Nutrition Information in Crisis Situations

United Nations
Standing Committee on Nutrition

May 2011 . Report Number XXIII

Highlights

Special Focus—Climate Change

Climate change affects food and nutrition security and aggravates the problems of hunger and undernutrition (ACF, 03/10). Therefore this edition of the NICS aims to provide some basic understanding of the ways that climate change exacerbates humanitarian crises and contribute to the debate about how to face this challenge.

Global climate change magnifies the risk of disasters, especially in those parts of the world where high levels of human vulnerability already exist. A significant impact of climate change is the increase in the frequency and severity of certain hazards which, in combination with this vulnerability, can provide the conditions for disasters. Climate change also increases the vulnerability of communities, particularly through ecosystem degradation, reductions in water and food availability, and changes to people's livelihoods (UNISDR, 2008).

According to the global assessment report on Disaster Risk Reduction, the number of reported natural disasters has more than doubled in the past decade, from approximately 200 to over 400 a year (UNISDR, 2009). Of particular concern are the increase in floods and the frequency and duration of droughts. Africa is likely to be especially hard hit by the negative consequences of climate change, as the populations and national economies of many of its nations are reliant on the agriculture sector (FAO, 05/10; UNSCN, 12/10).

Sudan—The humanitarian situation in southern Sudan between July-September 2010 remained fragile, with new flooding and worsening disease outbreaks in parts of the south. These crises have added to existing pressures linked to violence and food shortages.

The Sahel—Malnutrition and food insecurity remain major humanitarian challenges in many West African countries. The 2010 rainy season brought flooding, even worse than that of 2009, with a total of 1.9 million people affected. Benin bore the brunt of the destruction, with 680 000 people facing the consequences of damage to homes or farmland.

Niger—The country has been affected by recurrent drought and its government's actions are now viewed as a model on reacting to crisis situations. The government's early appeal for support prevented the crisis from turning into catastrophe. Distribution of fortified flour, oil, and sugar to children under two years of age started as early as May 2010 in areas where GAM was above the emergency threshold of 15%. During the last months of 2010 almost 5 million people received food aid and by the beginning of November more than 280 000 children received therapeutic feeding to treat severe acute malnutrition.

Pakistan— Flooding has been of particular concern in the past few years, raising questions about the impact of global warming on the country. Severe flooding occurred throughout the country between July and September 2010, affecting as many as 20 million people. Damage to infrastructure was extensive in both urban and rural areas. Agriculture was also heavily affected, with thousands of acres of crops lost, leaving millions of people in need of food aid.

Haiti – The impact of the earthquake has so far not led to a serious nutrition situation. However, the hurricane season and the later cholera epidemic have negatively impacted livelihoods, whilst insecurity has hampered the humanitarian response.

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 Offa Woreda, SNNP Region	**Kenya** Greater Pokot, Rift Valley Province	**Sudan** Kurmuk County, Blue Nile State	**Central African Republic** Prefecture Nana Mambéré	**Democratic Republic of the Congo** Kisanjii, Bandudu Region
Nutritional risk category	III-IV	II	II-III	II	II
Households' livelihoods	😐	☹	☹	☹	😐
External assistance	?	?	☺	☹	?
Availability of water and access to potable drinking water	☹	☹	☹	?	☹
Health care	☺	☹	😐	☹	☹
Sanitation	?	☹	☹	?	☹
Social environment	?	?	?	☹	☹
Child feeding practices	😐	😐	☹	☹	☹
Accessibility to population	☺	☺	☹	☹	☹
Resources for humanitarian Intervention	?	?	☺	☹	?
Availability of information	😐	☺	☺	☹	?

☺ Adequate 😐 Mixed ☹ Inadequate

Africa

Africa is one of the continents most vulnerable to climate change and climate variability. Its major economic sectors are at particular risk and the existing developmental challenges exacerbate this vulnerability. African farmers have developed several coping mechanisms to deal with the current climate variability, but they may not be sufficient in the long term. Agricultural production and food security (including access to food) in many African countries and regions are likely to be severely compromised.

According to existing information, extreme conditions will persist. The Special Report on Emission Scenario (SRES) projects that Northern Africa will experience drier weather, while Central Africa can expect even wetter conditions. This is expected to increase desertification and decrease forest cover in northern areas. Drought is predicted to be more frequent and of longer duration. Rains, on the other hand, will likely be more erratic, contributing to soil erosion and vegetation damage. Additional pressures on water availability, water accessibility and water demand are expected.

A number of countries in Africa already face semi-arid conditions that make agriculture challenging, and climate change will probably reduce the length of the growing season, as well as force large regions of marginal agriculture out of production. Projected reductions in yield in some countries could be as much as 50% by 2020, with small-scale farmers being the most affected. Food availability and access are likely to be severely compromised, worsening the food and nutrition security situation (Parry et al, 2007; Boko et al, 2007; Below et al, 2010).

Greater Horn of Africa

Ethiopia

Located in the Horn of Africa, Ethiopia is particularly susceptible to drought. Some 85% of Ethiopians farm for their living, mostly on very small plots. They have few options to mitigate the increasing crop failure brought about by climate change. With credit hard to come by, farmers may have to sell essential assets or dip into meagre savings to survive a poor harvest and pay for the next planting season (IRIN, 11/10). As was expected, October/December *deyr* rains were poor due to the influence of La Niña. The resulting water and pasture shortages have resulted in deteriorating terms of trade for pastoralists and increased food insecurity.

On the other hand, torrential rains, such as those in theTigray, Amhara, Afar, Oromiya, Somali and Gambella regions in July 2010, led to widespread flooding. The subsequent losses of assets and livestock, agricultural land being washed away, and crops and infrastructures being damaged were significant (FAO, July-August 2010).

Serious water shortages in Somali Region

UNICEF has reported serious water shortages in the chronically water-insecure areas of Afder, Degehabur, Gode and Fik due to the delayed 2010 *deyr* rains. The Disaster Preparedness and Prevention Bureau started emergency water trucking in the most affected woredas. The situation could worsen if the pastoral rains are further delayed and/or rainfall performance is poor. This is a likely prospect, given the prevailing La Niña effect, which typically results in below-average rains over the eastern Horn of Africa (OCHA 11/10).

Promising *Meher* harvest

Food security recently improved in most parts of Ethiopia with the start of the *meher* harvest (October-January). Food security from October 2010 to March 2011 is expected to stabilize as a result of this harvest, which contributes up to 95% of the total annual crop production.

Given the average to above-average *kiremt* rains (June-September 2010), *meher* crop production for 2010 is similarly expected to be average to above-average. This is not the case in highland areas, however, where heavy rains may lead to water logging, flooding, and crop pests (FEWSnet 10/10).

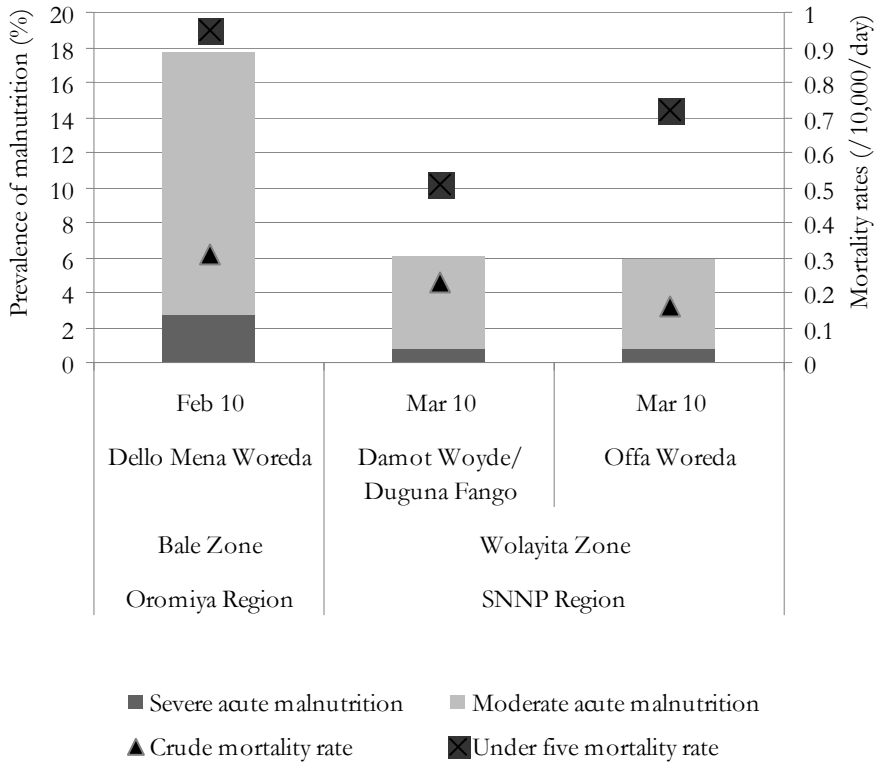
Low staple food prices

Prices of staples have remained low. The retail price of white maize in Addis Ababa, for example, is 25% less than that in 2009. Prices of livestock remain high, however, following the improvement in livestock conditions across most of the country, which has in turn increased purchasing power and contributed to the overall improvement in food security (FEWSnet 10/10).

Required emergency assistance

There are still certain areas that will require emergency assistance during the 2010/11 consumption year. This is based on the assumption that although the *bega* season rains (October-January) are likely to be average across the west and northwest regions of the country, drier than average conditions are expected over much of the eastern half of the nation. This will lead to deteriorated pasture and water conditions in the pastoral and agropastoral parts of the southeast and poor production of sweet potatoes in eastern SNNPR. Moreover, prevailing conflict in the Gambella region and across the border with Sudan is expected to continue as a result of the upcoming Sudanese referendum in January 2011. An increase in the number of displaced people due to conflict is anticipated. A multi-agency, multi-sector assessment to estimate specific assistance needs is planned (FEWSnet 10/10).

FIGURE 1 RESULTS OF NUTRITION SURVEYS IN THREE WOREDAS, ETHIOPIA (CONCERN WORLDWIDE, 02/10 AND 03/10)



Serious nutrition situation in Oromiya Region

According to a nutrition survey conducted by Concern Worldwide, the nutrition situation was serious in Dello Mena Woreda in the Bale Zone of the Oromiya Region in February 2010. Global acute malnutrition rates (GAM) were estimated at 17.7% (CI: 12.6-22.9) and severe acute malnutrition rates at 2.8% (CI: 1.4-4.1). The nutrition survey also reported low dietary diversity among adults (mean 4.1 score units out of 12) and poor dietary diversity among children below 5 years of age (mean: 2.9 score units out of 8). The main food groups for adults are cereals, pulses, oil and coffee or tea, while grains and pulses are the main food groups for children below 5 years of age. The consumption of vegetables, fruits and animal protein was reportedly very poor.
Measles vaccination coverage verified by card and mothers' recall was low (44.3%, CI: 35.1-53.5). Major problems reported by the community include a lack of drinking water for human and animal consumption, poor road accessibility, lack of health services, and food shortages both at the household level and for grazing animals. Out of the 160 adults interviewed in the survey, 50% reported eating two meals a day and 6.3% reported eating just one meal a day.

Satisfactory nutrition situation in Wolayita Zone

Two other nutrition surveys conducted by Concern Worldwide in the Wolayita Zone of the SNNP Region in March 2010 reported much lower GAM rates. GAM rates were estimated to be 6.0% in Offa Woreda (CI: 3.2-8.7) and 6.1% in Damot Woyde/ Duguna Fango Woreda (CI: 4.6-7.7). SAM rates were 0.8% in both areas (CI: 0.1-1.4 in Offa woreda and CI: 0.2-1.3 in Damot Woyde/ Duguna Fango Woreda). Consequently, no emergency nutrition intervention was required. However, improvement in access to drinking water was recommended for both areas, as well as improved vaccination coverage for Offa Woreda. (figure 1).

Kenya

Kenya has a climate with wide variations across the country and strong seasonality. Climate change is likely to have major effects on managed and natural ecosystems in the country. It also causes climatic zones and their ecosystems to move. Particularly vulnerable areas include arid lands due to water scarcity and heat stress, coastal zones due to pressure from sea level rise and the mountain regions (Stockholm Environment Institute, 2009).

The impacts and economic costs of current climate variability and events in the country are already very high. Kenya is exposed to major floods and droughts, associated with El Niño and La Niña in addition to other influential regional processes. The most recent interagency mission in January 2010 to the Maasai cluster revealed population displacement patterns provoked by climate change (OCHA/joint, 01/10). In severely drought-affected communities, families are becoming more and more displaced within their usual eco-systems. As migration patterns change, the competition for natural resources fuels conflicts which are becoming more violent and frequent. OCHA's analysis into pastoral conflicts in 2009 estimated that over 400 people were killed during cattle rustling related clashes and that nearly 9 000 people fled their homes due to violence. Although these displacements have been temporary in nature, there is also an increasing number of pastoralists that are dropping-out of their lifestyles and moving to new areas in search of alternative economic opportunities. An increase in extreme weather conditions also caused displacements, like those in 2009 when flooding during the short rainy season (October-December) led to the short-term displacement of 58 000 people (OCHA, 02/10).

Increased food insecurity among urban poor

Food insecurity for the majority of poor and very poor urban households is likely to increase until March 2011 (FEWSnet 10/11). Poor rains in key catchment areas are expected to lead to water shortages and increased water prices. This will not only erode purchasing power but could also lead to under-utilization of water, creating an environment conducive to the proliferation of water-borne diseases. In addition, the potential electricity shortages and rationing could reduce the productive capacity of small businesses, putting one of the main income source of poor and very poor urban households at risk. The upward pressure on food prices is also likely to increase.

Stable food security in pastoral areas

Pastoral food security has remained favorable throughout most of 2010, even during the lean seasons. This is due to the continued availability of grazing resources in most wet-season grazing areas, particularly in the northwest (FEWSnet 10/11). Migration has been less frequent than normal and livestock conditions are mostly favorable, partly because of limited livestock disease outbreak. As such, livestock prices have been above average and cereal prices have been marginally lower than average in most markets (FEWSnet 10/11).

High losses of maize crops due to aflatoxin contamination

Households that lost about 30% of short rains maize stocks to aflatoxin contamination and suffered a significant loss in income due to decreased maize prices are unlikely to have sufficient stocks to last until the next harvest in March 2011. However, in areas where long rains harvests were generally favorable, including parts of Meru North, Tharaka, Mbeere, Lamu, and Malindi, households are likely to maintain stocks until the next harvest. Overall food security has improved significantly for most households in the southeast and coast-marginal agricultural zone, after an average performance of the minor long rains season.

Although cereal prices are rising, they are still lower than average. This is beneficial to those farmers that have surplus stocks, but detrimental to farmers who have lost their harvest to aflatoxin contamination and have harvested very little in the way of long rains crops. On the other hand, livestock prices are high, ranging from 30-160% above the five-year average. Household livestock holdings are limited, with farmers only selling their livestock as a last resort, often after the condition and value of the animals have deteriorated (FEWSnet 10/11).

The Arid Lands Resource Management Program surveillance system uses Mid Upper Arm Circumference (MUAC) as an indicator of malnutrition in children below 5 years of age. They report that the proportion of children 'at risk of malnutrition' is below the average of the past five years in many areas, but still remains generally high (FEWSnet 10/11).

Acute malnutrition in Greater Pokot

The Greater West Pokot district is designated as one of the arid zones that experience food insecurity due to short rains; food intake at the household level has also been reported as inadequate. A joint nutrition and food security survey conducted by MPHS (05/10) in Greater Pokot, showed a GAM rate of 16.5% (CI: 13.9-19.1) and a SAM rate of 3.4% (CI: 2.2-4.7). For comparison, in 2008 and 2009 GAM rates of 12.6% (CI: 10.2-15.1) and 12.7% (CI: 9.9-15.6) respectively were estimated. Among women aged 15-49 years, 2.9% of pregnant women and 13.7% of breastfeeding women were classified as malnourished (MUAC<23.0 cm). Among the women who were neither pregnant nor breastfeeding, 3.4% were classified as being malnourished (MUAC<21.0 cm). The crude mortality rate (CMR) and under-five mortality rate (U5MR) were 1.17/10,000/day (CI: 0.70-1.28) and 0.99/10,000/day (CI: 0.56-1.79), respectively, thus below alerting level.

The survey also investigated the work load of mothers and child care practices. The high

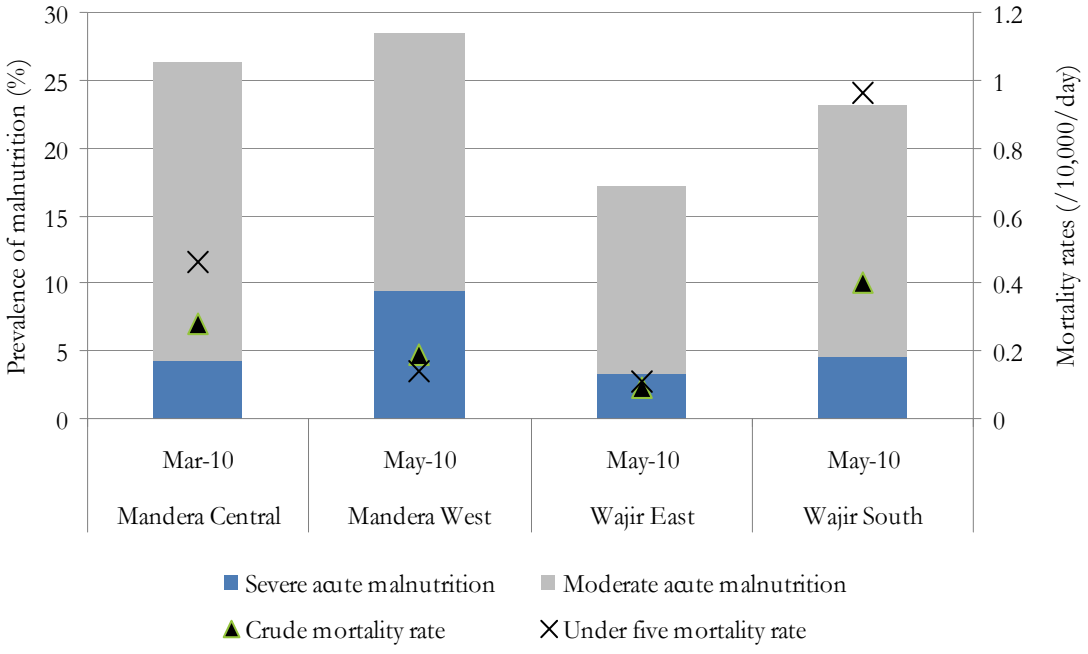
childhood malnutrition rates were associated with critical household food insecurity, poor child care practices, poor hygiene and environmental sanitation, and high morbidity. Food aid supply chains have experienced many challenges, including food pipeline shortages. As a result, ration sizes have been reduced. In February 2010, for example, ration sizes were cut from the recommended 10.5kg per person to 6.9kg per person (MPHS (05/10).

