intervention radius of the camp. An exhaustive screening was organised within two host communities accessing the MSF-OCG interventions. In addition to health and nutrition security indicators, the socioeconomic situation of the households and water availability were assessed.

HAGADERA CAMP, DADAAB CAMP, GARISSA DISTRICT, NORTH EASTERN PROVINCE

A nutrition survey was conducted by UNHCR in August 2009. The SMART methodology was used to measure 643 children from 31 clusters. To determine anaemia status, 300 women and 300 children were systematically sampled and their Hb status tested. To identify IYCF practices, mothers of 120 children ages 0-6 months and 300 children ages 6-24 month were interviewed. Micronutrient supplementation coverage of pregnant women was also investigated.

IFO CAMP, DADAAB CAMP, GARISSA DISTRICT, NORTH EASTERN PROVINCE

A nutrition survey was conducted by UNHCR in August 2009. The SMART methodology was used to measure 643 children from 31 clusters. To determine anaemia status, 300 women and 300 children were systematically sampled and their Hb status tested. Information on IYCF practices was gathered from 120 children ages 0-6 months and 300 children ages 6-24 months. Micronutrient supplementation coverage of pregnant women was also investigated.

KAJIADO AND LOITOKTOK DISTRICT, RIFT VALLEY PROVINCE

The nutrition survey was conducted in June 2009 by Concern Worldwide, in collaboration with the Ministry of Public Health and Sanitation in Kajiado and Loitokitok Districts, using the SMART methodology. ENA software 2007 was employed for sample size calculation of 636 children aged 6-59 months. Immunization and vitamin A supplementation coverage, crude mortality rate and under-five mortality rate, as well as usage of insecticide-treated mosquito nets,

household food security, food consumption, water and sanitation situation were also investigated.

Somalia

SOMALIA, NORTH WEST, NORTH EAST AND SOUTH CENTRAL ZONE

The national micronutrient and anthropometric nutrition survey was conducted by FSNAU in collaboration with Unicef, WFP, WHO, MoH and CIHD from March to August 2009. This national, stratified, cross-sectional multi-stage cluster survey with the three zones of Somalia treated as separate strata, allowed estimates at both the zonal and national level. PPS sampling method was used for nutritional status assessment of children aged 6-59 months, school age children (6-11 years) and women of reproductive age (15-49 years).

Prevalence of goitre was measured by observation. In most cases team supervisors verified goitre cases and took photographs for cross checking. Anaemia was measured using a portable photometer HemoCue Hb201. Dried blood spots were used to determine vitamin A deficiency. Cut-off point for vitamin A deficiency was set at RBP $<0.825\mu\text{mol/l}$ for children and RBP $<1.24\mu\text{mol/l}$ for adult women. Soluble transferrin receptors (sTfR) were measured to determine iron deficiency. A sTfR concentration above $8.3\mu\text{g/ml}$ was regarded as iron deficient, with the normal range being $3.0-8.3/l$. Insufficient iodine intake was considered if urinary iodine concentration was below $99\mu\text{g/l}$. Household salt iodine testing was done using an improved iodized salt field test kit from MBI International-India. The test provides semi-quantitative results with categories given as 0ppm, less than 15ppm, and more than 15ppm. Water availability, dietary intake and socioeconomic situation of the households were also investigated. Discussion of the results and detailed recommendations were provided in the report. Due to insecurity, three clusters in Northwest, four Northeast and seven clusters in South Central could not be accessed. Results, particularly those from South Central, might not be representative for the whole zone.

NORTHWEST: LASANOD, BDHAN, CEEL-AFWEYN, ERIGAVO, SHEIKH, BURAO, OLDWEYNE, BERBERA, HARGEISA, GABILEY, GUBADLE, ZEILA, LUGHAYA, BAKI AND BORAMA DISTRICT (CLUSTER: FARADHIDHIN, DHARKEYN AND CAROOLEY WERE NOT ACCESSIBLE DUE TO INSECURITY), AWDAL, GALBEED, TOGDHEER, SANAAG, SOOL REGION

The national micronutrient and anthropometric nutrition survey was conducted by FSNAU/ joint from March to August 2009. The method of the survey is described above.

