Refugee Nutrition Information System (RNIS), No. 21 – Report on the Nutrition Situation of Refugee and Displaced Populations

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# Refugee Nutrition Information System (RNIS), No. 21 – Report on the Nutrition Situation of Refugee and Displaced Populations

**United Nations** 

Sub-Committee on Nutrition

26 September 1997

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Funding support is gratefully acknowledged from CIDA, DFA (Ireland), NORAD, and ODA (UK).

# **Highlights**

The total number of refugees and internally displaced populations in Sub-Saharan Africa requiring assistance has decreased over the last three months. This is due mainly to the attainment of self-sufficiency of many people in Rwanda with the July harvest. However, those considered to be at heightened risk of malnutrition and associated mortality has increased due to insecurity in many areas rendering population groups inaccessible.

Angola The recent upsurge in violence between government and UNITA troops is the most serious threat to the peace process to date. Fighting has led to new waves of displacements, and populations in inaccessible areas are reportedly at heightened nutritional risk. There are also severe nutritional problems amongst refugees from Rwanda and Burundi who have recently entered the country with levels of wasting as high as 34% being recorded. Efforts are being made to continue many aspects of the reconstruction programme in spite of the prevailing insecurity.

Burundi/Rwanda (Great Lakes) Region Wide-spread insecurity in Burundi, eastern Democratic Republic of Congo (DRC) and Congo/Brazzaville are leading to large-scale population displacements and refugee movements, and in many areas are disrupting or preventing humanitarian aid programmes. No nutritional data are currently available, although anecdotal reports describe an extremely poor condition of those newly displaced in eastern DRC, and serious malnutrition among adults and children in some regroupment camps in Burundi. Re-construction and re-assimilation programmes are ongoing in Rwanda, although factors such as food price inflation and competition for scarce land and food resources are causing concern. The situation in western Rwanda is also worrying where continued insecurity is disrupting aid programmes. Repatriation from Tanzania to DRC has begun. At the same time, there continues to be new arrivals from Burundi.

**Ethiopia** The number of Somali refugees in Ethiopia has decreased due to repatriation. Preliminary results of surveys among this population showed levels of wasting ranging from 5.7–16.8%. These results show an improving trend in nutritional status in all the camps when compared with surveys carried out in May 1996.

**Liberia/Sierra Leone** The enduring peace in Liberia is allowing for better access to populations and also providing greater opportunities for people to diversify their food sources. This is leading to a general improvement in the nutritional status of many people. A survey in Tumanburg showed a decrease in levels of malnutrition from 38% in October 1996 to 4% in August. Similar situations were seen in other locations. Some refugees and IDPs are now returning home.

In contrast, the security situation in Sierra Leone, which deteriorated markedly following the May coup, is leading to widespread population displacements. Inaccessibility due to insecurity, looting of food stocks and the current embargo have meant that humanitarian assistance provided has been inadequate. Food prices have been spiraling out of control and levels of wasting of 30% are being seen. The health situation is also said to be deteriorating in all areas affected by the conflict, with shortage of drugs and nursing care being the main reported problems.

**Somalia** Continued insecurity coupled with successive poor harvests has led to widespread food insecurity in many areas in Southern Somalia. As a result, levels of wasting as high as 34% have recently been recorded. Emergency food distributions have been interrupted by security incidents involving humanitarian agency staff.

**Uganda** The situation in northern Uganda has deteriorated in recent months with intensified fighting between government and rebel forces and large numbers of displaced. This insecurity is periodically disrupting food deliveries. Although nutritional data from the camps for the displaced show fairly low levels of wasting, mortality rates in children under five are four times normal, with most deaths attributed to measles. Many of the newly displaced are in desperate need of shelter.

**Bangladesh** The nutritional condition of the 21,000 refugees remaining in Bangladesh has declined in recent months. Levels of wasting of almost 15% are being seen, and the number of cases of micronutrient malnutrition (seen as angular stomatitis) is increasing. Possible reasons for this apparent decline are that remaining refugees are from the most vulnerable section of the refugee community and that blended foods have been removed from the general ration with no substitute provided. Other factors which may have intensified food insecurity have been the recent arrival of up to 15,000 new refugees, many of whom have had to share rations with the existing registered population and a boycott of rations which took place in response to a forced repatriation of over 400 refugees to Rakhine state.

#### Adequacy of Factors Affecting Nutrition

Factor	Angola	Burundi	Rwanda	Tanzania	Dem. Rep Congo	Liberia	Sierra Leone	Somalia	Sudan	N. Ugand
Degree of accessibility to large population groups due to conflict	O	х	O	?	х	х	?	O	0	Х
2. General resources										
- food (gen. stocks)	?	?	?	?	?	Х	?	?	Х	Х
– non–food	0	Х	Х	0	Х	Х	?	?	Х	Х
3. Food pipeline	?	?	?	?	?	?	?	??	0	?
4. Non-food pipeline	?	Х	?	?	?	?	?	??	0	?
5. Logistics	0	Х	0	??	Х	Х	?	0	0	Х
6. Personnel*	?	Х	??	0	Х	?	?	?	?	?
7. Camp factors**	?	Х	??	0	Х	Х	?	0	0	Х
8. Rations – kcals	?	Х	0	?	0	Х	?	0	0	Х

- variety/micronutrients***	?	X	0	?	0	X	?	0	0
9. Immunization	?	?X	?	?	0	X	0	0	X
10. Information	?	X	X	?	0	X	?	0	0

? Adequate O Problem in some areas X Problem ? Don't know

?? Don't know, but probably adequate

?X Don't know, but probably inadequate

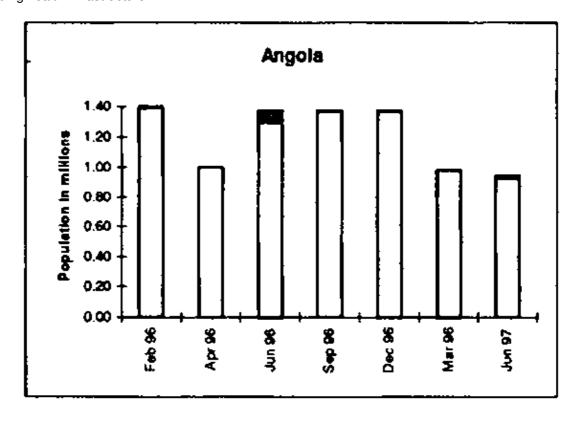
na not applicable

**Note:** Situations for which detailed Information is available are included in this table. Other potentially critical situations (e.g. Ethiopia or Shaba, Zaire) are not currently included due to a lack of detailed information. They will be included as more information becomes available.

# Sub-Saharan Africa

# 1. Angola

The signing of the Lusaka Protocol in November 1994 began a process of reconciliation and reconstruction to end the twenty year conflict that had left the country's infrastructure in ruins, and the countryside infested with landmines. Hundreds of thousands of people had been displaced within Angola or to neighbouring countries. A United Nations peace—keeping force was established to oversee the implementation of the peace agreement. Over the next two and a half years, much was accomplished in terms of opening land transport routes in the country, landmine clearance, demobilisation of soldiers, return of internally displaced people and rebuilding health infrastructure.



<sup>\*</sup> This refers to both adequate presence and training of NGOs and local staff where security allows.

<sup>\*\*</sup> This refers to problems in camps such as registration, water/sanitation, crowding, etc.

<sup>\*\*\*</sup> Rations may be inadequate due to inaccessibility.

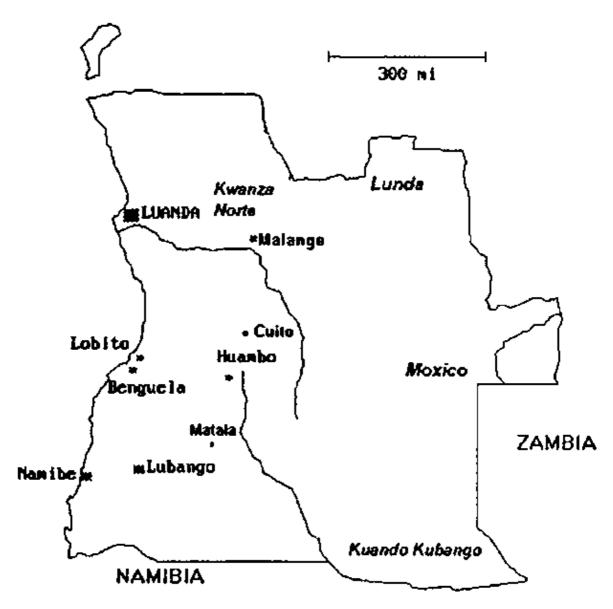
However, there has recently been an upsurge in conflict between government forces and UNITA rebels who still control some eastern areas of the country. The destabilisation arose following the return of both Angolan government troops and UNITA rebels from former Zaire. This is the most serious threat to the peace process witnessed to date, and some fear conflict escalation. In response, the United Nations has decided to establish an observer mission that will take over from the existing peace keeping force [DHA 30/06/97, JRS 01/07/97, USAID 15/07/97].

Lawlessness, exacerbated by severe economic conditions is said to prevail in most of the country. Furthermore, the opening of roads for peacekeeping and humanitarian purposes is hindered by thousands of land mines, numerous destroyed bridges and a lack of security in many parts of the country side. The demobilisation process that was originally scheduled to be completed in six months is now in its twenty second month.

This renewed fighting has led to fresh population displacements and disrupted resettlement programmes. For example, there are reports of population movements in Lunda Sul and Lunda Norte. Reports of newly displaced people arriving in N'Zaji, Lunda Norte in June showed 10.1% wasting with 3.6% severe wasting (see Annex I (1a)). Emergency food aid was rapidly airlifted in to the camps. Since the survey, people have continued to arrive and the displaced population is now estimated at 9,500 [CWS 04/09/97, MSF–H 17/07/97, WFP 04/07/97, 05/09/97].

In Malange, a recent survey showed 2.3% wasting with 0.4% severe wasting (see Annex I (1b)). This is comparable to a survey carried out in July 1996, when wasting was measured at 3.8%. However, an influx of internally displaced people fleeing violence in UNITA held areas continues [DHA 30/06/97, WFP 22/08/97].

There are reports of a measles outbreak in Ambaca, Kwanza Norte province, which is still under UNITA control, and that children are dying everyday. As one report reveals:



'Ambaca had been cut off from the outside world by the civil war, and most of the children and adults there were malnourished. They have no seeds or tools; and although the area is very fertile, they grow only cassava, which has little nutritional value.'[WV 12/08/97].

By the end of August, the outbreak was reportedly under control after an intensive immunisation programme [WV 03/09/97].

There are also reports of the arrival of Rwandan and Burundi refugees from the Democratic Republic of Congo (DRC). Approximately 1,600 refugees are in Luau in Moxico Province, and a rapid assessment revealed 34% wasting with 11% severe wasting (see Annex I (1c)). A health post has been opened and therapeutic feeding has begun. In addition, the water supply has been increased, and sanitation facilities have improved [WFP 08/08/97].

Despite the increase in insecurity, almost 4,000 spontaneous returnees were registered in May 1997, and 3.000 in July [DHA 30/06/97, WFP 05/09/97].

Cereal production is forecast at 14% lower than last years good harvest while other crops, particularly roots and tubers are estimated to be normal. Food aid is currently needed for at least 942,000 internally displaced and war–affected people, vulnerable groups, returnees and demobilised soldiers and their families [DHA 30/06/97, FAO 12/05/97]. This number could be higher, depending on the extent of population displacement caused by the recent fighting in the eastern parts of the country.

Overall, those in N'Zaji, Lunda Norte along with the Rwandan and Burundi refugees in Luau are at heightened risk due to elevated levels of wasting (category I in Table 1). The remainder of the population requiring emergency assistance can be considered to be at moderate risk (category IIb in Table 1) due to the recent

upsurge in violence.

**Ongoing Interventions:** Access remains a problem in some areas. When these areas become accessible, emergency conditions are often revealed to exist. Agencies require resources to respond rapidly to this type of situation. Trypanosomiasis prevention efforts are continuing and need support. Measles immunisation activities must continue throughout the country. There is also a need for additional funding for the refugee repatriation operation.

Specifically, in Ambaca, Kwanza Norte province there is an urgent need for seeds and agricultural inputs to help the population diversify their existing cassava based diet. Emergency feeding programmes need to be set up for Rwandan and Burundi refugees arriving in Luau, Moxico province, amongst whom wasting rates are reportedly extremely high.

#### 2. Benin/Ghana/Togo Region

The organised repatriation of Togolese refugees in Benin and Ghana has been successfully completed. These refugees, who numbered almost three hundred thousand, originally fled political unrest in Togo in 1993. Once the situation stabilised in Togo in 1996, repatriation began. A comprehensive review of the programme will be released in the near future [UNHCR 31/08/97, 23/09/97].

#### 3. Burkina Faso/Mauritania – Malian Refugees

Approximately 150,000 people fled Mali in the 1990s due to famine and unrest in Mali. There remain 18,000 Malian refugees in Burkina Faso, and 22,500 in Mauritania. Repatriation is ongoing [UNHCR 25/09/97, May 97, WFP 01/04797]. There are no new reports on the nutritional situation of these refugees. Earlier reports reflected an adequate and stable nutritional situation in Burkina Faso, while in Mauritania, levels of wasting were over 14% in March 1996 (see RNIS #15).

# 4. Burundi/Rwanda (Great Lakes) Region

Violence in this region over the last three years, including the genocide in Rwanda in 1994 and the overthrow of the Zairian government in early 1997, has led to widespread displacement. Numbers of people affected and locations over time are summarised in the box below:

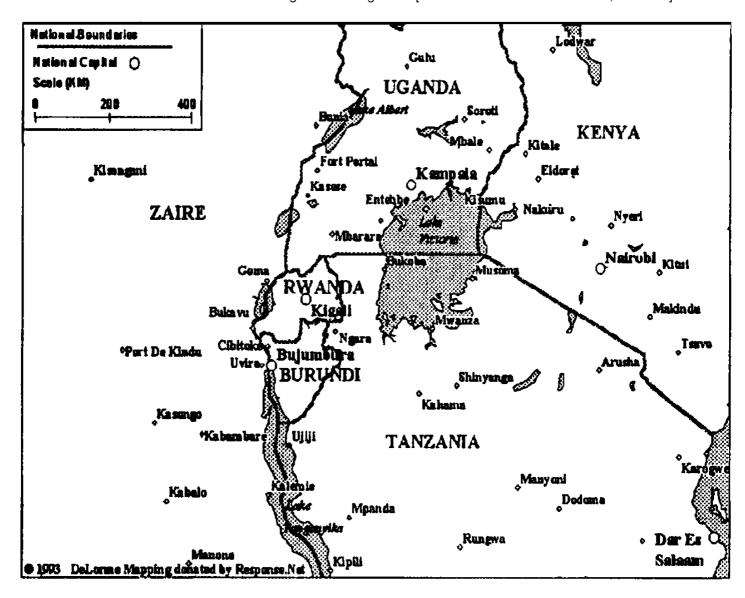
Location	Apr 96	Jun 96	Sep 96	Dec 96	Mar 97	Jun 97	Sep 97
Burundi	290,000	289,000	300,000	298,000	300,000	285,000	280,000
Rwanda	737,000	749,000	598,000	1,179,000	2,800,000	2,800,000	727,000
Tanzania	624,000	842,000	853,000	759,000	344,000	390,000	311,000
DRC	1,166,000	1,419,000	1,444,000	888,000	599,000	514,000	823,000*
Congo/Brazzaville	_	_	_	_	_	_	485,000
Malawi	_	_	_	_	_	_	1,200
Total	2,823,900	3,108,000	3,002,000	2,913,500	3,843,000	3,789,000	2,587,200

<sup>\*</sup> includes refugees and IDPs formerly included under section 14.

