Refugee Nutrition Information System (RNIS), No. 19 – Report on the Nutrition Situation of Refugee and Displaced Populations

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Geneva, 8 March 1997

ACC/SCN REFUGEE NUTRITION INFORMATION SYSTEM

UNITED NATIONS ADMINISTRATIVE COMMITTEE ON COORDINATION SUB-COMMITTEE ON NUTRITION

No. 19 ACC/SCN, Geneva, 8 March

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# **HIGHLIGHTS**

**Angola** The continuing peace in Angola is allowing more internally displaced people to return home. Also, large numbers of Angolan refugees in neighbouring countries are expected to repatriate during 1997. The improving access to rural areas and freedom of movement of people and goods is allowing humanitarian agencies to shift the focus of their activities during 1997 towards rehabilitation and resettlement. The nutritional status of this population is expected to continue improving in the coming months.

The Great Lakes Region The final weeks of 1996 and early weeks of 1997 were characterised by increasing insecurity in the entire region and massive population movements. Conflict between government and rebel forces in eastern Zaire has forced thousands of refugees and residents to flee. Approximately 1.3 million Rwandan refugees returned home and are facing the problems of reintegration in an increasingly insecure environment. However, several hundred thousands of refugees and residents have been repeatedly displaced with many residing in makeshift camps in eastern Zaire until rebel advances have led to the dissolution of these camps. Violence continues to be widespread in Burundi and at least 200,000 people in the most insecure areas have been grouped into camps for security reasons. Although, over 400,000 Rwandan refugees returned home from Tanzania at the end of 1996, continuous insecurity in Burundi and Zaire has led to a constant influx of up to 2,000 refugees a day into Tanzania from these countries.

The Government of Rwanda and aid agencies have so far coped well with the massive influx of returnees. However, there has been a marked increase in security incidents recently leading to some disruptions to food, seed and tool provision. The stable nutritional status of these returning refugees could be adversely affected should current distribution disruptions continue. The situation is far more critical for those refugees and Zairians displaced in Eastern Zaire. Aid deliveries have been severely constrained by the war and mortality rates have been up to ten times the normal rate in some of the makeshift camps. Recent surveys in Burundi show a dire situation with levels of wasting of almost 20% and 14% oedema in some of the camps for the

internally displaced and returning refugees. This is due to problems with delivering aid due to insecurity and in some cases overcrowding and unhygienic conditions.

**Kenya** The health and nutrition situation of the Somali refugees in the Dadaab area camps has deteriorated markedly over the past six months with current levels of wasting measured between 28–33%. The main contributing factors have been problems with the food supply and inequitable food distribution systems in the camps. In order to bring the situation under control humanitarian agencies are attempting to procure food locally and have also established a blanket supplementary feeding programme for all children under five years old.

Liberia/Sierra Leone As peace continues in Liberia, more areas of the country become accessible to humanitarian agencies. Populations facing extreme food insecurity are still being discovered in previously inaccessible areas although rapidly mounted emergency interventions appear to remedy situations in a short space of time. The peace process has also been moving forward in Sierra Leone with many IDPs returning home and plans being made for the repatriation of refugees during 1997. Improved access to needy populations has stabilised the nutritional status of populations that were previously vulnerable and recent nutritional surveys have only found low levels of wasting amongst populations affected by the civil war.

**Sudan** In spite of bumper harvests in many parts of Sudan, the food security situation in Darfur, Kordofan, the Red Sea Hills and Southern Sudan is precarious as these areas all have agricultural production deficits. Populations in Sinkat and Tokar provinces in the red Sea Hills are at particular nutritional risk as general ration programmes recommended several months ago in response to levels of wasting of almost 50% in some areas, have still not been implemented. There have been some improvements in provision of services to the displaced in camps around Khartoum, but this population still remains at nutritional risk due to isolation of the camps and inadequate provision of essential services. Recent information continues to demonstrate the variable nutritional situation of populations in southern Sudan. Conflict induced displacements occur regularly and rapid interventions are mounted as security allows. However, the long term erosion of livelihoods and assets brought about by this lengthy conflict predispose most of this population on high levels of food insecurity.

**Afghanistan** Conflict between government and Taliban forces north of Kabul has led to movements of large numbers of people into the capital. This expanding population is placing a strain on existing resources and an estimated 20% of the population in Kabul are now considered to be poverty stricken. Although humanitarian agencies are providing support to a large cross—section of the population in Kabul, there are legitimate concerns that large numbers of Afghans are facing severe hardship and that the nutritional and health status of many may be threatened.

# ADEQUACY OF FACTORS AFFECTING NUTRITION

	Great Lakes Region									
Factor	Angola	Burundi	Rwanda	Tanzania	Zaire	Liberia	Sierra Leone	Somalia	S. Sudan	N. Uganda
1. Degree of accessibility to large	~	Х	Х	~	Χ	~	~	~	0	Х
2. General resources										
– food (gen. stocks)	~	Х	~	~	~	~	~	~	? 🗸	~
– non–food	~	Х	Х	~	Х	~	>	~	? <b>V</b>	~
3. Food pipeline	~	~	>	~	~	? <b>V</b>	>	~	? <b>V</b>	Χ
4. Non-food pipeline	~	~	>	~	Х	? <b>V</b>	>	~	? <b>/</b>	~
5. Logistics	~	Х	>	X	Х	0	>	~	0	X
6. Personnel*	~	? <b>V</b>	? <b>V</b>	~	~	~	>	~	0	~
7. Camp factors**	~	Х	>	Х	Χ	<b>N</b>	>	?x	0	?x

8	. Rations – kcals	>	Х	? <b>V</b>	X	X	~	>	?	0	Χ
	<pre>- variety /micronutrients***</pre>	~	Х	?✔	X	Χ	?✔	~	?	0	X
9	. Immunization	>	?X	<b>'</b>	>	>	0	0	0	Х	>
1	0. Information	~	Χ	X	~	X	0	~	0	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.

## NOTE

The *Reports on the Nutrition Situation of Refugees and Displaced People* are published every three months. Updates on rapidly changing situations, and where new information is available, are published on an 'as needed' basis, depending on the current situation. The information in the Updates is mainly equivalent to that in Table 1 – population numbers in different nutritional risk categories – plus any new nutritional survey data, similar to the presentation in Annex 1 of the full reports. Further outputs will be developed in response to needs.

The Updates are, where feasible, be transmitted by e-mail in Word Perfect 5.1. If you would like to receive the Updates, please *either* contact the ACC/SCN by e-mail (accscn@who.ch); or write or fax to ACC/SCN at the addresses on the front cover. The full report in its present form is published every three months.

# INTRODUCTION

The UN ACC/SCN¹ (Sub–Committee on Nutrition), 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 nineteenth 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 situation on an 'as needed' basis between full reports. The box above gives further details.

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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 "How could external agencies help?". This is included when there is enough information on current needs and opportunities, and

<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.

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/retumee 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 Ha 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 He 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 the data in Table 1 as a current snapshot of population numbers and estimated risk. Figure 2 shows trends over time in total numbers and risk categories for Africa. Annex I summarizes 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 rates (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 normal 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.

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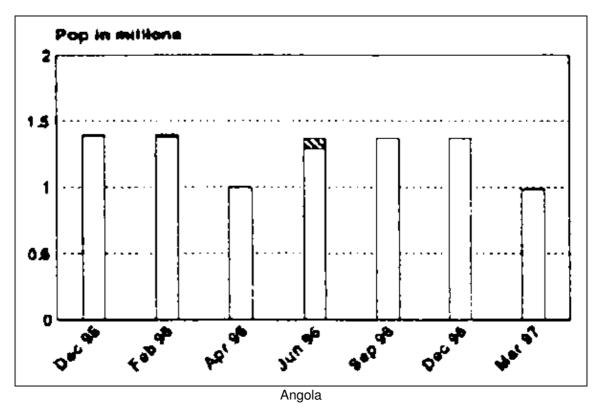
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#### SUB-SAHARAN AFRICA

# 1. Angola (see Map 1)



Trend in numbers of displaced/war affected. Shaded areas indicate those at heightened nutritional risk.

As peace slowly returns to Angola, more and more refugees and displaced persons are expected to return to their homes during 1997. Approximately 980,000 displaced and war affected people, and demobilised soldiers currently require humanitarian assistance. The decrease in numbers since the previous RNIS report is due to the increasing self–sufficiency of large numbers of returnees and war affected population groups. The de–mining process is gathering pace thereby allowing return of displaced populations to former homes in areas such as Quincunzo and Caje. Security incidents, although few and far between, are still being reported. Only recently, SCF closed its Quibaxe office in Bengo province after repeated armed attacks on their warehouse, and fighting has been reported in Cauingolo and Cubal [WFP 10/02/97, WFP 24/01/97, 14/02/97, 28/02/97].

There are no new nutritional data on this population. Throughout 1996, a pattern emerged whereby rapidly improving nutritional status was observed following interventions in areas which had previously been cut-off from humanitarian assistance due to insecurity. The continually improving access to the countryside and freedom of movement of people and goods would indicate that the improving nutritional situation seen in 1996

will continue [DHA 31/01/97].

However, in some areas such as Cuanze Norte, Bengo and Luanda, local authorities and NGOs are concerned that irregular rainfall will result in poor maize production in the first quarter of the 1996–7 agricultural season. Furthermore, food security of some populations will also be adversely affected by the late delivery of seeds and tools at the end of last year before the planting season [DHA 31/01/97].

The focus of humanitarian agency activities during 1997 will be on rehabilitation and resettlement. Efforts will also be increased to better target food assistance. One initiative to strengthen this process has been the creation of a "vulnerability Analysis and Mapping Unit" which will work with government, NGOs and donors to collect and analyse data to identify areas of food insecurity and beneficiaries in need of assistance [WFP 24/01/97].

The main diseases reported by agencies continue to be malaria, tuberculosis and trypanosomiasis [DHA 31/01/97].

Overall, this population is not considered to be at heightened nutritional risk (category IIc in Table 1).

**How could external agencies help?** The improved security situation in Angola has allowed for greater access to the countryside and many needs noted in earlier RNIS reports are now being addressed. For example, programmes to immunise women and children against tetanus, polio, measles and meningitis have begun. However, more support is needed to fight trypanosorniasis, including improved vector control.

## 2. Benin/Ghana/Togo Region

There remain approximately 13,500 assisted Togolese refugees in Benin and Ghana. Thee refugees originally fled political unrest in Togo in 1993. Repatriation began once the political situation allowed, and in 1996, 50,000 people returned to Togo from Ghana and almost 9,000 people from Benin. It is anticipated that, providing the political situation remains stable, all but a very few people will have repatriated by the end of 1997 [UNHCR 27/02/97].

This population is not considered to be at heightened nutritional risk (category IIc in Table 1). Furthermore, current funding is anticipated to be adequate for the 1997 repatriation programme [UNHCR 27/02/97].

# 3. Burkina Faso and Mauritania - Malian Refugees

*Burkina Faso* There are approximately 25,000 Malian refugees remaining in Burkina Faso [WFP 10/02/97]. There are no reports of change to what has been described as an adequate and stable nutritional status of this population.

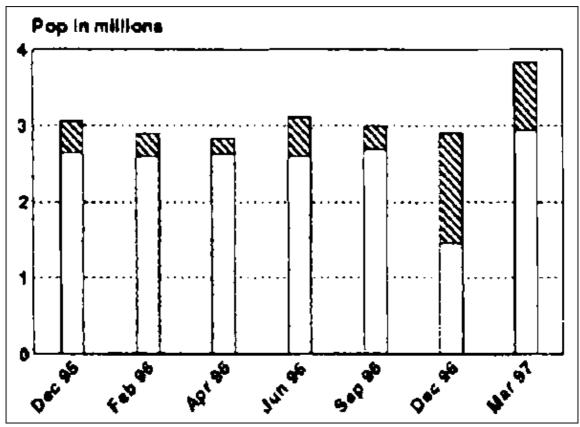
Mauritania There remain approximately 25,000 Malian refugees in M'Berra camp in Mauritania, comprised largely of women and children, the men having already repatriated. This population is considered to be almost totally dependent on food aid, and the ration is set at 1900 kcals/person/day. Only a limited number of people have access to income either through casual employment or through income generating activities supported by agencies. The recent transfer of refugees from Bassiknou to M'Berra has doubled the refugee population in M'Berra and pressure on basic assets such as water, sanitation, gardening land, class rooms, tools and expertise for income generating activities has consequently increased. However it is expected that this pressure will gradually be reduced as repatriation proceeds. Repatriation, which is scheduled to be completed by the end of 1997, is on–going, with approximately 1,000 people returning each month [WFP 02/02/97].

#### 4. Burundi/Rwanda (Great Lakes) Situation (See Map 4 and 14)

This information is as of 7 March 1997.

As rebel forces make significant advances in Eastern Zaire, displaced Rwandan refugees and Zairians have been constantly on the move from one make-shift camp to another. Insecurity has prevented full access by

humanitarian agencies to these camps and high levels of mortality have been recorded amongst this population. Approximately 1.3 million Rwandan refuges have returned home and although this population is facing problems of re–integration in an increasingly insecure environment, there are no reports of significant nutritional problems.



Burundi/Rwanda Region

Trend in numbers of refugees/displaced and proportion severely malnourished and at high risk (shaded area).

High levels of insecurity in Burundi continue to lead to population displacements and the army have rounded up some populations into "re–groupment" camps for security reasons. There are reports of high levels of malnutrition in some of these camps as well as camps for refugees. This is attributed to over–crowding and unhygienic conditions as well as lack of provision of foods due to insecurity. Over 400,000 Rwandan refugees repatriated from Tanzania at the end of 1996 but continued insecurity in Burundi and Zaire has led to an influx of up to 1,000–2,000 new refugees each day. The nutritional status of these newly arriving refugees is believed to be deteriorating due to poor water and sanitation provision and incomplete food deliveries as a result of logistical difficulties.

Estimates of populations affected regionally are summarised in the box below:

Location	Dec 95	Feb 96	Apr 96	Jun 96	Sep 96	Dec 96	Mar 97
Burundi	504,000	275,400	290,000	289,000	300,000	296,000	300,000
Rwanda	800,000	737,000	737,000	749,000	598,000	1,179,000	2,600,000
Tanzania	621,000	653,000	624,000	642,000	653,000	759,000	344,000
Zaire	1,146,000	1,211,000	1,166,000	1,419,000	1,444,000	668,000	599,000
TOTAL	3,077,400	2,883,200	2,823,900	3,106,000	3,002,000	2,913,500	3,843,000

Eastern Zaire The number of displaced refugees and Zairians in the Lubutu and Kisangani areas of eastern Zaire are rising as a result of increased fighting between rebel forces and those loyal to the government. Attempts at political negotiation have so far met with little success in terms of reducing the conflict on the ground. Rebel forces have been making dramatic advances in the past few days. In early March, the

strategically important town of Lubutu, which is 200 kms south east of Kisangani and the nearby camp of Tingi–Tingi fell to rebel forces. In addition to the refugees and internally displaced people affected in Zaire, others continue seeking asylum in neighbouring countries with 1,000–2,000 crossing into Kigoma, Tanzania per day, some are moving into southern Sudan border towns where there were an estimated 10,000 by the middle of February, and approximately 7,200 moving into Zambia [WFP 14/02/97, IRIN 16/01/97, USAID 17/01/97].