NORTHEAST: JERIBAN, GALDOGOB, GALKAYO, EYL, DANGOROYO, BURTINLE, GAROWE, ALULA, BAARGAL, GARDI, BOASASO (CLUSTERS: XIRIRO, UFAYN, EYL TOWN AND BANDIRADLEY WERE NOT ACCESSI-

BLE DUE TO INSECURITY) DISTRICTS, BARI, NUGAL, MUDUG REGION

The national micronutrient and anthropometric nutrition survey was conducted by FSNAU/ joint from March to August 2009. The method of the survey is described above.

SOUTH CENTRAL: SALAGLE, JULIB EAST, BUALE, WANLA WEYN, AFGOI, AWDHEGLY, BALCAD, MAHADAY, LUUQ, ELWAK, BERDUBO, BULAHAWA, MATABAAN, HOBYO, ELDHARE, DUSAMAREB, ADADO, ABUDWAQ, DINSOR, QANSAX DHERE, BAIDOA, BERDALE, HUDDUR, TEIGLOW (CLUSTERS: SIX CLUSTERS IN MERKA DISTRICT) DISTRICT, BAKOOL, BAY, GALGADUUD, MUDUG, GEDO, SHABELLE DHEXE, SHABELLE HOOSE, JUBA REGION

The national micronutrient and anthropometric nutrition survey was conducted by FSNAU/joint from March to August 2009. The method of the survey is described above.

Sudan

REFUGEE CAMPS, EASTERN SUDAN

UNHCR and partners carried out health and nutrition surveys in 8 refugee camps in Eastern Sudan from January to February 2009. The camps were classified as land-based (each refugee household has access to some land for own agricultural production), wage-based (with employment opportunities as laborers), or a mix of both. The food security and socioeconomic situation of the households, as well as IYCF practices, were investigated.

AWEIL WEST & NORTH COUNTIES, NORTHERN BAHR AL GHAZAL STATE, SOUTH SUDAN

The nutrition survey was conducted by Concern Worldwide in November 2009. The survey utilized the standard two-stage 30-by-30 cluster sampling technique. Clusters were randomly selected from all payams of Aweil West and North Counties of Northern Barhr el Ghazal State of South Sudan and 30 children were surveyed from each cluster. This was to enable longitudinal comparisons with data from previous surveys in the Aweils. Three sets of structured questionnaires and a focus group discussion guide were used for data collection on the socioeconomic situation of households and child and maternal nutrition and health situation.

GOGRIAL WEST COUNTY, WARRAP STATE, SOUTH SUDAN

The survey was conducted by AAH-US in February 2010. The SMART methodology was employed to determine the sample size for the anthropometric measurement and mortality assessment. A two-stage cluster sampling was used and a total of 42 clusters were randomly selected on a probability to population size (PPS) basis using ENA software. Child Care practices, water and sanitation conditions, and mortality rates were also investigated.

West Africa

Niger

AGADECZ (URBAN AREA), DIFFA, DOSSO, MARADI, TAHOUA, TILLABÉRI, ZINDER AND NIAMEY DISTRICT

A cross-sectional, stratified national nutrition survey was conducted by Unicef, MoPH, National Bureau of Statistics, WFP, HKI and FIDA in the eight regions from May to June 2009. A two-stage cluster sampling was employed based on the SMART methodology to measure 7333 children ages 6-59 months. Sample sizes were calculated using ENA software. Vaccination and vitamin A distribution coverage, IYCF practices, access to health services and health practices were investigated.

TAHOUA DEPARTMENT, TAHOUA REGION

A two-stage 26-by-15 cluster nutrition survey was conducted by Concern in June/July 2009 383 children aged 6-59 months were measured. Vaccination and vitamin A supplementation coverage, as well as infant and young child feeding (IYCF) practices, were investigated.