Insecurity is the overwhelming problem regionally leading to fresh population displacements and hampering humanitarian aid efforts. Fighting has been widespread in Burundi, eastern Democratic Republic of Congo (DRC), and in Brazzaville in the Republic of Congo. There have also been many security incidents in western Rwanda as well as tensions in some of the remaining refugee camps in Tanzania. Thousands of refugees in eastern DRC remain unaccounted for, and a United Nations investigation team has been set up to determine whether these refugees have been massacred. The team has yet to begin its investigation. Food security in being adversely affected as a result of these conflicts with the displaced particularly vulnerable.

Burundi A coup d'etat in June 1996 did not significantly reduce the widespread insecurity, and over a year later incidents continue to be reported throughout the country. Furthermore, both personnel and anti–tank landmines are causing injury and death. The continued insecurity is hampering relief efforts and leading to the

further displacements of Burundis both within the country and to neighbouring Tanzania. At the same time, there are a small number of Burundi refugees returning home [IRIN 5–11/08/97. WFP 13/06/97, 25/07/97].



THE GREAT LAKES REGION

updated by ReliefWeb: 7.6.96.

The boundaries and names on this map do not imply official endorsement or acceptance by the United Nations or ReliefWeb.

These maps may be freely distributed. If more current information is available, please update the maps and return them to ReliefWeb for posting.

The overriding problem in Burundi is widespread food insecurity. This is the result of the fighting throughout the country which is hampering efforts to assess needs and deliver humanitarian aid and also preventing farmers from working in the fields. Furthermore, sanctions are reducing the availability of farm inputs and leading to price increases. Although there is not an acute shortage of food, high prices mean that what is available on the markets is too expensive for most people to buy. It is currently estimated that food aid will be needed for an estimated 260,000 people in the second half of 1997. Food aid is currently being distributed to the displaced, as well as to smaller populations through food for work and selective feeding programmes [FAO 25/07/97].

Although, sanctions are theoretically being maintained, there are signs that the embargo is loosening. For example, the border with DRC is now officially open and Kenya has lifted sanctions on exporting aviation fuel to Burundi [IRIN 15–21/07/97].

In some of the more insecure provinces, civilians have been living in 'regroupment camps', which are similar to displaced camps. There are an estimated 300,000 Burundi people in regroupment camps. These camps were ostensibly created to allow the government to better protect these populations in certain areas. People have varying degrees of access to farmland and therefore varying degrees of self–sufficiency depending on the location of the camps. Many of the camp locations are remote and inaccessible. There have been many reports of poor living conditions in these camps with common problems being lack of adequate sanitation facilities, inadequate food supplies and a lack of medical care [FAO 25/07/97, WFP 04/07/97,15/08/97, 29/08/97].

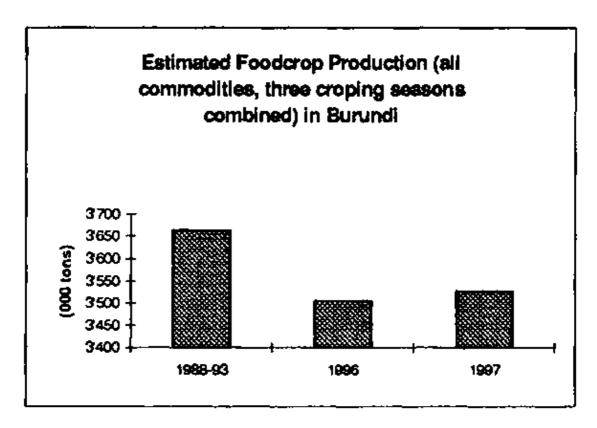
There are no recent nutritional data available but anecdotal reports are of 'obvious signs of malnutrition' and 'hundreds of cases of marasmus and kwashiorkor being admitted to therapeutic feeding units' among children and adults when visiting the camps. In the province of Karuzi, an estimated 100,000 people are in regroupment camps with limited access to food; it was recently found that many of those in the camps were consuming less than 1200 kcals/person/day. It was also noted that many people were not eating fresh vegetables thereby increasing the risk of micronutrient malnutrition [UNHCR 10/06/97, WFP-a 15/08/97].

Recently, people have begun leaving the camps to return home. They receive a 90 day ration upon departure, along with seeds and some farming tools. However, since the security situation does not appear to be improving, it is unclear whether returnees will be able to resume subsistence activities [WFP 29/08/97, 05/09/97]. Furthermore, their return may not be sufficiently early to allow planting for the next agricultural season.

Food economy assessments carried out during the second half of June have shown that many resident people in Kayanza and Bubanza province were in dire need of food assistance due to insecurity and lack of access to land under cultivation. Many residents showed clear signs of malnutrition [WFP 11/07/97].

Nutritional surveys have been carried out in a limited number of areas and sites in recent months. Such surveys commonly find acute malnutrition rates in under five children in excess of 15%. However, the information is piecemeal and no concerted effort has yet been made to assess the prevalence of acute malnutrition at community level and to set up a surveillance system for the country. Yet despite the lack of comprehensive data on malnutrition rates, NGO reports from the provinces of Ruyiga, Muyinga, Rutana, Kayanza, Bujumbura Rural and Gitega indicate a continued decline in nutritional status amongst local populations [FAO 25/07/97, IRIN 15/08/97].

There are three harvests per year in Burundi – June, September, and January. The graph to the right summarises production over the last few years. Production has increased compared to 1996, but remains well below the pre–crisis levels, when the populations were self–sufficient [FAO 25/07/97]. Prospects for the next season are said to be uncertain and will depend on the evolution of the security situation, weather conditions and the supply of agricultural inputs.



From: 'FAO/WFP Crop and Food Supply Assessment Mission to Burundi', 11 July 1997.

Democratic Republic of Congo (formerly Zaire). Widespread insecurity is leading to population displacements within the DRC as well as to neighbouring countries. An upsurge in fighting in the Masisi and Fizi areas have led to population displacements into areas of Goma and Sake; some have been displaced across the border into Gisenyi in Rwanda. There have been concerns over human rights abuses which have led UNHCR to pull out of the area, although as of mid–September, the decision had not yet been implemented. The suspension of activities will affect the search and rescue operations for remaining Rwandan refugees. However, assistance to Congolese, Angolan and Ugandan refugees will continue [IRIN 5–11/09/97, 16/09/97, UNHCR 10/09/97]. The effect this suspension will have on other agencies and projects currently underway in the area is unclear. Other humanitarian organisations may follow suit, thereby further jeopardising refugee and IDPs programmes.

Estimates are that the number of unaccounted for Rwandan and Burundian refugees in the east are 200,000 and 35,000 respectively. Repatriation by air of Rwandan refugees in the DRC continued into early September, although it was becoming more and more difficult to locate the refugees. Since the massive return of more than 700,000 Rwandan refugees in November 1996, a further 250,000 refugees have returned home. Sixty one thousand of these returned home by air transport. In addition, recent fighting in eastern DRC has led to the return of some Burundi refugees, with up to 100 refugees returning per day in September [IRIN 5–11/09/97, UNHCR 10/09/97]. The DRC government forcibly repatriated some Rwandan and Burundi refugees.

In the eastern part of the country, new groups of refugees or displaced people continue to be found. Some of these are from the Masisi and Fizi areas, and it is estimated that there are up to 120,000 IDPs in the area. Nutritional assessments are not possible given the volatile security situation, however while a few of these groups appear to be in relatively good health most are found to be in a appalling nutritional state. Anecdotal reports tell of widespread malnutrition among children and adults, and mortality rates of 45/10,000/day (150 times normal) were reported [IRIN 15–21/07/97, Pres. Comm. Aug. 97, UNHCR 04/06/97].

A survey carried out in Uvira showed 13% wasting and/or oedema among children (see Annex I (4a)). In response to these survey results, it was planned to set up nutritional rehabilitation centres [IRIN 24–30/06/97]. Refugees fleeing insecurity in Cibitoke province in Burundi continued to arrive in Uvira throughout August.

Some rehabilitation activities have been undertaken in the eastern part of the country. For example, a project has been set up for the construction and maintenance of water sources in the Bukavu area in order to ensure access to potable water, reduce water–borne diseases, alleviate the burden on women collecting water and improve hygiene. A vaccination project is also underway in North Kivu (UNICEF 22/08/97).

Conflicts in neighbouring Congo and Uganda have led to refugee influxes to the DRC. At least 20,000 refugees fleeing fighting in Brazzaville in the Republic of Congo are currently residing in Kinshasa. Many of these people are living with friends or relatives although there is a growing number (more than 22,000 by mid–September) in Kinkole camp just outside of the city [WFP 19/09/97]. More than 27,000 Ugandan refugees have also recently fled fighting in Uganda's western frontier and crossed into the Beni area of the DRC. Many of this population are living with local families and initial assessments indicate that the population are in reasonable health [IRIN 1–7/07/97, UNHCR 23/07/97, WFP 25/07/97].

Other refugees and IDP populations in DRC There are a number of other refugee and internally displaced populations in the DRC.

- Internally Displaced from Shaba There are no new nutritional data on the approximately 260,000 residents and displaced in Mwene Ditu. Most recent reports are from October 1995, and showed levels of wasting as high as 42% (see RNIS # 14). Insecurity in DRC is likely to exacerbate their already difficult situation.
- Angolan refugees There are approximately 150,000 Angolan refugees in the Democratic Republic of Congo, 50,000 of whom require assistance. Prior to an upsurge in fighting in Angola, some spontaneous repatriation was occurring [DHA 30/06/97, UNHCR May 97, WFP 05/09/97].
- Sudanese Refugees There are approximately 111,000 Sudanese refugees in DRC who are fleeing the continuing insecurity in Sudan [UNHCR May 97].

Republic of Congo/Brazzaville Heavy fighting between government forces and supporters of the former president is continuing in the capital and spreading throughout the country. This fighting has led to the evacuation of relief agency staff and the temporary suspension of relief activities for the 11,000 refugees in the country. There are reportedly at least 450,000 people who have been displaced by the fighting, out of a pre–war population of 900,000, but that number is difficult to verify due to insecurity. Among the displaced, child malnutrition and diseases such as diarrhoea and measles have been reported. A limited number of relief organisations have been providing humanitarian assistance to Brazzaville's displaced population, but the war has placed considerable constraints on the procurement of supplies and access to the affected population [IRIN 5–11/08/97, 20–22/09/97, WFP 13/06/97].

In July there were approximately 9,000 Rwandan refugees in three locations: Luokolela, Ndjoundou, and Liranga. These refugees had fled the DRC (formerly Zaire) following the advances of what were then "rebel" forces. Aid for these refugees was delivered by river and air avoiding the capital city. Repatriation to Rwanda began in July. There were a further 2,000 Rwandan refugees at Bilolo. Many refugees have been without plastic sheeting, blankets and kitchen utensils. These were not provided as repatriation was expected to be completed by the end of September [WFP 25/07/97, 22/08/97].

Rwanda The population in Rwanda has grown dramatically due mostly to the massive return of approximately 1.2 million refugees at the end of 1996. This presented a considerable challenge for the Government of Rwanda and humanitarian agencies, which to a large extent has been successfully met. For example, over six million rations were delivered in Rwanda during the first six months of 1997. However, during the second half of 1997, free food distributions are to be phased out and replaced by more targeted programmes. Assistance will be predominantly through food–for–work programmes aimed at agricultural recovery, and the rebuilding of housing and other infrastructure [WFP 20/06/97, 11/06/97].

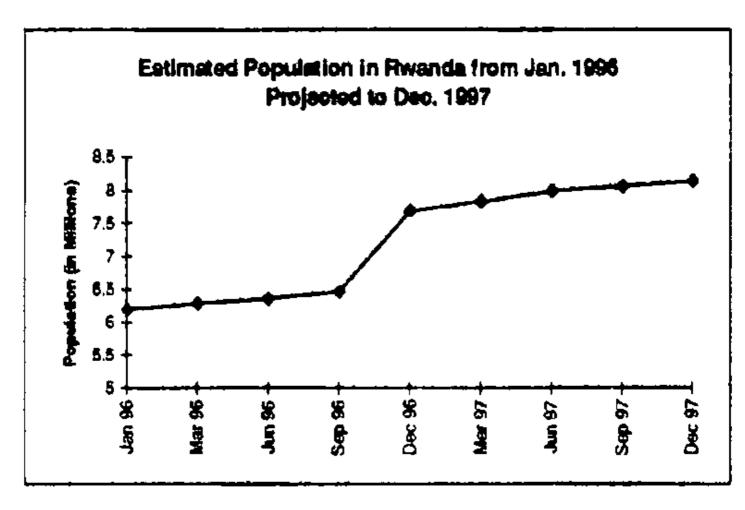


Figure taken from: FAO/WP Crop and Food Supply Assessment Mission to Rwanda, 11 July 1997

These positive achievements must however, be viewed against a backdrop of increasing insecurity, particularly in the western prefectures of Ruhengeri and Gisenyi. For example, three UN staff members were recently shot dead in Ruhengeri, leading WFP to suspend its operations in the prefecture. Heavy clashes between the army and rebels were reported in Gisenyi in August. At the end of August, an attack on a camp in Gisenyi resulted in the death of 148 refugees from the DRC. Furthermore, the food security situation in Ruhengeri has been described as precarious with malnutrition rates high especially in the less secure northwest and southern areas of the prefecture. The situation has been exacerbated by the mass return of refugees to these prefectures [IRIN 25/08/97, UNHCR 23/07/97, USAID 15/08/97, WFP 20/06/97].

Food security may also be increasingly threatened throughout the country in the coming months. Prices for staple foods in Rwanda have been rising steadily due to a combination of the increased demands of an expanded population, and reduced availability due to poor harvests in January, particularly for beans. Prices of pulses have tripled and of cassava and sweat potato have almost doubled in the last year. The harvest in September is predicted to produce somewhat higher yields than last year; however production will remain below pro–crisis levels. Agricultural production has been hampered by a number of factors including the late arrival of many returnees in relation to field preparation, land disputes between returnees and current farm occupants, a lack of agricultural inputs such as agricultural tools and seeds, and irregular rains. Therefore, although the current harvest is likely to result in somewhat lower prices for some foodstuffs, they are likely to remain higher than last year [FAO 11/07/97].

Much of the population, especially in this time of transition, will have to meet a large portion of their food needs through market purchases, and higher prices will have an obvious impact on how well they are able to do this. Food aid will, therefore, be needed for approximately 700,000 people during the second half of 1997 [FAO 11/07/97].

Fighting in the Masisi area of DRC is causing thousands to flee to Rwanda. Recent estimate were of 5,000 new arrivals into Gisenyi at the end of August, and 3,300 in early September. These refugees have settled in Mudende camp, which now houses 14,000 refugees. There are also 13,000 refugees in Kibiza camp in Kibuye. There is no information on the nutritional status of these populations. A small number of refugees continue to return from DRC. At the same time, repatriation of the approximately 1,500 Burundi refugees in

Rwanda has begun [IRIN 12-18/09/97, IRIN 18/09/97, WFP 04/07/97, 05/09/97, 19/09/97].

Tanzania A registration exercise in the refugee camps in Tanzania has led to a revised estimate of the total number of refugees of 311,000 people. This total number is comprised of approximately 237,000 Burundis and 73,000 Congolese refugees. New arrivals from Burundi continue and at the same time, there are reports of spontaneous repatriation of up to 3,000 refugees per month to Burundi [WFP 12/09/97].

The security situation remains tense in Lukole refugee camp in Ngara region and in Lugufu refugee camp in northwestern Tanzania. The majority of the 35,000 in Lugufu camp are from the Fizi region of DRC and resisted the Alliance of Democratic Forces for the Liberation of Congo (ADFL) advances through the DRC. Tensions have therefore arisen between those willing to repatriate and those staunchly opposed to returning home [IRIN 12–18/08/97].