Since the conflict erupted in November 1996, makeshift camps have been established in Eastern Zaire. During January and February, refugees were regularly displaced from these makeshift camps as rebels made advances so that new camps were established in "safer" areas. In early March, the rebels took over Tingi–Tingi, which had been the most long–standing camp in the area and thousands of refugees were reported to be on the move once again towards Kisingani. International humanitarian agency staff were evacuated from Eastern Zaire at the end of February. Recognising that this population is in a constant state of flux, the best estimates of numbers affected by the conflict are as follows: 218,000 refugees whose movements have been traced in Eastern Zaire, a further 249,000 refugees are accounted for. There are also an estimated 132,000 IDPs or residents affected by the conflict in the area [WFP 07/02/97, 14/02/97, 28/02/97, IRIN 18–20/01/97].

Since early January about 2,000 refugees a day have been returning to Rwanda from South Kivu region of Eastern Zaire. Of the 143,000 Burundian refugees originally in the Uvira area, some 64,000 have arrived in Tanzania. The rate of organised and spontaneous repatriation from the Goma and Bukavu areas to Rwanda fluctuates with the security situation in these areas. As military activity escalates, refugees often flee en mass and hide in nearby forests. Way stations have been established on route for those making the arduous journey home [WFP 07/02/97, 14/02/97, 28/02/97, IRIN 18–20/01/97].

Increased military operations, commandeering of planes and trucks, evacuation of agency staff, and extremely poor road conditions have seriously hindered efforts to reach these needy populations in Eastern Zaire with food and other aid. Dozens of civilians have been killed by government air—raids over Kisingani. Security permitting, relief items are flown to Kisangani, and then transported either by road or locally chartered aircraft to where groups of refugees are gathered [WFP 03/01/97, USAID 17/02/97].

There are hardly any health and nutritional data available from this area of Eastern Zaire. There are however some data from Tingi–Tingi, whose population, until early March, was the most stable in the area. Between the end of December and third week of January daily rations only provided an average of 600 kcals/person per day in Tingi–Tingi camp. Despite the considerable efforts of agencies the crude mortality rates (CMRs) in this camps are reported to be extremely high with an estimated 40 deaths per day, mostly of children and infants. In January the CMR was estimated at 2.0/10,000/day (reaching 4/10,000/day in the second week) and the under–five mortality rate was 6.4/10,000/day (reaching 10/10,000/day in the second week of January) (see Annex I 4(a,b)). The first occasion where a near full ration was delivered was at the end of February. However, as mortality rates have continued to remain high, there has been some speculation that rations may have been appropriated by the Rwandan militia and ex–soldiers in the camps. The number of severely malnourished admitted to therapeutic feeding facilities in the camp increased dramatically towards the end of January. Furthermore, about 150 cases of diarrhoea are being diagnosed every day in Tingi–Tingi some of which are reported as being cholera cases. By mid– February 350 cases of cholera had been reported [IRIN 18–20/01/97, 26/02/97, WFP 10/01/97, 24/01/97, 31/01/97, 07/02/97, USAID 14/02/97, EPICENTRE 15/01/97, 06/02/97].

The estimated 20,000 refugees and IDPs who were in Punia, a transit point, were said to be in a very poor nutritional state and have been surviving on high energy biscuits.

However, in areas where military activities have stopped, the nutritional situation appears to have improved. An example of this is seen in areas north of Goma which was the scene of fighting and subsequent population displacements in February 1996. At that time, levels of wasting in the area were over 30%. A more recent survey showed 10.7% wasting with 3.6% severe wasting in Sake. It was noted that female—headed households suffered more malnutrition (17.3%) than male—headed households (9.6%) [MSF-H 05/03/97].

In conclusion, the present level of insecurity has meant that little data are available on the health and nutritional status of populations currently affected by conflict in Eastern Zaire. However, repeated displacements, limited access by humanitarian agencies and reports of high mortality indicate a very serious situation which is likely to be deteriorating for most of this refugee and internally displaced population. WFP has been attempting a distribution of food to 35,000 internally displaced people in Kisangani although rebel forces are now setting their sites on this critical government strong–hold [IRIN 04/03/97].

Rwanda The security situation in Rwanda, particularly in Western prefectures, is apparently deteriorating and security incidents, including attacks directed at expatriate agency staff and civilians, are continually being reported in country. For example, three Medecins du Monde staff members were shot and killed in Ruhengeri and four employees of the UN Human Rights Field Operation in Rwanda (HRFOR) were shot dead on the 4th of February 1997. These killings are the latest in a series of attacks directed against foreigners. As a result of this escalating violence, most NGO and UN staff were evacuated to Kigali and to Naiobi in February [IRIN 18–20/01/97, WFP 24/01/97, 07/02/97, 21/02/97, UNICEF 06/02/97].

Despite the deteriorating security situation, refugees continue to return. Estimates of the numbers of refugees returning to Rwanda in 1996 are 719,000 from Zaire, 88,000 from Burundi, 483,000 from Tanzania and 9,000 from Uganda. There are also approximately 6,000 Burundi refugees in Rwanda. Most of these people fled fighting in Cibitoke province in June 1996, and the Government of Rwanda has announced that these refugees must return home. In addition there are 14,000 Zairian refugees who fled the Masisi region in 1996 [IRIN 11–13/01/97, USAID 14/02/97].

It is currently estimated that 2.6 million people in Rwanda will require food aid for the first six months of 1997. This number includes recent returnees, previous returnees who will have to leave farm areas that they are currently occupying, and other vulnerable groups (e.g. widows, elderly, orphans). Despite an improved harvest compared to recent years, crop production still remains below pre–civil strife averages due largely to the lower cropped areas, low yields of pulses, and crop losses in prefectures affected by dry weather. There are two main concerns regarding food security in the coming months. First, food shortages are seen as inevitable due to the reduction in bean production coupled with a sharp increase in demand for food from returning refugees. This may lead to a deteriorating nutritional situation in areas such as Gikongoro and Butare prefectures, where crop production has been particularly poor and there are large numbers of recent returnees [FAO 23/12/96].

Secondly, although some food deliveries are still taking place, full scale distribution cannot restart until security can be guaranteed. Where distributions are possible, these have also been delayed by lack of precise information on numbers of target beneficiaries. There are therefore concerns that irregular food distributions may have a negative impact on the nutritional status of the most vulnerable groups. Furthermore, there are fears that tensions in the country, which are already high, will likely be further increased if there is not enough food available for needy populations. Responsibility for food distributions are presently being handed over from NGOs to local authorities and guidelines have been proposed to ensure effective and transparent implementation of these new systems of food allocation [IRIN 18–20/01/97, WFP 24/01/97, 07/02/97, 21/02/97, UNICEF 06/02/97].

Aid agencies warn that Rwanda will remain heavily dependent on food aid for the next few years unless donor countries concertedly attempt to rehabilitate the agricultural sector of the country. Seeds and tools are in the process of being distributed to new returnees as they are heavily dependent on food aid and have not had access to a harvest. If completed in time, these distributions will enable the majority of the returnees to plant their first crops in several years [FAO 23/12/96, IRIN 07/02/97, WFP 03/01/97].

*Burundi* There are at least 300,000 people in Burundi requiring emergency aid. This number is comprised of returnees, internally displaced people and 'regrouped' people – those gathered in camp–like situations for security reasons. There are an estimated 200,000 'regrouped' civilians in these special camps, set up so the army could afford protection to the civilian population in the troubled provinces of Cibitoke, Bubanza, Muramvya and Karuzi [DHA 12/02/97, WFP 07/02/97].

The volatile security situation in most parts of the country in January only allowed for sporadic relief initiatives. Land mine explosions, ambushes and killings were regularly reported, and the Burundi army admitted to killing 126 refugees who tried to escape from detention centres. However, there were signs briefly in February that the security situation was improving. Humanitarian agency activities which had been temporarily suspended, were restarted in some areas of the country [WFP 24/01/97, 31/01/97, 07/02/97, 28/02/97].

Restrictions on fuel imports due to sanctions against Burundi were threatening to further restrict humanitarian efforts. However, just recently, authorisation has been granted by the Regional Sanctions Coordinating Committee for fixed quotas of fuel to be imported for the use of UN agencies and NGOs. The quantities of fuel now approved are those initially requested, but exemption has been made for importing kerosene which is badly needed for storage and transportation of vaccines and medical supplies [WFP 24/01/97, 31/01/97, 07/02/97 28/02/97].

There are reports of the existence of pockets of severe malnutrition among people living in hills in the country side. There are also reports of severe malnutrition in some of the displaced camps, with particularly concern being expressed over conditions in Maramvya camp, near Bujumbura [IRIN 24/01/97].

A recent survey conducted in Maramvya centre (estimated population 1,300 people) showed 17.9% wasting with 7.1% severe wasting among children 6–59 months old. Oedema among this group was measured at 14.3%. 13.6% of children 5–10 years old were either wasted or oedematous. Among those over ten years old, wasting (defined as BMI<16) or oedema was 23.6% (see annex I 4(c,d)). The general ration was providing approximately 1200 kcals/person/day. Sharply elevated levels of malnutrition are seen among all age groups, and admission criteria for feeding centres have been set up to include all age groups [ACF 31/01/97].

An assessment carried out in Rukana camp for repatriated refugees from Zaire and EDPs concluded that there are likely to be elevated rates of wasting among the approximately 5,000 people in the camp. It was recommended that a general ration programme be instituted for this population, and that an anthropometric survey be carried out to more precisely define the problem [ACF 10/01/97].

Information on the re–grouped populations (estimated at 200,000 people) is that the health and nutrition situation of this population is deteriorating, due in large part to the unhygienic conditions in the camps. The number of typhus cases has soared and there has been a rise in the number of cases of diarrhoea, malaria and respiratory tract infections as well as malnutrition. In most regroupment centres residents do not have access to land and are therefore totally dependant of food aid [IRIN 12/02/97].

Reports of a cholera outbreak in southern Burundi indicated at least 150 people have been infected and ten have died [IRIN 09/01/97].

Tanzania The return of the majority of Rwandan refugees at the end of December 1996 due to a repatriation deadline imposed by the Government of Tanzania left approximately 248,000 Burundi refugees in country. Since that time, insecurity in Burundi and Zaire has led to an almost constant influx of refugees with 1–2,000 new arrivals per day. Current estimates are that there are over 344,000 Burundi and Zairian refugees in Tanzania. The Tanzanian government has insisted that all Burundian refugees living outside the camps return to them. Many refugee had moved to local villages and towns [WFP 17/01/97, 31/01/97, 14/02/97].

Relief workers in Kigoma region face a daily battle with roads frequently rendered impassable after heavy rains. Flooding on some of these roads continues to hinder operations such as the continued delivery of food, water and medical assistance, as well as the movement of refugees themselves from the holding centres to the camps.

A nutritional survey was carried out in Nyarungusu camp in Kasula district, Kigoma region for Zairian refugees (estimated population at the time 28,000) at the end of December 1996. Wasting was measured at 5.0% with 0.2% severe wasting. Oedema was measured at 0.3% (see Annex I 4(e)). The ration was providing 1900 kcals/person/day at the end of December although during November rations were often below 1300 kcals/person/day, and it was estimated that 90% of children were immunised against measles. Food basket monitoring found rather large differences between ration receipts amongst families, reflecting an inequitable distribution system. Furthermore, commodities distributed were frequently exchanged for foods that are more commonly accepted by Zairians, such as manioc and leaves [MSF–S 31/12/96].

Crude mortality rates were 1.9/10,000/day and the under–five mortality rate was 4.4/10,000/day. Both of these rates are four times normal and quite close to what is considered an emergency out of control (see box on page 4). The main reason for the high mortality rates was considered to be high levels of disease. Water availability and sanitation were found to be inadequate with only 12 litres per person per day available and too few latrines. Principal causes of death were diarrhoea, fever, anaemia, and malnutrition [MSF–S 31/12/96].

Since the survey, new refugees have continued to arrive in the district, and the overall nutritional status of the refugee population is said to have declined. Access to the camps (total population of three camps circa 111,000) is difficult, particularly in the current rainy season. Food and non–food deliveries arc therefore not regular and the ration has only been providing 1200 kcals/person/day in recent weeks [UNHCR 22/02/97].

There is no new information on the Burundi refugees in the Ngara region of Tanzania.

Overall, those who were in Tingi-Tingi I and II with high mortality rates are in category I in Table 1. The remaining population in Eastern Zaire requiring humanitarian assistance can be considered to be at high risk (category IIa in Table 1) due to insecurity and resulting inaccessibility. Those in Burundi in regroupment

camps are also likely to be at high risk due to a lack of clean water and sanitation, evidenced by increasing morbidity. The returnees in Maramvya centre are in category I in Table 1 due to sharply elevated levels of wasting and oedema. The returnee population in Rwanda along with the remaining population in Burundi requiring humanitarian assistance are likely to be at moderate risk (category IIb in Table 1).

The refugees in Nyarungusu camp, Kasula district in Kigoma in Tanzania are at high risk (category I in Table 1), and the remaining refugees in Kigoma are probably at heightened risk (category IIa in Table 1). The refugees in Ngara district are probably not currently at heightened nutritional risk (category IIc in Table 1).

How can external agencies help? The high level of insecurity and lack of agency presence in Eastern Zaire is preventing full access to refugee and internally displaced populations so that there is only partial information on their nutritional and health condition. It is however clear that many thousands are in a desperate situation. At present, agencies can work toward a high state of preparedness for assessment and response as and when security allows. Consideration should be given to the creation of corridors for humanitarian assistance, with guarantees of safety for refugees, IDPs and agency personnel.

In Rwanda, there is a need for establishing nutritional and mortality surveillance at commune level. This is particularly important given the large numbers of returnees in certain prefectures and the adverse effects of insecurity on delivery of assistance and support to these returning populations. Efforts to strengthen health care provision to these populations must also be supported.

In Burundi, camps for the displaced and regrouped populations need to be carefully monitored as there are reports of deteriorating nutritional and health status amongst these populations. Water and sanitation provision for these camps must be improved and where over–crowding is contributing to high levels of disease, alternative camps must be established. Efforts should be made to ensure that the embargo on kerosene is lifted.

In Kigoma region of Tanzania high levels of mortality in the refugee camps are being attributed to inadequate supplies of water and poor sanitation. There is therefore an urgent need to improve the provision of water and latrines. In Nyaraguso camp the unequal receipts of general rations suggest the need for on–going food basket monitoring and review of the current general ration distribution system. If necessary, this system may need to be modified to ensure greater equity.

