

**Refugee Nutrition Information System (RNIS), No. 01 – Report on the
Nutrition Situation of Refugee and Displaced Populations**

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ACC/SCN

REFUGEE
NUTRITION
INFORMATION
SYSTEM

UNITED NATIONS
ADMINISTRATIVE
COMMITTEE ON
COORDINATION
SUB-COMMITTEE
ON NUTRITION



REFUGEE NUTRITION INFORMATION SYSTEM (RNIS)

No. 1 ACC/SCN, Geneva, 5 October 1993

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HIGHLIGHTS

Refugees and displaced people from local wars and ethnic conflicts in Angola, Liberia and adjoining countries, Rwanda, and Shaba/Zaire are reported to be in serious, sometimes desperate nutritional conditions. Populations known to be in especially critical condition are given in Table 1.

- The situation in Upper Margibi County in Liberia affecting some 80,000 people, is described as "catastrophic". Extremely high prevalences of kwashiorkor (about 45%) are reported, with mortality rates up to 50 times normal. Annex I gives the MSF–Holland summary from September. A further 175,000 people trapped in Upper Lofa County, Liberia are also said to have high levels of malnutrition.
- In Rwanda, around 350,000 people displaced in the civil war have variable access to food, high levels of wasting and reported very high mortality in certain camps.
- A major famine may be occurring in some areas of Angola, where some towns (e.g. Cuito) have been under siege for many months without food supply. However, there is very little information and this is urgently needed.
- People (maybe 75,000) displaced by ethnic violence in Shaba region, Zaire are reported to be in desperate medical and nutritional condition, with very high mortality rates and malnutrition.

In contrast, conditions are reported to have improved substantially in Northern Kenya, Somalia, and for Mozambican refugees, many of whom are returning to their own country. Pellagra has been largely prevented among refugees in Malawi by fortification of the rations with niacin.

Problems persist in Ethiopia and Southern Sudan. Surveys on children in Southern Sudan in March (CDC) gave around 80% wasting including 40% severe, about the highest ever documented, including in Somalia. Micronutrient deficiencies (scurvy, vitamin A deficiency, beri–beri) continue to be reported from camps in Eastern Ethiopia which also report very high prevalences of wasting in children.

INTRODUCTION

The UN ACC/SCN¹, which is the focal point for harmonizing policies in nutrition in the UN system, decided to set up an information system to track the nutrition of refugees and displaced people. Distributing this information should help to bring action to improve the situation. This decision was made, on the recommendation of the SCN's working group on Nutrition of Refugees and Displaced People, by the SCN in February 1993. This in turn was based on a trial report available at that time (dated 29 January 1993), which serves as a precursor to this report. Funding and other support have now been committed or offered for beginning the information system, from USAID, Government of Norway, UNHCR, WFP, Save the Children (UK), UNICEF and WHO. This is therefore the first of a regular series of reports, to be issued every two months, starting with the problems in Africa².

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² This report was prepared with the help of Jeremy Shoham, LSHTM.

Information is being obtained from a wide range of collaborating agencies, both UN and NGO (see list at end). Increasingly, the information exchange will be in both directions: you tell us what is known, we compile and get reports back to you. The overall picture gives context and information which separate reports cannot provide by themselves. Those receiving our reports may be able to directly initiate action to deal with the problems being monitored. Nonetheless, knowing what needs to be done, while a necessary condition for doing it, is not of itself sufficient. In due course, it may become possible to monitor responses, which would clearly provide additional important information.

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 internal 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 below.

Wasting is defined as less than $-2SDs$, or sometimes 80%, wt/ht by NCHS standards, in children of 6–60 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). Evidence from refugee camps shows such levels to be associated high mortality rates (MMWR Vol. 41 No. RR-13). **Severe** wasting can be defined as below $-3SDs$ (or about 70%). Any significant prevalence of severe wasting is unusual and indicates heightened risk. Equivalent of arm circumference are about 12 cm and 11 cm.

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.]

1,900 kcals/caput/day is often used as target requirement for a food aid-dependent population. These requirements are however often elevated by cold temperatures, essential activity levels and needs for catch-up growth, restoration of weight loss, and illness.

CURRENT SITUATION

The population groups identified below are the main existing refugee/returnee populations currently in Sub-Saharan Africa (see Map A). Also included are large population groups (many of whom are displaced) currently experiencing hardship as a result of civil war and drought. In subsequent reports we will aim to include other long-term displaced populations who are known to periodically require external assistance to avert nutrition/health crises.

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 1,900 kcals for a population wholly dependent on food aid would also indicate an emergency.

Populations *at risk* (category IIa in Table 2) of experiencing nutritional health crises are identified on the basis of the above indicators where these are approaching crisis cut-off levels and also on more subjective/anecdotal information where security and logistical circumstances prevent rigorous data collection but suggest a high degree of risk.

A summary of information on populations currently affected is given in Table 1, located as shown in Map B. To give some context, in Table 2, we give an estimate of the probable total refugee/displaced/returnee population involved, numbers at risk and how many we have information on.

1. Liberia, Sierra Leone, Guinea, Cote d'Ivoire (see Map 1)

The overall population of refugees/displaced people in this region is nearly two million (estimated as 1,986,000). The majority of this population are in a stable condition, not currently reported to be at unusual risk of malnutrition. However, the fighting that flared up again in the Liberian civil war in November 1992 prevented UNHCR from assisting a population of more than 100,000 Sierra Leonean refugees stranded in the isolated North of the country (Upper Lofa County). Surveys at that time found prevalence of wasting to be extremely high (34%) in some groups.

Very recently it was reported that a further 80,000 people in Upper Margibi County (see Map 1) are in "a catastrophic situation since several months" (see below).

Recent reports (20 August 1993) indicate a continuing nutritional and health crisis now affecting 175,000 Sierra Leonean refugees and displaced Liberians fleeing the conflict, in Upper Lofa County (see Map 1). Recent nutritional survey results in Vahun town (population of 20,000) gave levels of 30% wasting including 6% severe wasting in young children. Rough mortality estimates in the town of Yandehun (population of 10,000) are 3/10,000/day (10 x normal). Staple foods are unavailable and markets are non-existent. A lull in the fighting has allowed relief supplies to trickle into the area but transport vehicles and washed out roads and bridges prevent full emergency deliveries. There have been limited deliveries of rice in Vahun amounting to less than 20% of a full ration but there have been no distributions in villages along the road north of Vahun. Selective feeding established for vulnerable groups is at best a holding operation to minimize increased mortality but it is expected that the situation will deteriorate as the general food basket remains inadequate due largely to the logistical difficulties.

The situation is further aggravated by contaminated drinking water, and inadequate sanitary facilities. Cases of measles have been reported in all villages in this area.

WFP is currently planning an air-drop operation to assist this population cut-off by the rainy season.

Reports are also coming in of an emerging crisis in Upper Margibi County affecting 80,000 people, mostly displaced from Cape Mount, Bomi County and Kakata in February and March. Most of this displaced population (between 60–80% of the present population in Upper Margibi County) stay with relatives with whom they share available food resources. Extremely limited quantities of rice have been brought in "cross-line" by the UN but estimates are that this has barely provided food for five days. Rough nutritional surveys in July and August found prevalences of kwashiorkor (severe oedematous malnutrition) of 39% and 45% respectively. (Given the very high mortality risk of kwashiorkor, these rates if true are quite extraordinary, and do indeed indicate a catastrophic situation.) Severe wasting is estimated as 6%. Extremely high mortality rates of children between 0–15 years were recorded at 14.4/10,000/day (50 x normal — at this rate half the population of that age would die within a year). This area, which is also close to the front line, has been cut-off from outside food and relief supplies for several months due to the embargo imposed by ECOMOG.

Information for September from Upper Margibi County indicates a crude mortality rate of 10.2/10,000/day (equivalent to 37% of the population dying within a year). The mortality rate for children under five was measured at 42.5/10,000/day. This rate indicates all children under five would die within eight months.

A nutritional survey done in a population affected by the war but not displaced, the South East region of Liberia (estimated population of 112,000), showed 10.4% wasting and 4.2% severe wasting. The prevalence of kwashiorkor was measured at 3.4%.