There have been recent reports of high levels of malnutrition in Nduta (Kibondo) and Lugufu camps. As a response, blanket supplementary feeding programmes are being implemented for a period of two months [WFP 27/06/97].

Agreement has been reached by the government of Tanzania, DRC and UNHCR on the repatriation of Congolese refugees in Tanzania, and voluntary repatriation began on 1 September 1997. Some spontaneous repatriation had occurred before the organised repatriation [WFP 29/08/97, 05/09/97].

The food security situation of refugees in Tanzania needs to be considered in the context of the far reaching drought affecting much of the country. There are reports of total crop failure in some of the key producing areas, and large–scale food deficits are expected. Household food stores in some villages are non–existent, and population displacements have already been reported in some areas [IRIN 12–18/08/97].

Malawi There are 1,200 refugees from Rwanda and DRC in Malawi [IRIN 25/08/97].

*Gabon* Approximately 1,000 Rwandan refugees arrived in Gabon and were subsequently flown to Kigali [IRIN 15–21/07/97, USAID 15/08/97].

Overall, those who are inaccessible, or periodically accessible, can be considered to be at heightened nutritional risk, and are in category IIa in Table 1. This includes those in Burundi, unaccounted for refugees and IDPs in DRC, and the inaccessible population in the Republic of Congo/Brazzaville. Those in Rwanda can be considered to be at moderate risk of malnutrition and associated mortality (category IIb in Table 1) due to price inflation and pressure on available resources. The affected population in Mwene Ditu is likely to remain at high risk (category I in Table 1). The remaining affected population is not currently considered to be at heightened risk (category lie in Table 1).

Ongoing interventions: Response to a 'Consolidated Appeal for the Great Lakes Region' launched in March 1997 has been generous in many cases. For example, by July 1997, WFP and UNHCR had secured over 75% of the total funding needed for their programmes. On the other hand, appeals from other agencies have met with limited success. Further pledges are therefore needed to broaden the scope of possible interventions, with a view to strengthening human rights, and more development and rehabilitation orientated projects.

- The level of violence is seriously undermining food security for many in Burundi. Some of this food insecurity could be relieved by the increased provision of agricultural inputs for locals and returnees. Many of those returning from IDP or regroupment camps have missed planting and will need support. Reports from the IDP and regroupment camps indicate that the nutritional situation of many, particularly in insecure areas, is very poor. Efforts should therefore continue to gain access to these camps and to monitor the situation carefully. In some situations emergency selective feeding and health and sanitation programmes may need to be established. A national nutrition surveillance system should be established to help monitor a rapidly changing situation.
- There is a need to assess the nutritional and health situation of new refugees in Beni and Kinshasha who, although reportedly in reasonable condition and living with families, may still require some form of support. Agencies will also need to be geared up to meeting the emergency needs of those newly displaced from Masisi and Fizi regions when and as security allows. Many of the newly displaced are reportedly in an extremely poor nutritional condition.

- In Rwanda planting is now over. Until the harvest in January, food aid for targeted groups and rebuilding of infrastructure will be the priorities. Provision of agricultural inputs in preparation for the 1998 season should also be a priority. Support should also be given to strengthening national capacity to collect and analyse agricultural statistics. Establishing an early warning system should be part of this initiative. There should be careful monitoring of the food security situation throughout the country given the reduced harvest, food price inflation and pressures on land and food resources with the recent large influx of returnees. Particular attention should be paid to the western prefectures where insecurity is widespread and is affecting agricultural activities. In addition, information on the refugee populations in western prefectures is needed.
- In Tanzania the severe drought and drawing down of the strategic grain reserve may require that agencies attempt to build up buffer stocks at camp level as government grain reserves may not be available should breaks in the donor food pipeline occur.

#### 5. Central African Republic

Periodic mutinies among the Central African Republic (CAR) military have occurred since April 1996. Peace accords were signed in January 1997, and a peace keeping force was established. Further clashes between army mutineers and peacekeepers in Bangui at the end of June led to the displacement of up to 100,000 people who left the capital city and moved to Samba and Bimon, south—west of the city. There was concern that this increased population would strain local services, and that food, shelter, clean drinking water and medicines would be in short supply. However, most of the displaced people have now returned home [DHA 11/07/97, UN 06/08/97, WFP 04/07/97].

Efforts are being focused on strengthening the peace process in CAR to avoid this sporadic violence. For example, a UNDP initiative will help demobilise and reintegrate soldiers into civilian life, design a disarmament strategy, and plan a national conference on reconciliation [UNDP 28/07/97].

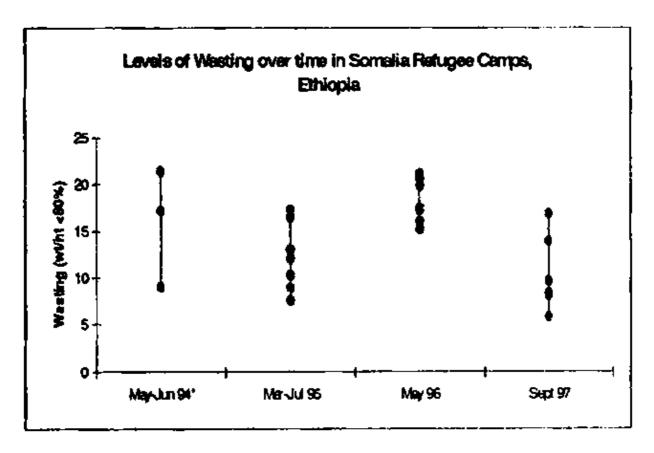
There are approximately 1,000 Rwandan and Congolese refugees in CAR requiring assistance; a further 12,000 Congolese in the country have not requested assistance [WFP 04/07/97]. There are approximately 27,400 Sudanese and 5,000 Chadian refugees in CAR whose nutritional status is reportedly adequate and stable. These refugees are not currently considered to be at heightened risk (category lie in Table 1).

#### 6. Djibouti

There are approximately 25,000 Somali and Ethiopian refugees in Djibouti. Most of these refugees are in camps, and about 3,000 are living in Djiboutiville. There are no details on the nutritional status of this population [UNHCR 26/09/97].

# 7. Ethiopia

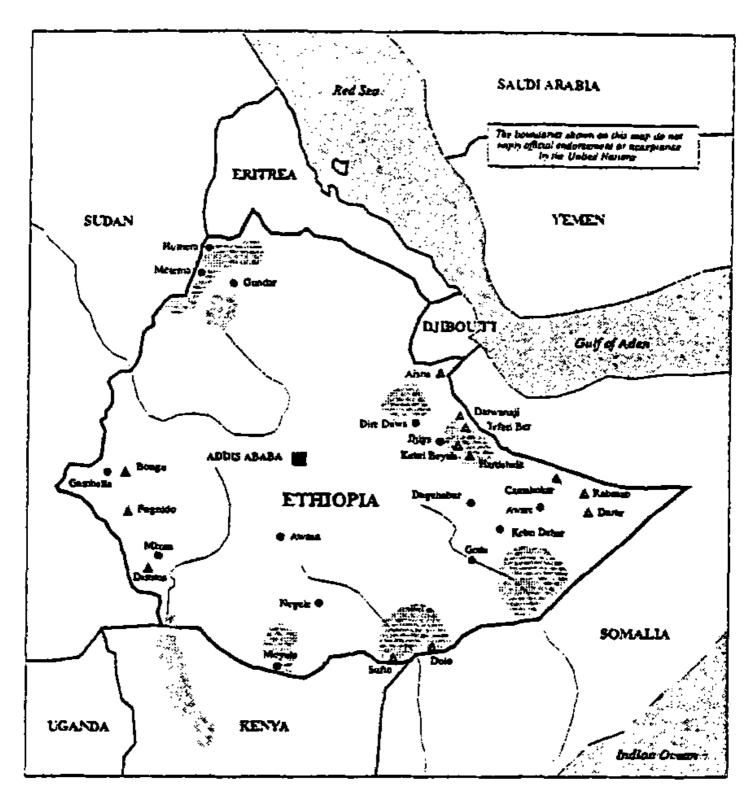
There are approximately 395,000 refugees in Ethiopia comprised of 278,000 Somali refugees, 54,000 Sudanese refugees, 8,700 Kenyan refugees, 18,000 Djibouti refugees, 11,000 internally displaced people around Addis Ababa, and a further 25,000 people in the Dollo region, including 10,000 people in Gode.



\* includes Hartesheik, Kebre Beych, Darwanaji, Teferiber

The total number of Somali refugees has decreased to 278,000, due to repatriation. Thirty thousand refugees are due to be repatriated in 1997, and a further 60,000 in 1998 [UNHCR–a 09/09/97].

Surveys carried out in May 1996 showed high prevalences of wasting in the eastern camps for Somali refugees, but follow–up surveys carried out in August and September 1997 showed a much improved situation. Preliminary results from these surveys show levels of wasting varied from 5.7–16.8% (see Annex I (7a–h)). The highest rates were seen in Darwonaji (16.8%) and Teferiber (13.9%). These results do show an improving trend when compared with the May 1996 results when wasting in Darwonaji and Teferiber was 21% and 17%, respectively. This is most likely attributable to the fact that the survey last year was conducted at the end of the lean season. Furthermore, the blanket supplementary feeding programme has by all accounts been extremely successful in targeting those most in need of support and has far less "leakage" than the general ration programme [UNHCR–b 16/09/97].



These results are particularly encouraging as only two months ago there were concerns about potentially high levels of wasting in some of the camps. For example, in Kebre Beyah an estimated 24% of children were malnourished based on measurements made at the blanket supplementary feeding programme. These high levels of wasting were probably due to the fact that the most vulnerable families enroll in this programme [UNHCR–b 16/09/97].

However, one result was particularly worrying from the recent set of surveys. An 18.1% prevalence of oedema (mostly mild) was recorded in Kebre Beyah camp. A 24 hour therapeutic feeding programme is being established in response to this and lentils are to be included in this on–site feeding programme. Unlike the other camps where an estimated 85% of children are enrolled in the blanket supplementary feeding programme there are concerns that a much lower percentage are enrolled in Kebre Beyah [UNHCR–b 16/09/97].

Surveys are to be carried out at the end of September in the Sudanese camps in Western Ethiopia [UNHCR-a 09/09/97].

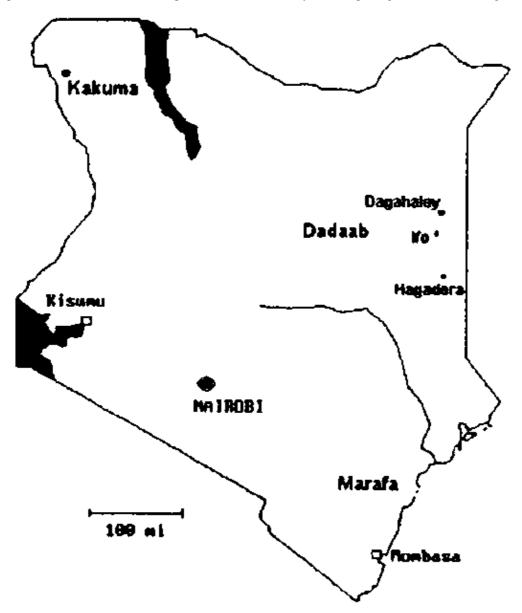
There is no new information available on the 10,000 people in Gode; surveys in May included in RNIS# 20 showed over 50% wasting.

Overall, those in Gode and Kebre Beyah are at high risk (category I in Table 1). The Somali refugees in the eastern camps can be considered to be at moderate risk (category IIb in Table 1) with a trend towards improvement. The remaining refugees are not currently considered to be at heightened nutritional risk (category lie in Table 1), with the exception of the population around Dollo, on whom there is no information (category III in Table 1).

**Ongoing interventions:** There is a need to continue 24 hour therapeutic feeding in Kebre Beyah and Teferiber. Re–screening under–fives enrolled in the blanket feeding programme in Kebre Beyah is needed to better target the most vulnerable children. UNHCR/ARRA need to address the severe water problems in Teferiber camp in anticipation of the November droughts.

#### 8. Kenya

There has been a slight increase in the total number of refugees in Kenya over the last three months due to the arrival of approximately 3,000 Sudanese refugees. The total number of refugees is comprised of 131,000 Somali refugees, 41,000 Sudanese refugees, and 4,500 Ethiopian refugees [UNHCR 31/08/97].



In response to a survey carried out in January 1997 which showed levels of wasting varying from 26–33% among the Somali refugees in the Dadaab camps (see RNIS #19), blanket feeding programmes have been started and are planned to continue up until November 1997. A follow–up survey will be conducted in the near future to determine whether the blanket feeding programme is having the desired impact [UNHCR 09/09/97].

Scurvy is often seen among the Somali refugee population in Kenya during the September–December period. Curative measures are now taken rather than preventive ones. This is in part because of the difficulties experienced in the past of providing vitamin C rich supplementary foods such as vegetables due to logistical difficulties and poor local availability of these foods. Vitamin C tablets are available at the health centres, however it is acknowledged that reliance on health centre treatment will not be effective in reaching the total population at risk [UNHCR 09/09/97].

A survey carried out in Kakuma camp for Sudanese refugees in April 1997 also showed high levels of wasting and anaemia, particularly among school aged children (see RNIS #20). Interventions undertaken in response to the survey results included the distribution of dried fish to vulnerable groups, including school–aged children, in April and May, and a distribution of CSB and therapeutic milk to school children in May. Efforts in the past to provide meat, fish and vegetables have failed due to problems of supply and logistical difficulties. A school feeding programme is planned to begin once the construction of kitchens and shelters are completed [UNHCR 04/07/97].

It should be noted that there are serious difficulties in supplying the Kakuma and Dadaab camps with food aid. These camps are very isolated and road conditions, particularly during the rainy season, are not good. In addition, the availability of some foods locally, for example fresh vegetables or meat and fish, is poor [UNHCR-a 16/09/97].

Overall, the refugees in Kakuma and the Dadaab camps are at high risk due to elevated levels of wasting (category I in Table 1) and the remaining refugees in Kenya are not currently thought to be at heightened risk (category lie in Table 1).

#### 9. Liberia/Sierra Leone Region

The security situation in Sierra Leone after a *coup d'etat* in May 1997 remains fluid. Displacement in Sierra Leone is widespread, and agricultural activities have been disrupted. Food is becoming scarcer and there are reports of increasing malnutrition. In contrast, the security situation in Liberia is stable and almost all areas of the country are now accessible. There are also greater opportunities for people to diversify their food sources and levels of malnutrition are falling. Repatriation of refugees back to Liberia is planned to begin in the near future.

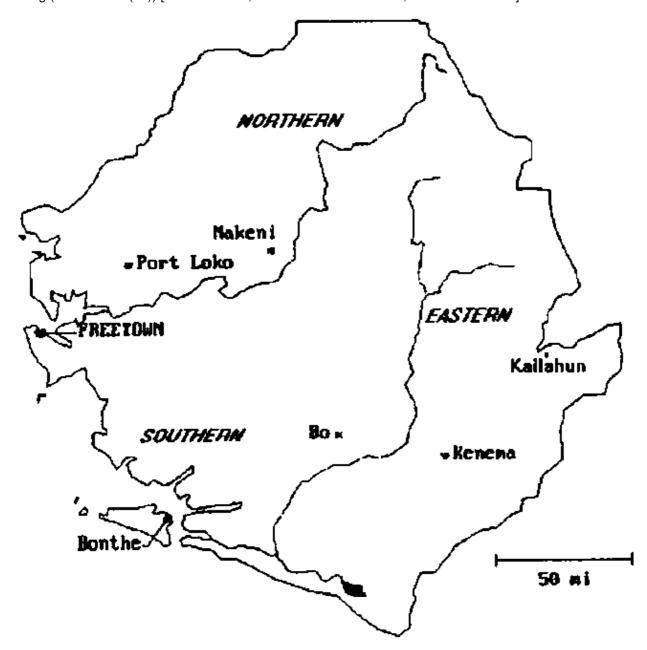
Population estimates for refugees and IDPs over time are summarised in the box below:

Location	Apr 96	Jun 96	Sep 96	Dec 96	Mar 97	Jun 97	Sep 97
Liberia	1,800,000	1,800,000	1,800,000	1,800,000	1,100,000	710,000	700,000
Sierra Leone	756,000	756,000	609,000	609,000	548,000	453,000	453,000
Cote d'Ivoire	305,000	305,000	305,000	305,000	305,000	305,000	210,000
Guinea	536,000	536,000	536,000	536,000	536,000	545,000	401,000
Total	3,397,000	3,397,000	3,250,000	3,250,000	2,489,000	2,013,000	1,764,000

Sierra Leone A coup d'etat in May 1997 led to the military take over of the elected government and has thrown the country back into a state of war. The coup has been condemned by the international community and sanctions have been imposed by the Economic Community of West African States (ECOWAS). Humanitarian goods will be exempted from the embargo with prior approval from the Authority of Heads of State who are responsible for monitoring the embargo.