# 5. Central African Republic

There are approximately 32,400 assisted Sudanese and Chadian refugees in the Central African Republic, this total number is comprised of 5,000 Chadian refugees and 27,400 Sudanese refugees [UNHCR 27/02/97],

The number of Sudanese refugees has increased due to a small influx of refugees from the camps in Eastern Zaire. These refugees had been living in refugee camps in Zaire for many years and are now fleeing righting in Eastern Zaire. There are a small number (perhaps 50) who have newly crossed into the CAR. These people are not seeking refugee status, and are expected to return home shortly [UNHCR 27/02/97].

There are no reports of change to what has been described as an adequate and stable nutritional situation for these refugees (category IIc in Table 1).

#### 6. Djibouti

There are 2,500 Somali and Ethiopian refugees in Djibouti requiring assistance. There are no current details on the nutritional status of this refugee population.

# 7. Ethiopia (see Map 7)

There are an estimated 532,500 assisted refugees in Ethiopia. This total number is comprised of 77,800 Sudanese refugees, 287,000 Somali refugees, 8,700 Kenyan refugees, 18,000 Djibouti refugees, 11,000 internally displaced people around Addis Ababa and an additional 130,000 people in the Dolo region.

A recent intensification of fighting in Sudan, near the Ethiopian border has led to an influx of at least 5,800 people into western Ethiopia. These new arrivals were reportedly in a desperate state. Wasting was measured at 31% with 13% severe wasting (see Annex I 7(a)). The crude mortality rate was estimated at 5.0/10,000/day and the under–five rate was estimated at 10/10,000/day. Both of these rates are ten times normal. These refugees were depending on wild foods for their survival [UNHCR Dec 96, 24/02/97].

In response to this situation, supplementary feeding programmes were set up and targeted to all children under five years old, the severally ill, the elderly, and pregnant and lactating women. In addition, plans are underway for a measles immunisation campaign which will include the distribution of vitamin A. More recent reports indicate that the condition of these new arrivals has improved [UNHCR Dec 96, 24/02/97].

There remain approximately 287,000 assisted Somali refugees in Ethiopia. Repatriation of these refugees has begun with 200 people returning in February 1997. Blanket selective feeding programmes for all under fives which were introduced following a survey in May 1996 that showed a poor nutritional situation, are continuing in all the camps for Somali refugees in the East. These programmes are said to be running well. The drought, which is currently affecting the entire region, has resulted in a water shortage in these camp [UNHCR 18/02/97, 24/02/97],

A household food economy assessment conducted by SCF towards the end of 1996 in Kebri Beyah refugee camp has provided information on the food security of this refugee population and may also describe some aspect of the food security situation in other nearby camps. The assessment found that as food distributions have been irregular, providing less than 100% of caloric needs over the year, and each family has had to develop income generating strategies in order to survive. As most families lacked any capital for starting up a business, most of these activities are small scale and opportunistic, e.g. selling firewood, making charcoal and working for local people [SCF Oct. 96],

The main sources of food for this population are the general ration and food purchased on the market which together account for 88–96% of total caloric intake. Another source of food is a blanket feeding programme which provides approximately 6% of an average household's food needs for each child registered in the programme. This programme also appears to have resulted in a reduction in malnutrition rates which were observed to be very high in May 1996 [SCF Oct. 96].

A recent assessment in the Dollo region of Ethiopia, fielded in response to reports of influxes of Somali refugees into the area, concluded that there is a population of approximately 40,000 in need of humanitarian aid. There are a further 90,000 nomads who are fleeing drought in Northern Kenya. Aid will provided to this mixed group [UNHCR 24/02/97]

Overall, the newly arrived Sudanese refugees can be considered to be at moderate risk. The remaining Sudanese refuges, and those from Kenya and Djibouti are probably not at heightened risk (category IIc in table 1). The Somalia refugees in the Eastern camps can be considered to be at heightened risk (category IIa in table 1) due to a water shortage caused by the drought in the region. Little is known about the nutritional status of the newly identified population in the Dollo region.

**How could external agencies help?** Per capita water availability in the Eastern camps for Somali refugees needs to be assessed given the current drought. If appropriate, water provision may need to be increased. There are an absence of specialist medical staff in the Somali refugee programme which is compromising health service provision. Every effort must be made to strengthen the staffing component of this programme.

In Kebri Beyah, the effects of any developments which may negatively affect income sources for refugees, e.g. poor harvest or cross border trade restrictions, should be closely monitored through regular market price data collection and appropriate action taken to support income generation activities where necessary. Credit programmes for women combined with appropriate skills training or education could serve to create alternatives to the increasingly difficult and low–income activities employed by this refugee population.

# 8. Kenya (see Map 8)

There are approximately 166,000 refugees in Kenya requiring humanitarian assistance. This population is comprised mainly of 4,000 Ethiopian, 130,000 Somali and 32,000 Sudanese refugees.

The health and nutrition situation of the Somali refugees in the Dadaab area camps (total estimated population 114,000) has markedly deteriorated over the past six months, leading to what is being described as a nutritional emergency. Problems with the food supply and the distribution systems in the camps have been identified as primary factors contributing to the increased levels of wasting being seen. Since June 1996, there have been problems with the supply of beans and the average number of kcals/person/day supplied in the general ration has been less than 1700. The general ration has not contained blended foods or sugar, despite recommendations made following an assessment mission in October 1996 to include these foods in the general ration. An increase in the incidence of diarrhoeal disease and malaria may also be influencing nutritional status. Furthermore, some cholera cases have been confirmed in the last few months [MSF–B 31/01/97, WFP 11/02/97].

A recent survey in Ifo camp showed 33.3% wasting with 6.7% severe wasting (see Annex I 8(a)). The general ration provided approximately 1,850 kcals/person/day in November 1996 and 1700 kcals/person/day in December 1996. The under–five mortality rate was 5/10,000/day in January 1997 (5x normal). Coverage of the therapeutic feeding programme was only 63% [MSF –B 31/01/97].

In Dagahaley camp wasting was measured at 31.4% with 6.7% severe wasting (see Annex I 8(b)). The general ration in November 1996 provided just over 1900 kcals/person/day and in December 1700 kcals/person/day. The under–five mortality rate was 3.6/10,000/day (over 3x normal). Coverage of the therapeutic feeding programme was only 56% [MSF–B 31/01/97].

Wasting in Hagadera was measured at 26.0% with 5.3% severe wasting (see Annex I 8(c)). Rations provided approximately 1900 kcals/person/day in October and November 1996 and 1650 kcals/person/day in December. The under–five mortality rate was 3.5/10,000/day in December (over 3x normal). Coverage of the therapeutic feeding programme was 70% [MSF–B 31/01/97].

Scurvy is a seasonal problem in this area and has been regularly reported during the September–January period in 1993, 1994, 1995 and again in 1996 [RNIS 2. 8, 17, 18). However, the number of new scurvy cases in the three camps began to decline in December 1996. This was probably due in part to the distribution of vitamin C tablets to the refugee population. It had been recognised that CSB does not greatly affect the seasonal incidence of scurvy in these camps so that planned distributions were only for the dry season period (May to October) with attempts to provide or increase the availability of fresh fruits and vegetables for the remaining six months of the year. The nutritional surveys cited above also reported the presence of vitamin A deficiency and a very large number of anaemia cases [MSF–B 31/01/97].

A number of steps have so far been taken to redress this serious nutritional situation. Attempts have been made to procure maize and beans locally for the general ration to ensure more reliable deliveries. However, the current drought in the region has somewhat thwarted this initiative. Another initiative has been the establishment of blanket selective feeding with com soy blend for all children under five and pregnant and lactating women [WFP 21/02/97, UNHCR-a 27/02/97].

There remain approximately 16,000 Somali refugees in three camps on the coast of Kenya. These camps were supposed to be closed by the end of 1996, with refugees either repatriating or being moved to the camps in the north—east of Kenya. However, this deadline was not met. Currently a food basket of pulses, cereals, vegetable oil and salt is being distributed to this refugee population and targeted supplementary feeding programmes are distributing a fortified blended food, sugar and oil. An outstanding problem in these camps is the existence of a large, unregistered population who do not benefit from the general ration. It is believed that many of the malnourished who are admitted to the supplementary feeding programme, come from this unregistered population [IFRC 11/02/97].

A recent assessment in Kakuma camp (estimated population 32,000 Sudanese refugees) revealed a very high rate of severe anaemia amongst boys aged between 8–20 years. This unusually high incidence was attributed to a number of factors. Many of this "teenage" population were effectively unaccompanied minors with little linkage to the household economies in the camp. Furthermore, the average per capita kilo calorie requirements for this age group (2200 kcals) were not being met by the 1900 kcals general ration. Also, the general ration was deficient in absorbable iron and vitamin C (which is essential for the absorption of iron) [WFP 07/02/97].

Other factors were that a recent re-registration had reduced the number of excess ration cards in the camp (many of which were previously held by this group) and a high proportion of the unaccompanied minors were known to be selling off a part of their general ration in order to purchase essential non-food items. High levels of intestinal worm infestation amongst this age group may also have been contributing to this unusual pattern

of severe anaemia. A school feeding programme utilising CSB has been recommended in response to this serious nutritional problem. As Kakuma camp has a high rate of school enrolment this strategy should be effective in ensuring an increased intake of absorbable iron amongst this target group [WFP 07/02/97].

Overall, the Somali refugees in the Dadaab camps are at high risk (category I in Table 1) while the refugees in the coastal camps are not currently considered to be at heightened risk (category IIc in Table 1). The marginalised population identified as having very high rates of severe anaemia in Kakuma camp are at high risk while the remaining Sudanese and Ethiopian refugees are not at heightened risk (category IIc in Table 1).

**How could external agencies help?** Some of the proposed actions to remedy the situation in the Dadaab area camps which are currently under consideration include:

- supplying vitamin A enriched oil and fortified blended foods in the general ration to reduce micronutrient deficiency diseases;
- increase the general ration to 2100 kcals/person/day;
- determine any social causes of malnutrition;
- investigate reasons for poor coverage of therapeutic feeding programmes and increase coverage of the therapeutic feeding programmes through appropriate measures, e.g. better outreach activities.

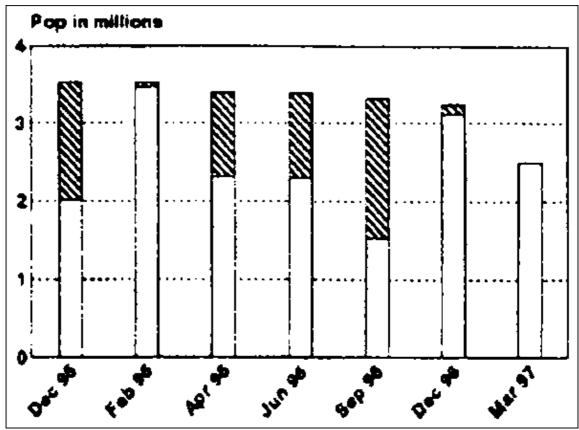
These interventions, where implemented, would need financial support. The newly established blanket supplementary feeding programmes will also need to be evaluated in the near future in order to determine whether rates of wasting are declining as a result of this measure.

In the coastal camps there is an urgent need to register "unregistered" individuals so that they can obtain the food and non-food resources to which they are entitled.

In Kakuma camp the effects of the newly introduced school feeding programme on rates of severe anaemia amongst males aged 8–20 years of age should be closely monitored. In the event that this strategy fails to have a marked impact on the problem, then other strategies, e.g. improving the general ration food basket, should be considered.

# 9. Liberia/Sierra Leone Region (see Map 9 a, b)

Continuing peace in Liberia is allowing the return of many internally displaced people and some refugees to their villages. It is also allowing access by humanitarian agencies to previously inaccessible areas and the implementation of emergency interventions where need dictates. The peace process also appears to be progressing in Sierra Leone with a relatively stable security situation allowing improved access to needy populations leading to marked improvements in their nutritional situation. If peace holds, it is expected that large numbers of IDPs and refugees will return home during 1997 and aid programmes are already beginning to shift their focus from emergency relief to resettlement and rehabilitation programmes.



Liberia/Sierra Leone

Trend in numbers of refugees/displaced and proportion severely malnourished and at high risk (shaded area).

Current estimates of the numbers of people affected in the region are summarised below:

Location	Dec 95	Feb 96	Apr 96	Jun 96	Sep 96	Dec 96	Mar 97
Liberia	1,900,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,100,000
Sierra Leone	730,000	730,000	756,000	756,000	609,000	609,000	548,000
Cote d'Ivoire	305,000	305,000	305,000	305,000	305,000	305,000	305,000
Guinea	605,000	605,000	536,000	536,000	536,000	536,000	536,000
TOTAL	3,540,000	3,440,000	3,397,000	3,397,000	3,250,000	3,250,000	2,489,000

Liberia There are positive indications that the existing peace in Liberia may continue to hold. Demobilisation is progressing, despite continued insecurity in some parts of the country which were reportedly hindering the process. Over 80% of fighters are believed to have disarmed and demobilised. Elections are scheduled for May 1997 and it was agreed that Liberian refugees should register and vote in Liberia. Demobilisation has prompted the spontaneous return of internally displaced persons from the Monrovia shelters to their villages in parts of Bomi, Cape Mount, Bong and Margibi counties. An inter–agency assessment mission to Lofa County confirmed reports of increasing numbers of returnees from Guinea to towns in Foya and Zorzor districts that had been destroyed by war and abandoned for several years [FAO 03/01/97, UN 20/02/97, WFP 24/01/97, 07/02/97, 28/02/97].

Food aid will be needed for approximately 1.1 million people in Liberia in 1997. Much of this food aid will be utilised to assist returning refugees, and IDPs. Despite hostilities during 1996, the rice crop was substantially greater than in 1995, due largely to improved security in the two main producing areas of Liberia. This enabled various NGOs to distribute seed and tools to farmers. Rice production overall was estimated to be 30% of pre–war production levels [FAO 03/01/97].

As the security situation improves, areas that were previously cut-off have become accessible to humanitarian organisations. For example, Zwedru had been cut of for at least eight months but recently

became accessible to outside agencies. Following a rapid assessment, it became apparent that the resident population had little food, there was no market activity, water supplies were unsafe and there were no health clinics. The population is forced to forage in the bush for wild foods. There is a clear need for assistance to this population, although the overwhelming presence of LPC (Liberia Peace Council, a rebel group) fighters who are in control of the town make the delivery of such assistance problematic [DHA 15/01/97, WV 16/01/97].

There are no new nutritional survey results available but there are reports of a high incidence of malnutrition in Maryland country and cases of cholera were also reported [DHA 05/02/97].