Reports are also coming in (10/9/93) of high levels of wasting in Nimba County (See Map 1).

2. Eastern Ethiopia/Ogaden (see Map 2)

The overall number of refugees and displaced people in this part of Ethiopia is approximately 350,000. At the end of 1992 it was clear that the displaced population in Gode, Ogaden region (see Map 2) who resided in three camps and surrounding towns were experiencing a food and nutritional crisis. Although crude mortality rates have decreased significantly in the three camps since September 1992, (overall population of 51,000) the rates are still 3–7 times normal. Furthermore, a nutritional survey conducted in June 1993 shows a serious and pronounced deterioration in nutritional status, with a prevalence of wasting of 44% which compares with 34% in the last survey in August 1992. Thirteen percent of children are severely wasted. In June 1993 some 1,000 severely wasted children were admitted for intensive feeding in Gode camp. The situation in Bohelagare is somewhat better where a July 1993 survey found a lower prevalence of wasting compared to the prevalence of 33% recorded in August 1992. Much of this situation can be attributed to erratic and inadequate supplies of general food rations, shortage of dry supplementary food items, and an increase in diarrhoeal and respiratory tract infections at the beginning of the rains. Five kg of wheat and 0.5 litres of oil/beneficiary were distributed on 19/6/93 which was 68 days after the previous distribution in April. This ration would only have provided enough food for approximately ten days.

The situation for five other refugee camps (Hartisheik A and B, Teferi Ber, Derwonaji and Kebri Bayeh [marked on Map 2]) is confusing with evidence of severe nutrition stress amongst some sections of the population. These camps which house Somali refugees were not causing concern earlier (e.g. at the time of the previous RNIS report, February 1993). The general ration over the past six months has been very limited, approximately 400–1,350 kcals/person/day (about 20–70% energy requirement). However, there is considerable over-registration in Hartisheik and evidence of access to alternative sources of food in all camps. This may partly explain the nutritional status data which ranges from only 7% prevalence of wasting in Hartisheik to a raised level of 17% in Kebri Bayeh.

Evidence of micronutrient deficiency also confirms the inadequacies of the general ration for sections of this population. Scurvy has been noted in Teferi Ber affecting 2.5% of those at the feeding centre. Vitamin A deficiency has affected 1% of those in attendance. Approximately 40 cases of beri-beri (thiamine deficiency) have also been noted by SCF in Aisha camp (marked on Map 2) on the Djibouti/Somali border and it may be that some of the oedematous malnutrition seen in the Ethiopian camps are also beri-beri. Beri-beri has also been noted in camps within Djibouti.

The situation is further compounded by inadequate water supplies. Estimates for Hartisheik A and B are that between January and March 1993 *per caput* availability of water was only 1–3 litres per day. The overall number of refugees and displaced people in this part of Ethiopia is estimated to remain at approximately 350,000.

3. Eastern Sudan (see Map 3)

No information at present.

4. Northern Kenya (see Map 4)

The nutritional and health situation in the camps for Somali refugees has improved enormously in recent months (e.g. since February 1993). There has been both spontaneous and organized repatriation and the current refugee population number is less than 360,000 compared to 620,000 in February 1993. Their condition is reported to be stable.

5. Southern Somalia (see Map 5)

The food security situation has further improved recently despite the escalation in violence between Somali militia and UN forces.

Including new programmes to be initiated in the North West and North East there will be 85 ongoing and new food assistance projects targeting approximately 400,000 beneficiaries. However, all free distributions have been terminated so that these projects only include hospital feeding of vulnerable groups, food-for-work, school feeding and resettlement.

The above figure does not include refugee returnees from Northern Kenya, which could be guessed at around 300,000 from the change in population between now and last February. The condition of these is not known, but has not been reported as bad.

6. Mozambican Refugees Returnees (see Map 6)

The status of Mozambican refugees in Malawi, Zimbabwe, Zambia, Swaziland, Tanzania and South Africa appears stable. Both spontaneous and organized repatriation is occurring following the signing of the peace accord last year. The almost total disappearance of pellagra in Malawi since fortification of maize flour began — only 400 cases have been reported since its inception — is in marked contrast to the 18,000 cases reported during the height of the outbreak in 1990. The total refugee population in the area is currently estimated at 1,515,000.

The food security situation for most of the returnees to Mozambique continues to improve with indicators of food stocks, levels of malnutrition, and access to water all either improving or stabilizing. There are however various populations at serious risk due to a variety of factors and given the approach of the hungry season (December–April) efforts to reduce vulnerability will need to be increased. Furthermore, these populations must be carefully monitored. Examples are as follows.

In Caia and Mutarara Districts (see on Map 6) the situation remains critical due to the isolation of the area, the lack of general services, and the high rate of influx of returnees from Malawi as well as the general failure of the harvests. In Derre in Morrumbala District (see Map 6) there are acute nutritional problems with isolated populations at risk from epidemics. Prevalence of wasting in June was 14% with 5% severe wasting. In Gaza region (see Map 6) there are large numbers of displaced people settled around towns in areas with wholly inadequate resources. This has resulted in widespread nutritional difficulties throughout large sections of the populations in these regions. Thus, in Chicualacuala District (see Map 6) prevalence of wasting is 10% with 5% severe wasting. In parts of Chokwe District (see Map 6) wasting rates of 17%, with 11% severe, have been recorded in June while in parts of Guija District (see Map 6) wasting rates have varied between 9–20% with severe wasting as high as 14% in some parts (June 1993).

A July survey in areas of Nampula Province found 38% wasting as defined by less than 12.5 cms MUAC. It appears that many wasted children seen at feeding centres are from either recently resettled populations or living in RENAMO zones. July saw a significant increase in diarrhoea disease with many cases of dysentery. Cholera has also been reported in the provinces of Zambezia, Sofala and Maputo.

7. Rwanda (see Map 7)

Recently there have been considerable movements of populations caused by an escalation in fighting between government and FPR (Patriotic Front) forces. There are currently approximately 350,000 displaced people in camps north of Kigali in Government held areas. Approximately 300,000 people in addition, who were displaced further south from North Rwanda in February, have now returned to their land in the demilitarized zone (DMZ). Conditions seem more favourable in the Western region compared to the East. The FPR zone remains practically empty (see map).

Food provision has varied. For long periods the *per caput* ration averaged about 800 kcals/day. This reflected both the planning to provide only half a general ration and logistical difficulties of the programme. Some populations were able to survive adequately on such rations due to access to productive land and employment opportunities, while others were clearly more vulnerable. A November 1992 nutrition survey by

ICRC found levels of wasting of 37% in some groups, confirming this differential vulnerability. Although target rations for the camps are now 1,900 kcals/caput/day, data for June and July still only show receipt of around 800 kcals although real figures will be higher due to widespread double registration.

A recent report released by the Nutrition Committee for Displaced People in Rwanda (a consortium of NGOs and the MOH) says that the ration received up to August was well under 1,600 kcal/head/day, reflecting the continued increase in the camp population, and an ability to adjust for this. Many instances of target beneficiaries never receiving rations were also reported. Three new therapeutic feeding centres were opened in August (Nyaconga, Rutongo, Bagarura camps) to keep pace with the increasing prevalences of wasting caused by the inadequate ration. In Nyaconga the number of cases of severely wasted children on therapeutic feeding indicated a prevalence of 10% severe wasting. Rapid weight gains seen in many of these feeding centres was interpreted as showing that lack of food was the primary cause.

A nutritional surveillance system established by UNICEF collects mainly anthropometric data and currently shows levels of wasting ranging between 4–17%. However, these data sometimes contradict that from supplementary/therapeutic feeding centres operated by numerous NGOs which may show many admissions of moderately and severely malnourished children. From this information, therefore, the situation at least in some areas is likely to be serious, with very high levels of wasting.