Serious malnutrition situation

In March 2010, Save the Children UK conducted nutrition surveys in Mandera and Wajir (SC-UK, 05/10). In all surveyed areas GAM prevalence was at a serious to alarming level (figure 2). GAM and SAM rates were highest in Mandera West (28.5%, CI: 23.7-33.7; 9.5%, CI: 6.7-13.3) and Mandera Central (26.3%, CI: 23.1-29.4; 4.2%, CI: 3.0-5.4). In Wajir South, GAM rates were 23.2% (CI: 19.1-27.8) and SAM rates were 4.6% (CI: 3.3-6.4), while in Wajir East GAM rates were 17.2% (CI: 14.7-20.1) and SAM rates were 3.4% (CI: 2.1-5.5).

When compared with results from previous surveys in Mandera Central in March 2009 (GAM: 30.9%, CI: 26.9-35.3%; SAM: 7.1%, CI: 5.1-9.7%), it would seem as though things have improved, especially with regard to severe malnutrition. However, the situation remains alarming and needs monitoring. No information about interventions was provided.

FIGURE 2 RESULTS OF NUTRITION SURVEYS IN MANDERA AND WAJIR DISTRICTS, KENYA (SC-UK, 05/10)



Sudan

Sudan encompasses the full range of meteorological diversity – semi-arid in the north, savannah in the central regions and equatorial in the south. Nevertheless, drought has been the dominant threat throughout. Data from weather monitoring stations record that average rainfall has decreased significantly over the last 60 years, accompanied by an increase in variability, especially in the north. Vulnerability to climate change is accentuated by the dependence of 70% of the population on rain-fed agriculture based livelihoods (OneWorld.net, 06/10). According to the World Bank, Sudan is one of the countries most at risk from the effects of climate change on agriculture. Farmers and pastoralists face serious problems if the situation becomes worse (World Bank, 2009). Sudan is one of the World Food Programme's largest operations, providing aid to about 11 million people. Although many of the reasons for the WFP presence are related to conflict and displacement, there is no escaping the long history of climate-related humanitarian crisis in the country (WFP Regional Bureau for Sudan, 2010). This is likely to be exacerbated by the implications of rising temperatures forecast in the coming century.

Normal to surplus harvest

Above-average and extended rains, and good crop performance, have resulted in normal to surplus 2010/11 harvests in Sudan, notwithstanding flooding which had affected crop performance in parts of Northern Bahr el Ghazal, Western Bahr el Ghazal, Warrap, Upper Nile, Jonglei, and Unity states. Despite this, there are currently 6.8 million food insecure people in the country including 2.3 million internally displaced people (IDPs) (FEWSnet, 09/10).

Food security outlook

Northern Sudan

Cereal prices have begun to decline in northern Sudan, an early indication that food security in this region has improved with the onset of the main harvest. A bumper 2010/11 harvest (October-January) is also expected. The above-average and extended rainy season of 2010/11 has generated good pasture and water conditions for livestock, especially in the drought-affected areas of North Darfur, Red Sea, and North Kordofan states. Most resident communities in northern Sudan are expected to produce sufficient food to last throughout the 2010/11 consumption year, in addition to cash crops.

Darfur

Populations which will remain moderately to highly food insecure through December 2010 include the majority of the more than 2 million IDPs in Darfur with little or no access to cultivation, the conflict-affected areas in Jabal-Marra, parts of North Darfur, most of the rural populations in the Red sea state, and the Hamiskorieb locality in the Kassala state. Conflict in Darfur continues to cause displacement and limit humanitarian access to 180,000 people in Jabal Mara.

Southern Sudan

At the moment FEWSNET (09/10) reports an overall improvement of food security conditions in most livelihood zones of Southern Sudan, due to ongoing harvests and the consumption of groundnuts and maize.

Previously the food security conditions had worsened in Southern Sudan due to poor crop production in 2009, continued conflicts, and displacements (FEWSNET, 06/10). The extreme levels of food insecurity in the Akobo county of Jonglei State were and are of particular concern. According to a March 2010 FEWSnet assessment in Akobo, poor and displaced households which form 30-40% of the population, were likely to meet only 60% of their basic food needs during 2009-2010. Furthermore, a nutrition survey conducted by Save the Children – US (SC-US) and Medair in Akobo County in February 2010 indicated an extremely high prevalence of acute malnutrition in the area.

SUDAN INTEGRATED PHASE CLASSIFICATION MAP
(IPC, 10/10)

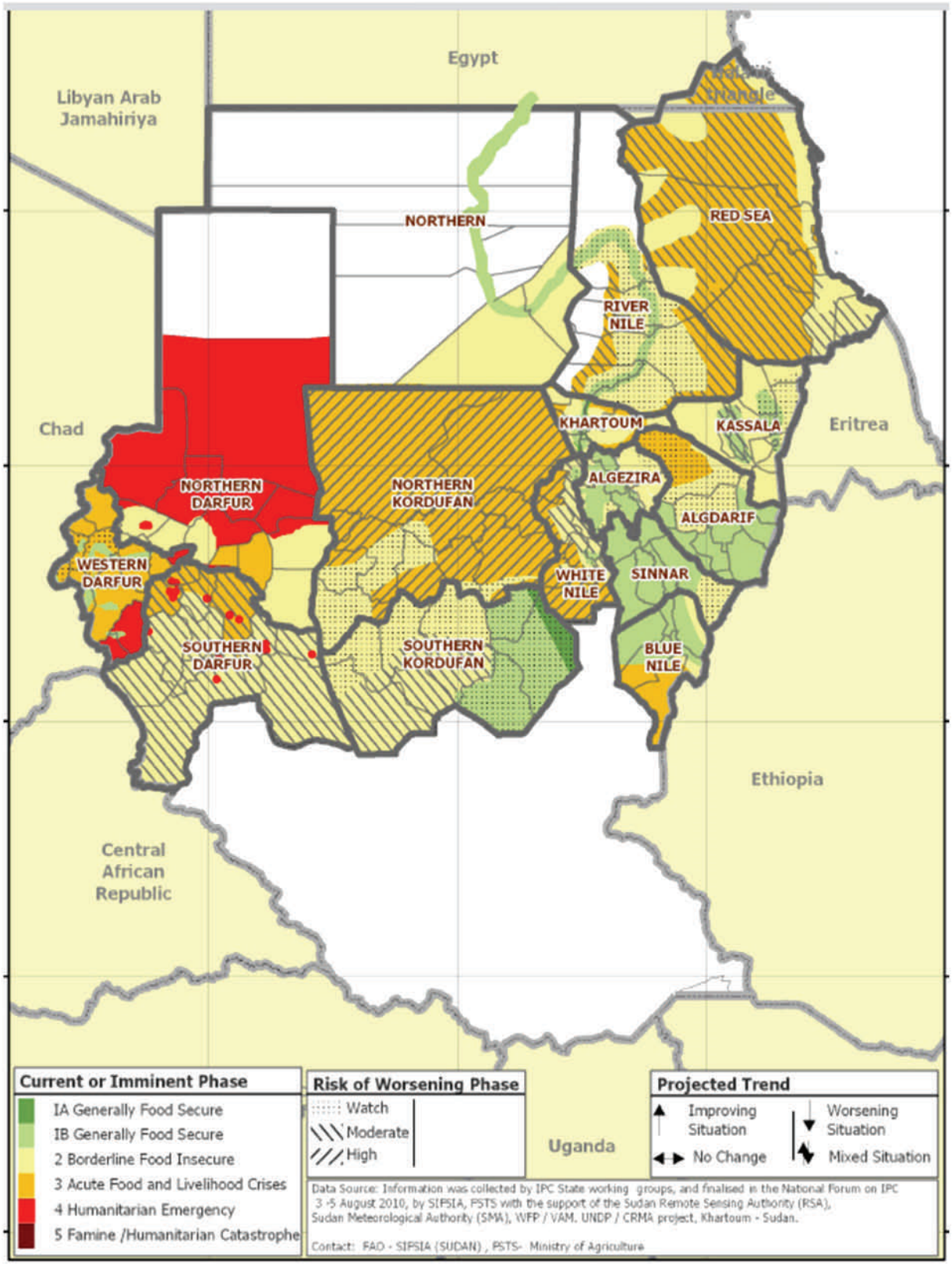
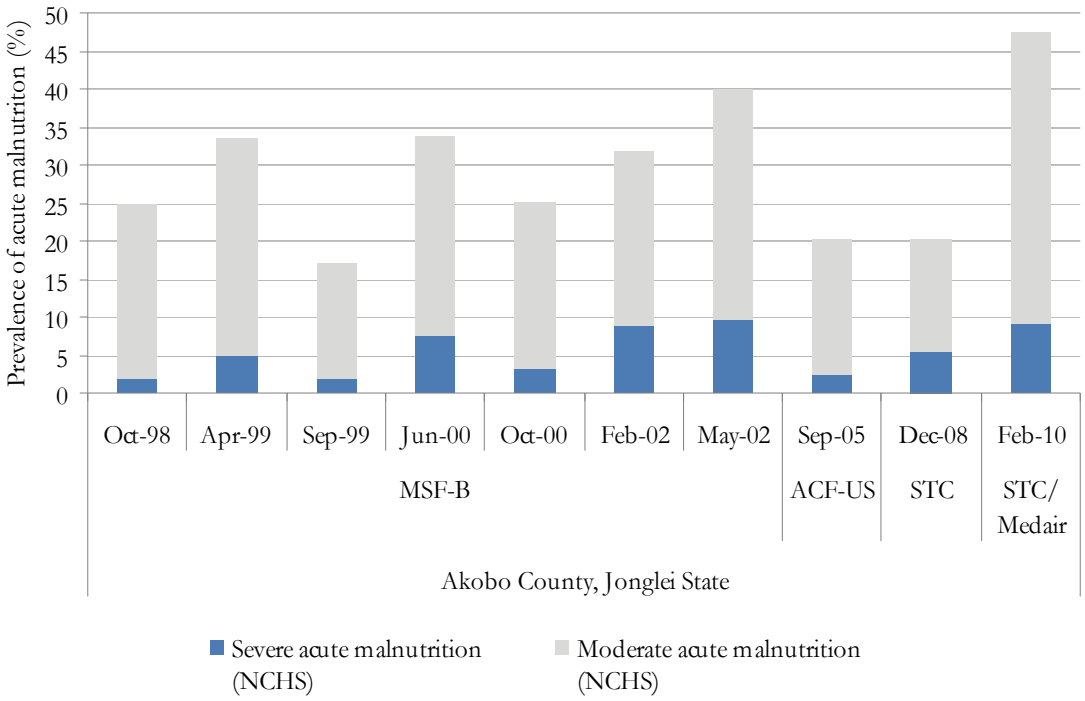


FIGURE 3 RESULTS OF NUTRITION SURVEYS FROM OCTOBER 1998 TO FEBRUARY 2010 IN AKOBO COUNTY, JONGLEI STATE, SUDAN
(FEWSNET, 06/10)



Very serious nutrition situation in Akobo County

The global acute malnutrition (GAM) rate in Akobo county was estimated at 45.7% and the severe acute malnutrition (SAM) rate was estimated at 15.5% (no CI were reported 06/10) (figure 3). Similar high levels of malnutrition were recorded in the past, in both February 2002 and May 2002. However, the data presented in figure x should be interpreted with caution, as the surveys have been conducted in different seasons and by different organizations that might have used different sampling methods. Thus, the results should not be interpreted as a trend over time.

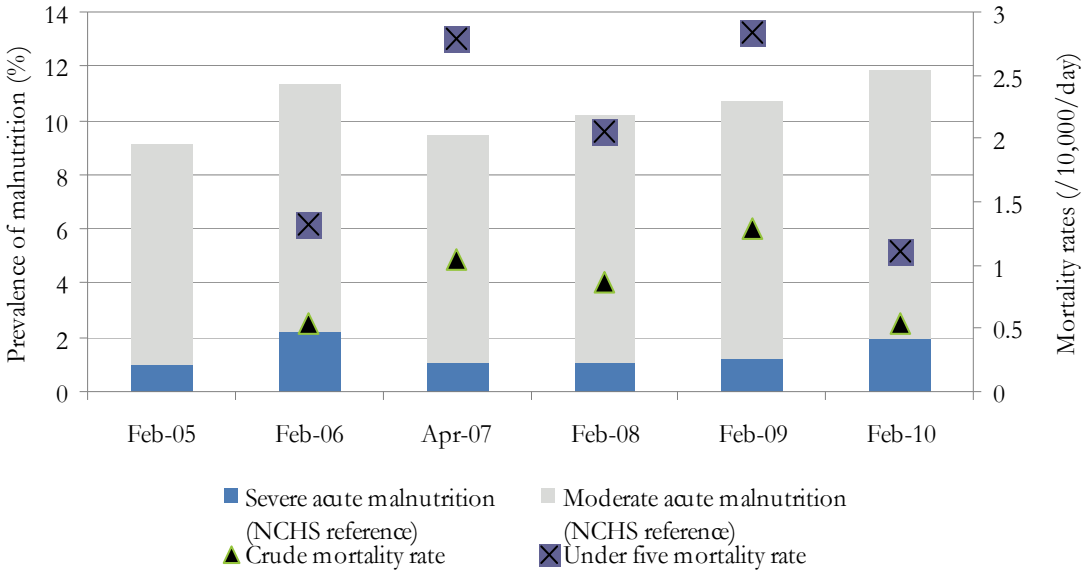
Several humanitarian response programs are underway in Akobo,including an Outpatient Therapeutic Program (OTP) established by Save the Children in Akobo Town in March 2010. The continued monitoring of food security and nutrition conditions remains critical.

Blue Nile State

The marginalized southern locality of Kurmuk in Blue Nile State, home to an estimated 250 000 people, is still in a state of humanitarian emergency. The lack of development programmes is of serious concern and has been noted by the state governor as a potential cause for further unrest. The upcoming referendum in 2011 is an additional potential trigger for violence. At the end of 2010 it was reported that more than 120 000 Sudanese returned to the South from northern Sudan in order to participate in the week-long independence referendum (VOA, 11/01/11).

GOAL conducted a nutrition survey in Kurmuk county in February 2010, which found a 10.8% GAM rate (CI: 8.1-14.3) and a 2.8% SAM rate (CI: 1.6-4.8). Malnutrition rates have increased compared to last year, although the increase was not statistically significant. Mortality rates, on the other hand, have dropped significantly (figure 4). Diarrhoea (42.8% of children), cough and fast breathing (28.6%), and malaria (14.3%) were found to be

FIGURE 4 RESULTS OF NUTRITION SURVEYS, KURMUK COUNTY, SUDAN (GOAL, 2005—2010)



the most common causes of mortality among children under the age of five.

According to the survey results, nearly all children in the age group 6-23 months had been breastfed. Initiation of breastfeeding within the first hour of life was practiced by more then half of mothers and exclusive breastfeeding of infants by 46% of mothers (table 1).

TABLE 1 INFANT AND YOUNG CHILD FEEDING PRACTICES, KURMUK COUNTY, SUDAN (GOAL, 02/10)

% of infants who were breastfed in first hours after birth	62.5	(57.2 – 67.5)
% of infants < 6months exclusively breastfed	46.3	(32.0 – 61.5)
% of infants 6 – 8 months receiving breast milk and complementary foods	25.3	(16.4 – 37.0)
% of infants still breastfed at 1 year	86.2	(74.8 – 93.1)
% of children still breastfed at 2 years	43.8	(31.8 – 56.7)
% of children ever breastfed (0 – 23 months)	94.3	(91.3 – 96.4)

West Africa

The situation in West Africa remains of deep concern. Natural disasters increased in both frequency and impact in 2010. Droughts have affected more than 10 million people in the Sahel, while floods during the 2010 rainy season impacted an additional 1.4 million. Benin has been hit hardest, with 680 000 people affected by the flooding of the Niger river in the north, the rivers Ouémé in the southeast and Mono in the southwest of the country. Niger, Burkina Faso and Togo have also been impacted, as well as the northern areas of Nigeria and western areas of Chad (OCHA, 02/11/10).

The floods have destroyed infrastructure and housing, affected the harvest and household food stores, and worsened the food security situation which had started to improve in some countries. Despite increased milk production in agropastoralist households and post-harvest food availability, many households will need assistance during the first few months of 2011 (OCHA 11/10).

A timely response to the crisis situation has been challenging in the landlocked countries of Chad and Mali which also have very poor infrastructure. Additional factors have compounded the problem. In Chad, humanitarian interventions have focused for years on eastern parts of the country to ensure assistance for refugees from Darfur and IDPs. As a result, for the approximately 1.6 million people who faced food shortages during this year's crisis in central and western parts of the Chad Sahel belt, the number of organizations working on the ground was limited. This made it difficult to react in terms of logistics. At the same time, it was difficult to raise sufficient funds for appropriate interventions (IRIN 07/10).

Regional sector response plans having been developed for the Consolidated Appeal Process (CAP) for 2011, focusing specifically on the reduction of excess mortality and morbidity, the reinforcement of livelihoods of the most vulnerable people, the insurance of humanitarian access and improvement of protection, and the strengthening of coordination and preparedness of emergencies at national and regional level. The financial requirements of the 2011 CAP amounts to 252 million USD, including about 50 million USD for nutrition interventions to improve national nutrition information systems and reporting, expand coverage of management of acute malnutrition programmes, and establish prevention programmes for acute malnutrition (OCHA, 11/10).