Sierra Leone Despite some security incidents, e.g. clashes between Kamajors and government soldiers in Moyamba and Bonthe districts, the peace process in Sierra Leone appears to be moving forward. There has been a generally stable security situation in recent weeks and many observers are optimistic that this situation will endure. These events have set the stage for the demobilisation process to begin in February 1997 and significant numbers of internally displaced people are returning home. Aid programmes in Sierra Leone are beginning to shift their focus from emergency relief to resettlement and rehabilitation. The general ration programme was stopped at the end of 1996. There remain approximately 548,000 people in need of emergency assistance in Sierra Leone [WFP 10/02/97].

If the reigning peace in the country holds, it is feasible that most, if not all, of the internally displaced population (IDPs) could return home in 1997. Furthermore, initial plans are being made for the repatriation of the approximately 375,000 Sierra Leonean refugees in neighbouring countries. Food aid will be a critical component in supporting the processes of resettlement, reconstruction and rehabilitation. A one to three month ration will be provided to returning IDPs, while targeted feeding programmes, including therapeutic feeding, school feeding and food–for work will be established. Food for work activities will be implemented to aid in the reconstruction of village infrastructure and support agricultural production [FAO 15/01/97, UNHCR 17/01/97, WFP 24/01/97].

The relative peace in the country has allowed for improved access to needy populations. This has generally had a positive impact on the nutritional status of many populations. For example, a recent survey in Segbwema town in Kailahun district (estimated population 117,000) showed 5.6% wasting and/or oedema with 1.4% severe wasting and/or oedema. This compares favourably with a previous survey carried out in July 1996 when wasting and/or oedema were measured at 11.1% (see Annex I 9(a,b)). It should however be noted that the recent survey was conducted following what was described as a good harvest and that many of the displaced maintained some access to land for farming. The survey did indicate a low measles immunisation coverage of only 41% [CONCERN 06/12/96].

The majority of people fleeing the fighting in Sierra Leone moved to Bo and Freetown. It is estimated that 400,000 people went to the capital, approximately 300,000 of whom were living in camps. The remaining 100,000 people were living among the resident population. A nutritional survey conducted in January 1996 showed 7.6% wasting and/or oedema amongst the displaced living in Freetown, so that food aid was discontinued. A follow up survey was conducted in December 1996 to assess the nutritional status of this population since the discontinuation of food aid. Wasting was measured at 5.5% with 0.8% severe wasting. No cases of oedema were seen (see Annex 1 9(c)). Only 14% of malnourished children were enrolled in the selective feeding programmes while measles immunisation coverage was estimated at 53% [ACF Dec 96].

Government soldiers have recently rescued some 700 unaccompanied children living in the forest in Kailahun district. The children aged 9–15 apparently fled rebel attacks four years ago and are reported to be severely malnourished [WFP 28/02/97].

A major concern as displaced people return home will be the support necessary to resume farming activities. Returnees will require seeds, tools and other farm inputs to resume production. These families will also need food aid support until the next viable harvest in the second half of 1997. Such support is already being provided, as far as security has allowed, and will need to be continued and expanded to meet the needs of a growing returnee population [FAO 15/01/97].

Guinea There remain approximately 650,000 Liberia and Sierra Leonean refugees in Guinea, 536,000 of whom are assisted with emergency food aid. There are no reports of change to the generally adequate health and nutritional status of this population.

Cote d'Ivoire There remain approximately 305,000 Liberian refugees in Cote d'Ivoire. There are no reports of change to the generally adequate health and nutritional status of this population.

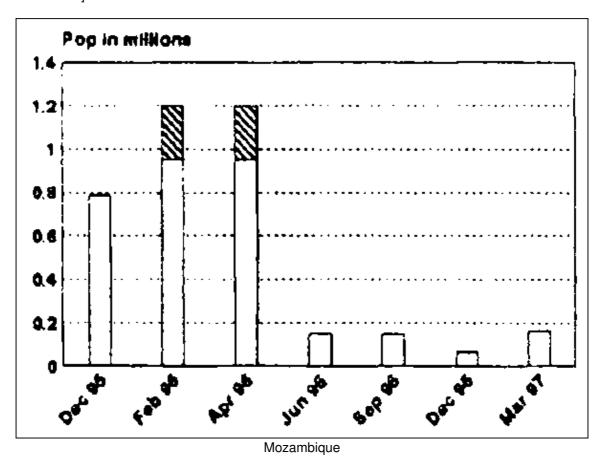
Overall, those in Liberia, along with internally displaced in Segbwema and Freetown in Sierra Leone can be considered to be at moderate nutritional risk (category IIb in Table 1), as are the children newly emerged from the forest. The remaining affected population in the region is not currently thought to be at heightened nutritional risk (category IIc in Table 1).

How could external agencies help? There is an on-going need in Liberia to reactivate health centres and rebuild bridges to enhance the movement of relief and rehabilitation material throughout the country. The need for expanding the immunisation programmes is beginning to be addressed as security permits. Specific needs have been identified in Rivercess country. These include improving the drug supply, dispatch of a tuberculosis health team, improving immunisation coverage and improvements in the water supply and sanitation facilities.

Throughout Sierra Leone a priority must be to support returnees in re–establishing themselves in the agricultural sector. Furthermore, immunisation coverage must be improved nationally. This should now be feasible given the current positive security environment. More specifically, immunisation coverage must be improved in Segbwema while in Freetown facilities for therapeutic feeding should be expanded and coverage improved, if possible, through home visiting and referrals from mother child health centres and health units. The vaccination programme must also be continued with efforts made to increasingly sensitise mothers to the importance of immunisation.

# 10. Mozambique Region (see Map 10)

Emergency food assistance is currently being provided to 162,600 returnees and internally displaced people in Mozambique, mostly concentrated in Tete, Gaza and Maputo provinces. This assistance will be continued until the harvest in April 1997 when it is assumed that these returnees will have achieved self–sufficiency. However, as this is the "hungry period" just before the harvest when foods stocks for many have run out, food aid to this group is currently a priority. A food security assessment conducted in mid–1996 indicated that over 10% of families in Mozambique do not have sufficient production or income to guarantee access to food and that at least half of these families will experience prolonged shortage of food each year. [WFP 10/02/97, MSF–CIS Dec 96].



Trend in numbers of returnees and demobilised soldiers.

The nutritional and health situation in some districts in Tete province has been described as worrying. Some cases of pellagra, which are probably seasonal in nature, were noted in September. However, by October, the number of cases had begun to decrease. Nutrition education programmes to prevent these apparently seasonal outbreaks from occurring, are ongoing. In addition some cases of measles were reported [MSF–CIS Dec 96].

Severe flooding has been reported in some provinces in central and north western Mozambique. Among those provinces affected are Tete, an area with many returnees still dependent on food aid. An estimated 400,000 people have been affected and emergency operations are underway. Road communications are very difficult and preliminary reports indicate that food stocks seem to be running out. Weather forecasts suggest that heavy rains are set to continue until April [DHA 21/02/97].

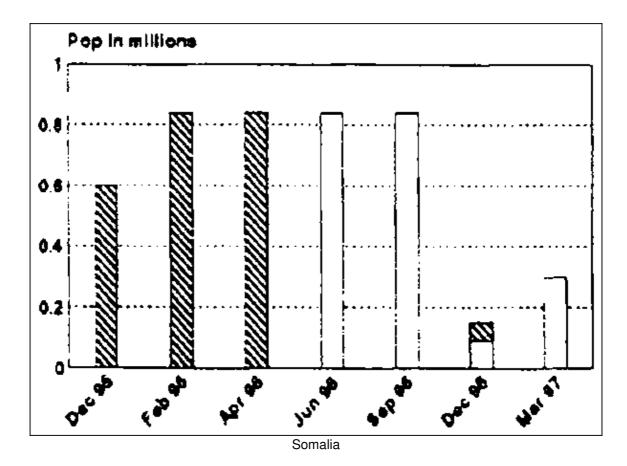
Overall, this population is not currently considered to be at heightened nutritional risk (category IIc in Table 1).

**How could external agencies help?** Sporadic cases of measles which are reported in Mozambique indicate a need for improved immunisation coverage. However, as access for immunisation programmes is difficult in many of the districts where outbreaks are reported, an initial step requires that road infrastructure be improved.

#### 11. Somalia (see Map 11)

Extensive field based discussions between UN agencies, NGOs, donors and Somalis has recently generated an innovative "Strategic Framework for Humanitarian Assistance" for Somalia. This framework takes into account the varied needs and operating environments in areas of the country; those in crisis, in transition and in recovery. The common country strategy focuses on:

- emergency assistance;
- reintegration of internally displaced people;
- · refugees and returnees from abroad;
- rehabilitation and;
- · governance.



Trend in numbers of returnees and internally displaced with proportion severely malnourished or at high nutritional risk in shaded area.

Food assistance will be used to support these activities. There are an estimated 200,000–400,000 internally displaced people in Somalia. Most of these people are living in temporary camps and are considered to be very vulnerable [DHA 16/12/96].

The security situation in Somalia remains volatile. The most intense fighting seen since 1992 rocked South Mogadishu towards the end of December 1996 with over 300 deaths and 1400 casualties reported. Many families fled the city and surrounding areas as a result of this fighting. Mogadishu was relatively quiet in January. Other security incidents have recently been reported in border towns of Gedo region and in the Mogambo area of Juba Valley [DHA–a 15/01/97].

An evaluation of the 1996/7 Deyr crop at the end of last year estimated that cereal production was roughly 45% less than the previous year's Deyr harvest and that within the rainfed areas, Bay and Lower Shabelle regions were the most adversely affected.

There are now reports of drought in Southern Somalia and WFP is pre–positioning food in order to be prepared to respond quickly to possible emergency food aid needs. However, the food security situation for most of this population appears adequate until May. There are reasonable food reserves and food availability on the local markets is good. Furthermore, there are many traditional coping strategies that can be employed, including remittances from abroad, sale and slaughter of livestock, foraging for wild fruits and casual labour. [WFP 24/01/97, 21/02/97]. There are no reports to date of any substantial drought induced displacements in the area although there have been small–scale movements in Sanaag, Bay, Hiran and Bakool regions.

There are few nutritional data currently on the Somali population. One recent survey carried out in Hiran region showed 22.4% wasting and/or oedema with 3.8% severe wasting and/or oedema (see Annex I 11 (a)). This compares unfavourably with a survey carried out in the same region in August 1996 when wasting and/or oedema was measured at 13.4%. Children of farmers with access to river irrigation showed less malnutrition than those dependent on rain fed agriculture. Children of pastoralists seemed to be least malnourished possibly reflecting continual access to milk. Crop assessments in the region indicate a worrying situation with poor and scattered rainfall, which would indicate a need to closely monitor families dependant of rain fed agriculture [DHA–a 15/01/97, FSAU 23/12/96].

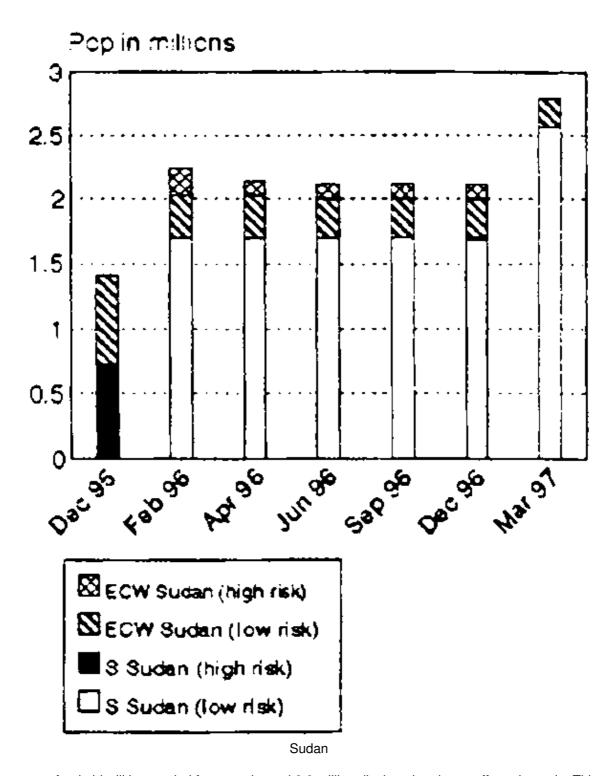
A few cases of cholera have recently been reported in Mogadishu city but there have been no confirmed cases in any other part of the country. A cholera task force involving UN agencies, NGOs, local authorities and communities has been extremely proactive in putting into place effective public information, sanitation and case management programmes [DHA–a 15/01/97]

Overall, the population in southern Somalia can be considered to be at moderate nutritional risk (category IIb in Table 1) as many are being forced to employ traditional coping strategies in order to mitigate the effects of crop failure.

**How could external agencies help?** Over the coming months it is imperative that there is close monitoring of the evolving food security situation. Particular attention must be paid to people's access to food (purchasing power). It may be that areas most severely affected by drought and crop failure should be targeted and that interventions to be considered should include using food aid cereals for sale at market prices and establishing food for work projects.

#### 12. Sudan (see Map 12)

Total cereal production in Sudan for the 1996/7 cropping season is predicted to increase substantially compared to last year and to be greater than the excellent crop of 1994/5. However, the situation in certain areas, namely Darfur, Kordofan, the Red Sea State and the south as a whole is believed to be precarious as these are food deficit regions.



Emergency food aid will be needed for an estimated 2.8 million displaced and war–affected people. This total number is comprised of 2.2 million people in Southern Sudan (an increase of 300,000), 374,000 in the transitional zone, 78,000 in Khartoum and the White Nile states, and approximately 138,000 Eritrean and Ethiopian refugees [FAO 19/12/96, WFP 21/02/96].

Displaced around Khartoum Access to the displaced populations living in camps around Khartoum improved slightly in 1996, allowing therapeutic and supplementary feeding programmes to be established. There are anecdotal reports of an improving vitamin A status amongst this population, but no recent assessment results available to confirm this [DHA 1997].

Southern Sudan Emergency relief has been delivered to about 2,000 new returnees from Zaire fleeing the escalating fighting in Eastern Zaire. These returnees, who had originally fled fighting in southern Sudan in 1990–1, have settled in three camps in the Madiri area of Western Equatoria. An assessment team found that the returnees "looked reasonably well–nourished, but were weak and hungry from their journey". They had returned with very little food, mainly cassava and sweet potato, most of which had run out. In neighbouring

Mundri county a further 8,000 people have been displaced by fighting between the SPLA and Sudanese government during 1996. This population are reported to be in a serious condition [OLS 04/02/97].

As has been seen in Southern Sudan in past years, findings of recent assessments and surveys indicate a variable nutritional situation amongst resident and displaced populations.