A recent report on ten camps in Byumba West and East (see Map 7), with a total population of around 120,000 in July (about half the April numbers), gives information of very high mortality in at least two of these (Nyacyonga and Rusine) — 4 and 6/10,000/day in June, down to 1.8 and 4/10,000/day in July (x normal respectively: 15, 22, 7, 15), largely caused by outbreaks of shigella dysentery, and malaria. Reported under-five mortality rates were about double the overall crude mortality rates. Estimates were made from population censuses, and burial-mat distribution. Prevalences of wasting in young children in April–June were high, around 11–17%; severe wasting 1–5%. Water supply (treated) was around 10 litres/caput/day.

The Nutrition Committee report (see above) recommends an increase in the ration for four camps (Nyaconga, Muhanda, Mugambari and Rutongo) which have a total population of 91,000, to 2,400 kcals/head/day and an increase to 2,170 kcals for a further seven camps in Byumba East with a total population of 77,730. The Committee also argues for an improvement in the quality of the ration for children so that wheat or rice or sorghum is added in addition to an increased quantity of beans. The remaining camps are thought to be at lesser risk.

There are currently 1,170 Burundi refugees in Rwanda; their situation is unknown.

8. Angola (see Map 8)

The results of the multiparty elections in September 1992 were rejected by one of the major parties and Angola's civil war was resumed in October 1992. Since that time most of the country, including Luanda (see Map 8), has seen heavy fighting. Several large urban provincial centres have been completely surrounded and cut-off from food supplies. Others such as Luanda have had to host large numbers of newly displaced people (90,000).

An FAO/WHO Special Alert on 20/4/93 estimated cereal import requirements of 435,000 tons for 1993/94, citing the combined affects of the conflict and drought. WFP estimate that the total food assistance requirement for the coming 12 months is for a case-load of 1,963,000 conflict and drought affected persons. Other reports speak of about two million seriously at risk. However, the physical limitations on moving food around in the country due to mined roads, destroyed bridges and damaged airfields, mean that for the next 12 months at least, the maximum logistics capacity of the (UN and NGO) agencies in the Angola emergency operation is just over 70% of net requirements.

Ad hoc reports from relief agency and hospital staff and journalists indicate the existence of many cases of severe wasting and related mortality and villages surviving on wild famine foods. However, there are very few rigorous data and numbers severely affected are unknown. It is estimated that about 600,000 people are at risk (category IIa in Table 2). There is an urgent need for more information. A survey carried out in Porto Quipiri/Boa Vista in August 1993 showed total wasting 41%, of which severe was 15%.

From the scattered reports available, it seems that there is reason to fear a major famine may be underway. Towns such as Cuito (see Map 8) have been under siege and without food supplies for many months, and no

one is clear as to what is happening. Some relief agencies fear tens of thousands may now be starving, and hundreds of thousands already malnourished and at imminent risk if the conflict continues.

9. Southern Sudan (see Map 9)

The continuing civil war is producing an extremely fluid situation whereby there are numerous large-scale displacements and frequent changes of location of affected population groups. The WFP planning figure for food aid provision in Southern Sudan is based on one million displaced and drought affected people. This figure derives from a needs assessment conducted last year. The majority of this one million are believed to be displaced. A total of 230,000 is thought to be in a critical nutritional situation, in three areas as follows.

Kongor District (see Map 9) Extensive factional fighting within the SPLA has caused displacement of over 160,000 people. Of these, a population of over 50,000 is known to be facing extreme hardship, living on a diet of small fish and wild fruit. There are no remaining cattle and no land under cultivation. Insecurity has prevented humanitarian assistance reaching Kongor as one of the worst affected areas in South Sudan in most need of humanitarian relief. The number of moderately and severely malnourished individuals between the ages of 5–17 years currently enrolled on NGO feeding programmes (1,000) confirm the seriousness of the situation. Recent deterioration in security has led NGOs to pull out of the area although some one day visits have shown that there are many new arrivals and that the situation has not improved.

The UN and NGO community appear to have largely succeeded in providing adequate food to each newly displaced population through a combination of air-drops, river and road transport. However, security and logistical impediments create occasional crises. Three such situations which have occurred are as follows:

Ame, Aswa and Atepi Camps for the Displaced Three camps just North of the Ugandan border are home to approximately 100,000 people, mainly Dinka from Bor and Kongor Districts. Assessments by NGOs earlier in the year showed a desperate situation with high levels of malnutrition, extremely poor accommodation and sanitation and endemic diarrhoea and chest infections. Levels of enrollment of children under five at feeding centres with severe and moderate malnutrition in June indicated very high levels of wasting, ranging from 15–25%.

Surveys in March 1993 in Ame, Ayod, Akon and Kongor by CDC showed prevalences "among the highest ever documented" — higher even than Somalia in 1991/92. These reports (published in MMWR 42 (16), 30 April 1993, pp 305–308), gave prevalences of total wasting of 75–84%, of which severe wasting was 40–44% — these are far the highest figures in this report (see Table 1). Although the situation is said to have improved somewhat since June, there is still a flow of new arrivals and the general situation is precarious.

Bor and Surrounding Region (approximately 80,000) (see Map 9) WFP food stocks delivered by barge are likely to be depleted by the end of September and the outlook is bleak due to lack of cattle, grain and fishing equipment. No harvest is expected due to the drought and/or floods. A UNICEF survey team found high rates of malnutrition in Bor and Akwak and approximately 45% of children at feeding centres operating in Bor are known to be malnourished.

There were 10,960 displaced in the Upper Nile Region in September. The nutritional status of the displaced in Ayod town was noted as improved.

10. Northern Uganda (see Map 10)

In August 1993 a new wave of refugees from the Morobo area in South Sudan crossed into Northern Uganda. The number of refugee new arrivals since the influx began are currently estimated at 40,000. There are no reported difficulties with supplying food and other basic needs to this population.

11. Shaba Region, Zaire (see Map 11)

Since August 1992 ethnic violence in this region has led to the displacement of large numbers of people towards the towns of Likasi, Kolwezi and Kamina (see Map 11). The displaced population around Likasi is

estimated at 75,000, the majority of whom live in makeshift shelters. Three nutritional surveys amongst this population (December 1992, March 1993, and June 1993) have shown wasting levels ranging from 8–15% with a recent level of 13%. Currently levels of severe wasting are 6% which may reflect a recent influx of new arrivals in a poor state. Around Kolwezi and Kamina the displaced populations of 23,000 and 6,000 respectively are showing mortality rates of between 8 to 20 times normal.

The violence has also led to the displacement of large numbers from Shaba region to the region of Mwene-Ditu. By June 1993 it was estimated that there were 13,000 displaced in three camps and 50,000 (September 1993) in the main town. New arrivals are reported as being in a desperate medical and nutritional condition. A nutrition survey in the camps in June 1993 found prevalence of wasting to be 22% with 7% severely wasted. Many adolescents and adults are also found to be moderately and severely wasted. Reports for September show mortality rates of 6.7/10,000/day (week of 12 September) and 5.1/10,000/day (week of 19 September). This increased mortality (up from a reported level of 3.5/10,000/day in August) is in large part explained by an outbreak of severe malaria, the displaced coming from mountainous areas in Shaba with low malaria endemicity, moving into an endemic region in full rainy season. Rations for one week are currently given out to new arrivals but there were no stocks for a general distribution in June. Many of the new arrivals since May have come from Kolwezi where general rations of 1,200 kcals/caput/day have only been available since June.

12. Western Sudan (see Map 3)

Survey results from July and August in seven displaced camps (population 165,000) in Kordofan show levels of wasting at 11%. In Um Ruwaba camp in particular levels of wasting were at 17% including 4% who were severely wasted. Feeding centres are operational in all camps as are vaccination campaigns and ORT centres.

13. S.W. Uganda

No information at present

14. Zaire

No information at present

15. Burundi

No information at present

16. Mauritania/Senegal

No information at present

Southern Iraq

At the end of July a nutritional and health crisis affecting a large number of Marshland Arabs in Southern Iraq was publicized. The crisis was brought about largely by the government policy of draining the marsh area, polluting the waters and launching offensives against the resident population. The population in the area was believed to be approximately 350,000. A small percentage of this population (15,000) had made their way to the Iraq/Iran border either to a strip of land linking the two countries (Himnet) or to a deep and relatively safe marsh called Um Al Naj where they resided on floating rafts. Apart of limited supplies of fish from the marshes

this displaced population were without access to food and their health and nutritional situation was believed to be critical. Estimates of prevalence of wasting amongst children were 60% with cessation of lactation amongst a high proportion of mothers. Surveys were not possible for security and logistical reasons.