ILLÉLA DEPARTMENT, TAHOUA REGION

A two-stage 26-by-15 cluster nutrition survey was conducted by Concern in June/ July 2009 417 children ages 6-59 months were measured. Vaccination and vitamin A supplementation coverage, as well as IYCF practices, were investigated.

Sierra Leone

KONO, KAILAHUN, BONTHE AND KNEMA DISTRICTS, EAST AND SOUTH OF SIERRA LEONE

An analysis of context and activities in Eastern and Southern Sierra Leone was done by WFP in October 2009 in order to assess the security situation in WFP operational areas. The mission team, with a focus on protection, worked closely with the food security assessment team, who was conducting a parallel assessment on food security. Interviews and FGDs were conducted in urban, peri-urban, and rural settings. Primary Data was collected through interviews and FGDs. Appropriate sensitivities were observed with regard to gender and religion. When possible, female staff conducted interviews when discussing issues of gender and gender-based violence (GBV). The FGD involved a group of participants ranging in number from five to thirty-five, and were carried-out throughout the country. They were conducted in an open and informal manner, allowing discussions to be guided by the participants but facilitated by the researcher. These FGDs were used to elucidate themes and follow-up was carried out on a more in-depth level with one-on-one interviewing. These discussions included the following groups: beneficiary and local non-beneficiary groups, local leaders, village elders, municipal staff, food management committees, NGOs, community-based organizations, UN agencies, and government representatives from relevant ministries.

61 in

depth interviews were conducted with key informants at various levels and strata of society, such as government, local councils, civil society groups, religious leaders, cooperating partners and beneficiaries, in order to elaborate on and/or deepen analysis on issues raised during FGDs.

FREETOWN (CENTRAL AND EASTERN), CAPITAL CITY, WESTERN AREA URBAN DISTRICT

A community survey was conducted by GOAL in November 2009. The survey included a population estimation survey, community mapping identifying positive and negative changes in the past 12 months and a household survey using a two stage cluster sampling. MUAC and weight of children was assessed to estimate prevalence of malnutrition. Focus group discussions with 126 participants in 15 focus groups were conducted to assess community activities, knowledge about HIV/Aids, health and hygiene.

Central Africa

Chad

ABÉCHÉ VILLE, REGIONAL CAPITAL CITY, OUARA DISTRICT, OUADDAI REGION

The survey was conducted by ACF-F in June/ July 2009. A two-stage 36-by-25 cluster sampling was employed to measure 854 children ages 6-59 months. Crude and under five mortality rate as well as child morbidity, vaccination and vitamin A supplementation coverage were assessed.

AMNABACK CAMP, KOBÉ DISTRICT, WADI FIRA PROVINCE

The rapid nutrition survey was conducted by UNHCR, Unicef, IMC and Care in March 2009. The survey included key informant interviews and group discussion with main stakeholders; transect walks in the camp and a house-to-house sampling were used to take MUAC measurements of 1220 children 6-59 months from the 10 different camp zones.

BAHR EL GAZEL REGION

A nutrition survey was conducted by ACF-F between November and December 2009. The sampling procedure followed the SMART methodology.

Democratic Republic of the Congo

ZONE DE SANTÉ DE PAY KONGILA, MASIMANIMBA TERRITORY, KWILU DISTRICT, BANDUNDU PROVINCE

A random sampled nutrition survey of 910 children aged 6-59 months was completed by AAH-US in October 2009. A two-stage 30-by-30 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE YASA BONGA, MASIMANIMBA TERRITORY, KWILU DISTRICT, BANDUNDU PROVINCE

A random sampled nutrition survey of 968 children

aged 6-59 months was completed by AAH-US in October 2009. A two-stage 30-by-30 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE KUIMBA, TSHELA TERRITORY, BAS FLEUVE DISTRICT, BAS CONGO PROVINCE