Guinea

Guinea is threatened by a range of potential impacts associated with climate change. Approximately 80% of the population is dependent on subsistence farming. Widespread poverty, combined with unsustainable soil management practices, has weakened the existing coping strategies of rural households to face the consequences of extreme weather conditions such as floods and droughts.

Farming in the coastal region carries the additional uncertainty of salt intrusion from rising sea levels. A significant decline in mangrove plantations aggravates this risk.

Furthermore, sources of rivers that are also important for neighboring countries are located on its territory. Guinea's management of these resources in response to changes in rainfall patterns and a succession of floods and drought could negatively impact up to six regional countries as well as its own people (OneWorld.net, 04/10).

First democratically elected president sworn in

In December 2010, President Alpha Conde was sworn in as the first democratically elected president of Guinea since its independence (AFP, 22/12/10). Guineans faced an anxious waiting period before confirmation of the final election results on November 7th, with military authorities declaring a state of emergency. Demonstrations and political gatherings were banned and a 12-hour curfew was imposed which blocked automobile travel, and had negative impacts on market and food prices (IRIN, 19/11/2010). The state of emergency was lifted in early December.

Interruption of feeding programme activities

Funding shortages during the presidential election disrupted the implementation of maternal child health nutrition activities. Local health centres ran out of fortified flour used for the treatment of moderate acute malnutrition, and had to refer families to remote facilities for their supplementary feeding rations. The supply breaks forced the Ministry of Health and aid agencies to turn to temporary solutions, such as using therapeutic foods designed for the management of severe acute malnutrition for the management of moderate cases. More sustainable solutions are being sought (IRIN, 02/10).

Acute poverty affects children

The poverty level in Guinea remains acute, with more than half of the population living on less than $1USD per day, while the prices of food and other basic commodities are still on the rise. Long lasting corruption and mismanagement of Guinea's vast natural resources has systematically impeded the restoration of public finances. According to the results of a national survey conducted in 2009 by UNICEF, the well-being of more than 2.2 million children is affected by the country's severe social, cultural, political and economic disruption (UNICEF 02/10). Nutrition wise, chronic malnutrition remains of deep concern, with the prevalence of stunting estimated at 40% (Ministère de l'Economie des Finances et du Plan/joint, 05/2008).

Nutrition situation in Conakry

In January 2010, ACH-S conducted a nutritional survey in Conakry's Matoto commune which showed a GAM rate of 7.1% (CI: 5.4-8.7) and a SAM rate of 1.5% (CI: 0.7-2.3). Prevalence of GAM among children below 30 months (8.8%, CI 6.3-11.3) was significantly higher than among children equal and above 30 months (3.3%, CI: 1.2-5.3). About 26.6% of the mothers surveyed reported that their under-five children suffered from diarrhoea in the two weeks prior to the survey (ACH-S, 01/10).

Mali

In Mali, the impact of climate change has been strongly felt over the past 40 years with increased desertification and more frequent extreme events like flooding. The migration from rural areas to urban centres is of particular concern (UNDP, 12/09). The country's geographical location and the low percentage of arable land (14%), together with a weak economic development, leave Mali vulnerable to climate change. Nearly three quarters of its population live in rural areas under extreme poverty.

However, climate predictions for the next few years remain uncertain (FAO, 05/10). According to data from the Meteorological Office there has been a southwards encroachment of the Sahelian and Saharan climatic and vegetation zones over the past forty years, as rainfall has decreased. An analysis of the periods 1951-1970 compared with 1971-2000 for regions of Sikasso in the south and Tessalit in the North shows a decrease in average annual precipitation of 19% and 26% respectively. Whereas the annual temperatures are expected to increase, the annual average of precipitations is on the decrease (Ministère de l'équipement et des transport, 2007).

Eighty percent of Malians get their income from farming and cattle breeding. As a result they are heavily dependent on climatic conditions and people's key assets, cattle and farmland, are vulnerable to climate risks.

A much improved food security situation 2010/11

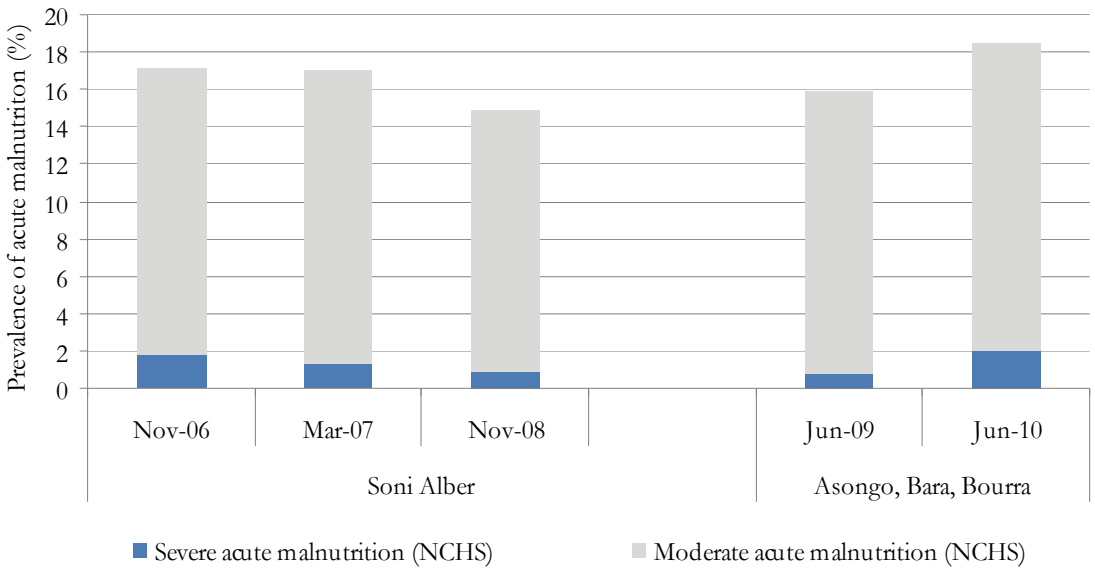
A good rainfall pattern in 2010 has led to favorable crop development in the country. Pastures and watering points have improved, ponds and lakes are at normal to above-normal levels, and prospects are good for flood recession and off-season farming as waters recede. As a result, food prices and cereal availability are likely to stabilize. In areas that are not self-sufficient in cereal production and where sowing was later than usual, sales of green harvests from the south are available at prices affordable to poor households. The rains have restored ground cover in rangelands, and improved fodder and water availability for animals. These pastoral conditions will lead to improved terms of trade. A much improved and satisfactory food supply situation is expected during the 2010/11 marketing year (FEWS NET 09/10; FAO, 02/11).

Continuing serious nutrition situation in Gao Region

ACH-S has run a nutrition program in northern Mali since 2007 and has noted a growing prevalence of malnutrition over the years. In June 2010, ACH-S observed a serious nutrition situation in the Gao region in Ansongo, Bara and Bourra with GAM and SAM rates of 17.4% (CI: 14.6-20.5) and 3.0% (CI: 1.8-5.1), respectively. However, these rates are not significantly different to previous years and are somewhat typical for the season and region (figure 5).

According to ACH-S, it is the sedentary population along the Niger River that is particularly affected by undernutrition. The observed degradation of the situation can only partly be explained by poor harvests after the erratic 2009 rainy season. Rather, it seems to be the situation of poor households which leads to an erosion of livelihood and coping strategies. These households find themselves in a difficult situation in terms of food availability, have very low reserves, and high level of debt in a context of high food prices over a long period of time (ACH-S, 06/10).

FIGURE 5 MALNUTRITION RATES IN GOA REGION, MALI
(ACH-S, 06/10)



Niger

Erratic annual rainfall is the main reason why subsistence agriculture on degraded soils has become an unreliable foundation for the rural livelihoods on which more than 85% of the population depend and which contributes 40% to the BIP. Failure of the rainy season in mid-2009 illustrates Niger's extreme vulnerability to climate events. The crisis came just five years after a similar emergency in 2005. At the moment it is not possible to suggest any direct relationship between the 2010 drought affecting the Sahel region and global warming. Predictions of rising temperature are more confident. Their consequence will be significant falls in crop yields for the period beyond 2020 due to shorter growing seasons. Therefore the Second National Communication on Climate Change warns that there may a visible gap between the food needs of a fast growing population and probable agricultural production (National Environmental Council for Sustainable Development, 2009).

Drought 2009

The food crisis in the entire Sahel region has been deepening due to the shortfall in food production resulting from erratic rainfall at the end of 2009. In Niger a 30% (=150,000 tons of crops such as millet, sorghum, cassava and rice) decrease was reported, and this was probably a very conservative estimate. This has had a dramatic impact on the livelihoods and coping mechanisms of the traditional pastoralists. It aggravated the already difficult situation caused by continued high food prices. The 70% shortage in fodder is also worrying since livestock production supports one third of the population (ECHO, 07/10).

The population displacement - around 500, 000 people have been displaced - started with a large-scale migration of families seeking casual labour opportunities. Work opportunities, however, are very scarce and when available are poorly paid. There has also been a substantial reduction in remittances sent home by expatriate workers (ECHO, 07/10).

Favorable climate for timely humanitarian interventions

The new government has created a favorable climate for humanitarian interventions. Niger is one of the countries of the Sahel region in which the government has declared a state of emergency and asked for international assistance. Out of a total population of 15 million, 3.3 million are considered severely food insecure, and a further 3.8 million moderately food insecure.

In May/June 2010, the government of Niger organized a nationwide nutritional status assessment in collaboration with UN agencies and NGOs to investigate levels of malnutrition among children. This was the sixth assessment in a series that started in October 2005 following the food crisis. The assessment was to reinforce evidence-based humanitarian decision-making.

According to survey results, high levels of malnutrition are prevalent throughout the country. The national global acute malnutrition (GAM) rate was estimated at 16.7%, and none of the eight administrative regions had GAM values below 10% (figure 6). Of even greater concern is the deterioration compared to last year's survey from 12.3% to 16.7% (INS-joint, 06/10).

In all survey regions, children below three years of age were more affected than children between three and five years. Based on these results it is estimated that about 455, 000 children are acutely malnourished and about 86, 800 of these are severely malnourished.

Niger is seen as an example of an appropriate reaction to the crisis situation. The government's early appeal for support prevented the crisis from turning into catastrophe. Distribution of fortified flour, oil and sugar to children less than two years of age started as early as May 2010 in areas where GAM was above the emergency threshold of 15% (IRIN 08/10). During the last few months almost 5 million people received food aid and by the beginning of November, more than 280,000 children had received therapeutic feeding to treat severe

acute malnutrition (OCHA 11/10). Nevertheless, around 1,000 children per day are still admitted to one of the 822 centers throughout the country.

Fragile situation in pastoral areas

Food security remains a problem in the Maradi and Zinder regions. Many poor households in pastoral areas lost most or all of their livestock and depend on gifts from the community. This coping strategy might work until December, but when transhumants leave in January those households will become highly food insecure. It should also be noted that cereal stocks in agropastoral regions might already be exhausted by January, not only because of personal consumption but also because many households are in debt and need to sell food (FEWS NET, 11/10). The overall situation, therefore, remains fragile.

Poor infant and young child feeding practices

A nutrition survey conducted by World Vision in their 18 Area Development Program zones in June 2010 found GAM rates between 3.8% and 18.4%, with an average GAM rate of 12.6% (CI: 11.1-14.1) and SAM 3.1%, (CI: 2.5-3.8). Thirteen of the zones showed GAM rates above 10% (figure 7). Exclusive breastfeeding of infants was reported by only 14% of mothers. However, the majority of the mothers surveyed had two or more children of breastfeeding age. In that case, mothers weaned the older child early, often before the age of 6 months. The complementary foods introduced were frequently found to be inappropriate for children of that age, indigestible or of low nutritional quality (World Vision, 06/10).

FIGURE 6 RESULTS OF A NATIONAL NUTRITION SURVEY, CHILDREN <3 YEARS AND 3-5 YEARS, NIGER (INS/JOINT, 06/10)

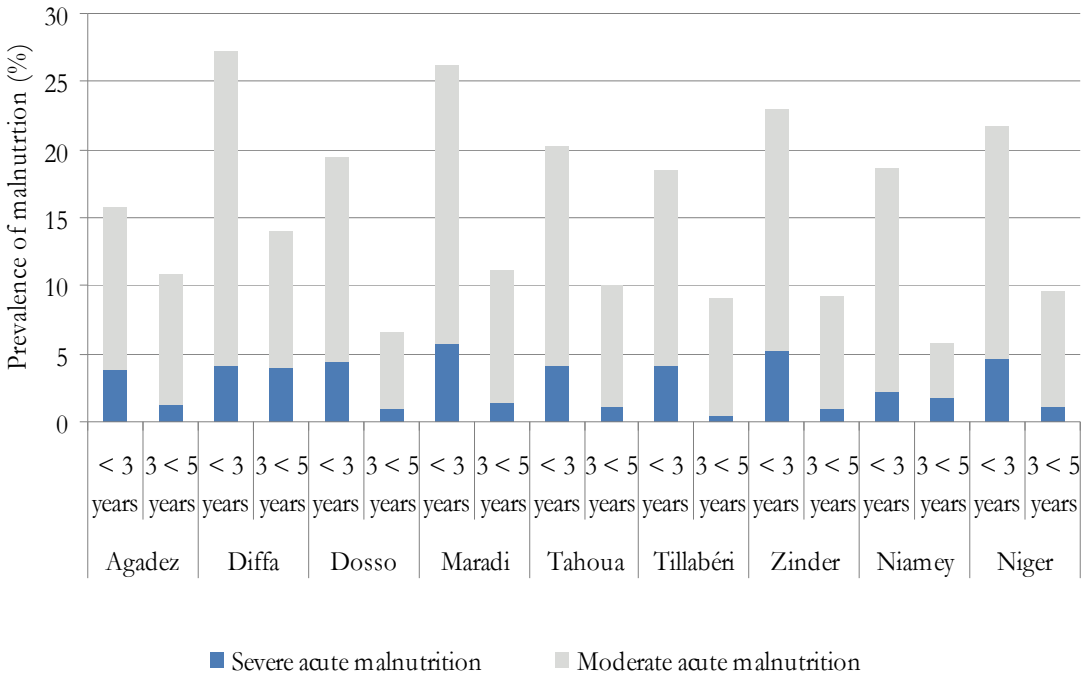
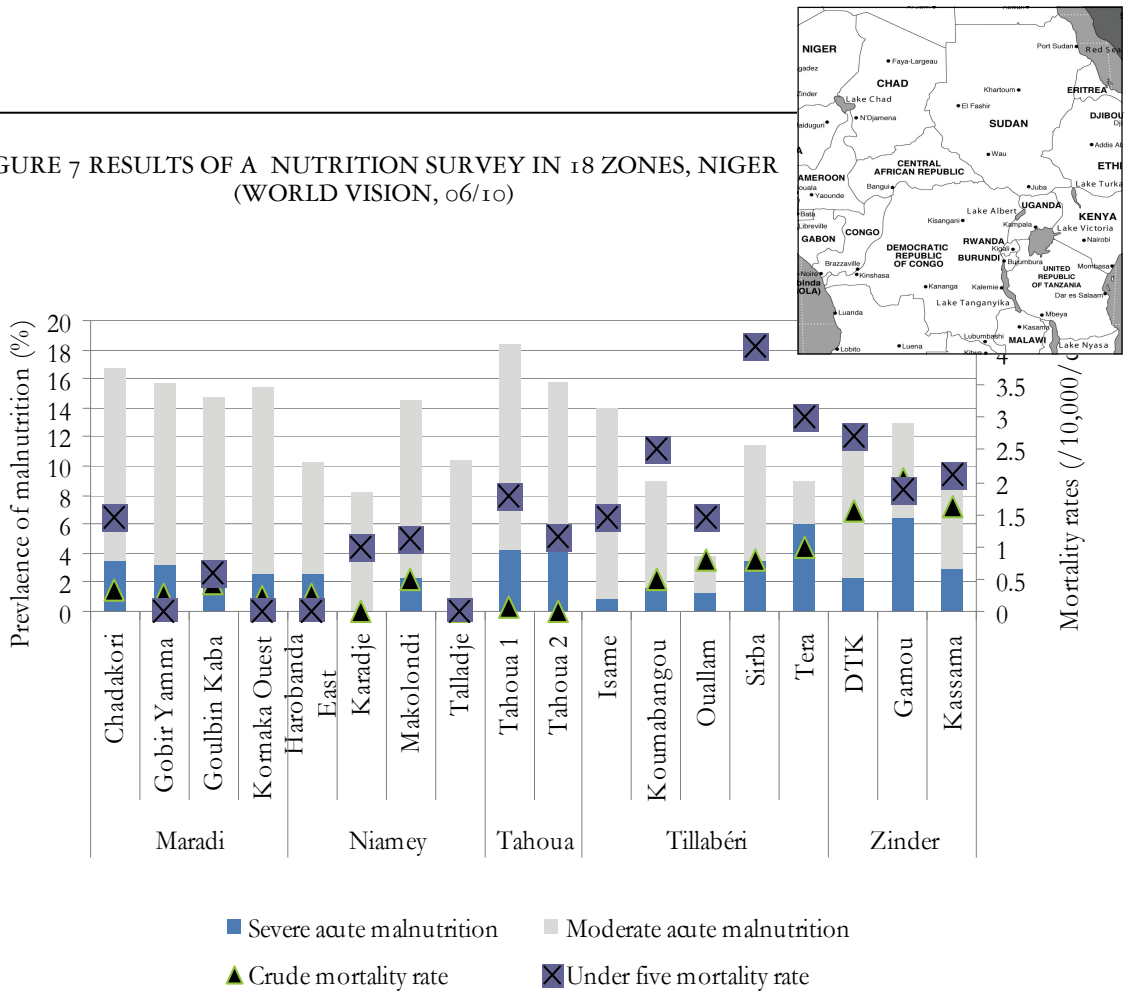


FIGURE 7 RESULTS OF A NUTRITION SURVEY IN 18 ZONES, NIGER (WORLD VISION, 06/10)



Central Africa

The six countries of central Africa -- Cameroon, Central African Republic (CAR), Democratic Republic of the Congo (DRC), Equatorial Guinea, Gabon, and Republic of Congo - contain the largest remaining contiguous expanse of moist tropical forest in Africa.