Over the last six weeks the population in Himnet (currently estimated at 4,500) has been supplied with food by local NGOs and their status has improved considerably as a consequence. However, the situation of those in Um Al Naj (currently estimated at 15,000) which is far less accessible, is unclear. The Iranian Government are now allowing these Marshland Arabs into camps in Iran at a controlled rate, although 50–75 new arrivals still appear each day in Himnet. The Iranian Government has allowed local NGOs to conduct a nutritional and health survey in the border area which should commence soon. The status of the larger population in the Marshland area can only be guessed at, but must, at the very least, be extremely precarious.

We would like to thank all those agencies who contributed information to this report, particularly AICF, CDC, GOAL, ICRC, MSF–Belgium, MSF–Holland, SCF–UK, UNHCR, UNICEF. and WFP

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ANNEX I SUMMARY BY MSF– HOLLAND REPORT ON UPPER MARGIBI COUNTY, LIBERIA (SEPTEMBER 1993)

Quick nutritional assessments done by MSF in Upper Margibi County during July and August indicate extremely high levels of severe acute malnutrition. Approximately 45% of the under–five population suffers from kwashiorkor or severe marasmus. Prevalence among children over–five and adults is also high. Kwashiorkor is the predominant type of malnutrition. It is estimated that among the target population of 80,000 in Upper Margibi, 12,000 suffer from severe acute malnutrition, half of them children under–five.

Indirect mortality calculations estimate the under–five mortality rate in the population between 9.2 and 37.0 per 10,000 per day (July/August), indicating a major catastrophe.

The present 5 feeding centres, implemented by MSF since July, only cover 27% of the target group of severely malnourished children. With an average daily attendance of 600 per centre, the feeding centres are extremely overcrowded, thereby creating a health risk in itself. Due to inadequate food, staff, accommodation and other resources, insufficient nutritional and medical treatment can be provided. However, given these circumstances, the programme is well organised, and data indicate that the mortality risk of those severely malnourished children who attend the programme is reduced to $\pm 25\%$ compared to those without treatment.

A plan has been made, formulating priorities with immediate goals, strategies and actions. The coverage of the programme has to be improved by increasing the number of feeding centres from 5 to 12. The quality of the programme (reduction of mortality rates) will have to be improved by differentiation of treatment protocols, focusing available resources more on the high risk groups.

If the total target group of 12,000 severely malnourished in Upper Margibi is to be covered by the feeding programme, monthly food needs amount to 135 MT. Also expat–staff requirements during the first three months are higher than anticipated in the latest project proposal. As soon as possible an emergency surveillance system should be implemented.

Table 1: Camps and Displaced Populations In Crisis (as of September 1993)

Note: Situations are included when there is some data: those not included for lack of data are not necessarily better – see text

	Population (date of report) ¹	% Wasting <80% wt/ht	Mortality/10,000/day (factor x normal)	Food – kcal/caput/day	Water Supply/caput	Micronutrient Deficiency
Liberia						
Upper Lola County	175,000 (9/93)	34%				

– Vahun Town	20.000 (8/93)	30%		approx. 400			
– Yandehun	10.000 (8/93)		3 (11.1)				
Upper Margibi County (see Annex I)	80.000 (9/93)	45% incl. Kwashiorkor, also in adults	9–37 (30–120) 5% – 20% per month	mainly cassava. <1,000			? ch Ext crow in fe cer
Ethiopia							
Gode Camp 1	19.410 (6/93)	44% (improving)	1.7 (6.3)				
Gode Camp 2	25.340 (6/93)		1.7 (6.3)				
Bohelagare	6.000 (6/93)		0.7 (2.6) (improving)				
Ieleri Ber	90,000 (8/93)			640 (8/93)		2.5% scurvy in <5yrs. vit A deficiency	
Aisha						Beri-beri (reported by SCF)	
Rwanda							
Nyacyonga	31.000 (7/93)	10.7% (5/93)	1.8 (6.7)	880 (7/93)	10 litres		Dysc & m
Rusine	11.000 (6/93)	17.3%	4.0 (14.8) (7/93)	880 (7/93)	10 litres		Dysc & m
Zaire							
Kolwezi	23.000 (8/93)	40.0 QS	22–4.0 (8–14.8)	1.200 since June			
Kamina	6.000 (8/93)		2–5 (7.4–18.5)				
Mwene Ditu	11.500 (8/93)	29.0%	5.1 (19) (9/93 increasing)		0 – 3 litres		
Angola: Porto Q/Boa	(8/93)	26%. incl. severe 15%					
S. Sudan: Ame, Ayod. Kongor	(3/93)	75% – 84%. incl. severe 40%–44%	CMR 20/10.000/day				

¹ Dale of report includes data in all columns unless otherwise noted.

Table 2: Information Available on Total Refugee/Displaced/Returnee Populations (as of September 1993)

- I --- Those reported on with high prevalences of malnutrition and/or micronutrient deficiency disease and sharply elevated mortality (at least 3 × normal)
- Ila --- At high risk, but not known to be currently malnourished

IIb -- Probably not currently in critical situation, nor known to be at particular risk

III -- Population known to exist, but condition unknown

-- No information

	I	IIa	IIb	III	Total	Comments
1. Liberia/Sierra Leone/Guinea/ Cote d'Ivoire	255.000 (r, id)	112,000	1,619,000 (r, id, ret)	0	1.986.000	Upper Margibi County (80,000) recently reported "catastrophic" (see Annex I); Upper Lola County (175,000) continued with severe food crisis & malnutrition. S. Eastern region, 112,000 at risk.
2. East Ethiopia/ Ogaden	140,000	108,000 (r, id)	59,000 (r)	0	307.000	Deteriorating nutrition (up to 44% wasting) in some camps. Scurvy, vitamin A deficiency, beri-beri reported.
3. Eastern Sudan (r)	--	--	--	--	--	
4. Northern Kenya	0	0	358,000 (r)	0	358.000	About half previous population repatriated, situation much improved.
5. Southern Somalia		0	400.000 (id)	300,000 (ret)	700.000	Situation improved.
6. Mozambique (r)	0	0	1,514,500 (r)	0	1.514.500	Generally situation much unproved, some critical pockets remain -- e.g. severe wasting 14% reported.
7. Rwanda (Id)	40.000	160.000	700,000	0	900.000	Some camps have very high mortality and high malnutrition.
8. Angola (Id/wa)	0	600.000	0	1,300.000	1.930.000	A major famine may be occurring, with

						some towns besieged and unsupplied for many months. More information is very urgently needed.
9. South Sudan (Id)	0	230.000	770.000	0	1.000.000	Wasting prevalences of 15–25% reported in some camps.
10. Northern Uganda (r)	0	0	40,000	0	40.000	New refugees from South Sudan. No food supply difficulties reported.
11. Zaire (Id)	115,500	75.000	0	0	190,500	Internally displaced people from ethnic violence, some reported in desperate state with high mortality and wasting.
12. Western Sudan (r)	–	–	165.000	–	165,000	
11. South West Uganda (r)	–	–	–	–	–	
14. Zaire (r)	–	–	–	–	–	
15. Burundi	–	–	–	–	–	
16. Mauritania/Senegal (r)	–	–	–	–	–	
Total	550.500	1.315.000	5.625,500	1,600,000	9,091,000	