As a result of this insecurity, there have been widespread population displacements within country and to neighbouring Liberia and Guinea. Inaccessibility due to insecurity, looting of food stocks, and the current embargo have meant humanitarian assistance provided is inadequate. A number of humanitarian agencies have also had to suspend activities for security reasons. The situation is exacerbated by the fact that it is the rainy season, making what deliveries of food aid to the newly displaced are possible extremely difficult, and leading to high levels of disease. As a result, there are many reports of malnutrition, especially amongst the

IDPs. For example, a survey in Kambia and Port Loko towns showed 10.8% wasting and/or oedema (see Annex I (9a)). An assessment in the southern part of Kenema district showed 30% wasting with 13% severe wasting (see Annex I (9b)) [DHA 22/08/97, 08/09/97. ICRC 25/08/97, UNICEF 11/09/97].

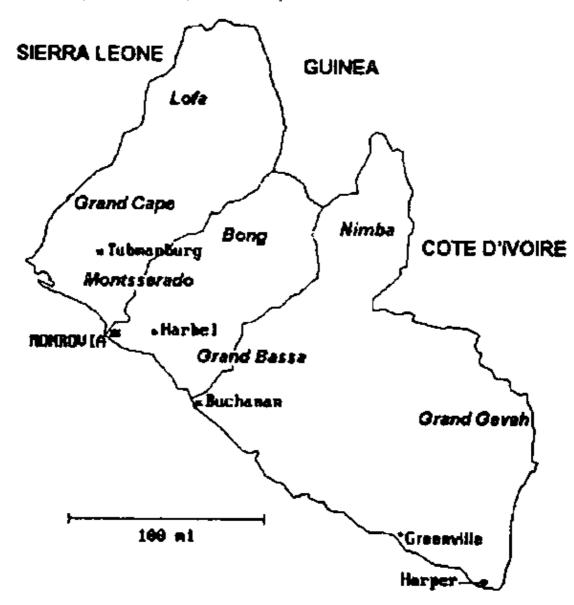


A survey carried out in Freetown showed 8.9% wasting and/or oedema, and 1.8% severe wasting and/or oedema (see Annex I (9c)). Rice, a staple of the diet under normal circumstances, has reportedly become scarce with prices tripling and people have resorted to eating cassava, which has comparatively less nutritional value [ACT 12/08/97, DHA 01/09/97].

The health situation is said to be deteriorating in all areas affected by the conflict. Assessments carried out at the end of July in the northern province and in the districts of Kenema, Pujehun, Bo and Kailahun confirmed a general shortage of drugs and adequate nursing care. The onset of the rainy season has led to a sharp increase in the number of cases of malaria, diarrhoea and pneumonia. Cases of measles are being reported. The Northern province of Sierra Leone has poor immunisation coverage, attributable to the difficulties of maintaining an effective cold chain [DHA 04/08/97, 01/09/97].

The upsurge in insecurity has disrupted agricultural activities. Crops are usually planted between April and June but current insecurity has prevented planting and led some farmers to abandon farms. Thus, despite the implementation of the rehabilitation programmes up until May 1997, the prospects for 1997 food production are not good. Although most recent estimates are of 453,000 people requiring humanitarian assistance, this is likely to be an underestimate and there will probably be a growing number of people requiring food assistance in the coming months [FAO 19/06/97].

Liberia Civil war had been ongoing in Liberia since the ousting of President Doe in 1989. A series of peace accords and the creation and implementation of a West African peacekeeping force helped to re–establish peace in Liberia and on 19 July 1997 Charles Taylor was elected president in what was decreed to be free and fair elections. The United nations Observer Mission in Liberia (UNOMIL) will conclude its mission at the end of September, and a UN office will be set up to assist with national reconstruction and development [IRIN–WA 18/07/97, USAID 14/08/97, WFP 25/07/97].



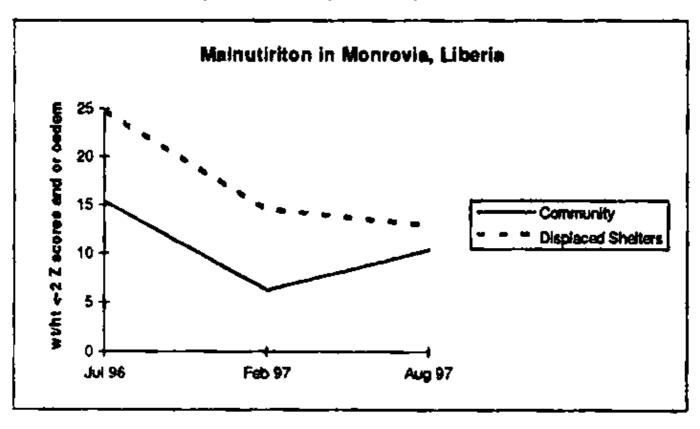
Relief organisations verify caseloads in all displaced shelters prior to monthly food distributions. Recent verifications have shown that many IDPs have spontaneously returned home because demobilisation has resulted in increased security in their home areas. The current situation is encouraging some refugees, particularly in Guinea, to return home. It is currently estimated that 700,000 people in Liberia require assistance. In addition, there are at least 3,500 refugees from Sierra Leone who have fled the recent upsurge in fighting and arrived in Liberia [JRS 15/09/97, UNDPI 16/09/97, WFP 25/07/97].

The improved security situation in the country is allowing for better access to populations and also providing greater opportunities for people to diversify their food sources. These factors are apparently leading to an improved nutritional status among many population groups.

For example, a survey was carried out in April 1997 in Tubmanburg to follow—up on a survey in October 1996. The October survey showed 38% wasting and/or oedema. Since that time, general ration distributions, selective feeding programmes and public kitchens have been in operation and have undoubtedly contributed to an improvement in nutritional status. The survey in April 1997 showed wasting levels of 4.0% with 0.8% severe wasting (see Annex I (9d)). Oedema was measured at 0.1%. Measles immunisation coverage, confirmed by a vaccination card was 41.1%. Immunisation coverage confirmed by card or mother's recollection without a card was 90%. Recommendations for future interventions based on this dramatically

improved nutritional status were to conduct a food security assessment to determine access to food, and improve the measles immunisation coverage [ACF 11/04/97].

In Buchanan, Grand Bassa County (estimated population 97,200), a recent survey showed an improved nutritional status among the displaced and resident populations. The survey, carried out in July 1997, showed 6.6% wasting with 0.3% severe wasting. Oedema was measured at 0.3% (see Annex I (9e)). This compares very favourably with a survey carried out in August 1996 when wasting and/or oedema was measured at 47.6%. This improved situation is attributed to a number of factors including improved security in the area allowing for better access to the population and giving the population greater opportunity to diversify their food sources. General ration and selective feeding programmes have been operational for many months. However, measles immunisation coverage was low at 41.1% [ACF 25/07/97].



Monrovia was the scene of intensive fighting in April 1996, leading to large scale displacement and rendering thousands dependent on international aid. Levels of wasting were high, but showed a decreasing trend over time (see graph on left). The most recent survey showed 10.3% wasting with 1.2% severe wasting in the community. Oedema was measured at 0.1% (see Annex I (9f)). The increase in wasting in the communities since the last survey may be due to the start of the wet season when access to food is reduced. Measles immunisation coverage, as confirmed by a card, was 37.6%. In the displaced shelters, wasting was measured at 11.9% with 1.8% severe wasting Oedema was 1.0% (see Annex I (9g)). This only shows a slight improvement since the previous survey. The allocation of a general ration in the shelters may however have prevented the seasonal decline in nutritional status witnessed in the community. The number of children eligible to attend selective feeding programmes can be determined using the prevalence of wasting. When this number is compared with the number actually attending, it appears that the feeding programme is not covering all vulnerable children. Measles immunisation coverage was 32.7%. One of the recommendations of the survey teams was to conduct a food economy assessment to design more appropriate interventions for the population aimed at aiding their return home [ACF 25/08/97].

The overall situation in the country is improving as access to populations is increasing. A problem, which has been identified in previous RNIS reports, is continuing low levels of measles immunisation coverage.

Cote d'Ivoire There are no reports of change to the adequate nutritional status of the approximately 210,000 assisted Liberian refugees in Cote d'Ivoire. Due to the stable situation in Liberia, repatriation of these refugees is hoped to begin soon [UNHCR May 97].

*Guinea* There are estimated to be 170,000 refugees from Sierra Leone in Guinea, 21,000 of whom have arrived since the *coup d'etat* in May 1997. In addition, there are 231,000 Liberian refugees in Guinea. This

decrease in the number of Liberian refugees is due to some spontaneous repatriation, both before and after recent elections in Liberia, and a revision due to a census. Organised repatriation for these Liberian refugees is scheduled to begin soon [UNHCR 25/09/97, WFP 27/06/97].

Overall, the affected population in Sierra Leone is at heightened nutritional risk due to continuing insecurity (category IIa in Table 1). The refugees in Cote d'Ivoire and Guinea, along with the affected population in Liberia are probably not a heightened risk (category lie in Table 1) although low levels of measles immunisation are cause for some concern.

**Ongoing interventions:** In Sierra Leone, measles immunisation has proven difficult due to problems of access and of maintaining a cold chain. There is also a shortage of drugs and nursing care in many areas. Sanctions have exacerbated these problem. A review of the sanction policy should be undertaken in order to simplify and speed up the exemption of humanitarian items.

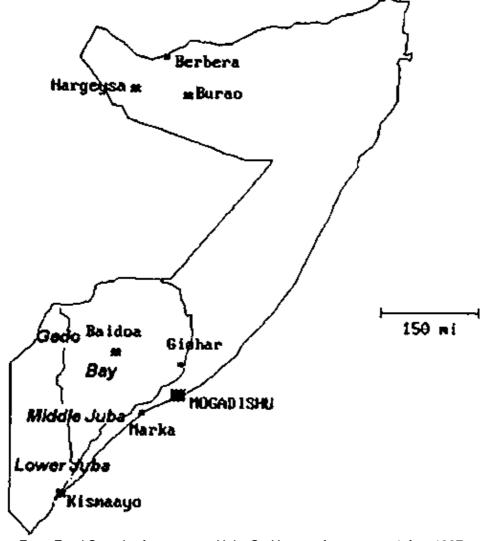
The security situation has improved in Liberia to the point where organised repatriation plans are underway. Appeals for funds for the repatriation of Liberian refugees, along with projects aimed to re-build the infrastructure in Liberia, will need generous and rapid responses from the donor community. Although food security in Liberia is steadily improving, the existence of vulnerable groups indicates a need to better understand the nature of food insecurity throughout the country. Inadequate measles immunisation coverage remains a problem country-wide.

More specifically, in Buchanan another measles immunisation campaign is required and the nutrition and food security situation needs to be closely monitored. In Monrovia, it is necessary to continue treating cases of malnutrition at feeding centres and to improve the outreach of this programme as coverage is low. It is also important to conduct a food security assessment to investigate the reasons for the differences in nutritional status between the community population and the shelter populations. Measles immunisation programmes must also continue.

#### 10. Somalia

Insecurity in Somalia, which erupted with civil war in the northern part of the country in 1988 and intensified with the overthrow of the military rulers in 1991, persists in many areas today. Current insecurity is sporadic as different clans fight for control of territory. Humanitarian aid workers continue to be affected by this violence. Recent examples include the fatal shooting of a doctor in Bay region and the kidnapping of two aid workers in Mogadishu. This insecurity, combined with low crop yields over the last two years, has led to heightened food insecurity for large portions of the population. Most recent estimates are that 1,170,000 people require humanitarian assistance in Somalia including those benefiting from food–for–work for reconstruction and rehabilitation projects, returnees and IDPs.

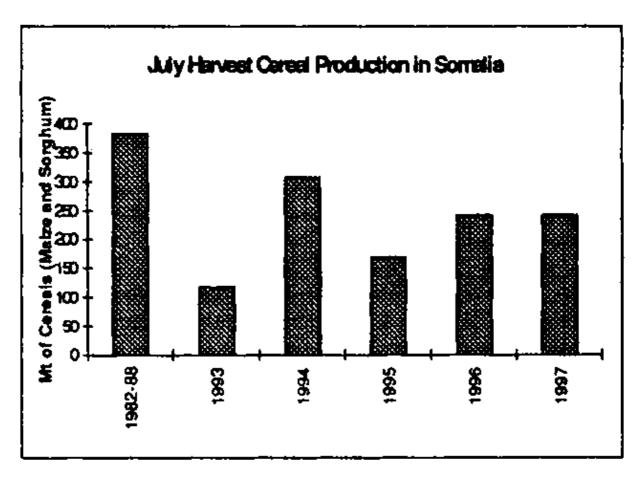
Somalia has two main cropping seasons per year: one in February and one in July. The February 1997 harvest was inadequate to feed those dependent on it until the July (Gu) harvest, and there were widespread reports of massive food price inflation, especially in inaccessible and insecure areas, and increasing levels of malnutrition in Southern areas. For example, a survey carried out in June in Baidoa in Bay region showed 20.9% wasting with 3.2% severe wasting. Oedema was measured at 1.0% (see Annex I (10a)). When compared to levels of wasting of 14.8% seen in a survey carried out in 1995, a declining trend in nutritional status is observed. Measles immunisation coverage was estimated at 41% [ACF 16/06/97].



From Food Security Assessment Unit, Gu Harvest Assessment 1 Aug 1997.

The report noted that this survey was carried out at the end of the "hungry season" and that the most vulnerable group amongst this population were the displaced. It also indicated that the poor security in the area was preventing farmers from returning to their fields and that the main problem in the area was not lack of food but the increase in market prices [ACF 16/06/97].

Another survey, carried out in Buale district (population approximately 33,800) in the middle Juba region, showed very high rates of malnutrition. Wasting and oedema were measured at 32.4% with 7.8% severe wasting and oedema (see Annex I (10b)). This compares unfavourably with a survey undertaken in June 1996 which showed an overall rate of wasting of 25.9% with a 4.1% prevalence of severe wasting. The current high rates of wasting were attributed largely to a lack of food availability in certain villages which had very poor harvests coupled with greater demands on scarce food resources due to the presence of some internally displaced people. Other factors included high rates of morbidity including diarrhoea and malaria. Measles immunisation coverage was low at 35.5%. The fact that levels of wasting actually increased over the year despite the presence of a large supplementary feeding programme indicates the extent of food insecurity in the area [WV Jul. 97].



Emergency food was distributed to approximately 360,000 people in fifteen districts in southern Somalia during June and July 1997 to fill the gap until the July harvest. The death of an MSF–France doctor, killed by gunmen, led to a suspension of all activities by the international community in the Bay region until further notice. However, deliveries were successfully completed in other regions [WFP 13/06/97, 04/07/97, 28/07/97].