A random sampled nutrition survey of 946 children aged 6-59 months was completed by AAH-US in December 2009. A two-stage 31-by-30 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE MUANDA, MUANDA TERRITORY, BOMA DISTRICT, BAS CONGO PROVINCE

A random sampled nutrition survey of 899 children aged 6-59 months was completed by AAH-US in November 2009. A two-stage 30-by-30 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE NGIDINGA, MADIMBA TERRITORY, LUKAYA DISTRICT, BAS CONGO PROVINCE

A random sampled nutrition survey of 937 children aged 6-59 months was completed by AAH-US in December 2009. A two-stage 31-by-30 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE KABINDA, KABINDA TERRITORY, KABINDA DISTRICT, KASAI ORIENTAL PROVINCE

A random sampled nutrition survey of 941 children aged 6-59 months was completed by AAH-US in January 2009. A two-stage 30-by-31 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE KATAKOKOMBE, KATAKOKOMBE TERRITORY, SANKURU DISTRICT, KASAI ORIENTAL PROVINCE

A random sampled nutrition survey of 916 children aged 6-59 months was completed by AAH-US in December 2009. A two-stage 30-by-30 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE KOLE, KOLE TERRITORY, SANKURU DISTRICT, KASAI ORIENTAL PROVINCE

A random sampled nutrition survey of 767 children aged 6-59 months was completed by AAH-US in December 2009. A two-stage 30-by-25 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE ANKORO, MANONO TERRITORY, TANGANYIKA DISTRICT, KATANGA PROVINCE

A random sampled nutrition survey of 951 children aged 6-59 months was completed by AAH-US in November 2009. A two-stage 30-by-30 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE MULONGO, MALEMBA TERRITORY, TANGANYIKA DISTRICT, KATANGA PROVINCE

A random sampled nutrition survey of 980 children aged 6-59 months was completed by AAH-US in October 2009. A two-stage 31-by-30 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE KILOTSHE, MASISI TERRITORY, MASISI DISTRICT, NORTH KIVU PROVINCE

A random sampled nutrition survey of 1160 children aged 6-59 months was completed by AAH-US in March 2010. A two-stage 43-by-26 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE NIANGARA, NIANGARA TERRITORY, HAUT OUÉLÉ DISTRICT, ORIENTAL PROVINCE

A random sampled nutrition survey of 842 children aged 6-59 months was completed by AAH-US in February 2010. A two-stage 28-by-30 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE RUNGU, RUNGU TERRITORY, HAUT OUÉLÉ DISTRICT, ORIENTAL PROVINCE

A random sampled nutrition survey of 935 children aged 6-59 months was completed by AAH-US in October 2009. A two-stage 31-by-30 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE BUNYAKIRI, KALEHE TERRITORY, KATANA DISTRICT, SOUTH KIVU PROVINCE

A random sampled nutrition survey of 1008 children aged 6-59 months was completed by AAH-US in December 2009. A two-stage 36-by-28 cluster design was employed. The survey included estimations of immunization and vitamin A supplementation coverage, as well as deworming rates.

ZONE DE SANTÉ DE MINOVA, KALEHE TERRITORY, KATANA DISTRICT, SOUTH KIVU PROVINCE

A random sampled nutrition survey of 965 children aged 6-59 months was completed by AAH-US in March 2009. A two-stage 30-by-32 cluster design was employed. The survey included estimations of immu-

nization and vitamin A supplementation coverage, as well as deworming rates.

Uganda

MOROTO, NAKAPIRIPIT, AMUDAT, KARMOJA SUBREGION, NORTH EASTERN

The health and nutrition baseline survey was conducted by GTZ in January 2010. A cross-sectional representative cluster design was used. The clusters were chosen according to a complete list of villages; numbers of households were not available. Anthropometric measurements were taken to assess the nutritional status of 510 children ages 6-59 months and non-pregnant mothers. A standardized questionnaire was used to collect information about the socio-demographic situation of households, their livelihood, water and sanitation situation, and food security and health situation.