(r) refugees, (id) internally displaced, (ret) returnees, (wa) war affected

FIGURE 1 REFUGEE AND DISPLACED POPULATIONS

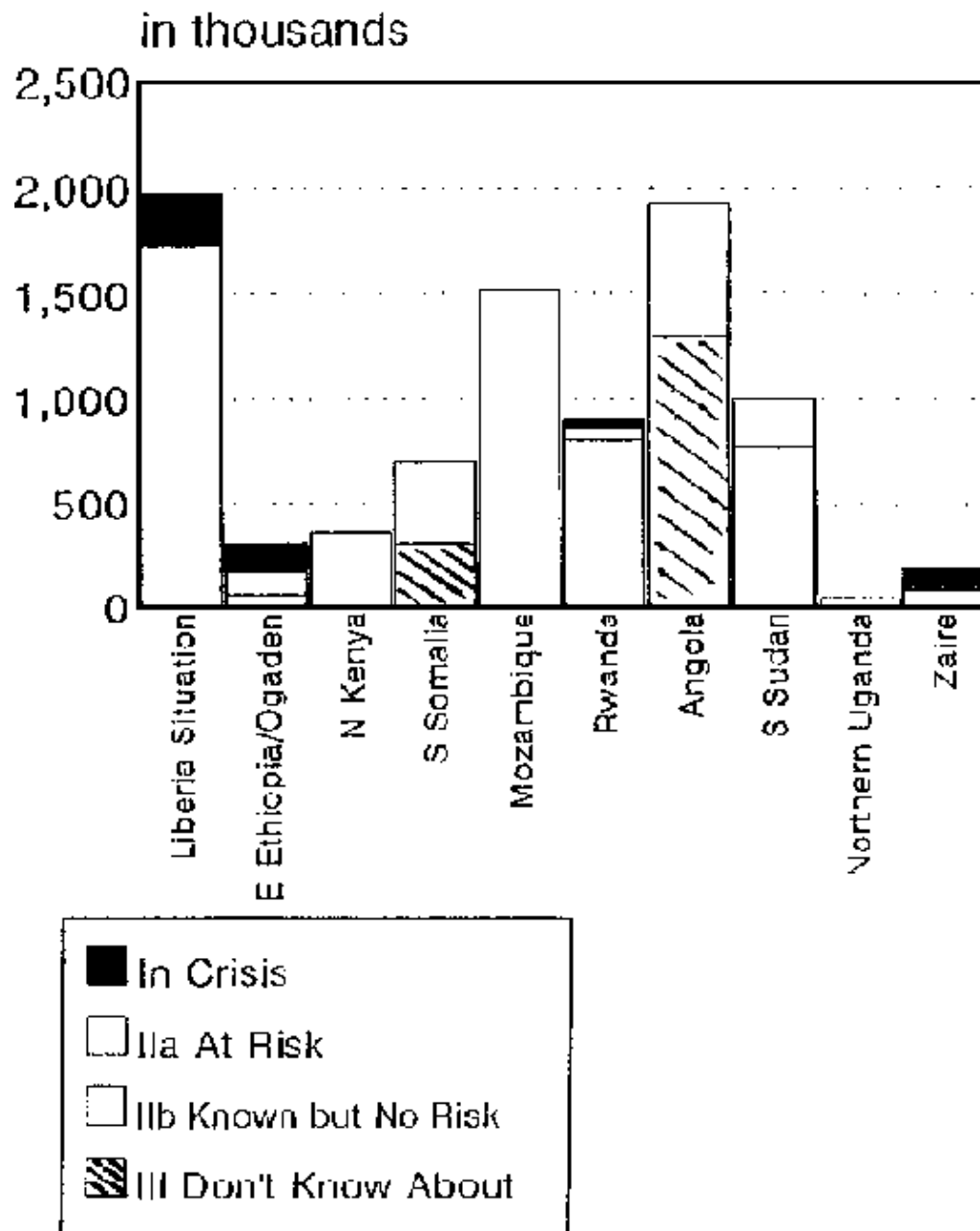
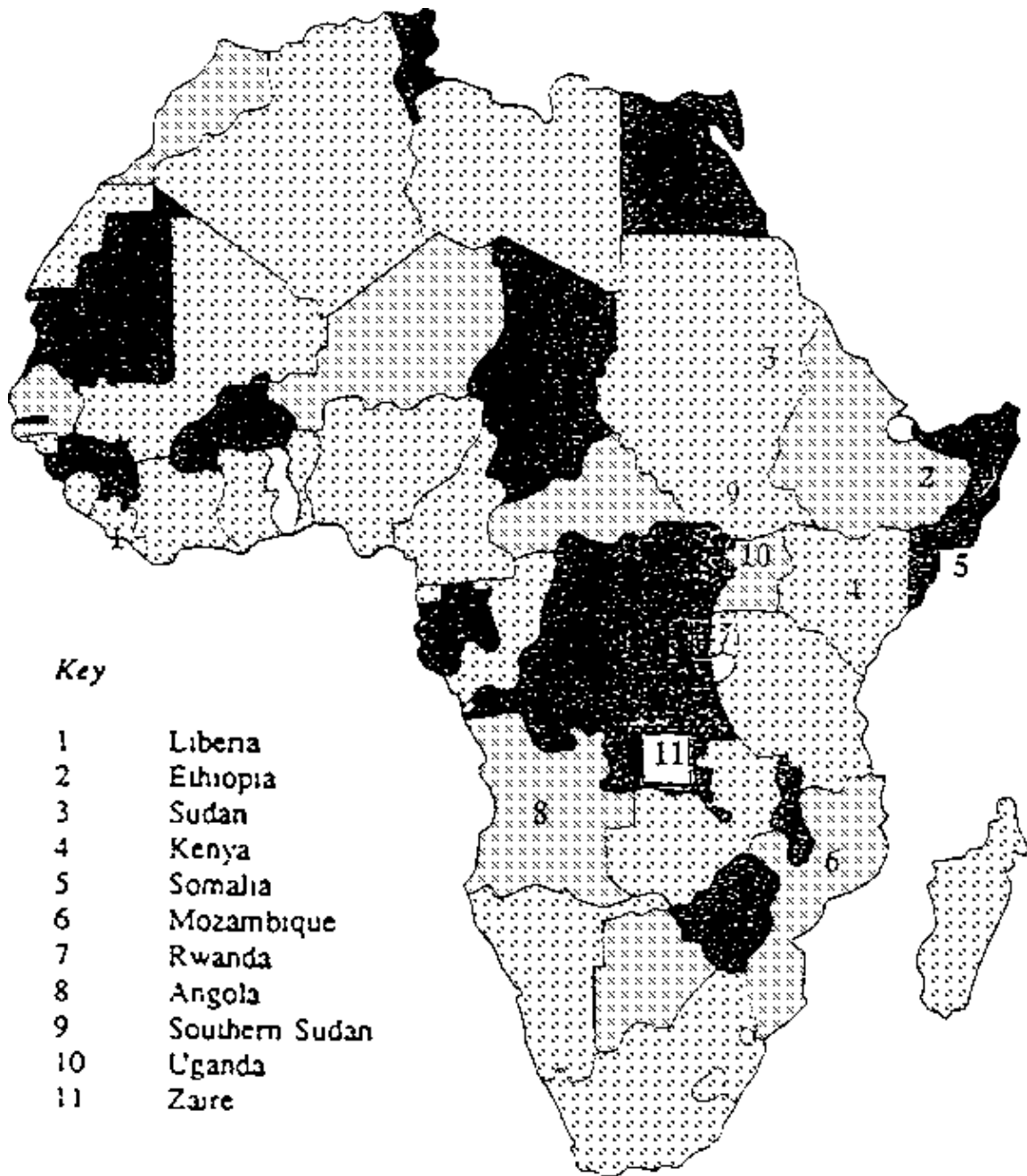