Land degradation - particularly from deforestation and unsustainable agricultural practices and land management practices – is a major contributor to increased atmospheric greenhouse gas concentrations that are responsible for human-induced climate change. With its vast forest reserves, the central African region is the most important region in Africa for storing carbon and mitigating carbon dioxide emissions.
Unfortunately, unsustainable natural resources extraction, shifting cultivation practices, poverty, and urban expansion at the forest margin, pose increasing threats to this globally significant forest resource. This has a variety of negative consequences also for its own population: damaging the agricultural and economic productivity of the region, placing a heavier burden on the natural resources upon which the rural populations rely for almost their entire subsistence; as well as reducing the region's ability to withstand the potential environmental and socioeconomic impacts of global climate change. Maintaining the carbon "sink" potential of the region is a key objective of climate change programs (USAID, 05/08).

Central African Republic

Civil conflict and insecurity within the CAR, which has been concentrated in the northeast, remains a major factor impeding improvements in food security and agricultural production. As of June 2010, nearly 200, 000 IDPs were estimated in the country. The food security situation has further deteriorated following renewed attacks in the southeast, in Haut-Mbomou and Mbomou, and in the northeast. Furthermore, insecurity in neighboring DRC has increased the number of refugees in the country - a phenomenon which is adding to the pressure on the country's already limited resources (FAO 11/10).

Persistent insecurity

During the main maize-growing period (March-August), substantial rainfall was recorded in the major southern maize-growing regions and during the harvesting stage. No official production estimates are available, but gross cereal production for the 2009/2010 season is estimated to be below the past five-year average. Limited access to agricultural inputs, as well as insecurity throughout the country, continue to place constraints on agricultural production (FAO 11/10).

Worrying nutrition situation

According to a nutrition survey conducted by Merlin in the prefecture Nana Gribizi during the harvest season in August 2009, GAM and SAM rates were estimated at 6.6% (CI: 5.1-8.6) and 2.4% (CI: 1.5-3.9) respectively. Boys were significantly more affected than girls (figure 8), and children below 30 months were at a greater risk of malnutrition than older ones. Overall, the main causes reported have been poor complementary feeding practices due to inadequate access to food and low food diversity, as well as poor food safety. Despite the high agricultural potential, actual productivity is low. Agricultural production tools and the harvest were stolen during armed conflicts. Moreover, the cash crop production of coffee and cotton, formerly a main source of income, has been almost completely abandoned because of low producer prices.

FIGURE 8 PREVALENCE OF MALNUTRITION, NANA GRIBIZI PREFECTURE, CENTRAL AFRICAN REPUBLIC (MERLIN, 08/09)

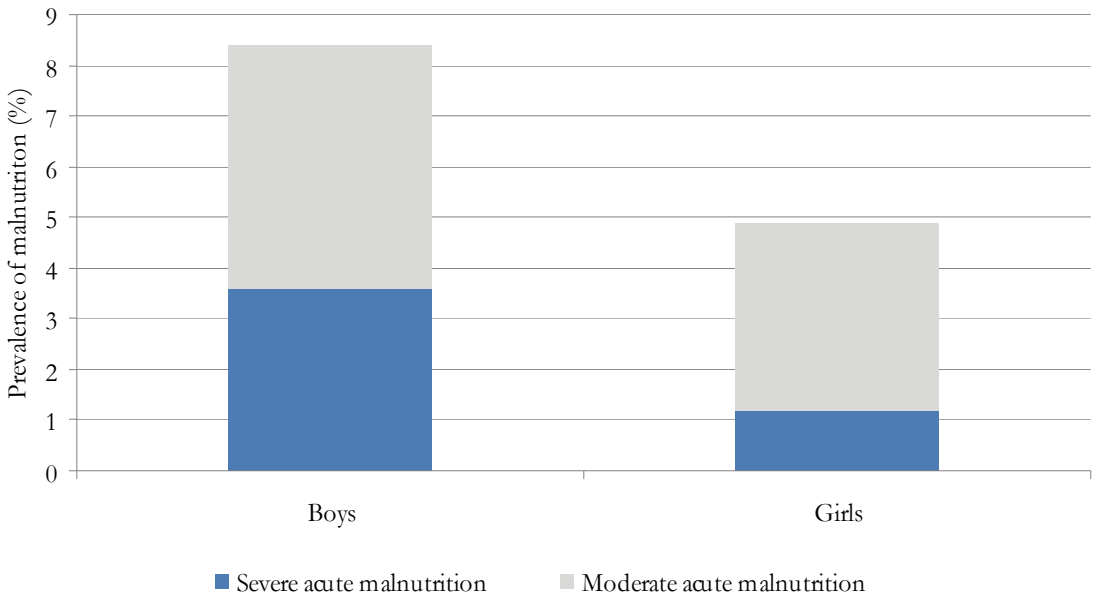
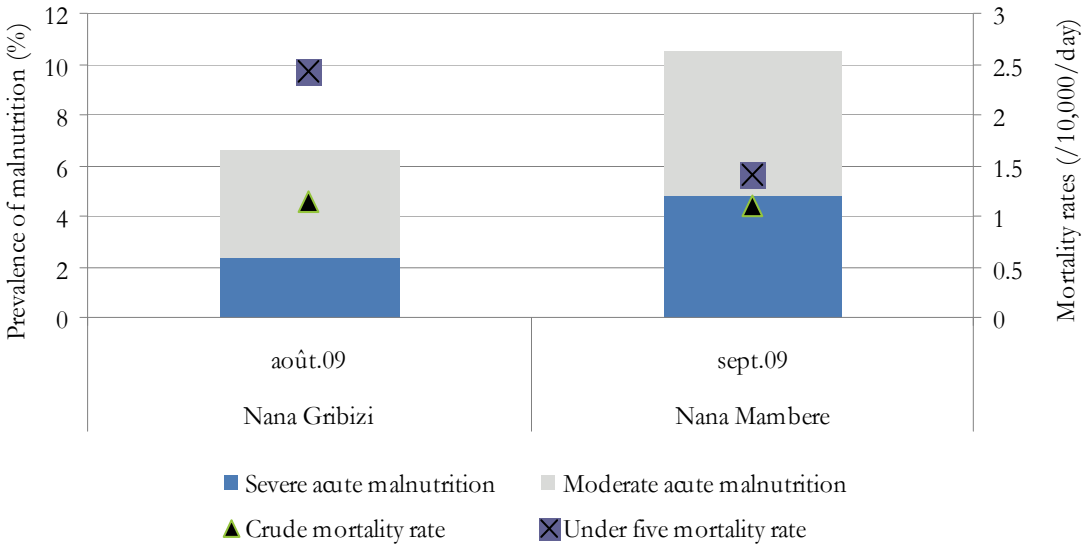


FIGURE 9 RESULTS OF A NUTRITION SURVEY, NANA GRIBIZI PREFECTURE, CENTRAL AFRICAN REPUBLIC (MERLIN, 08/09)



In the prefecture of Nana Mambéré, a GAM rate of 10.5% (CI: 8.4-13.1) and a SAM rate of 4.8% (CI: 3.2-7.1) were reported by Merlin (09/09). The situation was expected to worsen in the following dry season from January to March 2010. Boys and girls were equally affected, but children below 30 months were significantly more affected than older ones. The under-five mortality rate of 1.40/10,000/day (CI: 0.70-2.80) was not as high as in Nana Gribizi (2.43/10,000/day) (CI: 1.63-3.59) (figure 9).

Malaria is a major health problem in the area and access to health care services is limited. Health posts are poorly equipped and partly damaged. Nana Mambéré is bordered by Cameroon, which offers many market opportunities; however, poor road infrastructure has rendered these markets inaccessible (Merlin, 09/09).

Chad

Lake Chad - once one of Africa's largest freshwater lakes and shared by Nigeria, Chad, Cameroon and Niger - has receded to less than 20% of its former volume. This environmental disaster affects the livelihoods of over 20 million people in the four countries sharing the lake's boundaries. Fishermen, farmers and pastoralists are all affected. The demand for irrigation water upstream and poor water management have certainly contributed. In addition, as the lake is very shallow, it is sensitive to changes in temperature and rainfall. According to scientists, if nothing is done, it could disappear over the next 20 years, reflecting the inability to manage a vital resource in a period of declining rainfall (OneWorld.net, 03/10; UNICEF, 02/11).

Like other countries in the Sahel, Chad is affected by increasing desertification. One reason is deforestation that leads to land degradation. On the other hand, changes in climate have also been measured: temperature has risen by 0.7°C since 1960 and is predicted to rise at a faster rate. Greater heat diminishes water volume through evaporation and adds stress to plants. Although rainfall patterns emerging from these higher temperatures are hard to predict in the Sahel region, it is clear that subsistence farming

and husbandry in Chad is highly vulnerable to any climate variability. Poor rains during the most recent growing season resulted in over 2 million people in Chad requiring food assistance during 2010 (OneWorld.net: Climate Change in Chad, 03/2010).

Food security of vulnerable groups still at risk

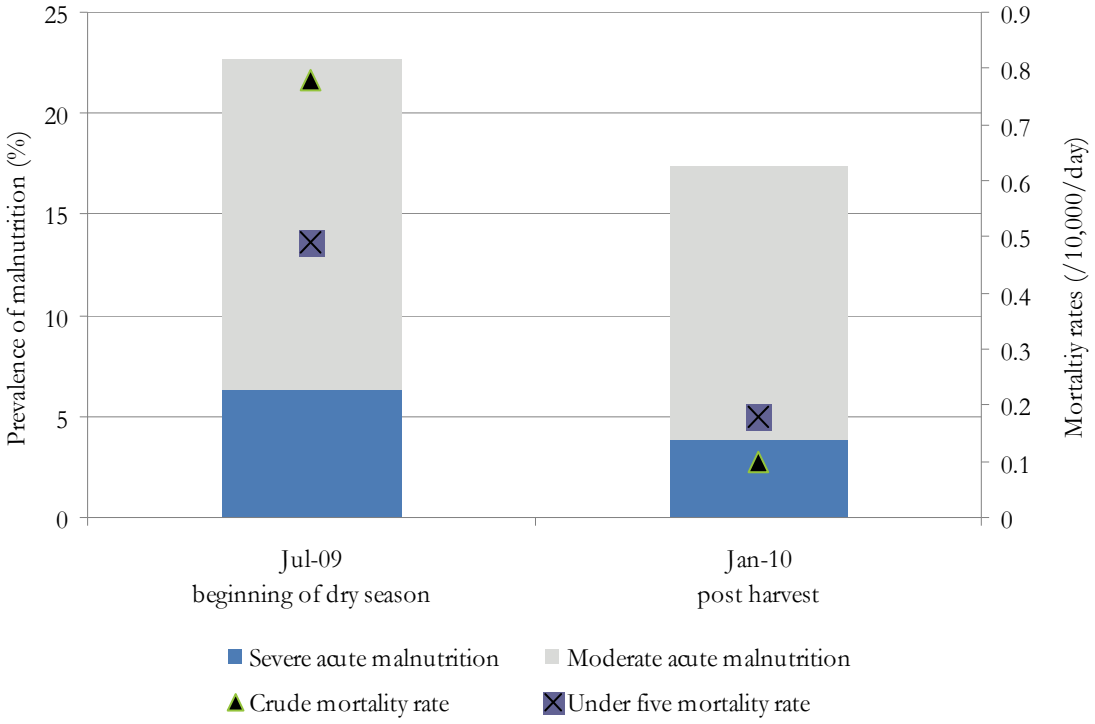
The effects of last season's food deficits in the Sahelian zone will continue to impact food security conditions between October 2010 and March 2011. The period between October and December 2010 is the best time of year from a food security standpoint, but food insecurity is expected to be greater than usual as of January 2011, particularly in the Sahelian zone.

Wild fonio production, a wild plant harvested in November and December and an important food source for poor households in the Sahelian zone, is at a ten-year high. The harvesting of these seeds started earlier than usual in 2010, beginning in September, due to the large unmet food needs (Fewsnet 10/10).

Serious nutrition situation in Abéche ville

According to a survey by ACF-F in January 2010 in Abéche ville, capital of Ouddaï, GAM and SAM rates were 17.4% (CI: 14.1-20.7) and 3.9% (CI: 2.1-5.6) respectively, even though the assessment was conducted after the harvest period (figure 10). Poor water and sanitation facilities together with poor hygiene practices and inadequate IYCF practices were reported. For example, exclusive breastfeeding for the first 6 months was only practiced by 2.2% of the mothers surveyed (ACF-F, 01/10).

FIGURE 10 RESULTS OF NUTRITION SURVEYS, ABECHE VILLE, OUDDAI REGION, CHAD (ACF-F, 07/09, 01/10)



Democratic Republic of the Congo

Numerous factors underscore the vulnerability of the Democratic Republic of the Congo (DRC) to climate impacts. The country is covered by the world's second largest area of tropical rainforest, storing 8% of global forest carbon. The Congo Basin Forest is a major trans-boundary natural resource pool and, like other forest ecosystems, is likely to be impacted by climate change in the various ways described in the Intergovernmental Panel on Climate Change's fourth assessment report (IPCC 2007). The majority of the population is highly dependent on climate-sensitive sectors like agriculture, fisheries, pastoral practices, and forests for household food security, water supply, energy, herbs, and tree barks. Subsistence rain-fed farming and non-timber forest activities support about 70% of the population (CIFR, 2009). Extreme weather conditions are already the cause of regular humanitarian alerts as households have insufficient capacity to cope.

Conflict continues to negatively impact food security

Tens of thousands of people have been displaced in the Sud-Ubangi district of the Equateur province in northwestern part of the country since October 2009, and many more have fled to Central African Republic following inter-communal violence. The number of IDPs increased slightly between July and August 2010 to just under 2 million, with the highest concentration located in North and South Kivu. Nationally, the latest figures indicate that there are about 160, 000 refugees, mainly from Angola and Rwanda, in the country (FAO 11/10).

Imported rice prices relatively stable

Prices of imported rice have remained constant, increasing only marginally between the beginning of the year and October 2010. This reflects the relative stability of the exchange rate. Approximately one-third of the national cereal supply is imported. However, rice prices in Kinshasa are still significantly above levels recorded two years earlier. In Bunia and Kisangani, local rice prices are also higher than those observed two years earlier, although they dropped between June and October. Lower maize prices this season on the Zambia side of the Kasumbalesa border point - about 20% lower in August 2010 compared to the previous year - as well as ample supplies, have supported an increased flow of maize into the country. Estimates of cross-border trade from WFP/FEWSNet indicate that informal imports from Zambia between April and August 2010 reached 5,8 tonnes, compared to 4,3 tonnes over the same period in 2009 (FAO 11/10).

Serious nutrition situation in Bandundu Region

AAH-US has conducted several nutrition surveys in various districts over the past two years. In March 2010, a nutrition survey was carried out in the health zone of Ganga at the beginning of the dry season. Two other surveys were conducted during the dry season in the health zones of Kisanji and Boko in April and May 2010. Malnutrition rates were lowest in Ganga with GAM at 5.1%, (CI: 3.5-6.7) and SAM at 1.3%, (CI: 0.3-2.3). In Kisanji, GAM rates were at a serious level of 13.3% (CI: 10.2-16.5) with SAM rate of 3.4%, (CI: 1.8-4.9) The nutrition situation in Boko is better than in Kisanjii, where the GAM rate was 10.1% (CI: 8.0-12.2) and the SAM rate was 3.0% (CI: 1.9-4.1), despite the fact that both assessments were conducted in the same season (figure 11).

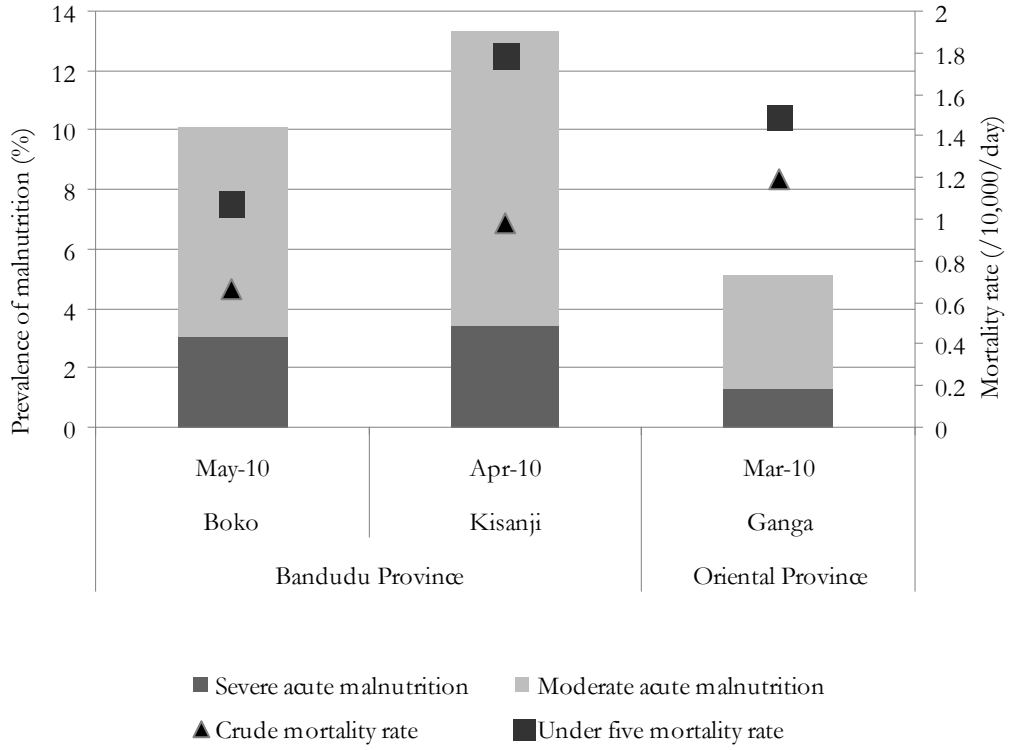
In the Ganga survey, measles vaccination coverage was only 57.2%. Malaria prevention measures and vitamin A supplementation coverage (84.7%) were at an acceptable

level. Little effort has been made so far to rebuild the demolished agricultural infrastructure. Agricultural production and primary school enrolment rates are affected by many men and children working in the diamond and gold fields.