Yields form the July harvest were comparable to those of last year, but considerably below pre-war levels. The graph on the right shows cereal production in the July season over time [FSAU 01/08/97]. Household food security is not likely to improve on the basis of this harvest.

Some efforts to reconstruct the country are underway, despite continued insecurity. For example, a system of clinics and hospitals has been set up by the IFRC–backed Somali Red Crescent Society, and serves approximately 350,000 people. However, there is concern that current low levels of funding may mean the network is not sustainable, let alone expandable. Other initiatives include demobilisation programmes and law enforcement training [IFRC 15/08/97, UNDP 18/08/97].

Overall, the affected population in Buale district are in category I in Table 1 with high levels of wasting. Those requiring aid in fifteen districts in southern Somalia can be considered to be at moderate risk of malnutrition (category IIb in Table 1), and the remaining affected population can be considered to be at moderate risk of malnutrition and associated mortality (category IIb in Table 1). While the limited harvest will alleviate food shortages in some areas, it is unlikely to be sufficient for most of the vulnerable population.

**Ongoing interventions:** It is unlikely that the current harvest will be sufficient to last until the next harvest in January. Food aid will therefore be required for 1,170,000 vulnerable people at least until January 1998. More specifically, the nutritional situation in Bay region needs to be closely monitored. Useful interventions would include the establishment of therapeutic feeding facilities, the continued distribution of supplementary foods for moderately malnourished children and the identification of other vulnerable groups in order to target food distributions. A measles immunisation campaign is required in the region.

In Buale province, there is a need to continue the supplementary feeding programmes and vitamin A distribution and to reinforce the EPI programme. Ways of improving potable drinking water supplies and sanitation should also be explored. A follow–up nutrition survey should be implemented in the coming months and efforts to improve crop production should continue.

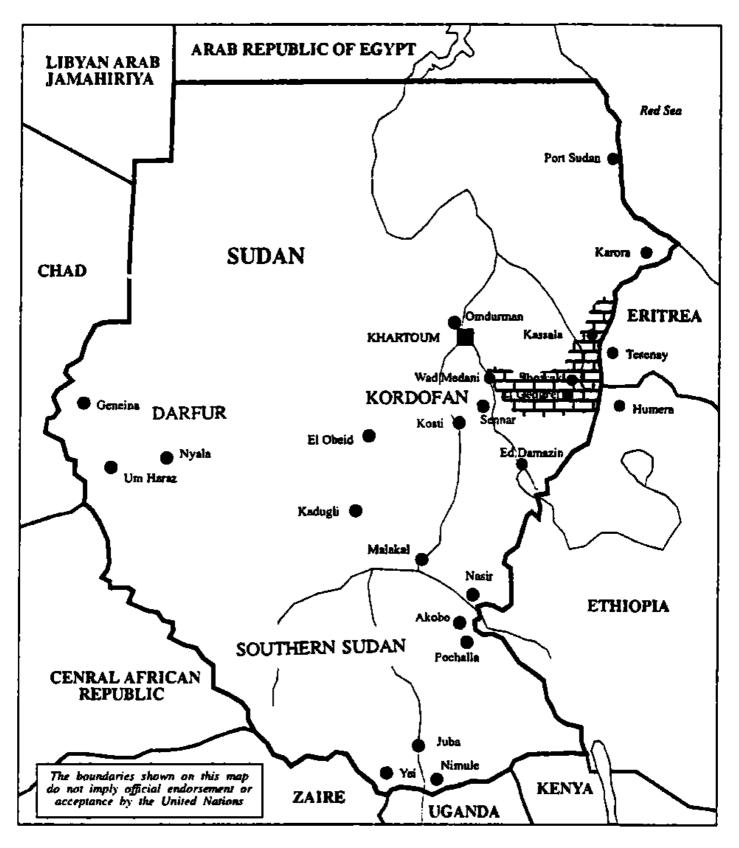
# 11. Sudan

There are currently 2.8 million people in Sudan in need of emergency humanitarian aid. This total number includes at least 2.2 million people in Southern Sudan, 374,000 in the transitional zone, 80,000 in Khartoum and approximately 138,000 Ethiopian and Eritrean refugees.

*Khartoum* It was hoped that somewhat improved access to this population would lead to improved service provision. This would then lead to a reduction in the high levels of wasting seen in previous surveys. However, there are no new nutritional data on the approximately 400,000 internally displaced people around Khartoum.

Red Sea Hills A survey carried out in October 1996 showed high levels of wasting and noted the presence of micronutrient malnutrition in the Red Sea Hills. The survey team estimated that there were 240,000 people in need of emergency aid and recommended a general food distribution, since the malnutrition was felt to be attributable to widespread food insecurity. However, at the time funding was only made available for supplementary feeding programmes and a vitamin A distribution. More recently general ration distributions have commenced for 240,000 nomads and farmers and the food situation in the area is currently reported as under control. However, insecurity in the area may hamper food aid deliveries [WFP 11/07/97, IFRC 15/06/97, OXFAM 01/07/97].

Southern Sudan The signing of a peace accord in April 1997 has not led to an improved level of security in the south, primarily because one of the principle warring factions did not sign the accord. In the past few weeks there has been fighting in Bahr–el–Ghazal, which prevented the delivery of food aid for a period in July, as well as intense clashes in Juba. Humanitarian agency staff have been relocated from a number of locations due to insecurity. Advances by the SPLA, along with heightened insecurity in Uganda have led to the return of many Sudanese.



Food aid continues to be delivered through a combination of land, barge and air routes, with the GOS approving planned deliveries before they take place.

Yields form the August harvest were lower than normal. This was due in part to a dry spell in May and June which destroyed much of the crop. It is also felt that the high prevalence of Guinea worm among both young and old has prevented many from carrying out full farming activities. Because this harvest normally provides about a quarter of the total annual crop production, food aid will continue to be needed [USAID 25/08/97, WV 15/07/97].

Food shortages are having a significant impact on prices in some area and food prices in Juba are now considered beyond the means of the local population [WFP 01/08/97].

As in the past, nutritional surveys show a variable situation in Southern Sudan. For example, a survey in Twic county, Bahr–el–Ghazal reported high levels of wasting, and supplementary feeding is being carried out whenever access is possible. Preliminary results from a survey in Upper Nile showed tow rates of malnutrition. Variable security in southern Sudan has continually disrupted access and hampered humanitarian aid efforts [OLS 25/06/97].

The annual needs assessment for Operation Lifeline Sudan, an umbrella group for humanitarian agencies working in Sudan, is taking place during September. The mission will gather information on food security, health, water and other non–food sectors with the aim of identifying needs in Southern Sudan for 1998 [OLS 03/09/97, WFP 22/08/97].

Ethiopian and Eritrean Refugees There are approximately 400,000 Ethiopian and Eritrean refugees in Sudan, 138,000 of whom require assistance [USAID 02/09/97]. There are no reports of change to their nutritional status. The most recent nutritional data available is from December 1996, when levels of wasting varied from 3.2–15.7% (see RNIS #19).

*Overall,* the populations requiring humanitarian assistance in Sudan can be considered to be at moderate risk of malnutrition and associated mortality (category IIb in Table 1).

**Ongoing interventions:** There is a need for further information on the nutrition and health status of displaced populations around Khartoum. Additional funding and food supplies are needed for programmes in the Red Sea Hills.

# 12. Uganda

There are approximately 473,000 refugees and internally displaced people in Uganda in need of emergency aid. This number comprises the following population groups:

Origin	Apr 96	Jun 96	Sep 96	Dec 96	Mar 97	Jun 97	Sep 97
Sudanese Refugees	214,000	214,000	214,000	214,000	225,000	165,000	175,000
IDPs	_	_	20,000	200,000	200,000	150,000	270,000
Rwandan Refugees	6,900	7,000	7,000	11,500	14,500	17,000	14,000*
Refugees from DRC	12,300	12,300	15,800	15,800	28,800	21,000	14,000*
Total	233,200	233,3000	256,800	441,300	468,300	353,000	473,000

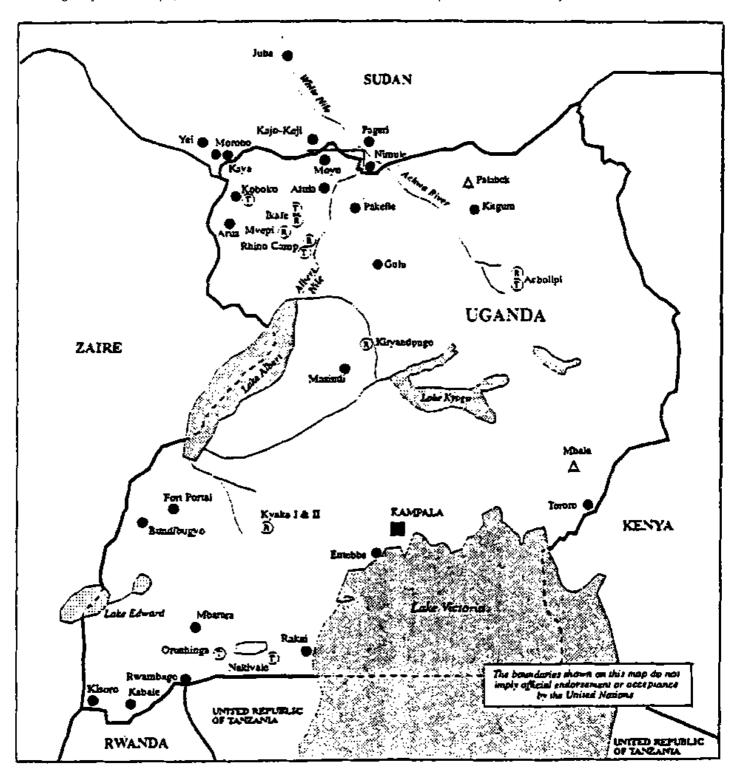
<sup>\*</sup>estimated breakdown of population figures.

The total number has increased substantially, mainly due to an increase in the number of internally displaced. These people are displaced due to clashes between government forces and two opposition factions. Low level insecurity has been a common feature in northern Uganda for the last decade, however there has been a marked increase in violence in 1997. This has led to the displacement of a further 70,000 people between mid–June and mid–August. The terror tactics of rebel forces against civilian populations are said to be forcing many into what they consider to be 'safe' towns and settlements [IRIN 13/08/97, WFP 11/07/97].

Food aid is distributed as security allows. Efforts are made to stockpile food during relatively calm periods for distribution during more insecure times. The insecurity has affected food deliveries to the internally displaced so that ration levels have often been below those that have been planned [WFP 15/08/97, 22/08/97].

A survey carried out in tour camps for internally displaced people in Kitgum district (population of the camps 45,000) showed 6.9% wasting with 0.4% severe wasting. Oedema was measured at 0.9% (see Annex I (13a)). The under–five mortality rate (U5MR) was 2.1/10,000/day and while this is high (2x normal), it is showing a decreasing trend. U5MRs in March were as high as 6/10,000/day. The leading cause of death, according to mothers questioned, was measles [ACF Aug. 97].

In other camps in the region (population 25,000) a recent survey showed 7.8% wasting with 1.0% severe wasting. Oedema was measured at 1.0% (see Annex I (13b)). The under–five mortality rate was very high at 4.3/10,000/day (almost 4x normal) with the primary cause of death according to mothers being measles [ACF Aug. 97]. In all camps, access to household farms is erratic and depends on the security situation.



The ration distributed in these camps provides 1200 kcals/person/day. Some seeds and tools have also been distributed [ACF Aug. 97].

The displacement of large numbers of people has meant that farms have been abandoned and the normal planting season in August has been missed by many [IRIN 13/08/97]. Ugandan refugees that fled to eastern DRC as a result of fighting are now returning to Uganda although prevailing insecurity is preventing many from being able to return home. With the advent of the rains, there is an urgent need for shelter, plastic sheeting, and blankets for the displaced. There is also a risk of epidemics occurring, particularly diarrhoea, cholera and measles.

There are approximately 175,000 Sudanese refugees in the northern districts of Uganda. Some of these refugees are fleeing insecurity in Uganda and returning home as the security situation in Southern Sudan permits. There are also new arrivals from Sudan, some of whom are thought to have been former refugees in Uganda who returned home for a brief period. Many of these people are arriving in Koboko, but are subsequently moved to camps farther from the border [WFP 13/06/97,18/07/97].

The current situation in Uganda in terms of insecurity and the resulting decrease in yields in the northern areas needs to been viewed within the context of a drought in the eastern part of the country. Overall, cereal and bean production have been as much as 50% lower than normal in some areas [WFP 11/7/97, 22/08/97].

Overall, the displaced population in the six camps surveyed in Kitgum District are at high risk, with elevated mortality rates (category I in Table 1). The remaining IDPs and the Sudanese refugees in Uganda can be considered to be at heightened risk (category I la) due to continued insecurity. The refugees from DRC and Rwanda can be considered to be at moderate risk of malnutrition and associated mortality (category IIb).

**Ongoing interventions:** The provision of shelter, drug supplies and water for those recently displaced by insecurity is of the utmost importance. The efficacy of established selective feeding programmes for IDPs could be improved with greater standardisation of admission criteria, improved referral systems to therapeutic feeding centres and better coverage. There is also a need to improve measles immunisation coverage. Food access and availability for IDPs also needs to be regularly monitored so that feeding programmes can be modified accordingly.

#### 13. Zambia

There are 15,000 refugees from Angola and the Democratic Republic of Congo (formerly Zaire) requiring emergency food aid [WFP 12/05/97].

#### Asia - Selected Situations

The most recent overview of the numbers of refugees and displaced people in Asia (as of the end of 1996) is as follows. There were an estimated 4.8 million refugees in Asia, of whom over 1.2 million were Afghans in Pakistan and in Iran (1.5 million). There were reported to be 600,000 Iraqis in Iran. Other large groups were refugees from Viet Nam in China (289,000), and Bhutanese in Nepal (92,000). No comprehensive data were available on the numbers of internally displaced populations in Asia, but they were certainly in the millions (UNHCR, 1996 'Populations of Concern to UNHCR').

This section of the report aims to give updated information on some of these situations. The current situation for the Afghan refugees/displaced populations, the largest single group in Asia with approximately three million affected people, is described. Available information on the Bhutanese refugees in Nepal and refugees from Myanmar in Bangladesh are included because of reports of micronutrient deficiencies. A section on the situation in Sri Lanka is also included. As in the past, we also include information on Southern Iraqi refugees in Iran.

# 14. Afghanistan Region

Civil strife has been continuing in Afghanistan for almost twenty years. The most recent upsurge in fighting led to an almost complete sweep across the country of the Taliban, a fundamentalist group who now controls most of the country, including Kabul. Fighting is continuing north of Kabul [ICRC 28/08/97, WFP 19/09/97].

This ongoing conflict has led to large-scale displacement within Afghanistan and refugee movements into neighbouring countries. It is estimated that 1.75 million people in Afghanistan are in need of food aid. There are a further 330,000 refugees in Pakistan and 322,000 in Iran in need of assistance.



Afghanistan Heavy fighting outside of Kabul has led to fresh waves of displacement and the situation north of the city remains tense. The security situation in the south is calmer, and some return to normalcy is being seen. It is currently estimated that there are over 200,000 displaced people in the capital. Emergency aid is needed for a total of 1.75 million people in Afghanistan. Those in need include internally displaced persons, the sick and elderly, households headed by women, and returnees. Food aid is mainly provided in the form of subsidised bread at bakeries and through food–for–work projects [ICRC 28/08/97, UNDPI 22/07/97].

Agriculture has been disrupted due to damage to irrigation systems, mines in fields, and market disruptions. However, in many areas, particularly in the south, some return to normalcy is being seen. Yields from the harvest in July are estimated to be higher than last year, although there are problems anticipated with transporting food from surplus to deficit areas. Partial closure of the border with Uzbekistan has let to massive inflation of fuel prices so that commercial transporters are now charging ten times the rate they were charging previously. The Uzbek authorities have allowed food into Afghanistan by barge, however the road bridge linking Afghanistan with Uzbekistan remains sealed [FAO 07/08/97].