Figure 1 REFUGEE AND DISPLACED POPULATIONS Selected Areas

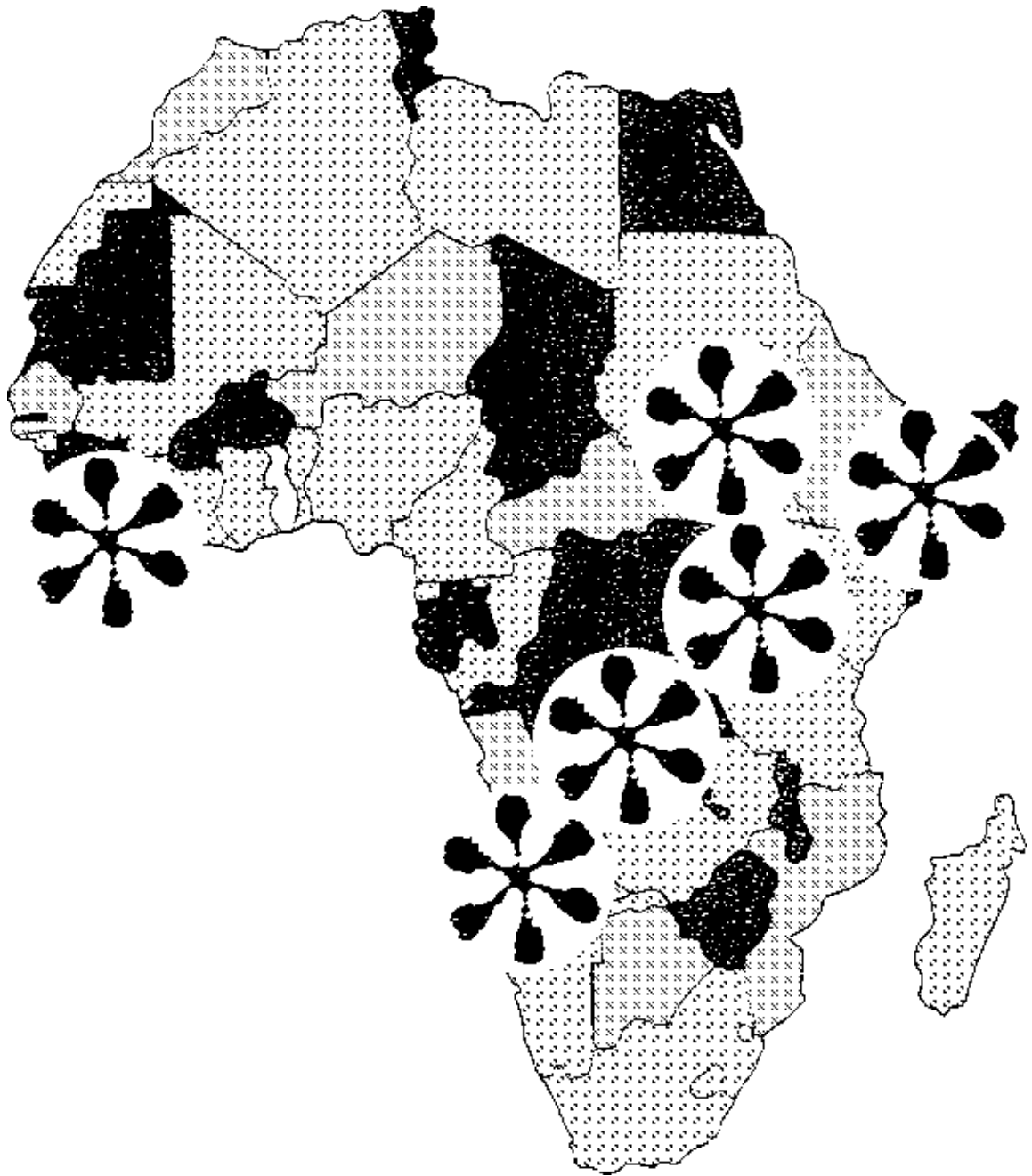
MAPS



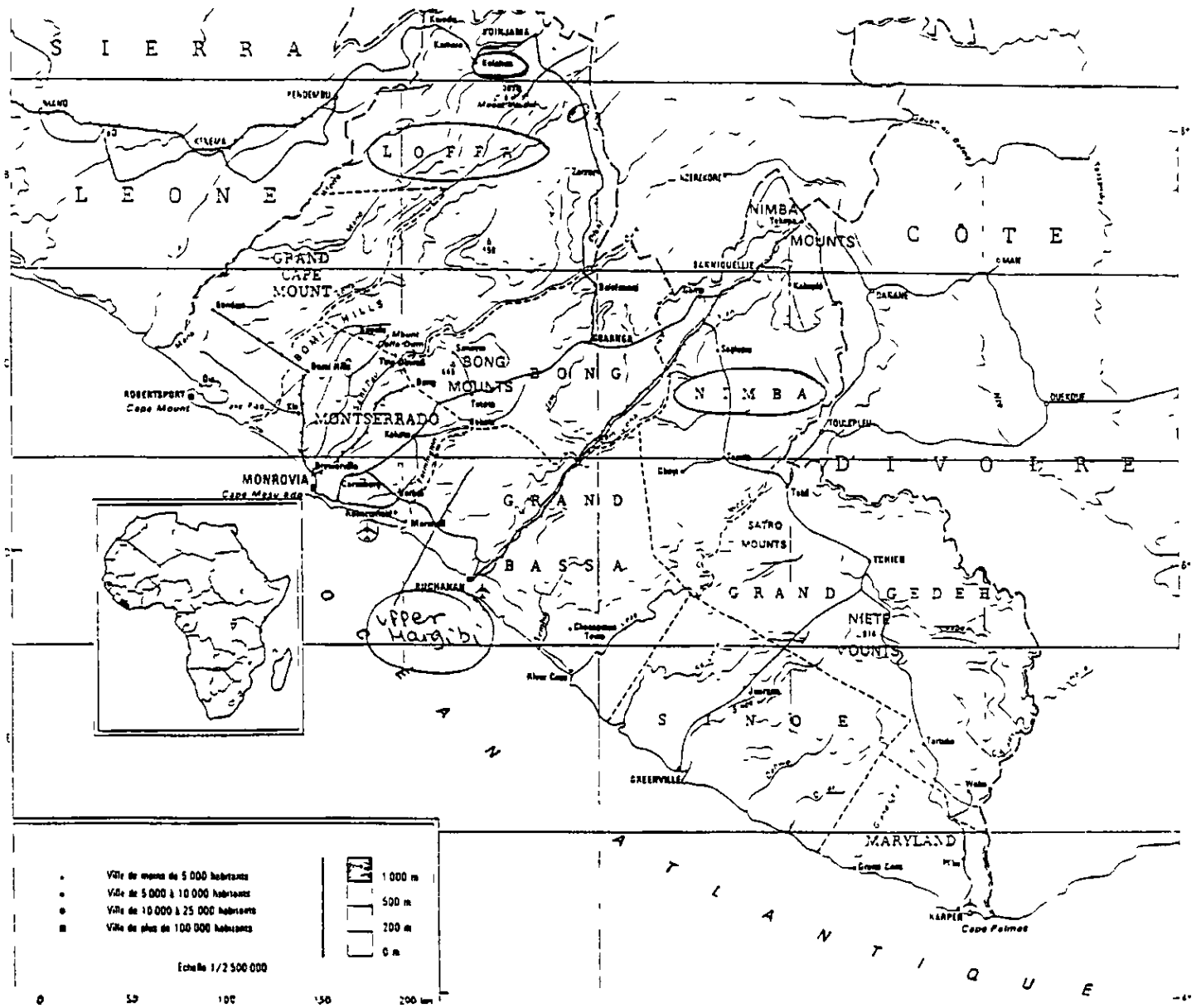
Key

- 1 Libena
- 2 Ethiopia
- 3 Sudan
- 4 Kenya
- 5 Somalia
- 6 Mozambique
- 7 Rwanda
- 8 Angola
- 9 Southern Sudan
- 10 Uganda
- 11 Zaire