Southern Africa

Madagascar

ANDROY REGION, TOLIARA PROVINCE, SOUTHERN MADAGASCAR

An anthropometric baseline survey was conducted by Unicef, MoH and ONN in March/April 2009. The SMART methodology was applied to measure children ages 6-59 months.

ANDROY REGION, TOLIARA PROVINCE, SOUTHERN MADAGASCAR

An anthropometric survey was conducted by Unicef, MoH and ONN in November 2009. The SMART methodology was applied to measure children ages 6-59 months. The survey evaluated the impact of the interventions following the baseline survey March/April 2009.

ANOSY REGION, TOLIARA PROVINCE, SOUTHERN MADAGASCAR

An anthropometric survey was conducted by Unicef, MoH and ONN in March/ April 2009. The SMART methodology was applied to measure children ages 6-59 months.

ANOSY REGION, TOLIARA PROVINCE, SOUTHERN MADAGASCAR

An anthropometric survey was conducted by Unicef, MoH and ONN in November 2009. The SMART methodology was applied to measure children ages 6-59 months. The survey evaluated the impact of the interventions following the baseline survey March/April 2009.

Zimbabwe

MAKONI DISTRICT, MANICALAND PROVINCE

The survey was conducted by GOAL in November 2009. The survey area covered approximately 99% of Makoni District. A two-stage 30-by-12 cluster sampling was used to assess 374 households. The sample size was generated using the ENA for SMART software following GOAL guidelines for Knowledge At-

titude Practices and Behaviour (KAPB) surveys, which recommends a 50% prevalence for the key indicator. Precision was set at $\pm 7.5\%$. The survey included data collection of the following indicators: demography, maternal health, mosquito net usage, basic health related knowledge and practices, vulnerability and coping mechanism of the population, school attendance among children aged 5-16 years, drinking water sources, water usage, treatment and storage, hygiene practices within the community, acute malnutrition rates of children aged 6-59 months based on MUAC measurements, immunization coverage, IYCF practices for children below 2 years. Knowledge, attitudes and practices within the community on HIV/AIDS was also collected and compared with results from previous surveys.

Asia

Bangladesh

NAYAPARA AND KUTUPALONG CAMP, COX'S BAZAAR, CHITTAGONG DIVISION

A cross-sectional study on the nutrition and health status of the population in the two camps was conducted by Helen Keller International in September 2009. The sample size was calculated separately for key nutritional status indicators of interest. ENA for SMART software was applied for sample size estimation and cluster allocation. The sampling frame for the survey entails only household and individuals registered with UNHCR, thus does not include other unregistered refugees. Eligibility of survey participants was checked by reviewing their UNHCR identification cards. Nutritional status indicators were assessed from children aged 6 to 59 months, lactating women and adolescent girls. The HemoCue model B-Hemoglobin machine was used to measure anaemia. Physical signs of vitamin B deficiencies (angular stomatitis, cheilosis and glossitis) were also assessed using procedures described by WHO. Socioeconomic situation, food security indicators, usage of micronutrient sprinkles and IYCF practice indicators were assessed.

Middle East

Yemen

AL HUDAYDAH, SANA'A, DHAMAR, IBB AND TAIZZ GOVERNORATES

In October 2009, a crop and food security assessment mission was carried out by FAO and WFP to estimate the 2009 the main season cereal production and to assess the overall food security situation for the 2010 marketing year (January-December). Over a period of 8 days, the mission visited the Governorates of Al Hudaydah, Sana'a, Dhamar, Ibb and Taizz, representing 55% of national agricultural land, accounting for about 60% of domestic cereal production. During the fieldwork, the mission interviewed government officials, rural community leaders and other key informants as well as traders, farmers and poor rural households. The mission inspected standing crops and those

recently harvested. It gathered information on different aspects of household food security and main livelihoods systems. It examined the evolution of local prices of the main food and cash crops, production and income-generation possibilities, and the effects of the adverse climatic events on agriculture and livestock production.