In Kisanji, many men moved to the Tshikapa diamond field in the West Kasai Region of Kasai-Occidental Province. The Tshikapa diamond field lies directly downstream of the alluvial diamond fields of the Lucapa Graben in northeastern Angola.

The children are often supervised by their grandparents who struggle to feed the children adequately. Access to safe drinking water is poor. Diarrhoea, malaria, respiratory diseases, anemia and malnutrition are the most common health problems.

FIGURE 11 RESULTS OF NUTRITION SURVEYS, BANDUNDU AND ORIENTAL PROVINCES, DRC (AAH-US, 03-05/10)



Asia

According to the IPCC, future climate change is likely to affect agriculture, as well as increase the risk of hunger, and water resource scarcity in Asia, with enhanced climate variability and more rapid melting of glaciers. Studies indicate that extreme weather events, including heat waves, will increase in South, East, and Southeast Asia. Expected increases in air temperature in Northwest China may result in a 27% decline in glacier area (Cruz et al, 2007).

Sea level rise will increase the risk of coastal land loss and flooding, which will force populations to relocate, and possibly generate conflict. Changes in occupancy and migration patterns may occur, within or across national borders. The most vulnerable areas to flooding in Southeast Asia are the Ganges-Brahmaputra delta in Bangladesh, and small islands (Maldives and in Indonesia- as well as the entire coastline of the Indian Ocean).

If sea surface temperature increases by 2 to 4°C as predicted, tropical cyclone intensity will also increase by 10 to 20% in South, East, and Southeast Asia. Increased temperatures and water stress will negatively affect the production of main staple foods, increasing food insecurity and ultimately malnutrition. Different scenarios have been calculated about a possible decrease in caloric availability and the increase in number of people in Asia that could be at risk of hunger, including an increase in the number of malnourished children (Cruz et al, 2007; WHO, 2009).

Bangladesh

Bangladesh is most vulnerable to natural disasters due to the frequency of extreme climate events and its high population density. According to the UNDP, Bangladesh is the country most vulnerable to tropical cyclones and the sixth most vulnerable to floods (UNDP, 2004). Flooding problems are exacerbated by sediment transported by three major rivers- the Ganges, Brahmaputra and Meghna. National and international research communities predict that, in the short term, global warming will increase the risk of flooding, erosion and mudslides during the wet season. In the longer term, global warming could lead to the disappearance of several glaciers that feed many rivers in Bangladesh and South Asia.

The risks for Bangladesh are posed by higher temperatures, more variable precipitation, more extreme weather events, and sea level rise already having an impact on economic performance and on the lives and livelihood of its population. Crop yields are predicted to fall by up to 30%, creating a very high risk of hunger (World Bank, 2009). On the other hand, rainfall may decrease and become more erratic in the drier northern and western regions of the country, resulting in increasing drought. Furthermore, rising sea levels threaten inundation and saline intrusion in the southern coastal region.

One of the most serious impacts will likely be on human migration. As sea levels rise and land becomes inundated, many will have no choice but to flee their homes. Bangladeshi "land squatters" have, for decades, settled on islands of silt known as chars already vulnerable during monsoons. With higher sea levels and stronger storms, the chars are quickly eroding under their inhabitants' feet.

Farmers who can no longer cultivate their land, inhabitants of coastal areas that have been submerged in sea water, and other impoverished Bangladeshis who are forced to leave their homes to escape from climate change will become environmental refugees.

They will spill over into Bangladesh's neighbouring countries and may end up in the already crowded slums of cities like Calcutta, Delhi, and Mumbai (CSIS, 12/09).

Some of the challenges include: increased number of casualties due to poor resilience capacity in the Bangladeshi society, large - scale migration into urban areas may make cities (which are already under severe stress) more vulnerable to health hazards, reduction in the availability of freshwater may affect people's health as many will be bound to use unclean water, all contributing factors to increase disease outbreak.

To address the challenge, the government of Bangladesh has formulated the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2008, which was last revised in 2009.

Pakistan

Pakistan experienced extraordinary rainfall in mid-July 2010, which continued until September 2010. The result was unprecedented flooding that affected the entire country. The floods have been assessed as the worst since 1929. According to the National Disaster Management Authority, the floods affected more than 20 million people. Additionally, flash floods and landslides triggered by the rain caused severe damage to infrastructure. Entire villages were washed away, urban centres were flooded, homes destroyed, and thousands of acres of crops and agricultural lands were damaged (ADB/WB/UN, 11/10).

While many experts are still cautious against trying to link any specific event directly to emissions of greenhouse gases, scientists at the World Meteorological Organization (WMO) in Geneva say there's no doubt that higher Atlantic Ocean temperatures are a major contributing factor to the disaster (Scientific American, 08/10).

Over 20 million flood affected people

Flash floods in the mountainous north and parts of Baluchistan were highly destructive; in Punjab and northern Sindh slower-onset flooding affected densely populated and cultivated areas; in lower Sindh, where soils were saturated, the impacts are expected to be longer-term.

Flood victims in Punjab province and Khyber Pakhtunkhwa (KP) province have since returned home. However, humanitarian agencies report that many in Sindh and Balochistan are unable to return to their areas of origin. Many areas remain under water, causing secondary displacements.

Sindh province heavily affected

In Sindh province, around one million IDPs remain in 4, 700 sites. Of these, 49% are women, 58% are children, and 12% are persons with disabilities. The study highlighted the lack of access to basic services such as reproductive health services. In Dadu district, an estimated 50, 000 people - half of whom are children - remain stranded on small embankments and are in need of immediate medical assistance and emergency relief (UNICEF 5-11/11/2010).

According to OCHA (11/11/10), it is a priority that shelter distribution across Sindh province, along with the distribution of blankets, non-food items and hygiene kits be carried out as winter approaches.

Food and nutritional needs

The results of the initial flood impact assessment suggested that 10 million people were in need of immediate food assistance across the country. In November, close to 7 million flood-affected people had been reached with monthly rations, and distributions were ongoing. Key challenges include ensuring uninterrupted food distributions in priority

districts, access constraints and the need for prepositioning of stocks in Northern provinces, as well as tracking of populations.

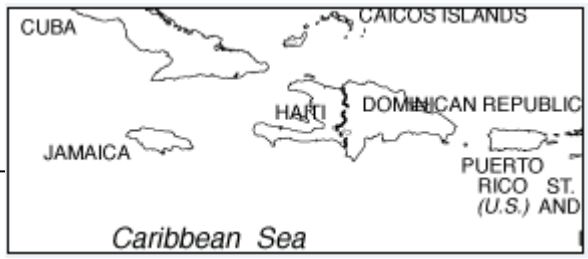
As of November 2010, the number of feeding programs in the flood-affected areas had increased to 214 Outpatient Therapeutic Feeding Programmes, 31 Inpatient Stabilization Centers, and 167 Supplementary Feeding Programmes (OCHA, 11/11/10).

Current key priorities include continued delivery of food in flood-affected areas, the introduction of unconditional cash transfers, and scaling up of early recovery activities such as food-for-work. The Nutrition Cluster is urging for confirmation of donations from donors in order to ensure that food can be purchased on time and pre-positioned in target locations. WFP is still facing funding shortfalls which are threatening breaks in the food pipeline.

Infant and young child feeding practices

Infants and young children are particularly vulnerable in crisis situations. Even before the crisis IYCF practices were not optimal in some parts of Pakistan, as evidenced by a recent study conducted by ACF in Lower Dir, NWFP in March 2010. The assessment of IYCF practices showed that colostrum is routinely discarded in favor of supplements such as ghee, green tea, honey, and sugar water which are given prior to or at the start of breastfeeding. Initiation of breastfeeding within the first hour after birth was practiced by 71% of mothers and 43% of mothers introduced complementary foods to their child at four months. Exclusive breastfeeding was practiced by only 14% of the mothers surveyed. The same study included a rapid MUAC screening among the host and displaced populations estimating a GAM rate of 3.2% (MUAC < 12.5cm) and SAM rate of 0.4% (MUAC < 11.5cm).

The Caribbean



Haiti

Located in the Caribbean Basin, Haiti has the highest index of vulnerability to cyclones of all the developing small island states and is particularly susceptible to the adverse effects associated with climate change. Significantly above average sea surface temperatures in the Atlantic Ocean where water temperatures are currently two degrees Celsius above average, combined with a waning El Nino in the Pacific generally causes the rainy season to be wetter than average in Haiti. The three past seasons, with record warm April sea surface temperature anomalies, all had abnormally high numbers of intense hurricanes.

Each year, from May to November, Haiti is exposed to powerful cyclones responsible for considerable damage due to high winds, flooding, landslides and mudflows. In addition to the hydro-meteorological threats, Haiti is in a seismically active zone. The disproportionate impact of the earthquake in 2010 shows the country's extreme vulnerability to exogenous shocks.

These adverse natural events alone cannot explain the magnitude of impact of disasters which have taken place. The country's extreme vulnerability multiplies the extent of

each event's impact. One of the main factors is the weakness which flows from rural development and town planning, with 39% of the population and 66% of the GDP concentrated in the West department alone, the main metropolitan area. Haiti's high urban population density, coupled with the proliferation of flimsily-constructed buildings and the overall fragility of the infrastructure, make earthquakes exceptionally devastating. In addition to this environmental vulnerability, certain social factors like poverty, political instability, rapid urbanization and the fragile nature of the Haitian state exacerbate the damaging effects of natural events (Government of Haiti/joint, 03/10).

Difficult reconstruction—one year after the earthquake

One year after the earthquake destroyed much of Port-au-Prince and other areas, there are few visible signs of reconstruction. As of January 2011, 810, 000 people were still living in 1, 150 camps spread over the area (Reliefweb, 10/01/11). Significant challenges remain, including the recent cholera outbreak, which has shifted resources towards containing the crisis and preventing future outbreaks.

The transition from emergency relief to sustainable recovery and growth has revealed even more work to be done. The overwhelming support for Haiti in the form of funding, supplies, and projects, while remarkable and admirable, means that there is an even greater need for efficient coordination of recovery efforts and for transparent governance. The Interim Haiti Recovery Commission (IHRC) was created in April 2010 to coordinate the recovery effort for a period of 18 months. The Haitian Development Agency, being developed by Haitians, is then expected to take over and lead the recovery through its full term (IHRC, 12/01/11).

Cholera epidemic

Despite all efforts, the Ministry of Health (MSPP) reported 4, 131 death from cholera and 215, 936 cumulative cholera cases, with a nationwide fatality rate of 1.9%. As of February 2011, the cholera epidemic was stabilizing but an increase in the number of cases in isolated areas are still being reported (OCHA, 04/02/11).
Young children affected by cholera were particularly at risk of severe acute malnutrition. In response to the outbreak, the Haitian Ministry of Public Health and Population issued guidelines on the diagnosis and treatment of SAM for 6-59months children suffering from cholera (MPHP/joint, 2011).

Civil unrest in Cap Haitien inhibited the humanitarian response to cholera in the surrounding area. The UN and humanitarian partners have called for calm in order to resume activities (OCHA, 19/11/2010).

Post-earthquake nutritional status

From April to June 2010 the MSPP, in collaboration with UNICEF, conducted a nutrition cluster survey around the epicenter of the earthquake in Port-au-Prince. The area was divided into 3 zones according to the damages. The communities of two zones were divided into host and displaced communities, as well as into camp residents or residents in tents or houses.

Five months after the earthquake, GAM and SAM rates among children under the age of five were below 5% for GAM in three areas and at 5% in two other areas. GAM and SAM rates were the highest in Artibonite (zone 3) at 5.6% (CI: 3.8-7.4) and 1.0% (CI: 0.3-1.7) respectively. In Port au Prince (zone 1), the GAM and SAM rates were at a similar level. GAM rates were at their lowest in zone 2, and varied between 2.5% and 3.2%. (figure 12).

Food insecurity not a matter of rich or poor

In February 2010, the Coordination Nationale de la Sécurité Alimentaire (CNSA, 02/10) conducted a food security survey in the affected area. They concluded that food insecurity had become a problem across all income groups and was more dependent on how many household resources were de-

stroyed by the earthquake. Poverty after the earthquake increased from 33% to 52%; about 11% of the rich were newly classified as poor.

Damage estimates found that 50% of the houses were destroyed in Gressier and Léogane, while 30% in Port au Prince, Delmas, Croix des Bouquets, Grand Goâve and Carrefour. Half of the households living in camps, from both rural and urban areas, also lost their homes. As a result, many households did not have latrines.

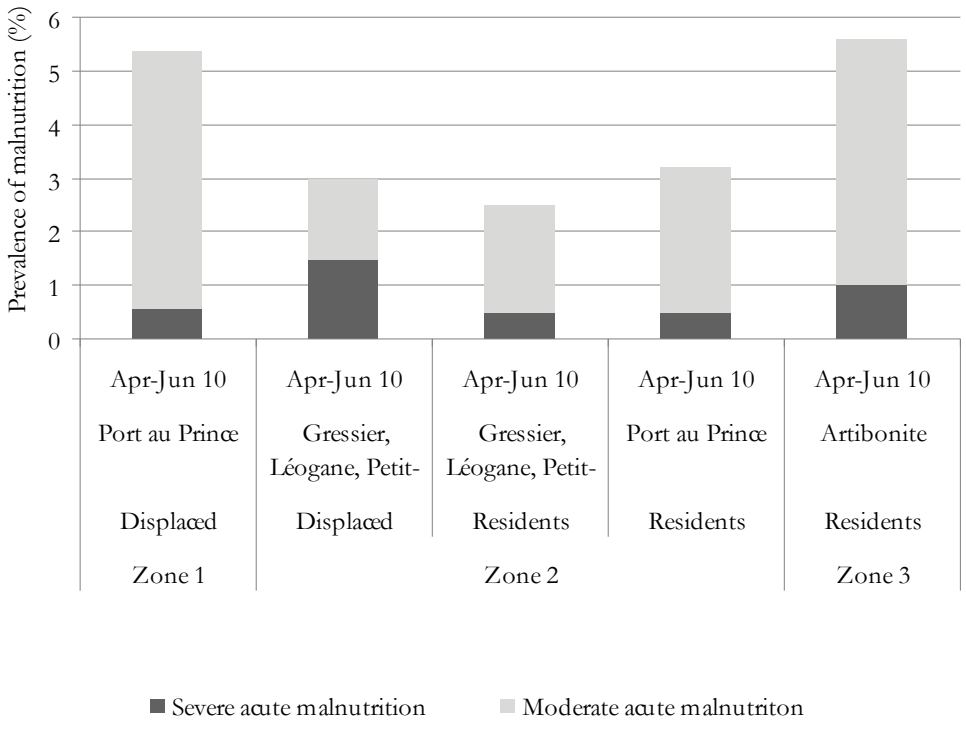
About 30% of the households depended on cash transfers and/or food aid. The cash was mainly used for food expenses (89%), and the rest for water, rent, schooling or transport. One-third of the households used credits to cope with the emergency situation. According to the survey report, no one was dependent on cash transfers and/or food aid in the respective areas before the earthquake. People had held many jobs which were no longer available after the earthquake.

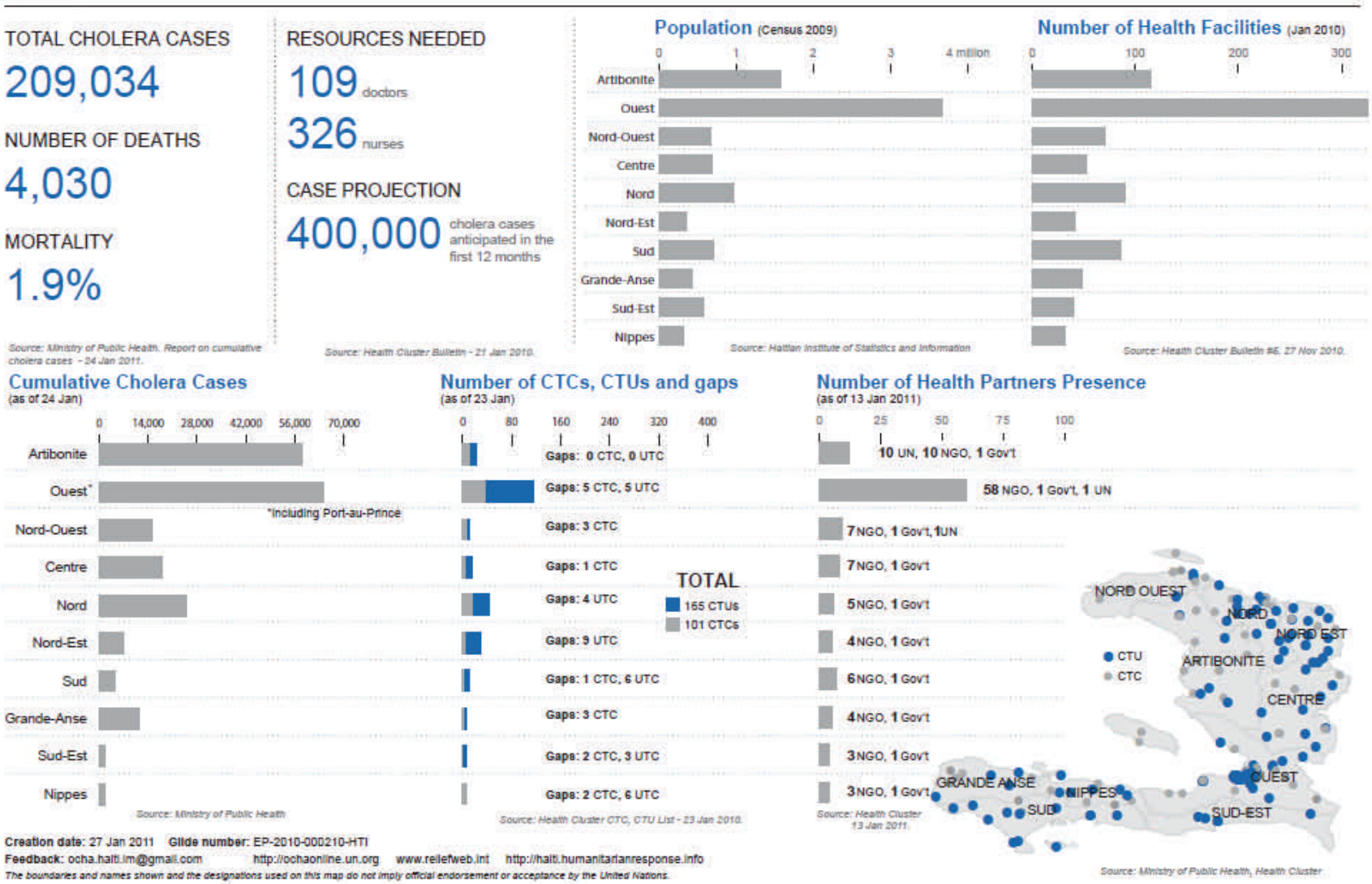
Difficulties in accessing food aid

Food distribution was generally effective after the earthquake. However, in some places it is reported that distributors favored relatives and friends. It was therefore recommended that a new "census" be started, to be supervised by international staff. Women were sometimes attacked after receiving their food ration, and widowers had problems accessing food aid since food ration cards were distributed to females only.