MAP A Situational Map



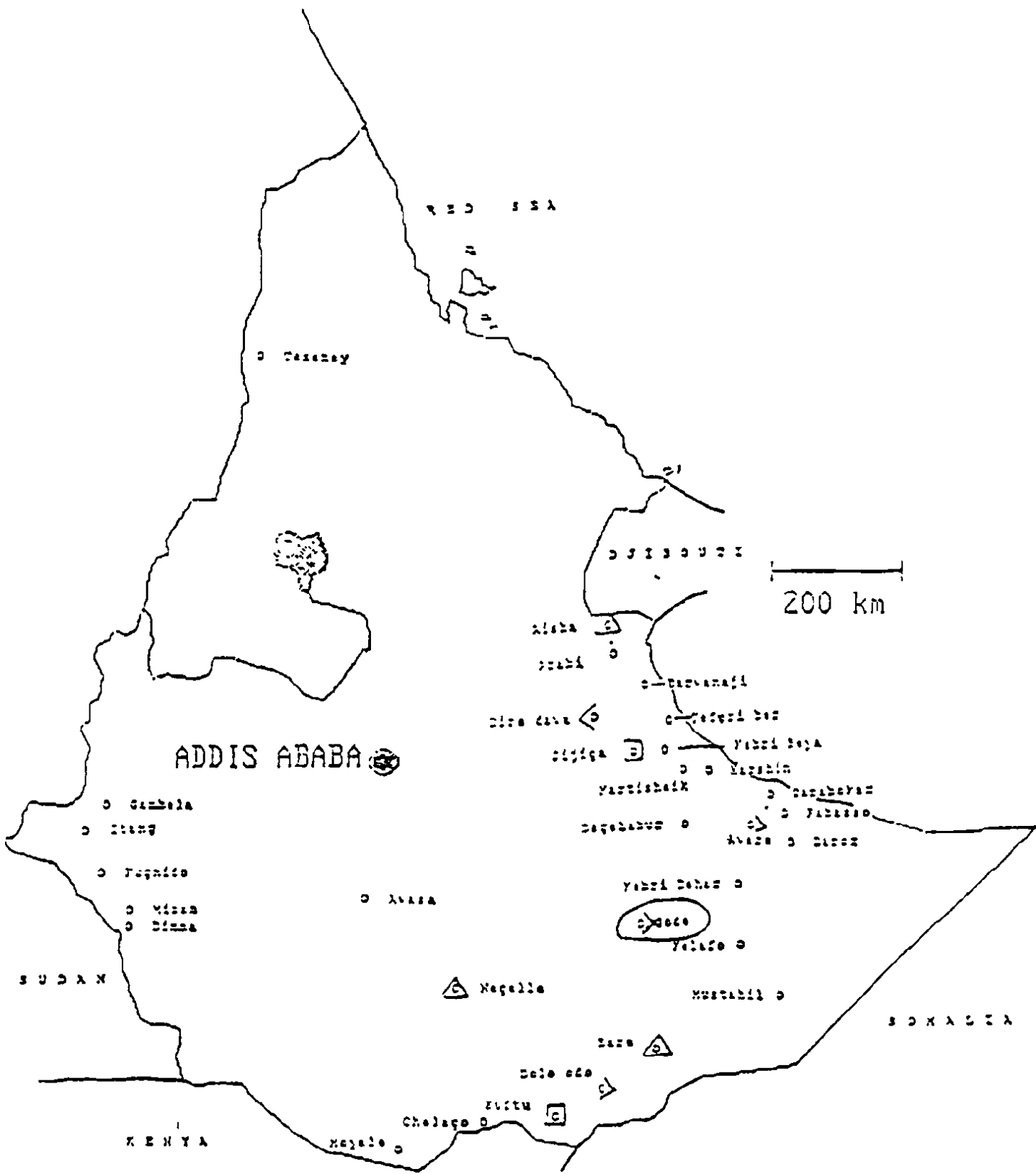
MAP B Location of Populations in Table 1