BASATEEN CAMP, KHARAZ REFUGEE CAMP, KAHRAZ VILLAGES AND SANA'A (URBAN REFUGEE POPULATION), LAHJJ AND ADEN GOVERNORATE AND SANA'A (CAPITAL CITY)

The survey was conducted by UNHCR, MoH, Unicef, IDF and CSSW in June 2009. A cross-sectional two-stage 30-by 30 cluster sampling was used to measure children aged 6-59 months or with 65 to 110 cm length/ height. Smart for ENA and Epi info version 6.04b software was used for data entry, cleaning and analysis. Haemoglobin level measurements were taken from children ages 6-59 months in all survey sites and from women of reproductive age in Sana'a only. RDTs were used to measure the prevalence of plasmodium falciparum. A structured questionnaire was used to obtain information about household structures and child care practices. Vaccination and vitamin A supplementation coverage, along with morbidity and mortality rates, were also investigated.

BASATEEN CAMP, KHARAZ REFUGEE CAMP, KAHRAZ VILLAGES AND SANA'A (URBAN REFUGEE POPULATION), LAHJJ AND ADEN GOVERNORATE AND SANA'A (CAPITAL CITY)

A cross-sectional survey was conducted in three study areas by UNHCR and the Mentor Initiative between May and June 2009. Two-stage cluster sampling was used to select 30 clusters within blocks and then 900 children aged 6 to 59 months within households in both Al-Basateen and Kharaz Camps. An exhaustive survey attempting to sample all children aged 6 to 59 months was used in the Kharaz surrounding host population. Haemoglobin measurements were taken using HemoCue and RDTs were used to measure the prevalence of plasmodium falciparum. Heads of households were interviewed with a structured questionnaire on demographics and child care practices.

Abbreviations and acronyms

AAH-US	Action Against Hunger USA
ACF-F	Action Contre la Faim France
BMI	Body Mass Index
CI	Confidence Interval
CMAM	Community Based Management of Acute Malnutrition
CMR	Crude Mortality Rate
DPPC	Disaster Prevention and Preparedness Commission
EOS-TSF	Enhanced Outreach Strategy-Targeted Supplementary Feeding
FAO	Food & Agricultural Organization of the United Nations
FARDC	Forces Armées de la République Démocratique du Congo
FEWS	Famine Early Warning System
FSNAU	Food security and nutrition analysis unit
GAM	Global acute malnutrition
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HKI	Helen Keller Institute
IDP	Internal Displaced Person
IMAM	Integrated Management of Acute Malnutrition
INS-Niger	Institut National de la Statistique - Niger
IRC	International rescue Committee
IRIN	Integrated Regional Information Networks
IYCF	Infant and young child feeding
MSF	Médecins Sans Frontières
MT	Metric Tonnes
MUAC	Mid-upper Arm Circumference
NCHS	National Centre for Health Statistics
NGO	Non-governmental Organization
OCHA	Office for the Coordination of Humanitarian Assistance
SAM	Severe Acute Malnutrition
SFP	Supplementary Feeding Programme
SMART	Standardized Monitoring & Assessment of Relief and Transitions
SNNPR	Southern Nations, Nationalities and Peoples' Region
TSFP	Therapeutic Supplementary Feeding Programme
U5MR	Under Five Mortality Rate
UNHCR	United Nations High Commission on Refugees
UNICEF	United Nations International Children's Emergency Fund
USAID	US Agency for International Development
WASH	Water, Sanitation and Hygiene
WFP	World Food Programme
WHO	World Health Organization

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Central Africa

Chad

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Middle East

Yemen

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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.

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.