Recommendations included a food security assessment outside the emergency zones as they are indirectly affected by migration, an agricultural production assessment in June/July 2010, and monitoring of market activities and the impact of food aid on local production activities. In addition, it is recommended that emergency assistance be continued for at least 3-6 months. Infant and young child feeding programs also need to be implemented, especially in the camps (CNSA, 02/10).

FIGURE 12 RESULTS OF NUTRITION SURVEYS IN EARTHQUAKE AFFECTED AREAS, HAITI (MSSP, 06/10)




TOTAL CHOLERA CASES
209,034
NUMBER OF DEATHS
4,030
MORTALITY
1.9%
Source: Ministry of Public Health. Report on cumulative cholera cases - 24 Jan 2011.
RESOURCES NEEDED
109 doctors
326 nurses
CASE PROJECTION
400,000 cholera cases anticipated in the first 12 months
Source: Health Cluster Bulletin - 21 Jan 2010.
Population (Census 2009)
0 1 2 3 4 million
Artibonite
Ouest
Nord-Ouest
Centre
Nord
Nord-Est
Sud
Grande-Anse
Sud-Est
Nippes
Source: Haitian Institute of Statistics and Information
Number of Health Facilities (Jan 2010)
0 100 200 300
Source: Health Cluster Bulletin #6, 27 Nov 2010.
Cumulative Cholera Cases
(as of 24 Jan)
0 14,000 28,000 42,000 56,000 70,000
Artibonite
Ouest*
*including Port-au-Prince
Nord-Ouest
Centre
Nord
Nord-Est
Sud
Grande-Anse
Sud-Est
Nippes
Source: Ministry of Public Health
Number of CTCs, CTUs and gaps
(as of 23 Jan)
0 80 160 240 320 400
Gaps: 0 CTC, 0 UTC
Gaps: 5 CTC, 5 UTC
Gaps: 3 CTC
Gaps: 1 CTC
Gaps: 4 UTC
Gaps: 9 UTC
Gaps: 1 CTC, 6 UTC
Gaps: 3 CTC
Gaps: 2 CTC, 3 UTC
Gaps: 2 CTC, 6 UTC
TOTAL
165 CTUs
101 CTCs
Source: Health Cluster CTC, CTU List - 23 Jan 2010.
Number of Health Partners Presence
(as of 13 Jan 2011)
0 25 50 75 100
10 UN, 10 NGO, 1 Gov't
58 NGO, 1 Gov't, 1 UN
7 NGO, 1 Gov't, 1 UN
7 NGO, 1 Gov't
5 NGO, 1 Gov't
4 NGO, 1 Gov't
6 NGO, 1 Gov't
4 NGO, 1 Gov't
3 NGO, 1 Gov't
3 NGO, 1 Gov't
Source: Health Cluster 13 Jan 2011.
NORD OUEST
NORD
NORD EST
CTU
CTC
ARTIBONITE
CENTRE
OUEST
GRANDE ANSE
NIPPES
SUD
SUD-EST
Source: Ministry of Public Health, Health Cluster
Creation date: 27 Jan 2011 Glide number: EP-2010-000210-HTI
Feedback: ocha.haiti.im@gmail.com http://ochaonline.un.org www.reliefweb.int http://haiti.humanitarianresponse.info
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Results of surveys

Survey Area	Date	Population	Estimated Population Number	Survey Conducted by	Acute Malnutrition* (%) (95% CI)§		Severe Acute Malnutrition** (%) (95% CI)§		Oedema (%)	MUAC# (%)
GREATER HORN OF AFRICA										
ETHIOPIA										
OROMIYA REGION										
Bale Zone										
Dello Mena Woreda	Feb-10	Residents	93,655	Concern	16.4 *17.7[1]*	11.4-21.4 *12.6-22.9*	1.5 *2.8[1]*	0.5-2.5 *1.4-4.1*	0.2	MUAC <11cm: 1.1 MUAC <12.5: 9.0
SNNP REGION										
Wolayita Zone										
Damot Woyde/ Duguna Fango Woreda	Mar-10	Residents	192,771	Concern	6.3 *6.1[1]*	4.9-7.8 *4.6-7.7*	0.5 *0.8[1]*	0.1-1.0 *0.2-1.3*	0.1	MUAC <11cm: 0.5 MUAC <12.0 cm: 4.4 MUAC <12.5 cm: 7.2
Offa Woreda	Mar-10	Residents	104,276	Concern	6.7 *6.0[1]*	4.3-9.1 *3.2-8.7*	0.6 *0.8[1]*	0.0-1.2 *0.1-1.4*	0.2	MUAC <11cm 0.61 MUAC <12.5 cm: 8.3
KENYA										
NORTH EASTERN PROVINCE										
Mandera Central	Mar-10	-	-	Save the children UK	25.1 *26.3[1]*	21.5-28.8 *23.1-29.4*	1.6 *4.2[1]*	0.9-2.3 *3.0-5.4*	-	MUAC <11.5cm: 1.0 MUAC <12.5 cm: 8.9
Mandera West	May-10	-	-	Save the children UK	28.7 *28.5[1]*	23.7-34.2 *23.7-33.7*	6.7 *9.5[1]*	4.7-9.4 *6.7-13.3*	-	-
Wajir East	May-10	-	-	Save the children UK	16.7 *17.2[1]*	14.3-19.5 *14.7-20.1*	1.9 *3.4[1]*	1.1-3.2 *2.1-5.5*	-	MUAC <11.5 cm: 0.8 MUAC <12.5 cm: 5.4
Wajir South	May-10	-	-	Save the children UK	21.9 *23.2[1]*	17.9-26.5 *19.1-27.8*	3.1 *4.6[1]*	2.0-4.7 *3.3-6.4*	-	MUAC <11.5 cm: 2.3 MUAC <12.5 cm: 6.1
RIFT VALLEY PROVINCE										
Greater Pokot										
Kasei, Kacheliba and Alale (North), Kapenguria, Chepareria, sook and Kongelai (West), Sigor, Chesogon, Tapach and Lelan (Central)	May-10	Residents	468,959	Joint[2]	*16.5[1]*	*13.9-19.1*	*3.4[1]*	*2.2-4.7*	-	MUAC <11.5 cm: 1.2 MUAC <12.5 cm: 6.6
Turkana District										
Kakuma Refugee Camp	Apr-10	Refugees	67,459	IRC	*7.9[1]*	*6.1-10.1*	*0.6[1]*	*0.3-1.6*	0	MUAC <11.5 cm: 0.3 MUAC <12.5 cm: 2.2

Continued...

Measles immunisation coverage (%)#		Assessment of micronutrient 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							
GREATER HORN OF AFRICA								
ETHIOPIA								
Oromiya Region								
Bale Zone								
8.7	44.3	-	28.0	MUAC < 21cm All women: 9.0 Pregnant/lactating women: 3.3	0.31	0.09-0.52	0.95	0.22-1.67
SNNP Region								
Wolayita Zone								
15.2	78.2	-	83.7	-	0.23	0.05-0.41	0.51	0.03-0.99
16.0	47.0	-	82.1	MUAC< 21cm: Pregnant/lactating women: 14.0	0.16	0.02-0.23	0.72	0.05-1.40
KENYA								
North Eastern Province								
50.7	89.2	-	68.3	-	0.28	0.10-0.46	0.46	0.04-0.89
12.6	80.7	-	78.5	-	0.19	-	0.14	-
30.2	84.8	-	36.5	-	0.09	-	0.11	-
65.8	94.1	-	89.0	-	0.40	-	0.96	-
Rift Valley Province								
Greater Pokot								
53.6	88.6	-	31.5	MUAC <21cm: Pregnant: 0.9 Lactating >24 months: 0.5 Not pregnant/lactating: 0.7 MUAC <23cm: Not pregnant/ lactating :3.4	0.99	0.70-1.28	1.17	0.56-1.79
Turkana District								
54.8	81.7	-	76.7	-	-	-	-	-

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# (%)
SUDAN										
Southeastern Sudan										
Kurmuk County	Feb-10	Residents	280,286	GOAL	11.9 *10.8[1]*	8.3-15.5 *8.1-14.3*	2.0 *2.8[1]*	0.5-3.4 *1.6-4.8*	0.6	MUAC < 11.5cm: 1.5 MUAC <12.5 cm: 11.1
West Africa										
GUINEA										
Conakry										
Matoto	Jan-10	Residents	589,216	ACF-E[3]	6.3 *7.1[1]*	4.6-8.0 *5.4-8.7*	0.9 *1.5[1]*	0.3-1.4 *0.7-2.3*	0	MUAC <11cm: 0.1 MUAC <12cm: 2.5
MALI										
Communes d'Ansongo, Bara, Bourra	Jun-10	Residents	90,812	ACF[4]	17.4 *18.5[1]*	14.6-20.5 *15.7-21.6*	3.0 *2.0[1]*	1.8-5.1 *1.1-3.4*	0	MUAC <11cm: 1.8 MUAC <12cm: 5.4
NIGER										
Niger, national	Jun-10	-	-	INS-joint	*16.7[1]*	*15.6-17.9*	*3.2[1]*	*2.7-3.7*	-	-
18 ADPs Zone in 5 out of 8 regions	Jun-10	-	903,583	World Vision	*12.6[1]*	*11.1-14.1*	*3.1[1]*	*2.5-3.8*	0.2	-
Agadez Region										
Agadez	Jun-10	-	-	INS-joint	*13.9[1]*	*11.6-16.5*	*2.8[1]*	*1.6-4.7*	-	-
Diffa Region										
Diffa	Jun-10	-	-	INS-joint	*22.1[1]*	*18.4-29.4*	*4.1[1]*	*2.9-5.6*	-	-
Dosso Region										
Dosso	Jun-10	-	-	INS-joint	*14.3[1]*	*11.6-17.5*	*3.0[1]*	*2.1-4.4*	-	-
Maradi Region										
Chadakori	Jun-10	-	-	World Vision	*16.8[1]*	*6.3-37.6*	*3.6[1]*	*1.3-9.5*	-	-
Gobir Yam-ma	Jun-10	-	-	World Vision	*15.7[1]*	*8.7-26.6*	*3.2[1]*	*1.2-8.5*	-	-
Goulbin Kaba	Jun-10	-	-	World Vision	*14.7[1]*	*9.8-21.6*	*2.9[1]*	*1.1-7.8*	-	-

Continued...

Measles immunisation coverage (%)#		Assessment of micro-nutrient	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	Deficiencies (%)						
SUDAN								
Southeastern Sudan								
35.4	63.8	-	52.7	-	0.53	0.29-0.76	1.11	1.19-2.03
WEST AFRICA								
GUINEA								
Conakry								
26.6	71.3	-	-	-	-	-	-	-
MALI								
24.8	73.4	-	-	-	-	-	-	-
NIGER								
-	-	-	-	-	0.48	-	1.22	-
-	53.5	-	86.4	-	-	-	-	-
Agadez Region								
-	-	-	-	-	0.29	-	0.44	-
Diffa Region								
-	-	-	-	-	0.59	-	0.70	-
Dosso Region								
-	-	-	-	-	0.40	-	1.67	-
Maradi Region								
-	-	-	-	-	0.34	0.09-1.22	1.46	0.40-5.17
-	-	-	-	-	0.27	0.07-0.97	0	0-2.02
-	-	-	-	-	0.44	0.15-1.29	0.59	1.0-0-79

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# (%)
Kornaka Ouest	Jun-10	-	-	World Vision	*15.4[1]*	*5.1-38.0*	*2.6[1]*	*1.0-6.3*	-	-
Maradi	Jun-10	-	-	World Vision	*15.6[1]*	*11.7-20.5*	*3.1[1]*	*2.0-4.7*	-	-
Maradi	Jun-10	-	-	INS-joint	*19.7[1]*	*16.6-23.2*	*3.9[1]*	*2.9-5.3*	-	-
NIAMEY REGION										
Harobanda East	Jun-10	-	-	World Vision	*10.3[1]*	*6.0-17.2*	*2.7[1]*	*0.8-8.9*	-	-
Karadje	Jun-10	-	-	World Vision	*8.3[1]*	*2.8-22.4*	*0[1]*	-	-	-
Makolondi	Jun-10	-	-	World Vision	*14.5[1]*	*7.5-26.0*	*2.4[1]*	*0.2-23.3*	-	-
Talladje	Jun-10	-	-	World Vision	*10.4[1]*	*5.2-19.5*	*0.9[1]*	*0.1-8.2*	-	-
Niamey	Jun-10	-	-	World Vision	*10.8[1]*	*8.1-14.3*	*1.7[1]*	*0.7-4.1*	-	-
Niamey	Jun-10	-	-	INS-joint	*13.3[1]*	*8.4-20.5*	*2.0[1]*	*0.9-4.1*	-	-
TAHOUA REGION										
Tahoua 1	Jun-10	-	-	World Vision	*18.4[1]*	*13.3-25.0*	*4.2[1]*	*2.6-6.8*	-	-
Tahoua 2	Jun-10	-	-	World Vision	*15.8[1]*	*11.8-20.8*	*6.0[1]*	*3.7-9.4*	-	-
Tahoua	Jun-10	-	-	World Vision	*17.6[1]*	*13.9-22.0*	*4.8[1]*	*3.4-6.6*	-	-
Tahoua	Jun-10	-	-	INS-joint	*15.8[1]*	*13.4-18.5*	*2.8[1]*	*1.9-4.1*	-	-

Continued...

Measles immunisation coverage (%)#		Assessment of micro-nutrient	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	Deficiencies (%)						
-	-	-	-	-	0.23	0.04-1.31	0	0-3.34
-	-	-	-	-	-	-	-	-
-	-	-	-	-	0.55	-	1.03	-
Niamey Region								
-	-	-	-	-	0.26	0.07-0.95	0	0-2.62
-	-	-	-	-	0	0-0.87	1.00	0.09-2.6
-	-	-	-	-	0.48	0.13-1.73	1.11	0.20-6.05
-	-	-	-	-	0	0-0.57	0	0-3.02
-	-	-	-	-	-	-	-	-
-	-	-	-	-	0.26	-	1.23	-
Tahoua Region								
-	-	-	-	-	0.06	0.01-0.35	1.80	0.27-2.33
-	-	-	-	-	0	0-0.55	1.15	0.32-4.11
-	-	-	-	-	-	-	-	-
-	-	-	-	-	0.20	-	0.29	-

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# (%)
Tillabéri Region										
Isame	Jun-10	-	-	World Vision	*13.9*[1]	*8.2-22.5*	*0.9*[1]	*0.1-8.5*	-	-
Koumaban-gou	Jun-10	-	-	World Vision	*8.9*[1]	*5.7-13.5*	*1.6*[1]	*0.7-3.7*	-	-
Ouallam	Jun-10	-	-	World Vision	*3.8*[1]	*1.8-7.9*	*1.3*[1]	*0.3-5.1*	-	-
Sirba	Jun-10	-	-	World Vision	*11.4*[1]	*7.4-17.1*	*3.5*[1]	*1.6-7.2*	-	-
Tera	Jun-10	-	-	World Vision	*9.0*[1]	*4.2-18.1*	*6.0*[1]	*2.5-13.7*	-	-
Tillabéri	Jun-10	-	-	World Vision	*9.2*[1]	*7.4-11.3*	*2.5*[1]	*1.7-3.7*	-	-
Tillabéri	Jun-10	-	-	INS-joint	*14.8*[1]	*12.7-17.2*	*2.7*[1]	*1.8-3.9*	-	-
Zinder Region										
DTK	Jun-10	-	-	World Vision	*11.6*[1]	*8.6-15.5*	*2.3*[1]	*1.0-5.4*	-	-
Gamou	Jun-10	-	-	World Vision	*12.9*[1]	*7.0-22.7*	*6.5*[1]	*1.8-20.8*	-	-
Kassama	Jun-10	-	-	World Vision	*8.5*[1]	*5.7-12.5*	*3.0*[1]	*1.4-6.5*	-	-
Zinder	Jun-10	-	-	World Vision	*10.8*[1]	*8.8-13.2*	*3.4*[1]	*2.0-5.7*	-	-
Zinder	Jun-10	-	-	INS-joint	*17.8*[1]	*15.8-19.9*	*3.6*[1]	*2.6-5.1*	-	-

Continued...