It is estimated that a mere 26% of the population have access to health care services and only 12% have access to safe drinking water [FAO 07/08/97].

*Iran* There are no recent nutritional data on the approximately 322,000 assisted Afghani refugees in Iran. Previous reports were of an adequate nutritional status among this population.

Pakistan There are estimated to be 330,000 Afghani refugees in Pakistan currently requiring aid. General rations were phased out in October 1995 and replaced by a safety net programme which began providing assistance to vulnerable groups. A survey carried out six months after this change showed an adequate nutritional status among children [UNHCR 26/06/97]. children [UNHCR 26/06/97].

A follow-up survey was carried out in May 1997. The survey showed levels of wasting varying from 2.6–3.8% (see Annex I (14a-c)), similar to those found during the previous survey. This compares with a prevalence rate of 9% wasting amongst the local population. The malnutrition seen was felt to be mainly as a result of cases of diarrhoea, not of food shortages. The underlying causes for the high number of diarrhoea cases was believed to relate to feeding practices, care and hygiene, particularly at the time of weaning. [UNHCR 26/06/97].

Overall, those requiring emergency assistance in Afghanistan can be considered to be at moderate nutritional risk (category IIb in Table 1) due to insecurity hampering relief efforts. The refugees in Pakistan and Iran are not currently thought to be at heightened risk of malnutrition and associated mortality (category lie in Table 1).

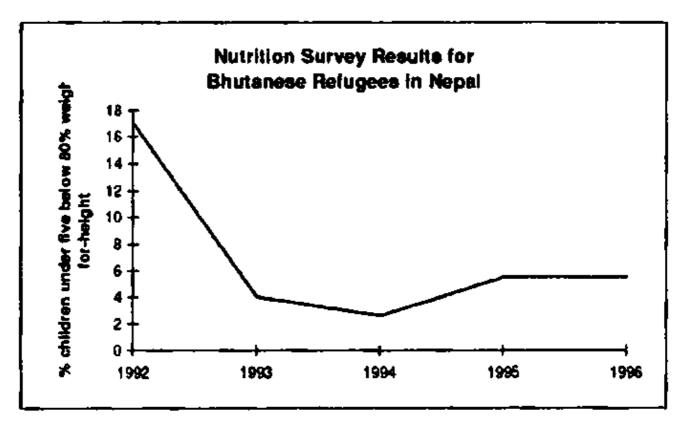
**Ongoing interventions:** Resources should continue to be made available for food for work programmes in Afghanistan. These programmes are currently needed to support food production initiatives and food for seeds, rehabilitation of irrigation networks and drainage, agricultural land rehabilitation, flood control and agro–forestry. Other priorities include the need to support reintegration and resettlement of the displaced and rehabilitation of health delivery systems.

As most of the existing malnutrition in Pakistan seems to derive from inadequate caring practices (especially poor

#### 15. Bhutanese Refugees in Nepal

There are estimated to be 92,000 Bhutanese refugees in Nepal. Most of these refugees arrived in the early 1990s, allegedly fleeing persecution in Bhutan. There are currently no plans for the repatriation of these refugees.

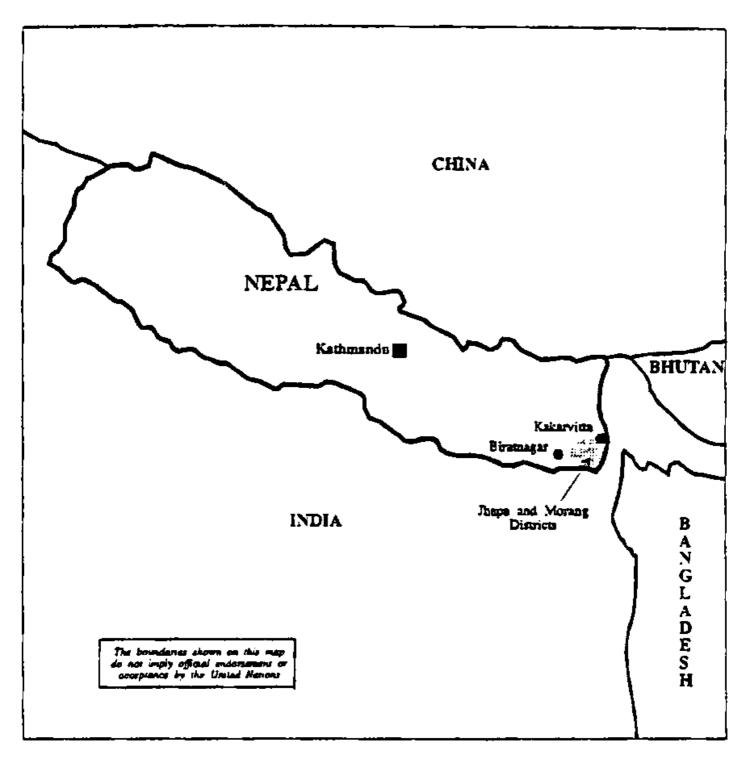
Levels of wasting in the camps have been low for quite some time. The figure on the right shows levels of wasting over time in the camps. Crude mortality rates (CMR) have also been quite low. For example, the CMR in June 1997 was 0.09/10,000/day and the under–five mortality rate was 0.15/10,000/day [SCF Jun. 97].



Token from: SCF(UK) (1997) Household Food Assessment of Khudunabari and Beldangi Refugee Camps, Jhapa District. South–east Nepal SCF(UK). London.

Despite the regular provision of a food basket which provides approximately 2,200 kcals/person/day and included a fortified blended food and fresh vegetable, cases of micronutrient malnutrition continue to be reported at camp clinics. For example, in June 1997, cases of vitamin A, scurvy, vitamin B deficiency (seen as angular stomatitis, and beri–beri) were seen [SCF Jun. 97]. A study on the uses of blended food at the household level is being finalised, and it is hoped that this study will help identify reasons for the continued low–level incidence of micronutrient malnutrition.

A recent household food economy assessment was conducted in the camps to help improve understanding of food security and food needs. It was determined that an overwhelming proportion of the food supply for households was provided by the general ration, and that there is very limited access to other food sources. There is little opportunity for the refugees to farm, or keep livestock and little demand for labour outside of camps. Furthermore, levels of calcium, riboflavin and niacin fall seriously below minimum requirements. Based on these findings, a WFP/UNHCR



Joint Assessment Mission recommended that current ration levels be maintained and that blended food fortification levels should be re–assessed [SCF May 97].

*Overall,* this population is not considered to be at heightened risk of malnutrition and associated mortality (category lie in Table 1), despite the continued presence of low levels of micronutrient malnutrition.

# 16. Refugees from Rakhine State, Myanmar in Bangladesh

Between December 1991 and March 1992, approximately 250,000 people fled the Rakhine State (then called Arakan state) in Myanmar (then Burma) to Bangladesh. Repatriation began in 1994 and was planned to be completed by the end of 1995. The repatriation process was impeded by a number of factors, and currently there are 21,000 refugees remaining in two camps in Bangladesh [HRWA/RI Aug. 97].

The food basket is meant to provide just over 2100 kcals/person/day. However, in November 1996, the distribution of fortified blended food was stopped due to questions of its suitability for consumption. Efforts to replace the calories provided by blended food include the distribution of high energy biscuits in supplementary

feeding programmes, a wet feeding programme for all children under five, and an increase in rations for pregnant and lactating women [UNCHR Aug. 97].

A nutrition survey was carried out in the two camps in Bangladesh, and the results confirm earlier survey results showing a decline in nutritional status among remaining refugees. Wasting was measured at 14.6%, with only 39.5% of malnourished children attending the feeding centres (see Annex I (16a)). The prevalence of angular stomatitis had increased to 8.9% from 5.5% measured in an earlier survey. Measles immunisation coverage was 92.8% [UNHCR 07/08/97]. A number of factors may have contributed to this decline in nutritional status. Blended foods have been absent from the food basket since November 1996 and no substitute has been provided in the general ration. Also, the most vulnerable families have been left following repatriation, and finally, refugees sell and trade food items in order to buy other necessary items. However, terms of trade are poor and many calories may therefore be lost from the ration.

Since the survey, there have been reports of new arrivals to Bangladesh, although these people are not registered and do not receive rations. Government officials claim that up to 15,000 refugees have crossed the border in recent months and that many are economic migrants. It is thought that in some cases, families are sharing rations with the new arrivals. Another recent development was the forced repatriation of over 400 refugees. This led to people refusing daily rations for up to two weeks. The boycott is now over, and forced repatriations have stopped [UNHCR 16/09/97]. Both of these recent developments are likely to have further adversely affected the nutritional situation of remaining refugees.

Overall, these refugees can be considered to be at high risk of mortality (category I in Table 1), with elevated levels of wasting and micronutrient malnutrition reported in recent surveys.

Ongoing interventions: The food security impact of the recent wave of refugees into the camps needs to be properly assessed and appropriate action taken. It also seems appropriate to review the kcal and micronutrient level of the ration given the decline in nutritional status. A substitute for corn soy blend which has been removed from the general ration should be found. It may also be that other initiatives to improve nutritional status are appropriate, e.g. deworming and efforts to establish home gardens. Attempts should also be made to increase supplementary feeding programme coverage through the outreach of community health workers and traditional birth attendants.

## 17. Marsh Arabs in Southern Iraq

An international embargo imposed on Iraq after the Gulf War in 1990 has resulted in a dramatic economic decline. Living standards throughout the country have deteriorated due to a combination of escalating prices, lower purchasing power, reduced food production and a breakdown of health services [UNICEF 01/06/97, MOH(GOI), UNICEF, WFP 14/04/97]. These adverse conditions are likely to adversely affect the Marsh Arabs in the south–east of the country even more profoundly since this group is traditionally neglected and marginalised by the government.

Security resolution 986 allowed the Government of Iraq to sell oil to buy food and medical supplies for distribution throughout the country. This has allowed the Government to make a food basket available to the population at heavily subsidised and affordable prices for most of the population. The responsibility to observe and ensure the equity, efficiency, and adequacy of distributions throughout the country falls under the United Nations Office of the Humanitarian Coordinator for Iraq under the overall authority of the Department of Humanitarian Affairs (DHA). In addition to food distributed through the 'oil–for–food' agreement, WFP is continuing its targeted feeding programmes to vulnerable groups whose needs are not otherwise being met [UNHCHR 10/09/97, WFP 29/08/97].

A nutritional survey was carried out in the southern governates in conjunction with a 'National Polio Immunisation Day' in April 1997 to provide baseline data. Over 15,000 children under five were weighed and measured at primary health centres when they arrived for polio immunisation. Wasting was measured at 8.9% (see Annex I (17a)). For comparison purposes, in 1990–95 wasting averaged 3%¹ [MOH(GOI), UNICEF, WFP 14/04/97, WFP 08/08/97]. It is unclear to what extent the Marsh Arabs are represented in this survey.

<sup>1</sup> from UNICEF (1997) State of the World's Children 1997. p.82. UNICEF. New York.

A subsequent assessment in July 1997 noted that while the food supply situation had improved, malnutrition remained a serious problem for vulnerable groups. The second six month phase of the programme began in June 1997 and will be completed in December 1997 [UN 26/08/97, WFP 08/08/97].

In order to be eligible to receive the food basket, people must first register by showing a government issued identity card. In this respect, there are three possible reasons why citizens might not be receiving rations: the person is in the process of registering, the person has not chosen to register, or has been denied registration. Many of those in the marshes do not have registration cards for one of these reasons and are therefore not able to access the subsidised food which is available. This group remains isolated, and information is lacking on their health and nutritional status [UNHCHR 10/09/97].

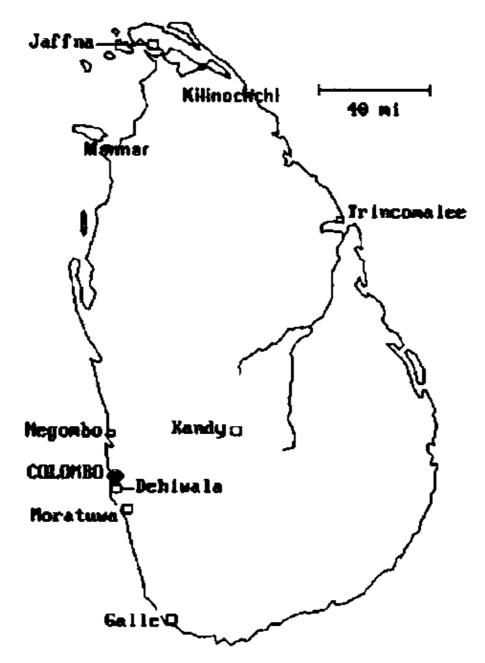
Overall, the Marsh Arabs can be considered to remain at heightened risk of malnutrition (category IIb in Table 1), since it is unclear to what extent the general improvement in food availability is having a positive impact on this group. There are a further 28,000 Marsh Arabs in Iran whose nutritional status is thought to be adequate (category lie in Table 1).

**Ongoing interventions:** As in the past, access to the Marsh Arabs is limiting the information available on their health and nutritional status. It was hoped the monitoring of food distributions under the 'oil–for–food' plan would provide much needed information on this population. So far this has not been the case.

#### 18. Sri Lanka

Apart from some notable periods of calm, the conflict in Sri Lanka has been ongoing in the north of the country for the past 14 years. The fighting has led to the displacement of large numbers of people, many of whom have been displaced several times. At least 135,000–210,000 people sought refuge in India, and those who are in government run camps are being assisted by the Government of India.

However, an escalation in fighting in the Jaffna peninsula which began in 1996 led to fresh waves of population displacement. The most recent upsurge in May 1997 is due to a government offensive which aimed at pushing the rebels back towards the peninsula. Although the numbers change rapidly as areas of intense fighting move, it is estimated that approximately 410,000 people are internally displaced. Many are in the rebel controlled Wanni jungle area just north of the peninsula. Most of those displaced within Sri Lanka are living with relatives or friends and while some assistance is needed, little food aid is necessary. There are approximately 150,000 people who live in "welfare centres" which are similar to open refugee camps. These people receive food distributions from either the government or WFP although they are not believed to be fully dependent on these distributions for all their food needs.



Recent reports are that the security situation is stable and calm. There are no new nutritional data on these populations, however there are reports of a cholera outbreak. Anecdotal accounts of the food security situation of the displaced in the Wanni region are often contradictory. One view is that there are far more displaced (as many as 700,000) than the government assessment of 400,000 and that many are not registered for government rations. Furthermore, government food distributions tend to be erratic and are affected by security and logistical factors. Many people are said to be surviving by employing coping strategies that cannot last indefinitely and that an estimated 35–200,000 people may be vulnerable and at risk. [USCR Mar 97, PROMED 20/06/97].

*Overall,* the affected population is not currently thought to be at heightened nutritional risk (category IIb in Table 1).

**Ongoing interventions:** In areas where it has responsibilities, the Government should undertake to supply food rations to all displaced people as well as providing adequate amounts of medicines, shelter material, water and sanitation facilities. If the government cannot supply these resources in a timely manner then they should enlist the support of NGOs, which has been offered and let them into areas containing internally displaced populations. For their part, the Liberation Tigers of Tamil Eelam (LTTE) should assume greater responsibility for providing for the needs of those under its control in Wanni region [USCR Mar. 97].