An assessment carried out in January 1997 found a satisfactory health and nutritional situation in Wau town and the nearby camps for the internally displaced. Levels of wasting were measured at 10% (see Annex I 12(a)), although caution was advised as the "hungry season" begins in March and this period is usually when high levels of diarrhoeal disease and eye infections occur due to deteriorating sanitary conditions. Furthermore, the groundnut harvest, a staple food in the area, was adversely affected by a long dry spell. Interventions currently underway to maintain availability of foods on the market might mitigate the worst effects of this situation but agencies are anticipating a decline in nutritional status in Wau town, Eastern Bank and Marial and Ajith camps in the coming months [OLS 23/01/97],

A recent assessment in Sidra camp in South Kordofan found that the nutritional status of children under five was deteriorating due to lack of food at household level and poor health. Over a third of children at the supplementary feeding centre were found to be re–admissions [OLS 23/01/97].

An outbreak of measles has been reported in Tonj Country with between 200–400 cases identified [OLS 28/01/97].

Red Sea State The last RNIS report described a deteriorating situation for the populations in Sinkat and Tokar provinces. Levels of wasting were 48% and 30% respectively and micronutrient deficiency diseases were also noted.

Extremely high levels of malnutrition and loss of traditional coping strategies coupled with the effects of severe drought, demanded immediate intervention. The risk of mortality amongst these populations was already extremely high and likely to increase in the event of large numbers becoming displaced and gathering in over crowded camps. However, appeals for funds to begin a general ration programme designed not only to improve the nutrition situation but also to prevent widespread population displacements, have gone largely unheeded. Supplementary feeding programmes have been set up but it is felt that these will not address the root causes of the declining nutritional status of this population.

Refugees from Ethiopia and Eritrea There are approximately 138,000 assisted Ethiopian and Eritrean refugees in Eastern Sudan. Thee refugees are housed in four large reception centres, and a further twenty settlements. Repatriation efforts are on–going with the most recent repatriation taking place in the first half of 1996 when over 27,000 Ethiopian refugees returned to Ethiopia [UNHCR 05/12/96, 28/01/97].

Crude mortality rates in December 1996 were measured at 0.22/10,000/day and the under–five rate was 0.43/10,000/day. Nutrition surveys are carried out among this population on an annual basis; the most recent round being conducted in December 1996. Preliminary results of the surveys show levels of wasting in two of the bigger reception centres as being the highest – 15.7% and 14.4%. These levels of wasting had not changed since the 1995 surveys. The remaining settlements showed levels of wasting varying from 3.2% to 12.5% (see Annex I 12(b–i)). Results from five of the settlements are not yet available [UNHCR 05/12/96, 28/01/97].

Overall, the internally displaced populations around Khartoum can be considered to be at moderate risk. The affected populations in Southern Sudan can be considered to be at moderate nutritional risk, although there are likely to be pockets of high risk. The displaced in the Red Sea Hills are at high risk. Refugees from Ethiopia and Eritrea can be considered to be at moderate risk (category IIb in Table 1) with some camps reporting elevated levels of wasting.

**How could external agencies help?** A recently launched Consolidated Inter–Agency Appeal for Sudan highlights some areas to be strengthened during 1997. Financial support is being sought for these proposed activities. Some of these include:

- continued food assistance to vulnerable groups, particularly those in southern Sudan during the "hunger gap" of April–July;
- improvement of sanitation and supply of safe drinking water in the displaced camps around Khartoum;

- the continued supply of essential drugs for the displaced camps around Khartoum;
- improved co-ordination between UN, NGO and Sudanese authorities in implementing programmes for the displaced around Khartoum and;
- expanded immunisation coverage programmes for this population.

Red Sea Hills Urgent intervention measures, most of which were outlined in the previous RNIS report, are needed to deal with the existing emergency to prevent further displacement. Supplementary feeding programmes have already been initiated, but other high priority interventions which need to be implemented include:

# For the displaced:

- a general ration of 440 gms cereal, 50 gms pulses, 20 gms of oil and 50 gms of fortified blended foods:
- vitamin A capsule distributions;
- immunisation campaigns against measles as coverage is currently so low;
- shelter and blanket provision for Sinkat province.

Assistance to rural areas should include:

- adequate general rations for all those in rural areas and rural towns;
- support for the destitute during the current agricultural season, e.g. transport to areas of cultivable land and provision of agricultural inputs;
- strengthening health care provision in rural areas.

# 13. Uganda (see Map 13)

There are approximately 468,000 refugees and internally displaced people in Uganda requiring humanitarian food aid assistance. This number is broken down by country of origin in the box below. There are approximately 50,000 unassisted refugees in Uganda, not included in the tables in this report.

Origin	Dec 95	Feb 96	Apr 96	Jun 96	Sep 96	Dec 96	Mar 97
Sudanese Refugees	217,000	210,000	214,000	214,000	214,000	214,000	225,000
Internally Displaced Ugandans			1	l	20,000	200,000	200,000
Rwandan Refugees (formerly included in Section #4)	6,400	6,800	6,900	7,000	7,000	11,500	14,500
Zairian Refugees	11,800	12,300	12,300	12,300	15,800	15,800	28,800
TOTAL	235,200	229,100	233,200	233,300	256,800	441,300	468,300

The security situation in northern Uganda continues to deteriorate particularly in the Kitgum region with increasing clashes between rebel and government forces. This insecurity has been restricting food aid deliveries and as a result, rations for refugees have had to be cut since July 1996. In some instances, refugees themselves are targets of violence and there have been several refugee deaths in the past few weeks. In addition, there are up to 200,000 internally displaced people in need of assistance in Northern Uganda, but this number is a rough estimated and should be viewed with caution. In Lokung, north of Kitgum an assessment team observed a dramatically worsening situation where over 11,000 people are camped in the local school compound, many without shelter. A food distribution scheduled for early February had to be cancelled for security reasons [IRIN 05/02/97, UNHCR 07/03/97, WFP 14/02/97, 21/02/97].

Humanitarian agencies have been providing assistance to Sudanese refugees in northern Uganda since the first influx in 1988. There are currently 225,000 Sudanese refugees in Northern Uganda. Despite land allocations by the Ugandan government in some areas, insecurity in the settlements prevent refugees from working the land and reaching self–sufficiency. Approximately, 90,000 refugees still remain in camps without access to land for cultivation. The food pipeline for this refugee population remains precarious and contributions are still urgently needed for grain, oil, sugar, pulses, blended foods, and salt [UNHCR 07/03/97, WFP 31/01/97].

A survey carried out in Mongola settlement in northern Uganda (estimated population 10,000) for Sudanese refugees indicated a deteriorating nutritional trend. Wasting was measured at 11.9% with 1.5% severe wasting. Oedema was measured at 2.0% (see Annex I 13(a)). This survey begins to show a deteriorating trend when compared to a survey carried out in April 1996 where levels of wasting and/or oedema were measured at 8.7%. This apparent deterioration may be explained by the fact that the insecurity in the area led to half rations of cereals being allocated since July 1996. Furthermore, refugees in Mongola are entitled to receive a habitation plot as well as fanning land. This allocation of land is supposed to provide the opportunity to reach self–sufficiency through agricultural production. However, at the time of the survey barely 20% of the refugees had received their farming land. The survey also established that only 40% of malnourished children were enrolled on selective feeding programmes. Measles immunisation coverage was 82% [ACF 08/12/96].

Refugees in Oligi/Ogujebe transit camps have also only received half rations for the past six months as have refugees in Palorinya settlements. There have been no recent nutritional surveys of these populations, but as with Mongola settlement, a deterioration in nutritional status is likely to have occurred [ACF 08/12/96].

There are approximately 14,500 Rwandan refugees in Uganda (formerly included in section#4). This number includes 4,000 people who arrived from Tanzania when the camps were closed [UNHCR 07/03/97].

There are almost 28,800 Zairian refugees in Uganda. Many of these people (12,800 people) have been in settlements in the West for many years. There are 20,000 new arrivals, fleeing insecurity in Eastern Zaire [UNHCR 07/03/97]. No nutritional details are available for these new arrivals.

Overall, the refugees and IDPs in northern Uganda are at heightened risk (category IIa in Table 1) due to insecurity. The Rwandan refugees and the Zairians who are not newly arrived are not currently considered to be at heightened nutritional risk (category IIc in Table 1). There is no nutritional information currently available on the newly arrived Zairian refugees (category III in Table 1)

**How could external agencies help?** The increasing numbers of internally displaced in northern Uganda in need of humanitarian assistance is placing a strain on humanitarian agency resources and capacity to respond. Pressing needs for this displaced population include shelter materials (plastic sheeting), essential drugs and an improved water supply (drilling of boreholes).

Food aid pledges are urgently needed for the Sudanese refugee population in northern Uganda. In Mongola settlement needs include improved coverage of selective feeding programmes, resumption of full general rations and improved access to land. There is also a need to supply F100 milk for those in therapeutic feeding and to introduce home visiting to identify malnourished children as well as monitoring of new arrival children in order to refer some to feeding centres, if necessary. Agencies should continue to monitor food security of this population in order to check on their degree of self–sufficiency and to make recommendations for eventual phasing out of general ration.

Nutritional surveys are required in the refugee transit camps and Palorinya as only half rations have been supplied for last six months of 1996 and it is quite possible that nutritional status has deteriorated as a result.

# 14. Zaire (see Map 14)

Refugees in Zaire (excluding Rwandans and Burundis included in section #4). There are an estimated 50,000 Angolan refugees in Zaire; It is also estimated that a further 119,000 Angolans are unassisted (and not included in tables 1 and 2). It is hoped that most of the assisted population will spontaneously return to Angola now that there has been such a marked improvement in the political and security situation. Organised repatriation for the 50,000 assisted refugees is scheduled to begin by mid 1997. There are approximately 94,000 Sudanese refugees receiving some assistance in Zaire.

Displaced from Shaba, Zaire There are approximately 600,000 people who have been displaced by ethnic violence which erupted in the Shaba region at the end of 1992. This population fled north into the Kasai region where many had ancestral links. During the migration large numbers stopped temporarily in villages along the route north, while others settled permanently at these sites. Currently, there is little further displacement from the Shaba region and based on the most recent set of nutritional survey information, it is believed that many of these people are self–sufficient and no longer require humanitarian aid. The exception to this is in Mwene Ditu where critically high levels of wasting of about 43% in the displaced population, estimated at 40,000 people, and 17% wasting in the resident population (estimated at 220,000) were reported [MSF–B 09/04/96 – RNIS #15].

However, as fighting in Eastern Zaire moves further into the interior of Zaire, this already vulnerable displaced population could experience increasing hardship.

Overall, the displaced and resident affected populations in Mwene Ditu are in category 1 in Table 1 due to elevated levels of wasting. The remaining displaced population from Shaba are no longer considered to require assistance ad so are not included in Table 1. The refugees are not currently considered to be at heightened nutritional risk (category IIc in table 1).

#### 15. Zambia

There are approximately 5,000 new arrivals from Zaire who are fleeing the fighting in the East of the country. However, most of these people are not asking for refugee status and are expected to return shortly to Zaire [UNHCR 27/02/97, USAID 07/02/97].

In addition, there are 6,500 assisted Angolan and Zairian refugees in Zambia [WFP 10/02/97].

#### ASIA – Selected Situations

The most recent overview of the numbers of refugees and displaced people in Asia (as of the end of 1995) is as follows. There were an estimated 4.5 million refugees in Asia, of whom over 800,000 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 Myanmar in Bangladesh (36,000), Vietnamese in China (286,000), and Bhutanese in Nepal (90,000). No comprehensive data were available on the numbers of internally displaced populations in Asia, but they were certainly in the millions (UNHCR, 1995 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 previous reports of micronutrient deficiencies. As in the past, we also include information on Southern Iraqi refugees in Iran.

#### 16. Afghanistan Region (see Map 16)

Fighting is continuing in various locations outside of Kabul and has reportedly led to fresh population displacements. For example, it is estimated that 30,000 new arrivals in Pakistan require emergency aid, and a further 90,000 people are said to have fled fighting in the north of Afghanistan and have moved to Kabul. The capital has also been under attack with several bombing and rocket attacks carried out by opposition forces resulting in a number of civilian mortalities. It is estimated that 1.5 million people in Afghanistan require emergency food aid. There are at least a further 900,000 Afghan refugees in Pakistan, 350,000 of whom are believed to require assistance, and 1.4 million in Iran, 322,000 of whom require assistance [ABC 28/01/97, WFP 31/01/97, 10/02/97, DHA 14/01/97].

Kabul The population in Kabul continues to swell due to the arrival of people newly displaced by fighting north of the city. Most recent estimates are of at least 115,000 new arrivals. Although many of the IDPs are staying with relatives, others are living in schools and other public buildings. Many of these are overcrowded. There is reportedly a major food shortage in the whole Kabul region. Food prices have recently risen by 25%. This,

coupled with the severe winter weather has resulted in increasing numbers of Afghan people relying on the international community to survive. There are now thousands of destitute people in the capital who are being targeted with food and non–food relief items. It is estimated that at least one fifth of the city's population are poverty stricken. The disabled, war widows and orphans are considered to be the most vulnerable groups. Humanitarian operations have restarted in many areas, after a suspension due to restrictions placed on women by the Taliban. For example, provision of subsidised bread through the capital's bakeries has been re–introduced [DHA 22/01/97, 13/02/97, 25/02/97, ICRC 22/01/97, WFP 03/01/97).

Jalalabad Earlier in 1996, a nutritional survey carried out in Jalalabad City showed 4.5% wasting with 0.4% severe wasting. In the camps for internally displaced people (population estimated at 150,000) wasting was measured at 3.3% with 0.3% severe wasting (see Annex 1 16(a,b)). While this is not a particularly recent survey, anecdotal reports are that the situation has remained stable over the past six months, and that existing programmes are coping with the influx of people from Kabul. The provision of a full general ration for IDPs in Jalalabad was stopped in June 1995 and replaced with a monthly 50 kg ration of wheat for each family. This provides on average less than 1,200 kcals/person/day. The low levels of wasting in the camps therefore indicate that this population have other sources of food and income apart from the wheat ration. [WHO July 1996].

Survey carried out in other camps for internally displaced people outside of Kabul and excluding Jalalabad showed low levels of wasting varying from 3.4–5.8% (see Annex I 16(c–e)) [MSF–H 05/03/97].

*Pakistan* Fighting between government and Taliban forces in Afghanistan has led to an influx of at least 30,000 people into Pakistan. Conditions for these new arrivals are described as "harsh"; more than 1,000 families are said to be living in the open, without shelter, food or warm clothes [DHA 29/01/97].

Iran There are no reports of change for the 322,000 Afghan refugees requiring assistance in Iran.

Overall, an estimated 20% of the population of Kabul who are thought to be poverty–stricken are in category IIa in Table I. The remaining population in Kabul, along with the new arrivals in Pakistan can be considered to be at moderate nutritional risk (category IIb in Table 1). The remaining refugees in Pakistan, along with those in Iran and internally displaced people outside of Kabul are not currently considered to be at heightened nutritional risk (category IIc in Table 1).