Measles immunisation coverage (%)#		Assessment of micro-nutrient	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	Deficiencies (%)						
				Tillabéri Region				
-	-	-	-	-	1.42	0.42-1.43	1.46	0.50-4.20
-	-	-	-	-	0.51	0.26-1.01	2.5	1.27-4.86
-	-	-	-	-	0.78	0.42-1.43	1.46	0.50-4.20
-	-	-	-	-	0.79	0.43-1.45	4.11	2.09-7.91
-	-	-	-	-	0.99	0.48-2.02	3.00	1.17-7.49
-	-	-	-	-	-	-	-	-
-	-	-	-	-	0.60	-	1.34	-
				Zinder Region				
-	-	-	-	-	1.56	0.39-1.81	2.71	1.09-3.67
-	-	-	-	-	2.06	1.90-3.08	1.90	1.09-2.77
-	-	-	-	-	1.61	0.93-1.81	2.11	1.89-2.60
-	-	-	-	-	-	-	-	-
-	-	-	-	-	0.70	-	2.05	-

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# (%)
CENTRAL AFRICA										
CENTRAL AFRICAN REPUBLIC										
Nana Gribizi	Aug-09	Residents	132,033	Merlin, MoPH, CHF-CAR	6.9 *6.6[1]*	5.2-9.0 *5.1-8.6*	1.2 *2.4[1]*	0.7-2.2 *1.5-3.9*	0.1	MUAC <11.5cm: 1.7 MUAC <12.5cm: 6.5
Nana Mambere	Sep-09	Residents	261,862	Merlin, MoPH, CHF-CAR	10.2 *10.5[1]*	8.0-12.9 *8.4-13.1*	3.5 *4.8[1]*	2.1-5.8 *3.2-7.1*	3.0	MUAC <11.5cm: 2.4 MUAC <12.5cm: 8.6
CHAD										
Ouddai Region										
Abéché ville (Capital)	Jan-10	Residents	109,047	ACF	16.8 *17.4[1]*	13.2-20.5 *14.1-20.7*	2.0 *3.9[1]*	1.0-3.1 *2.1-5.6*	0.6	-
DEMOCRATIC REPUBLIC OF THE CONGO										
Bandudu Province										
Zone de santé de Boko	May-10	Residents	180,409	ACF	9.8 *10.1[1]*	7.8-11.9 *8.0-12.2*	0.8 *3.0[1]*	0.2-1.4 *1.9-4.1*	0.7	MUAC[5] <11cm: 0.9 MUAC[5] <12cm: 5.8 MUAC[5] <12.5cm: 11.4
Zone de santé de Kisanji	Apr-10	Residents	98,710	ACF	12.0 *13.3[1]*	9.2-14.8 *10.2-16.5*	2.3 *3.4[1]*	1.1-3.5 *1.8-4.9*	1.4	MUAC[5] <11cm: 1.1 MUAC[5] <12cm: 4.7 MUAC[5] <12.5cm: 8.0
Oriental Province										
Zone de santé de Ganga	Mar-10	Residents	105,399	ACF	5.9 *5.1[1]*	4.2-7.5 *3.5-6.7*	0.7 *1.3[1]*	0.0-1.5 *0.3-2.3*	-	MUAC[5] <11cm: 0.2 MUAC[5] <12cm: 1.5 MUAC[5] <12.5cm: 4.3
ASIA										
PAKISTAN										
Lower Dir										
Bazrak	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: 3.1 MUAC <12.5cm: 6.2
Godar	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: MUAC <12.5cm: 4.0
Jan Muhammade	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: 0 MUAC <12.5cm: 3.6

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							
CENTRAL AFRICA								
CENTRAL AFRICAN REPUBLIC								
18.0	92.3	-	-	-	1.15	0.85-1.54	2.43	1.63-3.59
10.5	95.0	-	-	-	1.10	0.78-1.55	1.40	0.70-2.80
CHAD								
Ouddai Region								
14.0	80.7	-	-	-	0.10	0.02-0.18	0.18	0.0-0.45
DEMOCRATIC REPUBLIC OF THE CONGO								
Bandudu Province								
27.9	71.6	-	79.5	-	0.66	0.33-0.98	1.08	0.46-1.69
41.5	89.4	-	89.1	-	0.98	0.56-1.40	1.79	0.98-2.60
Oriental Province								
3.9	57.2	-	84.7	-	1.19	0.42-1.95	1.49	0.62-2.36
ASIA								
PAKISTAN								
Lower Dir								
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

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# (%)
Munda	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: 0 MUAC <12.5cm: 2.5
Musa Abad	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: 1.3 MUAC <12.5cm: 1.3
Ali Sheer	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: 0 MUAC <12.5cm: 2.0
Chamartalai	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: 0 MUAC <12.5cm: 0
Damtal	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: 0 MUAC <12.5cm: 3.9
Jabo	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: 0 MUAC <12.5cm: 0
Pro Kale	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: 0 MUAC <12.5cm: 2.9
Sadbar Shah	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: 0 MUAC <12.5cm: 2.8
Samar Bagh Camp	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: 0.7 MUAC <12.5cm: 4.0
Sawar Ghun-di	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: 1.4 MUAC <12.5cm: 6.9
Tatar Lour	Feb-10	-	-	ACF	-	-	-	-	-	MUAC <11cm: 0 MUAC <12.5cm: 2.0
THE CARRIBEAN **HAITI**										
Zone 1										
Port au Prince	Apr-Jun-10	Displaced	1,691,030	Joint[6]	5.0 *5.4[1]*	3.1-6.8 *3.4-7.4*	0.6 *0.6[1]*	0.3-1.2 *0-1.2*	0	-

Continued...

Measles immunisation coverage (%)#		Assessment of micro-nutrient	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	Deficiencies (%)						
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
THE CARRIBEAN								
HAITI								
Zone 1								
27.1	91.5	-	94.3	-	-	-	-	-

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# (%)
Zone 2										
Gressier, Léogane, Petit-Goâve, Grand Goâve, Jacmel	Apr-Jun-10	Displaced	395,156	Joint[6]	3.1 *3.0[1]*	1.7-4.5 *1.7-4.2*	0.7 *1.5[1]*	0.1-1.4 *0.5-2.4*	0.3	-
Gressier, Léogane, Petit-Goâve, Grand Goâve, Jacmel	Apr-Jun-10	Residents	310,941	Joint[6]	2.6 *2.5[1]*	1.2-4.1 *1.1-3.9*	0.5 *0.5[1]*	0-1.2 *0-1.2*	0.3	-
Port au Prince	Apr-Jun-10	Residents	1,520,078	Joint[6]	3.2 *3.2[1]*	1.7-4.8 *1.7-4.8*	0.5 *0.5[1]*	0-1.2 *0-1.2*	0	-
Zone 3										
Artibonite	Apr-Jun-10	Residents	1,571,020	Joint[6]	5.0 *5.6[1]*	3.4-6.6 *3.8-7.4*	0.9 *1.0[1]*	0.2-1.5 *0.3-1.7*	0.3	-

*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] Joint = Ministry of Public Health and Sanitation, Ministry of Medical Services, Unicef, Samaritans Purse
[3] ACF-E in collaboration with Programma de Cooperación Internacional and Republique de Guinee
[4] ACF in collaboration with ECHO and Gobierno de Navarra
[5] Height ≥ 65 cm
[6] Joint = Ministry of Health, ACF, MSF and Terre des Hommes

Continued...

Measles immunisation coverage (%)#		Assessment of micro-nutrient	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	Deficiencies (%)						
Zone 2								
27.4	85	-	90.7	-	-	-	-	-
19.0	74.7	-	89.5	-	-	-	-	-
31.2	97.9	-	95.9	-	-	-	-	-
Zone 3								
26.8	84.5	-	86.1	-	-	-	-	-

Survey methodology

GREATER HORN of AFRICA

Ethiopia

Dello Mena Woreda, Dello Mena Woreda, Bale Zone, Oromiya Region

The survey was conducted by Concern Worldwide Ethiopia in February 2010. A two-stage random cluster sampling was used. Sample size calculation, anthropometric information and mortality rate were calculated using ENA for SMART software version October 2007. Livelihood, food, nutrition and health security systems, as well as water and sanitation situation and market prices, were also investigated.

Damot Woyde/Duguna Fango Woreda, Damot Woyde/ Duguna Fango Woreda, Wolayita Zone, SNNP Region

The survey was conducted by Concern Worldwide Ethiopia in March 2010. A two-stage random cluster sampling based the SMART methodology and a population sampling frame of all rural villages was used. Current food and nutrition interventions, food security situation, public health care system, water and sanitation situation, as well as infant and young child feeding practices, were also investigated.

Offa Woreda, Offa Woreda, Wolayita Zone, SNNP Region

The survey was conducted by Concern Worldwide Ethiopia in March 2010. A two-stage cluster sampling using SMART methodology was employed. ENA for SMART software (October 2007 Edition) was used for the overall planning, data entry, data quality check and analysis. 638 households were visited for anthropometric measurements. CMR and U5MR are valid for March 2010 only. Food and nutrition security situation, as well as nutrition interventions, public health system, access to water and child feeding practices, were also investigated.

Kenya

Mandera Central, Elwak Zone, Mandera Central, North Eastern Province

The survey was conducted by SC-UK in March 2010 using SMART survey methodology. Anthropometric measurements were taken from 952 children ages 6-59 months. 458 households participated in the household survey. Data was obtained from a Microsoft powerpoint presentation.

Mandera West, North Eastern Province

The survey was conducted by SC-UK in May 2010. The methodology used is unknown. Data was obtained from a Microsoft powerpoint presentation.

Wajir East, North Eastern Province

The survey was conducted by SC-UK in May 2010. Methodology used is unknown. Data was obtained from a Microsoft powerpoint presentation.

Kasei, Kacheliba and Alale (North), Kapenguria, Chepareria, Sook and Kongelai (West), Sigor, Chesogon, Tapach and Lelan (Central), West, Central and North Pokot, Greater Pokot, Rift Valley Province

The survey was conducted by the MPHS, Ministry of Medical Servies, UNICEF and Samaritan's Purse in May 2010. A 30x30 two-stage cluster sampling was used to measure 895 children below the age of five years and 442 caretakers (15-49 years) from 461 households to determine nutrition, health and food security status. In addition, 840 households were surveyed to obtain mortality rates and causes of death.

Kakuma Refugee Camp, Kakuma Refugee Camp, Turkana District, Rift Valley Province

The survey was conducted by the International Red Cross in April 2010. A 45x19 two-stage cluster survey was performed to collect data from 768 households and to measure 776 children ages 6-59 months. ENA nutrisurvey was used for data entry and analysis of anthropometry data. Additional statistical analysis was performed using using SPSS version 16.0 for windows.

Sudan

Kurmuk County, Blue Nile State

The survey was conducted by Goal in February 2010. A 16x42 two-stage cluster survey was conducted using SMART methodology with PPS at the first stage of sampling. A total population of 280 286 was included in the sample frame, with the U5 population estimated at 21%. Five questionnaires were administered: household, child anthropometry, mortality, care and child feeding.

WEST AFRICA

Guinea

Matoto, Coastal zone (South East Conakry), Conakry

The survey was conducted by ACH-S, Programma de Cooperación Internacional, Republique de Guinee in January 2010. A 35x21 two-stage cluster sampling approach was conducted to measure 825 children ages 6-59months. Sample size was calculated using ENA for SMART version October 2007.

Mali

Communes d'Ansongo, Bara, Bourra, Cercle d'Ansongo, Région de Gao

The survey was conducted by ACF-F, ECHO, Gobierno de Navarra in June 2010. A two-stage cluster survey was employed to measure 856 children ages 6-59 months based on the ENA for SMART software. Anthropometric results were compared with results from previous asssessments. Mortality rates were assessed but not reported.

Niger

Whole country

INS, MOH and partners conducted a nutrition survey in all eight departments of Niger in May/ June 2010. Anthropometric measurements were taken from 8 011 children ages 5-59 months. A total of 7 249 households participated in the interviews.

18 Zones under the World Vision's Area Development Programme in 5 out of 8 regions

The survey was conducted by WV in June 2010. The SMART/ENA methodology package was used for sampling and collecting data through anthropometric measurements and a standardized questionnaire. Children (6 – 59 months) in the selected households were measured. Where the age is unknown, the height of the child was used as a proxy for age (65 – 110 cm). All children with oedema by applying normal thumb pressure on both legs near the ankle were recorded as malnourished. The questionnaire was used to collect qualitative information from mothers and/or caregivers. Some additional qualitative data were also collected from key informants including community beneficiary members, MoH workers, local NGOs, village leaders and others.

CENTRAL AFRICA

Central African Republic

Nana Gribizi

The survey was conducted by Merlin, the MoPH, and the Common Humanitarian Fund in August 2009. Using the SMART methodology, a 16x20 two-stage cluster sampling approach was used to measure 628 children ages 6-59 months. Vaccination coverage was also investigated.

Nana Mambere

The survey was conducted by Merlin, the MoPH, and the Common Humanitarian Fund in September 2009. Using the SMART methodology, a 40x22 two-stage cluster sampling approach was used to measure 828 children ages 6-59 months.

Chad

Abéché ville, Ouara Department, Région de Ouaddai

The survey was conducted by ACF-F in January 2010. A SMART two-stage 44x13 cluster nutrition survey was conducted to measure 648 children ages 6-59 months and to assess mortality rates of 573 households

Democratic Republic of the Congo

Zone de santé de Boko, Territoire de Kenge, District sanitaire de Kwango, Province de Bandundu

A nutrition and anthropometric survey was conducted by AAH-US in May 2010. SMART methodology was employed to measure 956 children ages 6-59 months. Vaccination and vitamin A distribution coverage, as well as deworming status, were also investigated.

Zone de santé de Kisanji, Territoire de Feshi, District sanitaire du Kwango, Province de Bandundu

The survey was conducted by AAH-US in April 2010. SMART methodology was employed to measure 916 children ages 6-59 months. Vaccination and vitamin A distribution coverage, as well as deworming status, were also investigated.

Zone de santé de Ganga, Territoire de Bambesa, District sanitaire de Bas-Uélé, Province Orientale

The survey was conducted by AAH-US in March 2010. SMART methodology was employed to measure 940 children ages 6-59 months. Vaccination and vitamin A distribution coverage, as well as deworming status, were also investigated.

ASIA

Pakistan

Swat, Upper and Lower Dir

A comprehensive nutrition survey was conducted by AAH-US in February 2010. Village and settlements across 19 union councils in Swat, Upper and Lower Dir were surveyed. A mix of primary and secondary information sources and methods was used. Secondary sources included meetings at Provinc/ District/ UC and community level. Primary sources and methods included key informant interviews, focus group discussions, household interviews, observation, water quality testing, MUAC screening and rapid market assessment. The bulk of sampling methods were non-random as significant constraints to primary data collection were faced on the field.

CARIBBEAN

Haiti

Port-au-Prince, 6 stratas

The "Coordination Nationale de la Sécurité Alimentaire (CNSA) conducted a rapid food security assessment in the earthquake-affected area in and around Port-au-Prince. The six strata included were: Port-au-Prince, Delmas and Carrefour, Gressier and Léogane, Petit-Goave and Jacmel, Pétionville and Tabarre, Cité Soleil, Grand Goâve and Croix-des-Bouquets and camps. A total of 118 sites were visited. Information was collected from 944 households, 118 focus groups and 118 key informants on socioeconomic situation, access to drinking water, hygiene and sanitation, access to food before and after the earthquake, market facilities, infrastructure, coping strategies, food aid and non food aid systems. Anthropometric data were not assessed.

Port-au-Prince, Zone 1 and Zone 2; Gressier, Léogane, Petit-Goâve, Grand Goâve, Jacmel, Zone 2; Artibonite, Zone 3

The survey was conducted by the MoH and partners between April and June 2010. SMART survey methodology was applied to measure the nutritional and vaccination status of children under 5 years of age.

The earthquake affected areas around Port-au-Prince were divided into 3 zones. Two zones of these were further divided into host and displaced communities. The population was classified into camp residents, residents in tents or houses or one household in a tent. EpiInfo 6.04, ENA Software and SAS 9.2 were used for data entry and analysis.

Abbreviations and acronyms

AAH-US	Action Against Hunger – U.S.
ACF-F	Action Contre la Faim – France
ACH-S	Accion Contre el Hambre – Spain
ADB	Asian Development Bank
BMI	Body Mass Index
CDC	Centres of Disease Control and Prevention in Atlanta
CI	Confidence Interval
CIFR	Centre for International Forestry Research
CMR	Crude Mortality Rate
CSIS	Center for Strategic & International Studies
ECHO	European Commission – Humanitarian Aid & Civil Protection
ENA	Emergency Nutrition Assessment
EPI-info	Public Domain Statistical Software for Epidemiology (CDC)
FAO	Food and Agriculture Organization
FewsNet	Famine Early Warning System Network
GAM	Global Acute Malnutrition
ICRC	International Committee of the Red Cross
IDP	Internal Displaced Person
IHRC	Interim Haiti Recovery Commission
IMAM	Integrated Management of Acute Malnutrition
INS	Institut National de Statistique
IPCC	Intergovernmental Panel on Climate Change
IRIN	Integrated Regional Information Networks
IYCF	Infant and Young Child Feeding
MoH	Ministry of Health
MoPH	Ministry of Public Health
MPHP	Ministry of Public Health and Population
MPHS	Ministry of Public Health and Sanitation
MSF	Medicines Sans Frontiers
MSPP	Ministry of Health - Haiti
MUAC	Mid-upper Arm Circumference
NCHS	National Centre for Health Statistics
NGO	Non-governmental Organization
NWFP	North West Frontier Province
OCHA	Office for the Coordination of Humanitarian Assistance
OHCHR	Office of the High Commissioner for Human Rights
SAM	Severe Acute Malnutrition
SD	Standard Deviation
SMART	Standardized Monitoring & Assessment of Relief and Transitions
SNNPR	Southern Nations, Nationalities and Peoples' Region
STC	Save The Children
U5MR	Under Five Mortality Rate
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UNISDR	UN International Strategies for Disaster Reduction
USAID	United States Agency for International Development
WASH	Water, Sanitation and Hygiene
WFP	World Food Programme
WHO	World Health Organization
WV	World Vision

References

Africa

PARRY et al	2007	Technical Summary. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press. Available online: http://bit.ly/a4hPOW
BOKO et al	2007	Africa. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press. Available online: http://bit.ly/dbaobM.
BELOW et al	2010	Micro-level Practices to Adapt to Climate Change for African Small-scale Farmers: A Review of Selected Literature. IFPRI Discussion Paper. Available online: http://bit.ly/8X51HV.