# **List of Sources**

# Listing of sources for September 1997 RNIS report #21

Org*	Date	Title of Report
ACF	11.04.97	Nutritional Survey Tubmanburg, Liberia
ACF	16.06.97	Nutritional Anthropometric Survey Baidoa Town (Bay Region)
ACF	25.07.97	Nutritional Survey Buchanan, Grand Bassa County, Liberia
ACF	Aug 97	Nutritional Survey Kitgum District/Northern Uganda
ACF, Concern, LWF/WS. MDM, MSF-I, OXFAM, SCF(UK), MOH	25.08.97	Nutritional Survey Monrovia Communities and Displaced Shelters, Liberia
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cws	04.09.97	Appeal for Angolan Refugees
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DHA	11.07.97	Central African Republic, Internally Displaced Persons, Situation Report No. 1
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DHA	08.09.97	Sierra Leone Humanitarian Situation Report 02–08
FAO	12.05.97	FAO/WFP Crop and Food Supply Assessment Mission to Angola
FAO	19.06.97	Special Alert – Sierra Leone
FAO	11. 07.97	FAO/WFP Crop and Food Supply Assessment Mission to Rwanda
FAO	25.07.97	FAO/WFP Crop and Food Supply Assessment Mission to Burundi
FAO	07.08.97	FAO/WFP Crop and Food Supply Assessment Mission to Afghanistan
FSAU	01.08.97	Highlights – Gu Harvest Assessment
HRWA/RI	Aug 97	Rohingya Refugees in Bangladesh: The Search for a Lasting Solution
ICRC	25.08.97	Update No. 5 on ICRC Activities in Sierra Leone
ICRC	28.08.97	No end to suffering
ICRC	Sep. 97	ICRC – Pact Sheet – Sierra Leone
IFRC	15.06.97	Sudan Drought Situation Report No. 5

IFRC	15.08.97	Somalia in Brief
IRIN	15.08.97	Emergency Update No 230 on the Great Lakes
IRIN	25.08.97	Emergency Update No. 234 on the Great Lakes
IRIN	16.09.97	Emergency Update No 249 on the Great Lakes
IRIN	18.09.97	Emergency Update No. 251 on the Great Lakes
IRIN	12–1808.97	IRIN Weekly Roundup 17–97 of Main Events in the Great Lakes Region
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IRIN-WA	18.07.97	Liberia-Special Briefing #1 Chronology Leading to 19 July Elections
JRS	01.07.97	Angola: Return to war, 1 Jul 1997
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MOH(GOI), UNICEF, WFP	14,06.97	Nutritional Status Survey at Primary Health Centres Durung Polio National Immunisation Days (PN ID) in Iraq
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SCF	Jun 97	Health and Nutrition Situation Report for June 1997
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SCF	May 97	Jhapa District, South-East Nepal
SF	07.0897	The Civil War and Peace Process in Sudan: A Brief Account

UN	06.08.97	Security Council Resolution 1125 (1997) on the situation in Central African Republic
UN	26.0897	Iraq's Humanitarian situation has improved under 'oil-for-food' formula
UNDP	28.07.97	UNDP Contributing \$2 Million to support peace process in Central African Republic
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UNDPI	Jul 97	Some 200,000 are displaced in Afghanistan as a result of recent fighting
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		UNHCR reports catastrophic mortality rates among refugees at transit centres in
UNHCR	04.06.97	Kiangani and Mbandaka
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UNHCR	07.08.97	Final Report of Nutrition Survey of Under Ive Refugee Children (Bangladesh)
UNHCR	31.08.97	Monthly Statistics - Kenya
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UNHCR	16.09.97	Personal Communication – Nepal, Sri Lanka, Bangladesh
UNHCR	25.09.97	Personal communication – Liberia Region, Burkina Faso
UNHCR	26.09.97	Personal Communication – Djibouti
UNHCR	23.09.97	Personal Communication – Togolese refugees
UNHCR	31.08.97	Statistics on Repatriation of Togolese Refugees
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UNHCR	May 97	The World – Africa – Cole d'Ivoire, Mali, Democratic Republic of Congo
UNHCR-a	09.09.97	Ethiopia survey results
UNHCR-a	09.09.97	Personal Communication – Kenya
	•	•

UNHCR-a	16.09.97	Comments on Kenya section
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USCR	01.03.97	Conflict and Displacement in Sri Lanka
WFP	01.04.97	Emergency and Protracted Relief Operations
WFP	13.06.97	Weekly Update
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WFP	28.07.97	Somalia Insecurity Problems Largely Overcome During Emergency Food Operation
WFP-a	15.08.97	WFP concerned about effects of prolonged food shortages on thousands of Burundis in camps

WV	15.07.97	Guinea worm factor
WV	12.08.97	World Vision Fighting Measles Epidemic in UNITA Area
WV	03.09.97	Measles epidemic reduced substantially (Angola)
WV	Jul 97	Nutrition and Immunization Survey, Buale Province (Somalia)

WV		Jul 97	Nutrition and Immuniza Province (Somalia)							
*Org										
ACF	Action Contre la Faim									
ACT	Action Churches Together	Action Churches Together								
Al	Amnesty International									
BAAG	British Agencies Afghanist	an Group								
CONCERN										
CWS	Church World Service									
DHA	Department of Humanitaria	an Affairs								
FAO	Food & Agricultural Organ	ization of the United	Nations							
FSAU	Food Security Assessmen	t Unit for Somalia								
GOAL										
ICRC	International Committee of	Red Cross								
IFRC	International Federation of	Red Cross								
IRIN	Integrated Regional Inform	nation Network (of DI	HA)							
IRIN-WA	Integrated Regional Inform	nation Network for W	est Africa (of DHA)							
JRS	Jesuit Refugee Service									
MSF-B	Medecins Sans Frontieres	– Belgium								
MSF-CIS	Medecins Sans Frontieres	- Celula Inter-Seco	coes							
MSF-F	Medecins Sans Frontieres	- France								
MSF-H	Medecins Sans Frontieres	- Holland								
MSF-S	Medecins Sans Frontieres	– Spain								
OLS	Operation Lifeline Sudan									
PROMED	On-line Medical Updates									
RI	Refugees International									
SCF-UK	Save the Children Fund (L	Inited Kingdom)								
SF	Sudan Foundation									
UNAA	United Nations Humanitari	an Assistance for Af	ghanistan							
UNDPI	U.N. Departement of Publi	c Information								
UNECOSOC	United Nations Economic	and Social Council								
UNHRCS	United Nations Humanitari	an and Resident Co	ordinator for Somalia							

UNHCHR	United Nation's High Commissioner (or Human Rights
UNHCR	United Nation's High Commission on Refugees
UNICEF	United Nation's Children Fund
USCR	US Committee for Refugees
WFP	World Food Programme
WHO	World Health Organization
WV	World Vision

# **Tables and Figures**

Table 1: Information Available on Total Refugee/Displaced Populations (as of September 1997)

Situation	Population Numbers									
			Condition	Condition Total Change from June 1997			from June			
	I: High Prev	lla: High Risk	IIb: Mod Risk	llc: Not Critical	III: Unknown					
Sub–Saharan Africa										
1. Angola	11'100		930'900			942'000	<i>–35'000</i>	det	De sec situ lea opu dis	
2. Benin/Ghana/Togo Region						0	-13'500	stat	Org rep cor	
3. Burkina Faso/Mauritania			22'500	18'000		40'500	-6'000	stat	De due rep	
4. Burundi/Rwanda Region	260'000	945'000	727000	655'200		2'587'200	-1'181'800	det	Se pro reg De duc atta sel of I Rw All and not	
5. Central African Republic				33'400		33'400	1'000	stat	Inc	

	Ī				·	,		1	ı
									some refug from DRC
6. Djibouti				25' 000		25'000	22500	stat	Increased to due to bette estimate of population numbers
7. Ethiopia	20'500		267'500	91'800	15'000	394'800	-98'90 <i>0</i>	imp	Decreased due to repatriation some Som refugees
8. Kenya	147'000			29'500		176'500	3'000	det	Those in Kakuma ar Dadaab ca at high risk Increased i due to new arrivals from Sudan
9. Liberia/Sierra Leone/Guinea/Cote d'Ivoire		453'000		1'311'000		1'764 000	-249000	imp	Decreased number requiring assistance Liberia Sor new displaceme Sierra Leor due to Cou
10. Somalia	34'000	360000	776'000			1'170'000	482'000	det	Increased estimate of vulnerable population to insecurit presence of IDPs and la of coping mechanist
11. Sudan			2'794'800			2'794 800	0	stat	Pockets of malnutrition likely to exi Southern Sudan Crit situation in Sea persis
12. Uganda	70'000	375'000	28'000			473'000	120'000	det	Increased a due to increased number of internally displaced people requassistance
13. Zambia				15'000		15'000	-25'000	stat	Decrease of to spontant

									Ang
Total (Sub–Saharan Africa)	542'600	2'133'000	5'546'700	2'178'900	15'000	10'416'200	-1'420'200		
Asia (Selected Situations)									
14. Afghanistan Region			1'750'000	652'000		2'402'000	250'000	stat	Inci num ped emi in A
15. Bhutanese Refugees in Nepal				92'000		92'000	0	stat	A p the ma risk mic defi
16. Bangladesh	21'000					21'000	<i>–3'000</i>	det	Rei refu risk mic mai ele of v
17. Southern Iraq			132'000	28'000		220'000	0	stat	Tho Mai con be
18. Sri Lanka			500'000			500'000		stat	

I: High Prev – Those reported with high prevalences of malnutrition (where available >20% wasting) and/or micronutrient deficiency diseased and sharply elevated mortality rates (at least 3x normal).

*Ila: High Risk – At high risk, limited data available, population likely to contain pockets of malnutrition (e.g. wasting).* 

IIb: Mod Risk - Moderate risk, may be data available, pockets of malnutrition may be exist.

Ilc: Not Critical – Probably not at heightened nutritional risk.

III: Unknown - No information on nutritional status available.

Table 2: Summary of Origin and Location of Major Populations of Refugees, Returnees and Displaced People in Africa September 1997 – RNIS #21 (population estimates in thousands)

	To/In								
From	Angola	Benin	Burkina Faso	Burundi	Congo/Brazzaville	Cote d'Ivoire	Dem Rep Congo	Eritrea	Ethiop

<sup>\*</sup> Indicates status of nutritional situation. Imp = improving; det = deteriorating; stat = static (i.e. no change).

942						50			
			260			35			
				450		20			
						380			
								11	
								9	
					210				
		18							
				11		200			
								278	
						111		54	
						27			
942	0	18	260	461	210	823	0	352	
			18	18	260 450	260 450 210 18	260 35 450 20 380 380 380 380 311 200 111 200	260 35 35 380 380 380 380 380 380 380 380 380 380	260 35 35 380 380 380 311 31 31 320 321 321 321 321 321 321 321 321 321 321

## NOTES:

- (1) This chart is intended to include major population groups in Africa (i.e. over 100,000 people affected from country of origin).
- (2) Boxes on the diagonal (shaded) show internally displaced populations (total = 7.1 million).
- (3) Numbers referred to in the text are usually by the country where the population is located (i.e. column totals).

For the regional situations of Burundi/Rwanda and Liberia/Sierra Leone the description is by country of origin (i. e. row totals).

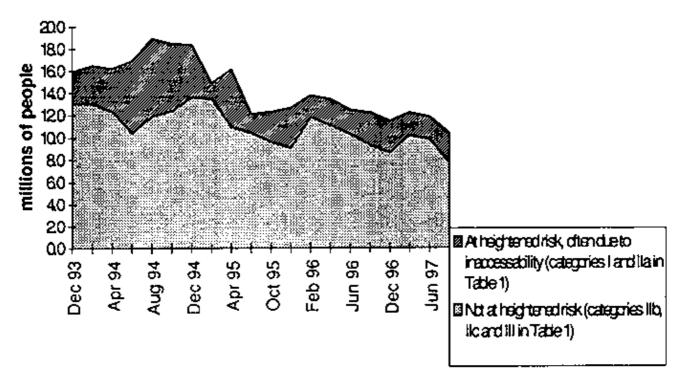


Figure 1: Number of Refugees and Internally Displaced in Sub-Saharan Africa and Estimated Nutritional Risk Over Time (Dec 93 – Sep 97)

Annex 1: Results of Surveys Quoted in September 1997 RNIS Report (#21)-usually children 6-59 months

Survey Area	Survey Conducted by	Date	% Wasted*	% Severely Wasted*	Oedema (%)	Crude Mortality (/10,000/day)
1. Angola						
a. N'Zaji, Lunda Norte	MSF-H	Jun 97	10.1*	3.6*		
b. Malange	MSF-H/MINSA	Jun 97	23*	0.4*		
c. Luau	MSF-B	Jul 97	34.0	11.0		
4. Burundi/Rwanda Region						
a. Uvira, DRC	UNICEF	Jun 97	13.0			
7. Ethiopia						
a. Kebre Beyah	ARRA/UNHCR	Aug 97	9.6 (<80%)		18.1	
b. Camaboker	ARRA/UNHCR	Aug 97	8.1 (<80%)		0.0	
c. Rabasso	ARRA/UNHCR	Aug 97	5.7 (<80%)		0.0	
d. Daror	ARRA/UNHCR	Aug 97	8.3 (<80%)		0.0	

e. Aisha	ARRA/UNHCR	Aug 97	13.0 (<80%)		6.2	
f. Tereriber	ARRA/UNHCR	Aug 97	13.9 (<80%)		0.0	
g. Darwonaji	ARRA/UNHCR	Aug 97	16.8 (<80%)		4.9	
h. Hartishek	ARRA/UNHCR	Aug 97	8.1 (<80%)		1.0	
9. Liberia/Sierra Leone Region						
a. Port Loko. Sierra Leone	UNICEF	Aug 97	10.8*			
b. Kambia District	MSF	Aug 97	6.4*			
c. Freetown, Sierra Leone	MSF	Aug 97	8.9*	1.8*		
d. Tubmanburg, Liberia	ACF	Apr 97	4.0	0.8	0.1	
e. Buchanan, Grand Bassa, Liberia	ACF	Jul 97	6.6	0.3	0.3	
	ACF,CONCERN,LWF/WS,MDM,MSF-					
	I,OXFAM,SCF (UK),					
f. Monrovia (Residents)	MOH	Aug 97	10.3	1.2	0.1	
	ACF,CONCERN,LWF/WS,MDM,MSF,					
	I,OXFAM,SCF(UK),					
g. Monrovia (Displaced)	МОН	Aug 97	11.9	1.8	1	
10. Somalia						
a. Baidoa, Bay Region	ACF	Jun 97	20.9	3.2	1.0	
b. Buale District. Middle Juba	WV	Jul 97	32.4*	7.8*		
12 Uganda						
a. Palabek Kal. Palabek Gem, Padibe, Gangyan	ACF	Aug 97	6.9	0.4	0.9	2
b. Lokung, Atanga	ACF	Aug 97	7.8	1.0	1.0	
14. Afghanistan Region						
a. NWFP; Pakistan	UNHCR	May 97	2.6*	0.4*		

b. Punjab Pakistan	UNHCR	May 97	2.7*	0.5*	
c. Balochistan, Pakistan	UNHCR	May 97	3.8*	0.5*	
16. Bangladesh					
a. Cox's Bazar District (2 camps)		Jun 97	14.6		
17. Iraq					
	MOH/Iraq,				
	UNICEF, WFP	Apr 97	8.9		

<sup>\*</sup> wt/ht unless specified: cut-off = n.s. means not specified but usually -2SD wt/ht for wasting and -3SD wt/ht for severe wasting

NOTE: see box on back cover for guidance In Interpretation of Indicators.

#### **Notes on Annex I**

## 1. Angola

- a. This survey was conducted by MSF–Holland in June 1997 in N'Zaji, Lunda Norte. 303 children were included in the survey; this was the total population under five at the time of the survey, so no confidence intervals are used. Wasting (wt/ht <-2SD) and oedema were reported together.
- b. This survey was carried out in Malange by MSF-Holland in June 1997. 483 children were included in the survey. Wasting (wt/ht <-2SD) and oedema are reported together. No further details are currently available.
- c. This was a rapid assessment of 145 children in Luau conducted by MSF–Belgium in July 1997. No further details are currently available.