How could external agencies help? Humanitarian agencies must continue to argue for gender equality in Taliban controlled locations, particularly in education and work opportunities as this policy now seems to be paying off. Agencies must also focus efforts on improving the water supply and sanitation conditions in Kabul, as this is a major cause of health problems in the city. There is also a need to establish a national nutritional surveillance system in order to monitor nutritional conditions throughout the country more effectively.

# 17. Bhutanese Refugees in Nepal (see Map 17)

There are approximately 92,000 Bhutanese refugees and asylum–seekers who sought refuge in Nepal in the early 1990s. The total number of refugees in the camps has increased slightly due to births and a few new arrivals, mainly family members of refugees. There is reportedly no change in the nutritional status of this population. Most recent reports are of low levels of wasting; however, some new cases of scurvy, beri–beri and angular stomatitis continue to be reported [UNHCR 26/02/97].

#### 18. Refugees from Rakhine State, Myanmar in Bangladesh (see Map 18)

There are approximately 24,000 refugees from Rakhine State, Myanmar remaining in Bangladesh. Repatriation is continuing, and is expected to be completed early in 1997 [UNHCR 04/03/97].

The last RNIS described a precarious situation for these refugees, with increasing incidence of diarrhoea, and levels of wasting of 15%. Supplementary feeding programmes have now been established in response to these high levels of wasting [UNHCR 04/03/97].

The distribution of a fortified blended food (CSB), which is a usual part of the general ration, was discontinued due to questions over it's suitability for human consumption. Although it's suitability has now been

demonstrated, CSB is still not being distributed. The general ration is therefore low in calories and micronutrients. This is particularly worrying for this population as micronutrient deficiency diseases, specifically vitamin B2 deficiency seen as angular stomatitis, has been endemic amongst this population.

Overall, this population can be considered to be at high nutritional risk (category IIa in Table 1) due to elevated levels of wasting and a low intake of micronutrients.

## 19. Southern Iraq

Reports have been received on a regular basis depicting the desperate state of the approximately 200,000 Marsh Arabs in Southern Iraq (RNIS # 1,3,4,6,10,11,12,15/). These people have been deprived of their livelihoods, their habitats have been destroyed, and they have been forced to endure arbitrary detention, arrests, torture and execution [UNHCHR 12/12/96].

The government of Iraq has been called upon repeatedly to halt discriminatory practices that, inter alia, restrict access to food and health care in the southern areas of the country [UNHCHR 23/04/96, 12/12/96].

The recent agreement on the sale of oil to purchase food and medicines for humanitarian purposes pursuant to Security Council resolution 986, may provide an opportunity to obtain more information on the plight of this highly vulnerable population. If UN observers are given freedom of movement throughout the country, it should be possible to begin monitoring the conditions amongst the Marsh Arabs.

**How could external agencies help?** The agreement reached on Security Council Resolution 986 allowing for the sale of oil to purchase humanitarian goods may provide a window of opportunity to assess the health and nutritional status of the Marsh Arabs. Free movement of UN monitors will be essential for ensuring the equitable distribution of humanitarian goods within the country, and that the traditionally neglected Marsh Arabs are able to reap the benefits of this programme.

# Listing of Sources for March 1997 RNIS Report #19

Org*	Date	Title of Report
ACF	Dec. 96	Nutritional Survey Dislaced and Resident People Freetown, Sierra Leone
ACF	08.12.96	Anthropometric Nutritional Survy in Mongola Settlement Moyo District, N. Uganda
ACF	10.01.97	Evaluation Nutritionnelle Rapide sur le Site de Rukana
ACF	31.01.97	Enquete Anthropometrique Realisee sur le Centre Medico-Nutritionnel de Maramvya
Australian Broadcasting Co (ABC)	28.01.97	UN Says 90 Thousand Afghans Have Fled Fighting in the North
CONCERN	06.12.96	Nutriton Survey Results for Segbwema, Sierra Leone July 1996 and Dec 1996
DHA	1997	Inter-Agency Consolidated Appeal for Sudan
DHA	16.12.96	UN Consolidated Inter-Agency Appeal for Somalia
DHA	14.01.97	Afghanistan Weekly Update No. 200
DHA	15.01.97	Liberia Humanitarian Situation Report No. 54
DHA	15.01.97	Somalia Bi-Monthly Information Report
DHA	29.01.97	Afghanistan Weekly Update, Issue No. 201
DHA	31.01.97	Update on Angola

DUIA	05.00.05	125 - 2 - 11 25 - 2
DHA	05.02.97	Liberia Humanitarian Situation Report No. 57
DHA	12.02.97	Burundi – Huamnitarian situation Report No. 3
DHA	13.02.97	Afghanistan Weekly Update No. 204
DHA	21.02.97	Mozambique Floods – Situation Report No. 1
DHA	25.02.97	Afghanistan Weekly Update, Issue No. 205
		Health and Nutritional Situation of the Rwandan and Burundese Refugees in Tingi-
EPICENTRE	15.01.97	Tingi, Eastern Zaire
		-Health and Nutritional Situation of the Rwandan and Burundese Refugees in Tingi-
EPICENTRE	06.02.97	Tingi, Eastern Zaire
FAO	19.12.96	FAO/WFP Crop and Food Supply Assessment Mission to Sudan
FAO	23.12.96	FAO/WFP Crop and Food Supply Assessment Mission to Rwanda
FAO	03.01.97	FAO Crop and Food Supply Assessment Mission to Liberia
FAO	15.01.97	FAO/WFP Crop and Food Supply Assessment Mission to Sierra Leone
FSAU	23.12.96	Preliminary Results of the 1996/97 Crop reduction Evaluation
ICRC	22.01.97	Afghanistan: A Little Poorer Every Day
IFRC	11.02.97	Kenya: Somali Refugees Situation Report No. 4
IRIN	06.02.96	Emergency Update #95 on the Great Lakes
IRIN	07.01.97	Emergency Update #73 on the Great Lakes
IRIN	09.01.97	Emergency Update #75 on the Great Lakes
IRIN	16.01.97	Emergency Update #80 on the Great Lakes
IRIN	24.01.97	Emergency Update #86 on the Great Lakes
IRIN	05.02.97	Emergency Update #94 on the Great Lakes
IRIN	07.02.97	Emergency Update #96 on the Great Lakes
IRIN	12.02.97	Emergency Update #101 on the Great Lakes
IRIN	26.02.97	Emergency Update #109 on the Great Lakes
IRIN	04.03.97	Emergency Update #116 on the Great Lakes
IRIN	08-10.02.97	Emergency Update #97 on the Great Lakes
IRIN	11–13.01.97	Emergency Update #76 on the Great Lakes
IRIN	18-20.01.97	Emergency Update #82 on the Great Lakes
MSF-B	31.01.97	Emergency Nutritional Intervention Dadaab Refugee Camps
MSF-CIS	Dec.96	Bulletin of the Nutritional Situation
MSF-H	05.03.97	Survey Results
MSF-S	31.12.97	
	I	

		Nutritional Evaluation Nutritional Survey Nyarugusu camp for Zairian Refugees
OLS	23.01.97	OLS Emergency Update No. 2
OLS	28.01.97	OLS Southern Sector Update 97/4
OLS	04.02.97	OLS Southern Sector Update 97/5
SCF-UK	Oct. 96	Household Food Economy Analysis Kakumu Refugee Camp, Kenya
SFC-UK	Oct. 96	Household Food Economy Analysis Kebri Beyah Refugee Camp, Ethiopia
UN	20.02.97	Report of the Secretary General on Sierra Leone
UNHCHR	23.04.96	Report on the Situation of Human Rights in Iraq
UNHCHR	12.12.96	Situation of Human Rights in Iraq
UNHCR	Dec.96	Monthly Situation Report- Health and Nutrition Sector Dec 1996
UNHCR	05.12.96	Review of Nutrition Epidemiology
UNHCR	17.01.97	Sierra Leone Briefing Notes
UNHCR	28.01.97	Monthly Health Bulliten (Eastern Sudan)
UNHCR	18.02.97	UNHCR starts repatriation of Somali refugees in Ethiopia
UNHCR	22.02.97	Personal Communication – Tanzania
UNHCR	24.02.97	Update on Emergency Preparedness and Response
UNHCR	26.02.97	Personal Communication – Nepal
UNHCR	27.02.97	Food Supply for Dadaab Camps. Kenya
UNHCR	27.02.97	Personal Communication – Benin/Ghana/Togo, CAR, Zambia
UNHCR	07.03.97	Personal Communication – Uganda
UNICEF	06.02.97	Update No. 41 on Great Lakes Region
USAID	17.01.97	Great Lakes Complex Emergency Situation Report #18
USAID	07.02.97	Great Lakes Complex Emergency Situation Report #21
USAID	14.02.97	Great Lakes - Complex Emergency Situation Report #22
WFP	03.01.97	Weekly Update
WFP	10.01.97	Weekly Update
WFP	17.01.97	Weekly Update
WFP	24.01.97	Weekly Update
WFP	31.01.97	Weekly Update
WFP	04.02.97	Food Aid for Malian Refugees
WFP	04.02.97	Weekly Update
WFP	07.02.97	Weekly Update
WFP	10.02.97	Emergency and Protracted Relief Operations

WFP	11.02.97	Personal Communication – Kenya
WFP	14.02.97	Weekly Update
WFP	21.02.97	Weekly Update
WFP	28.02.97	Weekly Update
WFP-a	07.02.97	Eastern Zaire Situation Report #44
WFP-a	07.02.97	Food Assistance for Somali and Sudanese Refugees (Kenya)
WFP-b	07.02.97	Food Assistance for Somali and Sudanese Refugees (Kenya)
		Comparative Malnutrition Survey in Jalalabad City and Internally Displaced People
WHO	Jul. 96	Camps in Nangarhar Province
WV	16.01.97	Liberia Weekly Report 12-16 Jan 1997

	Total Total Total Total Total					
* Org						
ACF	Action Centre la Faim					
Al	Amnesty International					
BAAG	British Agencies Afghanistan Group					
CONCERN						
DHA	Department of Humanitarian Affairs					
FAO	Food & Agricultural Organization of the United Nations					
FSAU	Food Security Assessment Unit for Somalia					
GOAL						
ICRC	International Committee of Red Cross					
IFRC	International Federation of Red Cross					
IRIN	Integrated Regional Information Network (of DHA)					
MSF-B	Medecins Sans Frontieres – Belgium					
MSF-CIS	Medecins Sans Frontieres - Celula Inter-Seccoes					
MSF-F	Medecins Sans Frontieres – France					
MSF-H	Medecins Sans Frontieres – Holland					
MSF-S	Medecins Sans Frontieres – Spain					
OLS	Operation Lifeline Sudan					
SCF-UK	Save the Children Fund (United Kingdom)					
UNAA	United Nations Humanitarian Assistance for Afghanistan					
UNHRCS	United Nations Humanitarian and Resident Coordinator for Somalia					
UNECOSOC	United Nations Economic and Social Council					
UNHCHR	United Nation's High Commissioner for Human Rights					
UNHCR	United Nation's High Commission on Refugees					
UNICEF	United Nation's Children Fund					

WFP	World Food Programme						
WHO	World Health Organization						
WV	World Vision						

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

			Po	pulation Nu	mbers				
Situation			Condition	Total	Change from	Nutr Stat*	Comr		
	I: High	Ila: High	IIb: Mod	IIc: Not	III: Unknown		Dec.96		
	Prev	Risk	Risk	Critical					
Sub-Saharan Africa									
1. Angola				980'000		90'000	395'000	imp	Decre due to attain suffic and/o return
2. Banin/Ghana/Togo Region				13'500		13'500	19'500	stat	Decre due to repar
3. Burkina Faso/Mauritania			25'000	25'000		50'000	<i>– 3'000</i>	sat	Decre due to repat Those Maur mode due to on re- cam
4. Burundi /Rwanda Region	199'300	712'000	2'698'700	233'000		3'043'000	929'500	del	Increadue to population In Za. Burui food in Rw.
5. Central African Republic				32'400		32'400	400	Stat	Increa a sma Suda refug comii Easte
6. Djibouti				2'500		2'500	0	Stat	
7. Ethiopia		287'000	5'800	109'700	130'000	532'500	135'800	Stat	Increadue to influx Suda and S

8. Kenya	130'000		16'000	20'000		166'000	- 1'000	Oil	High levels of wasting and some micronutrient deficiency diseases bein seen among to Somali refugees.
									Very high level of anaemia seen among adolescent boys in Sudanese refugee camp
9. Liberia/Sierra Leone/			1'317'000	1'171'300		2'489'000	_ 761'000	imp	Decreased number due to the attainment of self–sufficient of many.
Guinea/Cote d'Ivoire						0			
10. Mozambique Region				162'600		162'600	92'600	imp	The increase due to more people needir assistance as the harvest in April 1997 approaches.
									Pockets of malnutrition of a long-term insecurity and flooding may exist.
11. Somalia			300'000			300'000	150'000	del	Far greater numbers an likely to requir emergency for assistance, especially in large urban centres and crop deficit areas.
12. Sudan	4'000		2'790'800			2'794'800	617'800	stat	Pockets of malnutrition a likely to exist Southern Sudan Critica situation in Re Sea persists
13. Uganda		425'000		23'300	20'000	468'300	38'500	del	Increased

_		_	_			_		_	
14 Zoiro	260/000			156/000		416'000	0	del/stat	numb Rwan Zarea refueg Ugan and S refuga heigh
14. Zaire	260'000			156'000		416 000	U	del/stat	from S Mwer nutriti status most surve (end indica chang
15. Zambia				32'000		32'000	5'000	stat	Increa new a from I Zaire
Total (Sub-Saharan Africa)	593'300	1'424'000	7'154'000	2'961'300	150'000	12'282'600	790'100		
Asia (Selected Situation)									
16. Afghanistan Region		210'000	520'000	1'452'000		2'182'000	_ 648'000	stat	Decre numb requir assist Iran a Pakis
17. Bhutanese Refugees in Nepal				92'000		92'000	2'000	stat	A pro the po may t risk d micro deficio disea.
18. Bangladesh		24'000				24'000	<i>– 12'000</i>	imp	decre due to repati Those remai camp highte due to levels
						0			of wa. the pr micro deficie
19. Southern Iraq		192'000		28'000		220'000	0	del	Those Marsi

i i	I	I			
					considered at
					high risk.