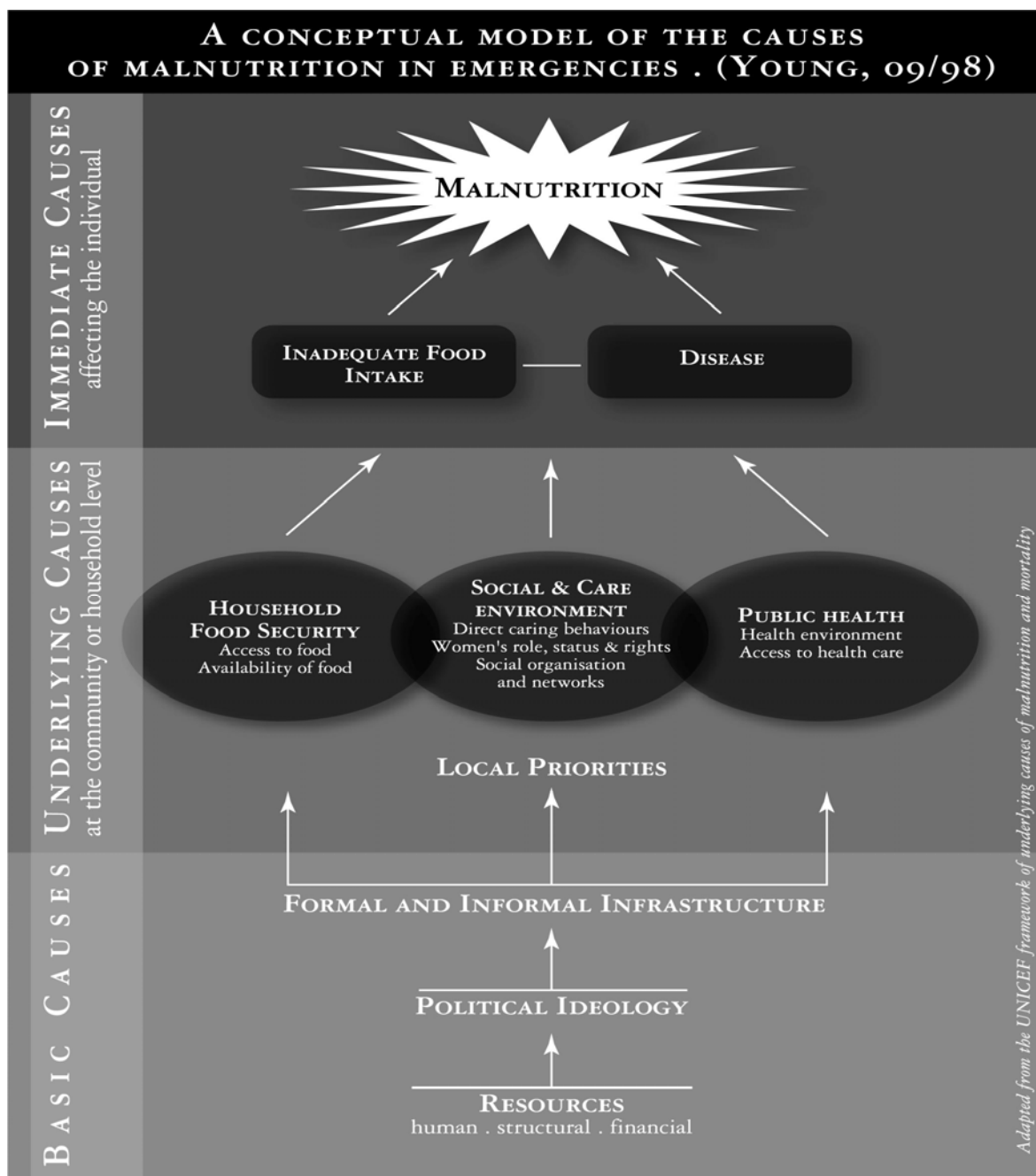
Classification of situations

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 maybe pockets of high malnutrition in a given area.
- Populations in *category IV* are *not* at an elevated nutritional risk.
- The risk of malnutrition among populations in *category V* is *not known*.

Nutrition causal analysis

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



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NICS quarterly reports

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

This system was started on the recommendation of the UNSCN's working group on Nutrition of Refugees and Displaced People, by the UNSCN 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 UNSCN 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 UNSCN 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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