#### 4. Burundi/Rwanda (Great Lakes) Region

a. This survey was carried out by UNICEF in June 1997 in Uvira, DRC. 17400 children under five years old were included in the survey. No further details are currently available.

## 7. Ethiopia

- a. This survey was carried out by ARRA, WFP and UNHCR in August 1997 in Kebre Bayah. 458 children under five were included. Wasting was measured by wt/ht <80% of the median, and oedema was recorded separately.
- b. This survey was carried out by ARRA, WFP and UNHCR in August 1997 in Camaboker. 666 children under five were included. Wasting was measured by wt/ht <80% of the median, and oedema was recorded separately.
- c. This survey was carried out by ARRA, WFP and UNHCR in August 1997 in Kebre Bayah. 458 children under five were included. Wasting was measured by wt/ht <80% of the median, and oedema was recorded separately.
- d. This survey was carried out by ARRA, WFP and UNHCR in August 1997 in Rabasso. 609 children under five were included. Wasting was measured by wt/ht <80% of the median, and oedema was recorded separately.

<sup>\*\*</sup> Oedema is included in this figure.

- e. This survey was carried out by ARRA, WFP and UNHCR in August 1997 in Aisha. 416 children under five were included. Wasting was measured by wt/ht <80% of the median, and oedema was recorded separately.
- f. This survey was carried out by ARRA, WFP and UNHCR in August 1997 in Teferiber. 603 children under five were included. Wasting was measured by wt/ht <80% of the median, and oedema was recorded separately.
- g. This survey was carried out by ARRA, WFP and UNHCR in August 1997 in Darwonaji. 613 children under five were included. Wasting was measured by wt/ht <80% of the median, and oedema was recorded separately.
- h. This survey was carried out by ARRA, WFP and UNHCR in August 1997 in Hartishek. 599 children under five were included. Wasting was measured by wt/ht <80% of the median, and oedema was recorded separately.

## 9. Liberia/Sierra Leone Region

- a. This survey was carried out by UNICEF in Port Loko, Sierra Leone. No further details are available.
- b. This survey was carried out by MSF in Kambia district in August 1997. No further details are available.
- c. This survey was carried out by MSF from 13–15 August 1997. 621 children 6–59 months old were included. Wasting (wt/ht <-2SD) and oedema were reported together.
- d. This survey was carried out by Action Contre la Faim in April 1997. It was a two stage cluster sampling of 900 children 6–59 months old. Wasting was defined as wt/ht <–2 SD and severe wasting was wt/ht <–3 SD. Oedema was recorded separately. Global malnutrition was defined as wt/ht <–2 sd or oedema and was recorded at 4.1% (95% Cl 2.5–6.5%). Severe malnutrition was defined as wt/ht <–3 sd or oedema and was recorded at 0.9% (95% Cl 0.3–2.4%). Measles immunisation coverage is based on a vaccination card.
- e. This survey was carried out by Action Contre la Faim in July 1997. It was a two stage cluster sampling of 891 children 6–59 months old. Wasting was defined as wt/ht <–2 SD and severe wasting was wt/ht <–3 SD. Oedema was recorded separately. Global malnutrition was defined as wt/ht <–2 sd or oedema and was recorded at 7.0% (95% Cl 4.8–9.9%). Severe malnutrition was defined as wt/ht <–3 sd or oedema and was recorded at 0.7% (95% Cl 0.1–2.1%). Measles immunisation coverage is based on a vaccination card.
- f. This was a joint survey with ACF, CONCERN, LWF/WS, MDM, MSF–I, OXFAM, SCF(UK) in consultation with the. Ministry of Health among the community in Monrovia. It took place from 18–25 August, 1997. It was a two stage cluster sampling of 948 children 6–59 months old. Wasting was defined as wt/ht <–2 SD and severe wasting was wt/ht <–3 SD. Oedema was recorded separately. Global malnutrition was defined as wt/ht <–2 sd or oedema and was recorded at 10.3% (95% CI 7.8–13.6%). Severe malnutrition was defined as wt/ht <–3 sd or oedema and was recorded at 1.3% (95% CI 0.5–2.9%). Measles immunisation coverage is based on a vaccination card.
- g. This was a joint survey with ACF, CONCERN, LWF/WS, MDM, MSF–I, OXFAM, SCF(UK) in consultation with the Ministry of Health among the displaced shelters in Monrovia. It took place from 18–25 August, 1997. It was a two stage cluster sampling of 927 children 6–59 months old. Wasting was defined as wt/ht <–2 SD and severe wasting was wt/ht <–3 SD. Oedema was recorded separately. Global malnutrition was defined as wt/ht <–2 sd or oedema and was recorded at 12.9% (95% CI 10.0–16.5%). Severe malnutrition was defined as wt/ht <–3 sd or oedema and was recorded at 2.8% (95% CI 1.5–4.9%). Measles immunisation coverage is based on a vaccination card.

#### 10. Somalia

- a. This survey was carried out by ACF from 13–16 June 1997 in Baidoa Town, Bay Region, Somalia. It was a two stage cluster sampling of 900 children 6–59 months old. Wasting was defined as wt/ht <–2 SD and severe wasting was wt/ht <–3 SD. Oedema was recorded separately. Global malnutrition was defined as wt/ht <–2 sd or oedema and was recorded at 21.9% (95% Cl 18.1–26.1%). Severe malnutrition was defined as wt/ht <–3 sd or oedema and was recorded at 4.2% (95% Cl 2.6–6.7%). Measles immunisation coverage is based on a vaccination card or mothers word.
- b. This survey was carried out by World Vision in Buale district of the Middle Juba region in Somalia. The survey took place in July 1997, and included 900 children 6–59 months old. A cluster sampling method was used. Wasting was defined as wt/ht <–2 Z scores and severe wasting wt/ht <–3 Z scores. Oedema was recorded with wasting. Wasting and oedema together were 32.4% (95% Cl 28.0–37.2) and severe wasting and oedema were 7.8% (95% Cl 5.5–10.9).

## 12. Uganda

- a. This survey was carried out by ACF in Palabek Kal, Palabek Gem, Padibe, Gandyang in August 1997. It was a cluster sample survey including 857 children 6–59 months old (or 65–110 cms). Wasting was defined as wt/ht <–2 SD and severe wasting was wt/ht <–3 SD. Oedema was recorded separately. Global malnutrition was defined as wt/ht <–2 sd or oedema and was recorded at 7.8% (95% CI 5.5–10.9%). Severe malnutrition was defined as wt/ht <–3 sd or oedema and was recorded at 1.3% (95% CI 0.5–3.0%).
- b. This survey was carried out by ACF in Lokung, Atanga in August 1997. It was a cluster sample survey including 857 children 6–59 months old (or 65–110 cms). Wasting was defined as wt/ht <–2 SD and severe wasting was wt/ht <–3 SD. Oedema was recorded separately. Global malnutrition was defined as wt/ht <–2 sd or oedema and was recorded at 8.8% (95% CI 6.3–12.2%). Severe malnutrition was defined as wt/ht <–3 sd or oedema and was recorded at 2.0% (95% CI 0.9–4.1%).

#### 14. Afghanistan Region

- a. This survey was carried out by UNHCR in April and May 1997 in NWFP; Pakistan. It was a two-stage cluster sample survey including 1616 children 0.5–5 years old. Global malnutrition was defined as wt/ht <-2 Z scores or oedema and was recorded at 2.6% (95% Cl 1.6–4.4%). Severe malnutrition was defined as wt/ht <-3 Z scores or oedema and was recorded at 0.4% (95% Cl 0.1–1.2%).
- b. This survey was carried out by UNHCR in April and May 1997 in Punjab, Pakistan. It was a two–stage cluster sample survey including 1558 children 0.5–5 years old. Global malnutrition was defined as wt/ht <–2 Z scores or oedema and was recorded at 2.7% (95% Cl 1.7–4.2%). Severe malnutrition was defined as wt/ht <–3 Z scores or oedema and was recorded at 0.5% (95% Cl 0.2–1.4%).
- c. This survey was carried out by UNHCR in April and May 1997 in Balochistan, Pakistan. It was a two-stage cluster sample survey including 1638 children 0.5–5 years old. Global malnutrition was defined as wt/ht <-2 Z scores or oedema and was recorded at 3.8% (95% Cl 2.7–5.5%). Severe malnutrition was defined as wt/ht <-3 Z scores or oedema and was recorded at 0.5% (95% Cl 0.2–1.3%).

#### 16. Refugees from Rakhine State, Myanmar in Bangladesh

a. This survey was carried out between 6–22 June 1997. It was a cross sectional, two stage cluster sample survey including 869 children, malnutrition was defined as wt/ht <–2 Z scores.

#### 17. Iraq

a. This survey was carried out by the Ministry of Health, UNICEF and WFP from 12–14 April 1997. The samples were taken form those presenting at primary health centres (PHC) on a 'Polio National Immunisation Day'. 87 of the 850 PHC were sampled, with 180 children assessed in each centre for a total of over 15, 000 children under five. Wasting was based on

'low weight for height' and is assumed to mean wt/ht <-2 SD from the mean.

## Seasonality in Sub-Saharan Africa\*

Country Climate/Rainy Season/Harvest

Angola Coastal area desert, SW semi-arid, rest of country: rains Sept-April

Burundi Three crop seasons: Sept–Jan. Feb–Jun, and Jul–Aug

CAR Rains March–Nov

Djibouti Arid Climate

Ethiopia Two rainy seasons February to May and June to October

Kenya N–E is semi–arid to arid. Central and SW rains: March–May and Nov–Dec

Liberia Rains March-Nov

Mozambique Coast is semi-arid, rest wet-dry. Harvest May

Rwanda Rains Feb-May with Aug harvest and Sept-Nov with Jan harvest

Sierra Leone Rains March-Oct.

Somalia Two seasons: April to August (harvest) and October to January/February

(harvest)

Sudan Rains April–Oct

Northern Rains begin May/June

Southern Rains begin March/April

Togo Two rainy seasons in S. one in N. Harvest August

Uganda Rains Mar-Oct

Zaire Tropical climate. Harvest in N: November; in S January

## \*SOURCES:

FAO, "Food Supply Situation and Crop Prospects in Sub-Saharan Africa". Special Report; No 4/5. Dec. 90 plus various FAO/WFP Crop and Food Supply Assessment Missions.



The UN *ACC/SCN*<sup>1</sup>, which is the focal point for harmonizing policies in nutrition in the UN system, issues these reports on the nutrition of refugees and displaced people with the intention of raising awareness and facilitating action to improve the situation. This system was started on the recommendation of the SCN's working group on Nutrition of Refugees and Displaced People, by the SCN in February 1993. This is the twenty first of a regular series of reports. Based on suggestions made by the working group and the results of a survey of RNIS readers, the Reports on the Nutrition Situation of Refugees and Displaced People will be published *every* three months, with updates on rapidly changing situations on an 'as needed' basis between full reports.

<sup>1</sup> ACC/SCN, c/o World Health Organization. 20 Avenue Appia, CH–1211 Geneva 27. Switzerland. Telephone: (41–22) 791.04.56. Fax (41–22) 798.88.91, Email accscn@who.ch.

Information is obtained from a wide range of collaborating agencies, both UN and NGO (see list of sources at end of report). The overall picture gives context and information which separate reports cannot provide by themselves. The information available is mainly about nutrition, health, and survival in refugee and displaced populations. It is organized by "situation" because problems often cross national boundaries. We aim to cover internally displaced populations as well as refugees. Partly this is because the system is aimed at the most nutritionally vulnerable people in the world – those forced to migrate – and the problems of those displaced may be similar whether or not they cross national boundaries. Definitions used are given in the box on the next page. At the end of most of the situation descriptions, there is a section entitled

"Ongoing interventions?". This is included when there is enough information on current needs and opportunities, and when there is a substantial risk to nutrition.

The tables, and figures at the end of the report can provide a quick overview. Table 1 gives an estimate of the probable total refugee/displaced/returnee population, broken down by risk category. Populations in category I in Table 1 are currently in a critical situation, based on nutritional survey data. These populations have one or more indicators showing a serious problem. Populations at high risk (category IIa in Table 1) of experiencing nutritional health crises are generally identified either on the basis of indicators where these are approaching crisis levels and/or also on more subjective or anecdotal information often where security and logistical circumstances prevent rigorous data collection. Populations at moderate risk (category IIb in Table 1) are potentially vulnerable, for example based on security and logistical circumstances, total dependency on food aid, etc. Populations in category lie are not known to be at particular risk. In Table 2. refugee and displaced populations are classified by country of origin and country of asylum. Internally displaced populations are identified along the diagonal line. Figure 1 shows trends over time in total numbers and risk categories for Africa. Annex I summarises the survey results used in the report.

## **Indicators**

**Wasting** is defined as less than –2SDs, or sometimes 80%, wt/ht by NCHS standards, usually in children of 6–59 months. For guidance in interpretation, prevalences of around 5–10% are usual in African populations in non–drought periods. We have taken more than 20% prevalence of wasting as undoubtedly high and indicating a serious situation; more than 40% is a severe crisis. Severe wasting can be defined as below –3SDs (or about 70%). Any significant prevalence of severe wasting is unusual and indicates heightened risk. (When "wasting" and "severe wasting" are reported in the text, wasting includes severe – e.g. total percent less than –2SDs, *not* percent between –2SDs and –3SDs.) Data from 1993/4 shows that the most efficient predictor of elevated mortality is a cut off of 15% wasting (ACC/SCN. 1994, p81). Equivalent cut–offs to –2SDs and –3SDs of wt/ht for arm circumference are about 12.0 to 12.5 cms, and 11.0 to 11.5 cms, depending on age.

**Oedema** is the key clinical sign of kwashiorkor, a *severe* form of protein–energy malnutrition, carrying a very high mortality risk in young children. It should be diagnosed as *pitting* oedema, usually on the upper surface of the foot. Where oedema is noted in the text, it means kwashiorkor. Any prevalence detected is cause for concern.

A crude mortality rate in a normal population in a developed or developing country is around 10/1,000/year which is equivalent to 0.27/10.000/day (or 8/10,000/month). Mortality rates are given here as "times normal", i.e. as multiple of 0.27/10,000/day. [CDC has proposed that above 1/10,000/day is a very serious situation and above 2/10,000/day is an emergency out of control.] Under–five mortality rotes (U5MR) are increasingly reported. The average U5MR for Sub–Saharan Africa is 181/1,000 live births, equivalent to 1.2/10,000 children/day and for South Asia the U5MR is 0.8/10,000/day(in 1992, see UNICEF, 1994, p.84).

**Food distributed** is usually estimated as dietary energy made available, as an average figure in kcals/person/day. This divides the total food energy distributed by population irrespective of age/gender (kcals being derived from known composition of foods); note that this population estimate is often very uncertain. The adequacy of this average figure can be roughly assessed by comparison with the calculated average requirement for the population (although this ignores maldistribution), itself determined by four parameters: demographic composition, activity level to be supported, body weights of the population, and environmental temperature; an allowance for regaining body weight lost by prior malnutrition is sometimes included. Formulae and software given by James and Schofield (1990) allow calculation by these parameters, and results (Schofield and Mason, 1994) provide some guidance for interpreting adequacy of rations reported here. For a healthy population with a demographic composition typical of Africa, under norma nutritional conditions, and environmental temperature of 20 °C. the average requirement is estimated as 1,950–2,210 kcals/person/day for light activity (1.55 BMR). Raised mortality is observed to be associated with kcal availability of less than 1500 kcals/person/day (ACC/SCN, 1994, p81).

**Indicators and cut-offs indicating serious problems** are levels of wasting above 20%, crude mortality rates in excess of 1/10,000/day (about four times normal – especially if still rising), and/or significant levels of micronutrient deficiency disease. Food rations significantly less than the average requirements as described above for a population wholly dependent on food aid would also indicate an emergency.

#### References

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