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

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

Ilb: Mod Risk – Moderate risk, may be data available, pockets of malnutrition may exist

IIc: 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

### March 1996 • RNIS #19 (population estimates In thousands)

From												
	Angola	Benin	Burkina Faso	Burundi	Cote d'Ivoire	Eritrea	Ethiopia	Ghana	Guinea	Kenya	Liberia	Mali
Angola	980											
Benin												
Burkina Faso												
Burundi				300								
Cote d'Ivoire												
Eritrea												
Ethiopia							11			4		
Ghana												
Guinea												
Kenya							9					
Liberia					305			16	408		1'100	
Mali			25									
Mauritania												
Mozambique												
Rwanda												
Sierra Leone									128		100	
Somalia							287			130		
Sudan							78			32		

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

Tanzania											
Togo								7			
Uganda		6	<u>_</u>								
Zaire											
Zambia											
TOTAL	980	6	25	300	305	0	385	23	536	166	1'20

#### 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 = 9.2 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).

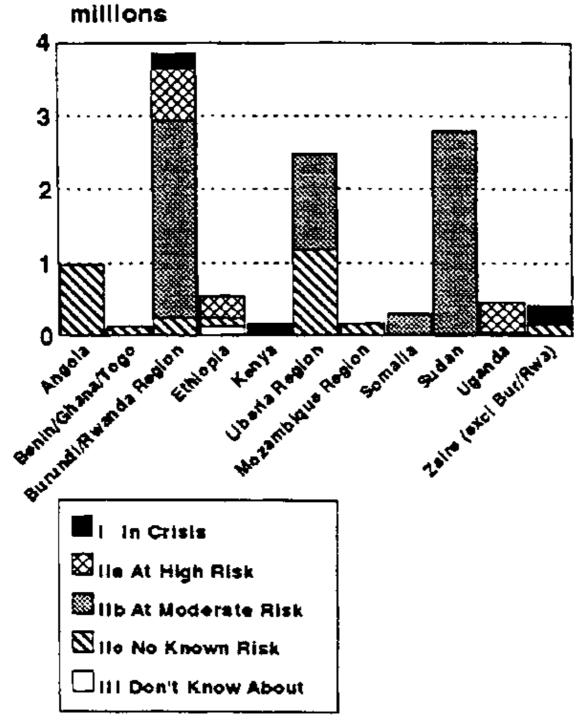


Figure 1 – Refugee and displaced populations – Selected Areas in Africa (March 1997)

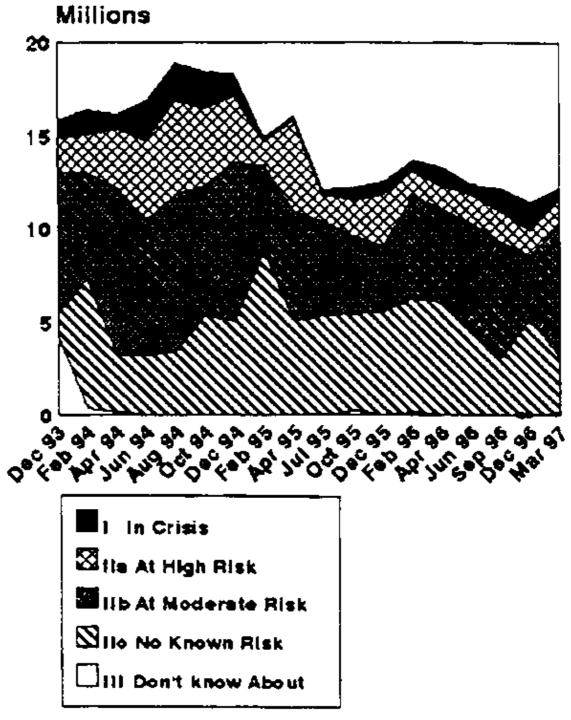


Figure 2 – Trends in Total Refugee/ Displaced Populations – by Risk Categories – Africa: December 1993 – March 1997

# ANNEX I: Results of Surveys Quoted In March 1997 RNIS Report (#19) – usually children 6–59 months

Survey Area	Survey Conducted by	Date	% Wasted*	% Severely Wasted*	Oedema (%)	Crude Mortality (/10,000/day)	Under 5 Mortality (/10,000/day)	Imm Co
4. Burundi/Rwanda Region								

a. Tingi–Tingi, Eastern Zaire	EPICENTRE	Jan 97				2.0	6.4	
b. Tingi–Tingi, Eastern Zaire	EPICENTRE	6–13 Jan 97				4.0	10.0	
c. Maranwya, Burundi	ACF	Jan.97	18.9	7.1	14.3			
d. Maramvya, Burundi (adults)	ACF	Jan 97	23.6					
9. Nyarugusu Camp, Tanzania	MSF – S	Dec.96	5.0	0.2	0.3	1.9	4.4	900%
7. Ethiopia								
a. New arrivals from Sudan	UNHCR	Dec 96	31.0	13.0		5.0	10.0	
8. Kenya								
а. Но Сатр	MSF – B	Jan.97	33.3	6.7			5.0	
b. Dagahaley Camp	MSF – B	Jan.97	31.4	6.7			3.6	
c. Hagadera Camp	MSF – B	Jan.97	28.0	5.3			3.5	
9. Liberia/Sierra Leone Region								
a. Segbwerma, Sierra Leone	CONCERN	Jul. 96	11.1**	7.8**				
b. Segbwema, Sierra Leone	CONCERN	Dec.96	6.4**	4.5**				
c. Freetown	ACF	Dec.96	5.5	0.8	0.0			
11. Somalia								
a. Hiraan Region	IMC	Dec.96	22.4**	3.8**				
12. Sudan								
a. Wau, Southern Sudan	OLS	Jan.97	10.0					
	Suprevised by the							
	Commission on							
b Wad Sherife	Refugees (GOS)	Dec.96	15.7 (<80%)					
c. Shagarab I. II. III		Dec.96	14.4 (<80%)					
d. Kilo 25		Dec.96	11.7 (<80%)					
e. K Gibira		Dec.96	12.5 (<80%)					
	•			•				•

	Dec.96	6.5 (<80%)					
	Dec.96	12.0 (<80%)					
	Dec.96	3.58 (<80%)					
	Dec.96	3.2 (<80%)					
ACF	Dec.96	11.9	1.5	2.0			8
WHO	Jul. 96	4.5	0.4				
WHO	Jul. 96	3.3	0.3				
MSF-H	Jan.97	3.4**	1.0**				
MSF-H	Dec.96	5.8**	1.2**				
MSF-H	Feb. 97	5.2**	0.2**				
	WHO WHO MSF-H MSF-H	Dec.96  Dec.96  Dec.96  Dec.96  Dec.96  ACF  Dec.96  WHO  Jul. 96  WHO  Jul. 96  MSF-H  Dec.96  MSF-H  Dec.96	Dec.96   12.0 (<80%)     Dec.96   3.58 (<80%)     Dec.96   3.2 (<80%)     ACF   Dec.96   11.9     WHO   Jul. 96   4.5     WHO   Jul. 96   3.3     MSF-H   Jan.97   3.4**     MSF-H   Dec.96   5.8**	Company   Comp	Comparison of the comparison	Company   Comp	Comparison   Com

<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

#### **NOTES on Annex I**

#### 4 Great Lakes Region

- a–b. This information comes from a surveillance system set up by EPICENTRE and MSF in Tingi–Tingi camps. The mortality rate calculations are based on an estimated population of 120,000 people, with 20,000 under–fives.
- c. This survey was carried out by ACF in the Medical–Nutritional Centre of Maramvya in Burundi in January 1997. It was an exhaustive survey. 280 children 6–59 months old were included in the survey. Wasting was defined as wt/ht <-2sd and severe wasting as wt/ht <-3sd. Oedema was measured separately.
- d. This survey was carried out by ACF in the Medical-Nutritional Centre of Maramvya in Burundi in January 1997. It was an exhaustive survey. This portion of the survey included 669 people older than ten years. Wasting was defined as a BMI<16. Oedema was also measured among this group.

<sup>\*\*</sup> Oedema is included in this figure. NOTE: see box on pg 4 for guidance in interpretation of indicators.

e. This survey was carried out in Nyarugusu Camp for Zairian refugees in Tanzania by MSF. This was a two-stage cluster sample survey, targeting children 6–59 months old, or 65–110 cms tall. The sample size was 880. Families who were squatting at the registration and distribution sites were not included in the survey population. Wasting was defined as wt/ht <-2sd and severe wasting as wt/ht <-3sd. Oedema was measured separately.

#### 7. Ethiopia

a. This screening was on new arrivals from Sudan to Ethiopia. There are no details currently available on this survey, except that MUAC was used to define wasting.

#### 8. Kenya

- a. This survey was carried out by MSF–B in January 1997 in Ifo camp. It was a two stage cluster sample survey including 971 children 6–59 months old, or 65–110 cms. Wasting was defined as wt/ht <–2sd and severe wasting as wt/ht <–3sd. Oedema was measured separately.
- b. This survey was carried out by MSF-B in January 1997 in Dagahaley camp. It was a two stage cluster sample survey including 967 children 6–59 months old, or 65–110 cms. Wasting was defined as wt/ht <-2sd and severe wasting as wt/ht <-3sd. Oedema was measured separately.
- c. This survey was carried out by MSF-B in January 1997 in Hagadera camp. It was a two stage cluster sample survey including 967 children 6–59 months old, or 65–110 cms. Wasting was defined as wt/ht <-2sd and severe wasting as wt/ht <-3sd. Oedema was measured separately.

#### 9. Liberia/Sierra Leon Region

- a. This survey was carried out in Segbwema in July 1996 by CONCERN. It was a two stage cluster sample survey (30 clusters) and 760 children 6–59 months old were included. Wasting was defined as wt/ht <-2z and severe wasting wt/ht <-3z. Oedema was included with the figure for wasting.
- b. This survey was carried out in Segbwema in December 1996 by CONCERN as a follow-up to the July survey described above. It was a two stage cluster sample survey (30 clusters) and 644 children 6–59 months old were included. Wasting was defined as wt/ht <-2z and severe wasting wt/ht <-3z. Oedema was included with the figure for wasting.
- c. This survey was carried out by ACF in Freetown in December 1996. The survey was carried out on the resident population, and the displaced population living in town. Displaced people living in camps around Freetown were not included. This was a two stage cluster sample survey including 919 children 6–59 months old. Wasting was defined as wt/ht <-2sd and severe wasting as wt/ht <-3sd. Oedema was measured separately.

## 11. Somalia

a. This is a rapid nutritional assessment conducted by International Medical Corps (IMC). Full details were not available.

#### 12. Sudan

- a. These survey results were reported in the OLS Emergency Update No. 2, and full details were not included.
- b–f. This was a cluster sample survey carried out in Wad Sherife, Shagarab I, II and II, Kilo 26 K, Girba and Um Sagata, Salmin, Umburush, Adingour, Zurzur (taken together as one group). 900 children were included in each of the surveys. Wasting was defined as wt/ht <80% of the median.

- g. This survey was carried out in Hawata and Mafaza. It was a house to house survey and included all children in the camps. 666 children were included in the survey. Wasting was defined as wt/ht <80% of the median.
- h This survey was carried out in Abu Rakham, Tenedba, and Wad Awad. It was a house to house survey and included all children in the camps. 648 children were included in the survey. Wasting was defined as wt/ht <80% of the median.
- i. This survey was carried out in Suki Kilo 7, Suki Kilo 5 and Abu Rakham, Tenedba, and Wad Awad. It was a house to house survey and included all children in the camps. 648 children were included in the survey. Wasting was defined as wt/ht <80% of the median.

#### 13. Uganda

a. This survey was carried out b ACF in Mongola Settlement in Moyo District, Northern Uganda. It was a two stage cluster sample survey including 750 children 6–59 months old. This sample size was calculated to take into account the low number of children in the settlement by using a correction factor. Therefore, 30 clusters of 25 children were used. Wasting was defined as wt/ht <-2z and severe wasting wt/ht <-3z. Oedema was recorded separately.

#### 16. Afghanistan

- a. This was a cluster sample survey (30 clusters of 30 children 6–59 months old) conducted by WHO in Jalalabad city. The total number of children included in the survey was 1072. Wasting was defined as wt/ht <–2z and severe wasting wt/ht <–3z.
- b. This was a cluster sample survey (30 clusters of 30 children 6–59 months old) conducted by WHO in the camps for internally displaced people near Jalalabad city. The total number of children included in the survey was 1185. Wasting was defined as wt/ht <-2z and severe wasting wt/ht <-3z.
- c. This survey was carried out by MSF–Holland in January 1997. It was a systematic sample survey. Wasting was defined as wt/ht <-2z and severe wasting wt/ht <-3z. Oedema was not recorded separately.
- d. This survey was carried out by MSF-Holland in January 1997. It was a cluster sample survey. Wasting was defined as wt/ht <-2z and severe wasting wt/ht <-3z. Oedema was not recorded separately.
- e. This survey was carried out by MSF–Holland in January 1997. It was a cluster sample survey. Wasting was defined as wt/ht <-2z and severe wasting wt/ht <-3z. Oedema was not recorded separately.

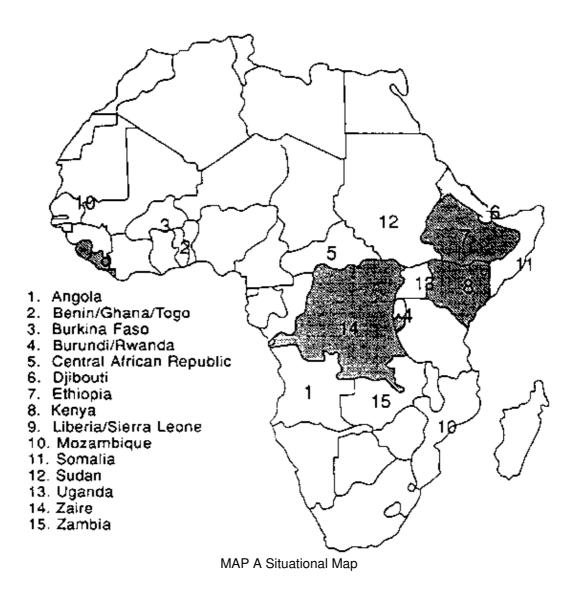
# ANNEX II: Seasonality in Sub-Saharan Africa

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.