Greater Horn of Africa

ACF-F	03/10	Climate change, humanitarian crisis and undernutrition
FAO	05/10	Climate change implications for food security and natural resource management in Africa
UNISDR	2008	Climate change and disaster risk reduction
UNISDR	2009	Global Assessment Report on Disaster Risk Reduction
UNSCN	12/10	Climate change and nutrition security,

WWW.UNSCN.ORG

Ethiopia

Concern Worldwide	02/10	Nutrition Survey Report – Dello Mena Woreda, Bale Zone, Oromiya Region
Concern Worldwide	03/10	Final report on nutrition and mortality surveys in Damot Woyde/Duguna Fango Woreda, Wolayita Zone, SNNP Region
Concern Worldwide	03/10	Final report on nutrition and mortality surveys in Offa Woreda, Wolayita Zone, SNNP Region, Ethiopia
IRIN	11/10	Ethiopia: taking the disaster out of drought, 24/11/10
FAO	08/10	Food security information for decision making, www.foodsec.org
FEWS NET	10/10	Ethiopia food security outlook – October 2010 through March 2011
OCHA	11/10	Weekly humanitarian highlights in Ethiopia, 1/11/2010

Kenya

FEWS NET	10/10	Kenya food security outlook – October 2010 through March 2011
MPHS/ joint	05/10	Nutrition and food security survey report
OCHA	02/10	Frequently asked question about IDPs
OCHA/joint	01/10	Inter-agency mission to the Maasai cluster by IOM OCHA, ISS and UNEP

SC-UK	05/10	Nutritional anthropometric and mortality surveys in Mandera West, Wajir East and Wajir South
Stockholm Environment	2009	Economics of Climate Change Kenya, Project Institute Report

Sudan

FEWS NET	06/10	Southern Sudan food security alert – 8/06/10
FEWS NET	09/10	Sudan food security outlook update –September 2010
GOAL	02/10	Multiple indicator cluster survey February 2010 in Kurmuk County, Blue Nile State, Sudan
IPC	10/10	Sudan Integrated Phase Classification Map, Sudan-North, August - October 2010
OCHA	10/10	Map: Cumulative figures of new conflict related displacement reported in 2010 – status 30/10/10
OCHA	11/10	Sudan humanitarian update – 3rd Quarter 2010
One world.net	06/10	Climate Change in Sudan, briefing
VOA	01/11	Voice of America: UN Warns Sudan Referendum Puts Children at Risk
World Bank Group	2009	Development and climate change
WFP	2010	Regional Bureau for Sudan

West Africa

IRIN	07/10	Chad: Moving the aid spotlight west, 20/07/10
OCHA	11/10	West and Central Africa – Flood impact profile as of 2/11/2010
OCHA	11/10	OCHA Bureau régional pour l'Afrique de l'Ouest et du Centre; Bulletin d'Information Humanitaire Septembre – Octobre 2010 Dakar
OCHA	11/10	West Africa - 2011 Consolidated Appeal

Guinea

ACH-S/joint	01/10	Enquête nutritionelle SMART – Commune de Matoto – Ville de Conakry
AFP	12/10	Agence France-Presse, Conde promises new era for Guinea at inauguration
IRIN	02/10	Guinea: Child malnutrition – moving beyond stop-gaps, 25/02/10
IRIN	11/10	Guinea: The waiting game – state of emergency 19/11/10
GoG/joint	05/08	Enquête nationale sur l'état nutritionnel et le suivi des principaux indicateurs de survie de l'enfant. Rapport provisoire
OHCHR	11/10	OHCHR Press Briefing on violence in Guinea 19/11/10; posted by African press organization^
One world.net	04/10	Climate change in Guinea
UNICEF	02/10	UNICEF Humanitarian Action 2010 – mid-year review

Mali

ACH-S/ECHO/GdN	06/10	Enquête nutritionelle anthropometrique – Communes d'Asongo, Bara, Bourra, Cercle d'Asongo, Région de Gao
FAO	05/10	Climate change implications for food security and natural resource management in Africa
FAO	02/11	GIEWS country brief: Mali
FEWS NET	09/10	Mali Food security outlook update September 2010
GoM	2007	Programme d'action national d'adaptation aux changements climatiques
UNDP	12/09	Country fact sheet: Mali and climate change

Niger

ECHO	07/10	Questions and Answers on Niger and Food insecurity
FEWS NET	11/10	Niger Food security outlook October 2010 to March 2011
INS-joint	06/10	Enquête nutrition et survie des enfants de 6 à 59 mois Niger, Mai – Juin 2010
IRIN	08/10	Niger: A crisis, not (yet) a catastrophe, 13/08/10
NECSD	2009	Second National Communication on Climate Change 2009
OCHA	11/10	Bulletin d'Information Humanitaire No 37 – Période du 1er au 10 novembre 2010
World Vision	06/10	Niger food and nutrition emergency programme – Smart Nutrition survey summary report

Central Africa

USAID	05/08	Central African regional program for the environment

Central African Republic

Merlin, MoPH	08/10	Enquête nutritionelle et de mortalité retrospective par la methodologie SMART – Prefecture de Nana Gribizi
Merlin, MoPH	09/10	Enquête nutritionelle et de mortalité retrospective par la methodologie SMART – Prefecture de Nana Mambéré
FAO	11/10	GIEWS Country Brief – Central African Republic, 09/11/2010

Chad

ACF-F	01/10	Résultats Préliminaires: Enquêtes anthropométrique nutritionnelle et de mortalité rétrospective, Abéché ville, Département du Ouara, Région du Ouddaï
FEWS NET	10/10	Chad Food security outlook – October 2010 to March 2011
One world.net	03/10	Climate Change in Chad
UNICEF	02/11	Lake Chad's receding water level heightens risks of malnutrition

Democratic Republic of the Congo

AAH-US	05/10	Enquête nutrionelle anthropmométrique – Zone de Santé de Boko, Province de Bandundu
AAH-US	04/10	Enquête nutrionelle anthropmométrique – Zone de Santé de Kisanji, Province de Bandundu
AAH-US	03/10	Enquête nutrionelle anthropmométrique – Zone de Santé de Ganga, Province Oriental
CIFR	2009	First annual report. Congo Basin Forests and Climate Change Adaptation (CoFCCA)

FAO	11/10	GIEWS country brief – Democratic Republic of the Congo, 17/11/2010
IPCC	2007	Intergovernmental Panel on Climate Change's fourth assessment report

Asia

Cruz, R.V., et al.	2007	Asia. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the IPCC. http://bit.ly/aj891d
Parry M.L. et al.,	2007	Summary for Policymakers. In: Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the IPCC: http://bit.ly/TS4yh
WHO	2009	Climate Change Is Affecting Our Health: Something should be done now: http://bit.ly/bmTwXe

Bangladesh

CSIS	12/09	The Centre for Strategic & International Studies: Bangladesh climate change emergency, www.reliefweb.int
UNDP	2004	A global report: Reducing Disaster Risk: A Challenge for Development
World Bank	2009	Bangladesh: Economics of Adaptation to Climate Change Study

Pakistan

AAH-US	05/10	Dir and Swat—NWFP rapid assessment report—food security and livelihoods, water, sanitation and hygiene, nutrition
ADB/WB/UN	11/10	Pakistan Floods 2010 – preliminary damage and needs assessment
OCHA	11/10	Pakistan Humanitarian Bulletin – issue 6 – 11/11/10
Scientific American	08/10	Is the Flooding in Pakistan a Climate Change Disaster?
UNICEF	11/10	Unicef Pakistan – Flood relief: weekly situation report – 5-11 November 2010
WFP	2010	Protracted relief operations : Pakistan

Caribbean

Haiti

BBC	11/10	Fatal floods – 6/11/2010
CNSA	02/10	Evaluation rapide d'urgence de la sécurité alimentaire post-séisme, Mars 2010
GoH/joint	03/10	Haiti earthquake Post Disaster Need Assessment. Annex to the Action Plan for National Recovery and Development of Haiti.
OCHA	11/12	Humanitarian situation report number 15 and 19
OCHA	02/11	Cholera situation report #35
Reliefweb	01/11	Pressconference on Haiti's reconstruction
UNICEF/MSSP	06/10	Rapport préliminaire de l'enquête nutritionnelle et de mortalité rétrospective dans les zones affectés par le séisme en Haïti du 12 janvier 2010
World Bank	12/08	Climate Change Aspects in Agriculture: Haiti Country Note
MPHP, Republic of Haiti/joint	2011	Dépistage de la malnutrition aigue severe chez les enfants de 6 à 59 mois ayant le cholera. La réhydratation d'un enfant avec malnutrition aigue severe en cas de cholera. http://haiti.humanitarianresponse.info

Indicators and risk categories

The methodology and analysis of nutrition and mortality surveys are checked for compliance with internationally agreed standards (SMART, 2002; MSF, 2002; ACF, 2002).
Most of the surveys included in the Reports on Nutrition Information in Crisis Situations are random sampled surveys, which are representative of the population of the targeted area. The Reports may also include results of rapid nutrition assessments, which are not representative of the target population but rather give a rough idea of the nutrition situation. In that case, the limitations of this type of assessments are mentioned.
Most of the nutrition survey results included in the Reports target children between 6-59 months but may also include information on other age groups, if available.
Detailed information on the methodology of the surveys which have been reported on in each issue, is to be found at the end of the publication.

Nutrition indicators in 6-59 month olds

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

. **Wasting**, defined as weigh-for-height index (w-h) < -2 Z-scores of the NCHS reference.
. **Severe wasting**, defined as weigh-for-height index < -3 Z-scores of the NCHS reference.
. **Oedematous malnutrition or kwashiorkor**, diagnosed as bilateral pitting oedema, usually on the upper surface of the feet. Oedematous malnutrition is always considered as severe malnutrition.
. **Acute malnutrition**, defined as the prevalence of wasting (w-h < -2 Z-scores) and/or oedema
. **Severe acute malnutrition**, defined as the prevalence of severe wasting (w-h < -3 Z-scores) and/or oedema.
. **Stunting** is usually not reported, but when it is, these definitions are used: stunting is defined as < - 2 Zscores height-for-age, severe stunting is defined < - 3 Zscores height-for-age.
. **Mid-Upper-Arm Circumference (MUAC)** As there is no international agreement on MUAC cut-offs, the results are reported according to the cut-offs used in the survey.
. **Micro-nutrient deficiencies**
Micro-nutrient deficiencies are reported when data are available.

Since the release of the WHO Growth Standards in 2006, results calculated using these standards are also reported, when available.

Nutrition indicators in adults

No international consensus on a definitive method or cut-off to assess adult under-nutrition has been reached (SCN, 2000). Different indicators, such as Body Mass Index (BMI, weight/height2), MUAC and oedema, as well as different cut-offs are used. When reporting on adult malnutrition, the Reports always mention indicators and cut-offs used by the agency providing the survey.

Mortality rates

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

Interpretation of indicators

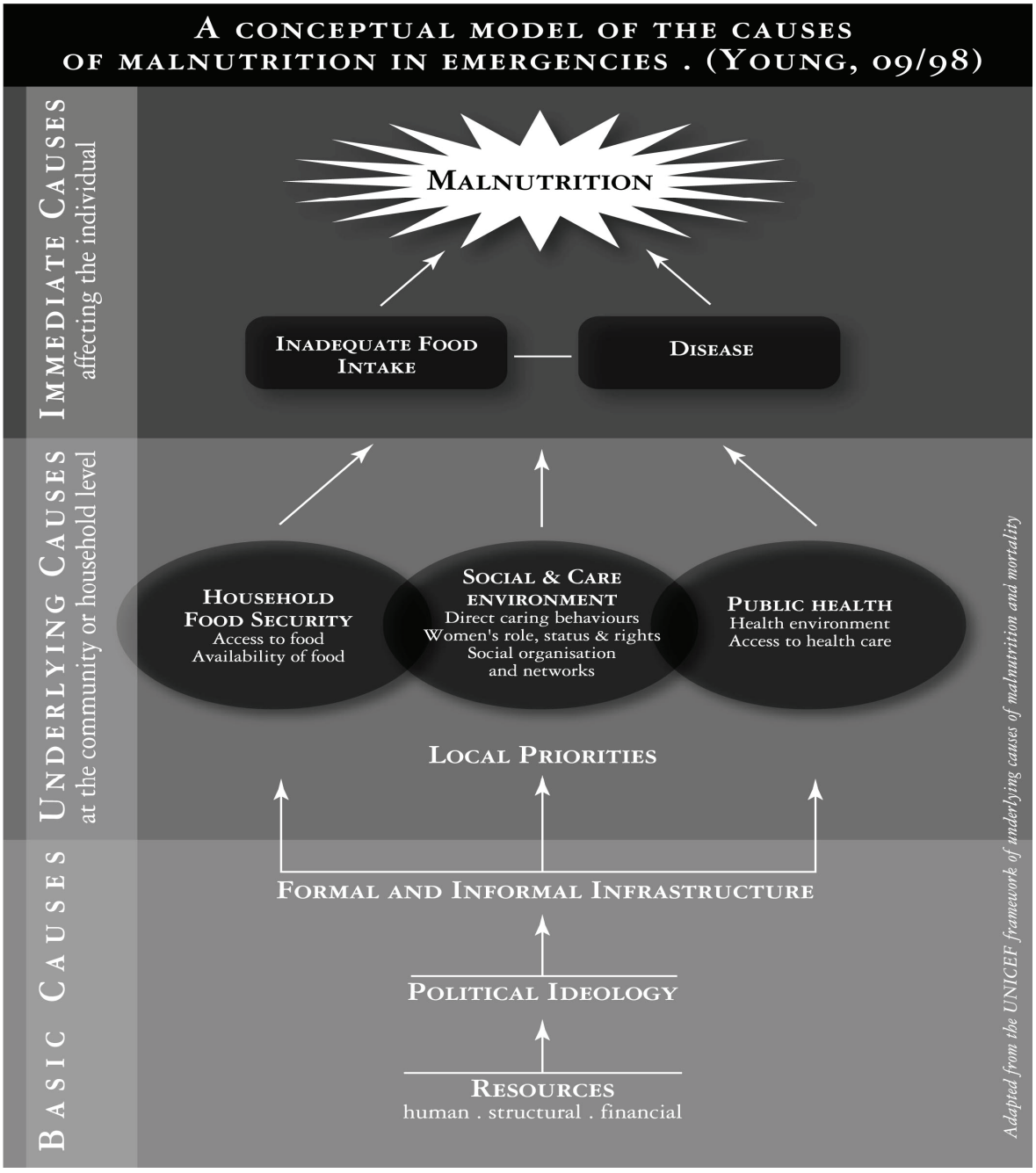
Prevalence of malnutrition and mortality rates are late indicators of a crisis. Low levels of malnutrition or mortality will not indicate if there is an impending crisis. Contextual analysis of health, hygiene, water availability, food security, and access to the populations, is key to interpret prevalence of malnutrition and mortality rates.
Thresholds have been proposed to guide interpretation of anthropometric and mortality results.
A prevalence of acute malnutrition between 5-8% indicates a worrying nutritional situation, and a prevalence greater than 10% corresponds to a serious nutrition situation (SCN, 1995). The Crude Mortality Rate and under-five mortality rate trigger levels for alert are set at 1/10,000/day and 2/10,000/day respectively. CMR and under-five mortality levels of 2/10,000/day and 4/10,000/day respectively indicate a severe situation (SCN, 1995).
Those thresholds have to be used with caution and in relation to contextual analysis. Trend analysis is also recommended to follow a situation: if nutrition and/or mortality indicators are deteriorating over time, even if not above threshold, this indicates a worsening situation.

Classification of situations

In the Reports, situations are classed into five categories relating to risk and/or prevalence of malnutrition. The prevalence/risk is indirectly affected by both the underlying causes of malnutrition, relating to food, health and care, and the constraints limiting humanitarian response. These categories are summations of the causes of malnutrition and the humanitarian response:
• Populations in *category I* – the population is currently in a critical situation; they either have a *very high risk* of malnutrition or surveys have reported a very high prevalence of malnutrition and/or elevated mortality rates.
• Populations in *category II* are currently at *high risk* of becoming malnourished or have a high prevalence of malnutrition.
• Populations in *category III* are at *moderate risk* of malnutrition or have a moderately high prevalence of malnutrition; there 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.



References

Action contre la Faim (2002) *Assessment and treatment of malnutrition in emergency situation.* Paris : Action contre la Faim.

Médecins sans Frontières (2002) *Nutritional guidelines.*

SCN (2000) *Adults, assessment of nutritional status in emergency affected popu*lation.
Geneva: SCN.

University of Nairobi (1995) *Report of a workshop on the improvement of the nutrition of refugees and displaced people in Africa.* Geneva : SCN.

SMART (2002) www.smartindicators.org

Young (1998) Food security assessment in emergencies, theory and practice of a livelihoods approach.

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 was compiled by of the UNSCN Secretariat with assistance of Irmgard Jordan and Julie Debons.
Design concept: Marie Arnaud Snakkers

The chairman of the UNSCN is Alexander Müller

The UNSCN Secretariat and the NICS Coordinator extend most sincere thanks to all those individuals and agencies who have provided information and time for this issue, and hope to continue to develop the excellent collaboration which has been forged over the years.

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

Dr. Marzella Wüstefeld, NICS Coordinator,
UN Standing Committee on Nutrition
20, avenue Appia, 1211 Geneva 27, SWITZERLAND
Tel: +(41-22) 791.04.56,
Email: scn@who.int
Web: http://www.unscn.org

Funding support is gratefully acknowledged from UNHCR.

ISSN 1564-376X