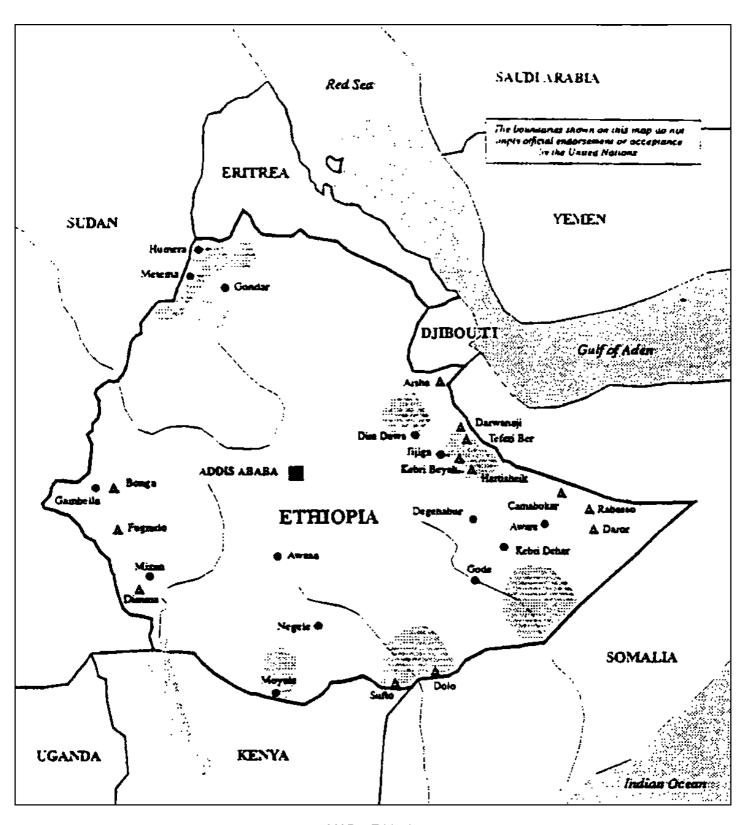
# **MAPS**



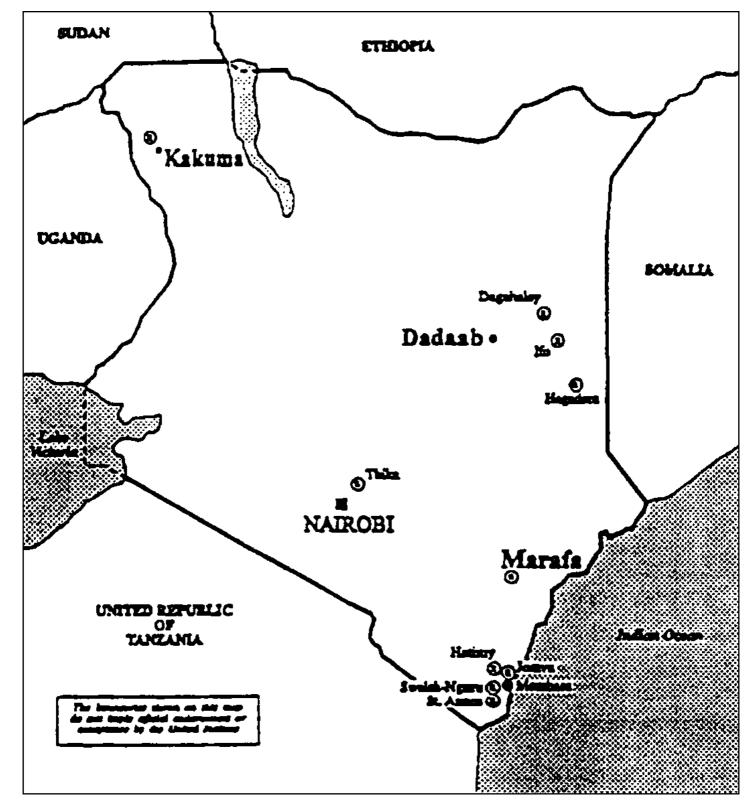




MAP 4 Burundi/Rwanda Region



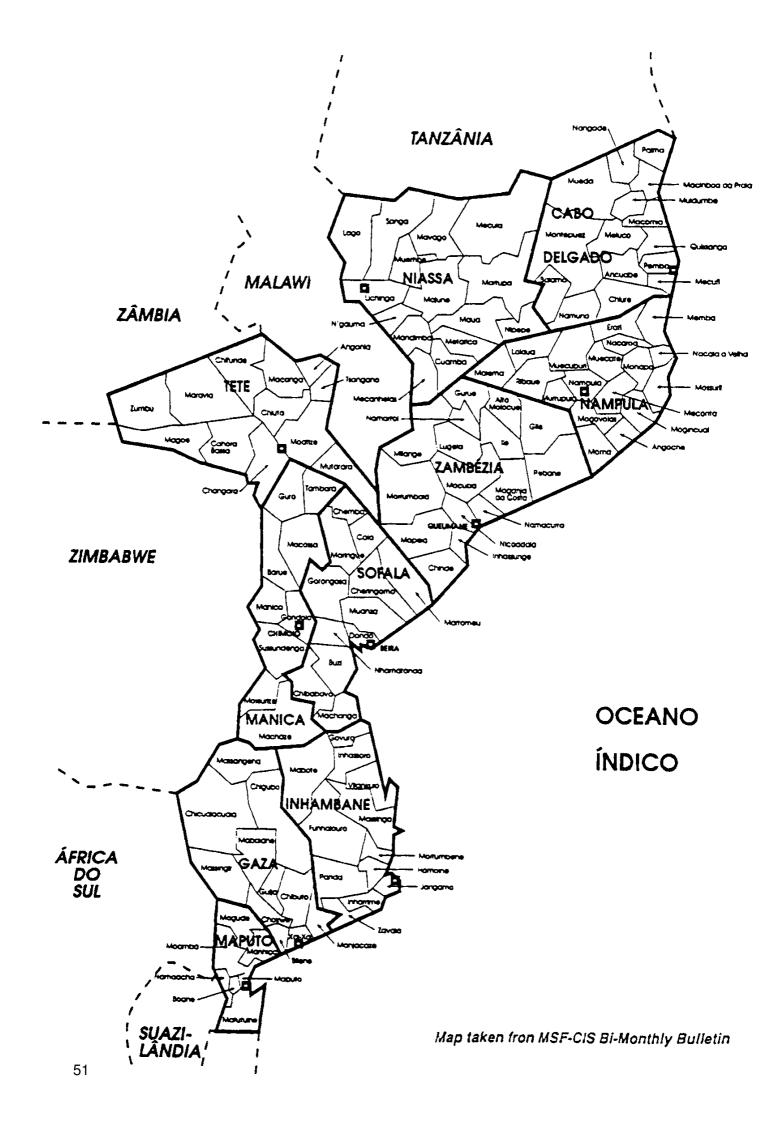
MAP 7 Ethiopia

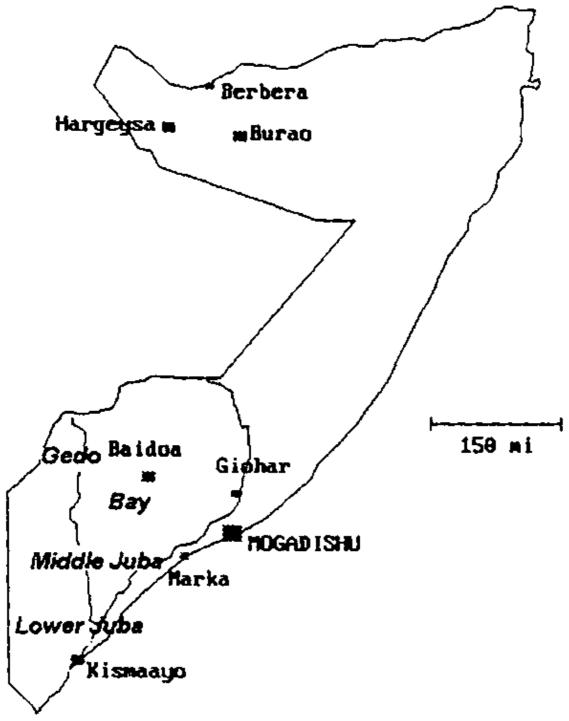


MAP 8 Kenya

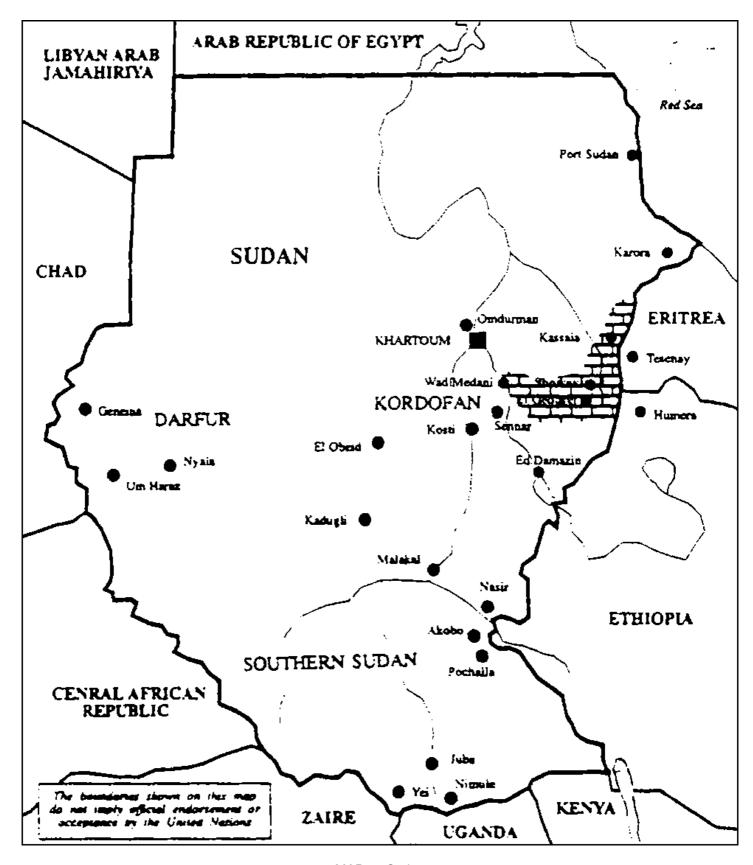




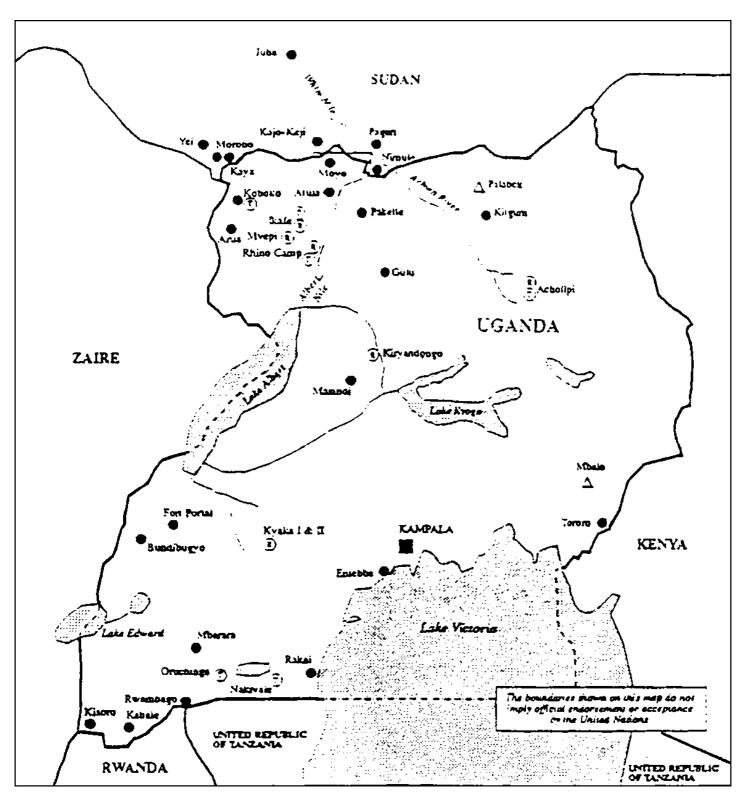




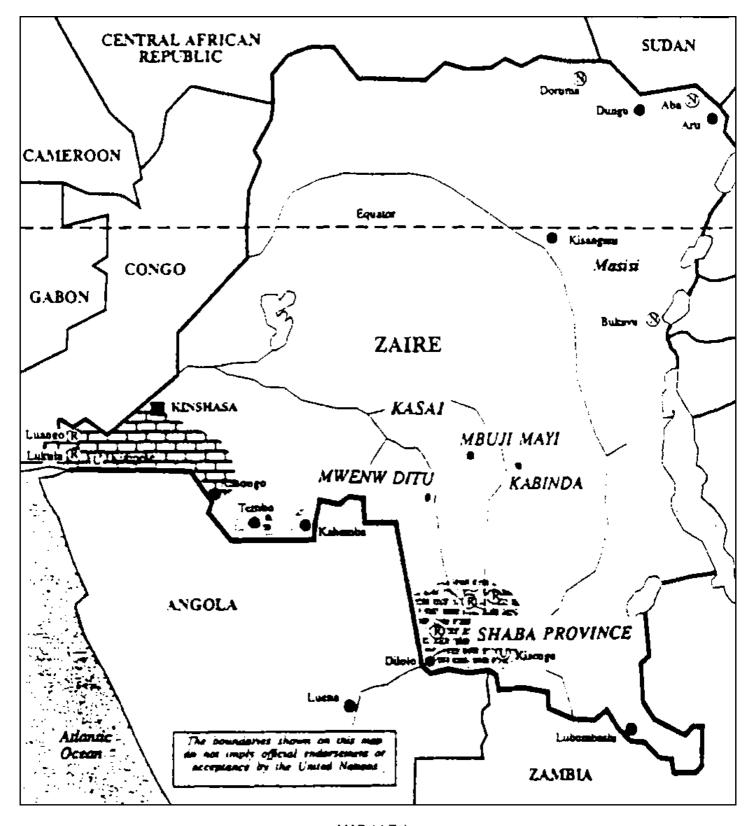
MAP 11 Somalia



MAP 12 Sudan



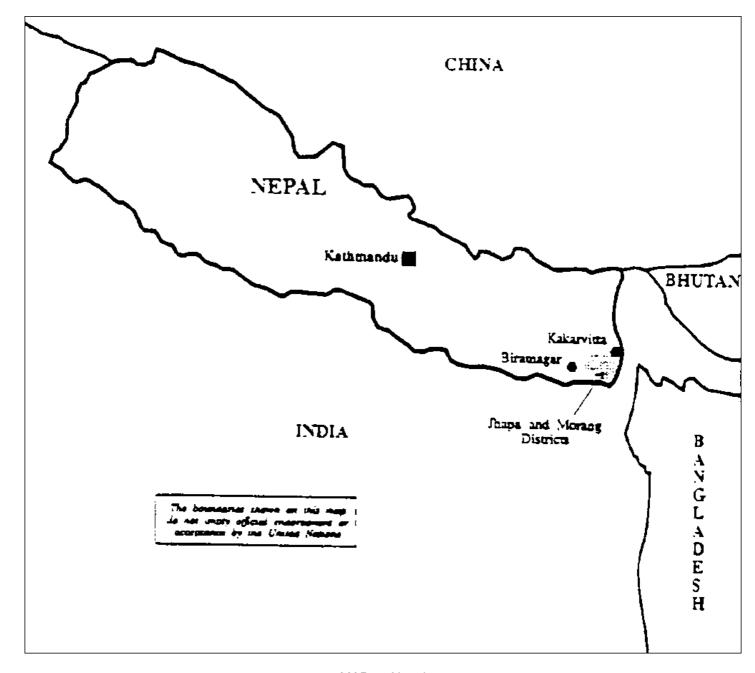
MAP 13 Uganda



MAP 14 Zaire



MAP 16 Afghanistan



MAP 17 Nepal