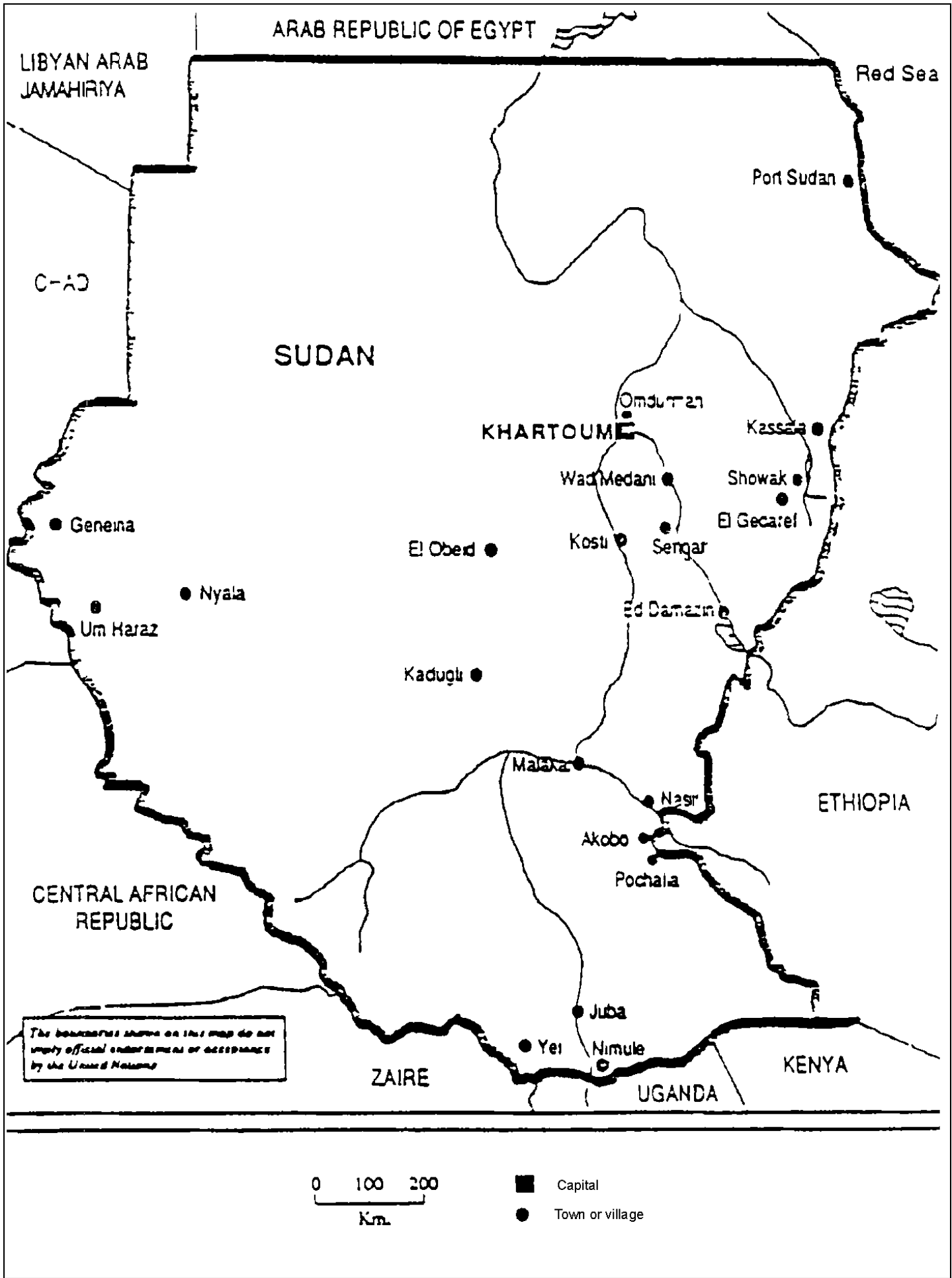
MAP 1 Liberia

POPULATION

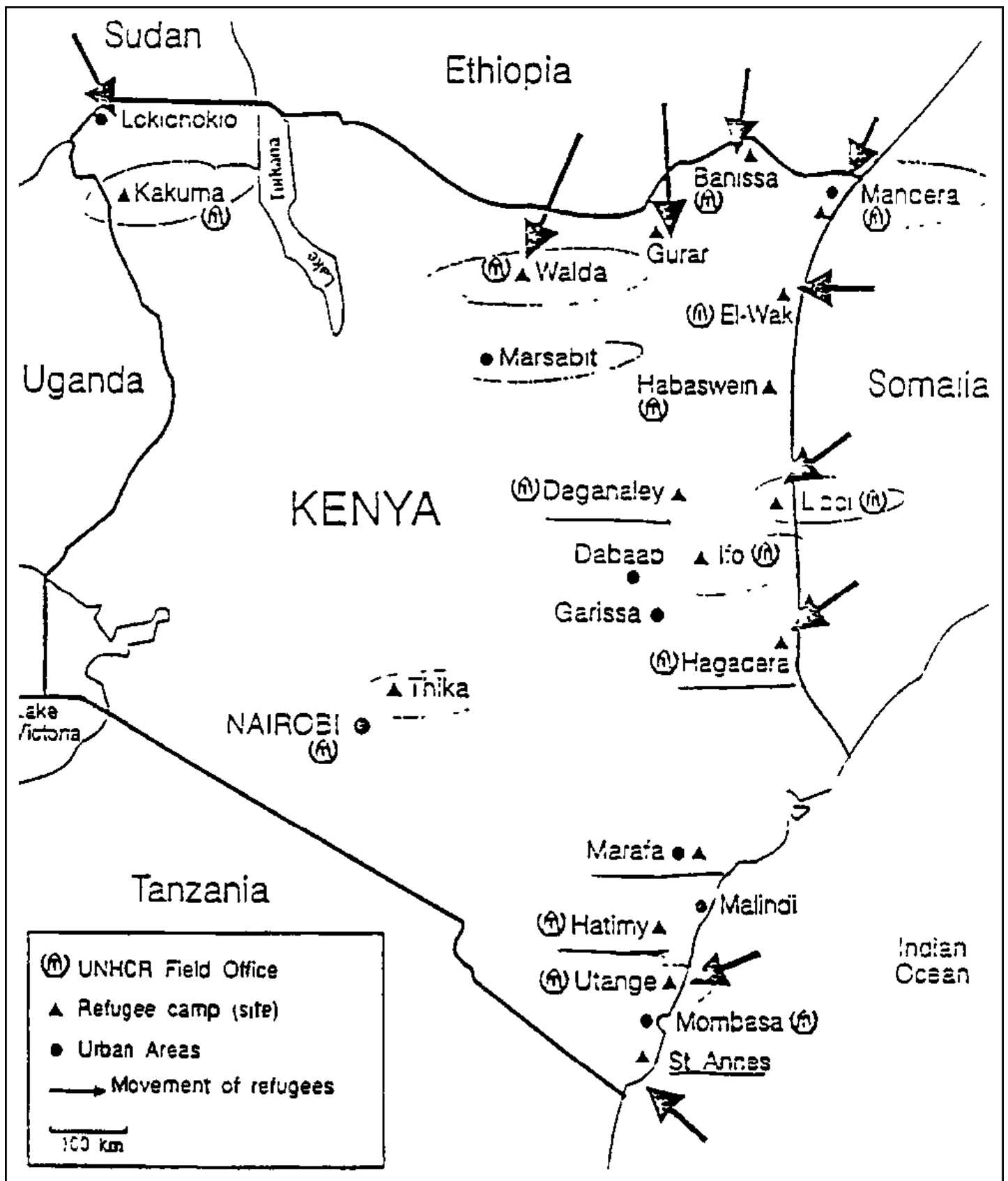
- < 10.000 ◁
- 10.000-20.000 ▲
- 20.000-40.000 ◻
- > 40.000 ▷



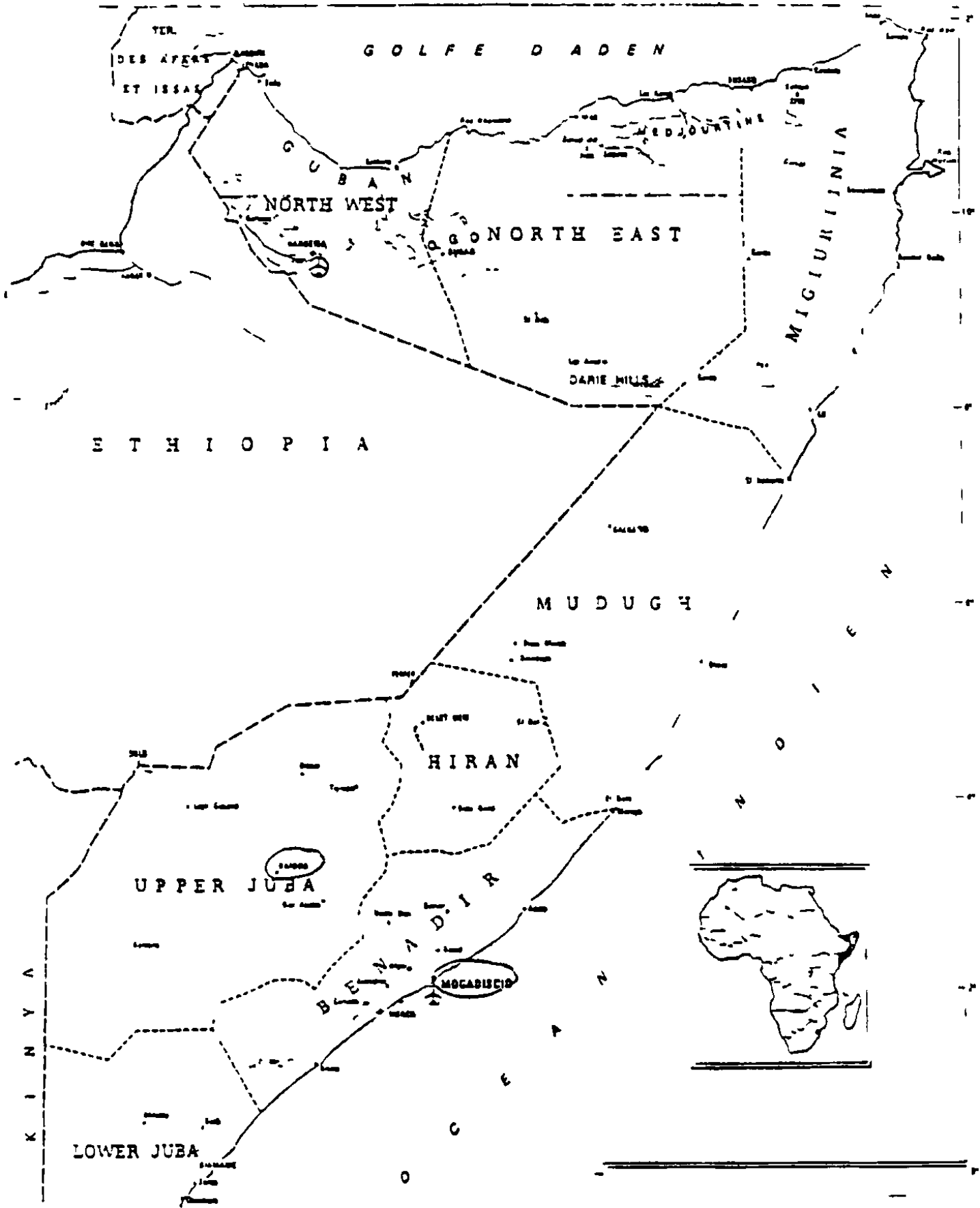
MAP 2 Ethiopia



MAP 3 Sudan

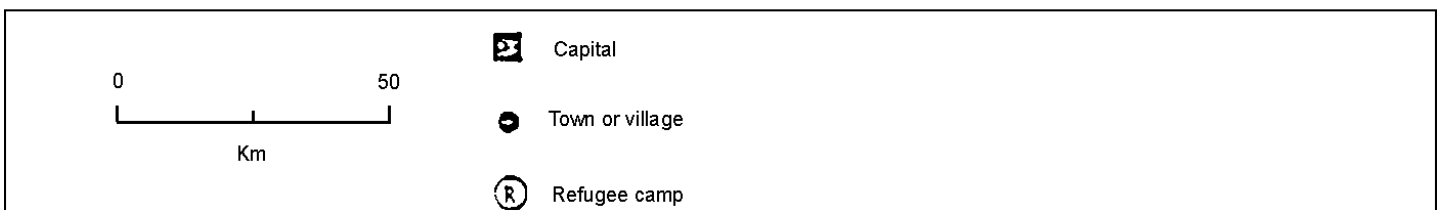
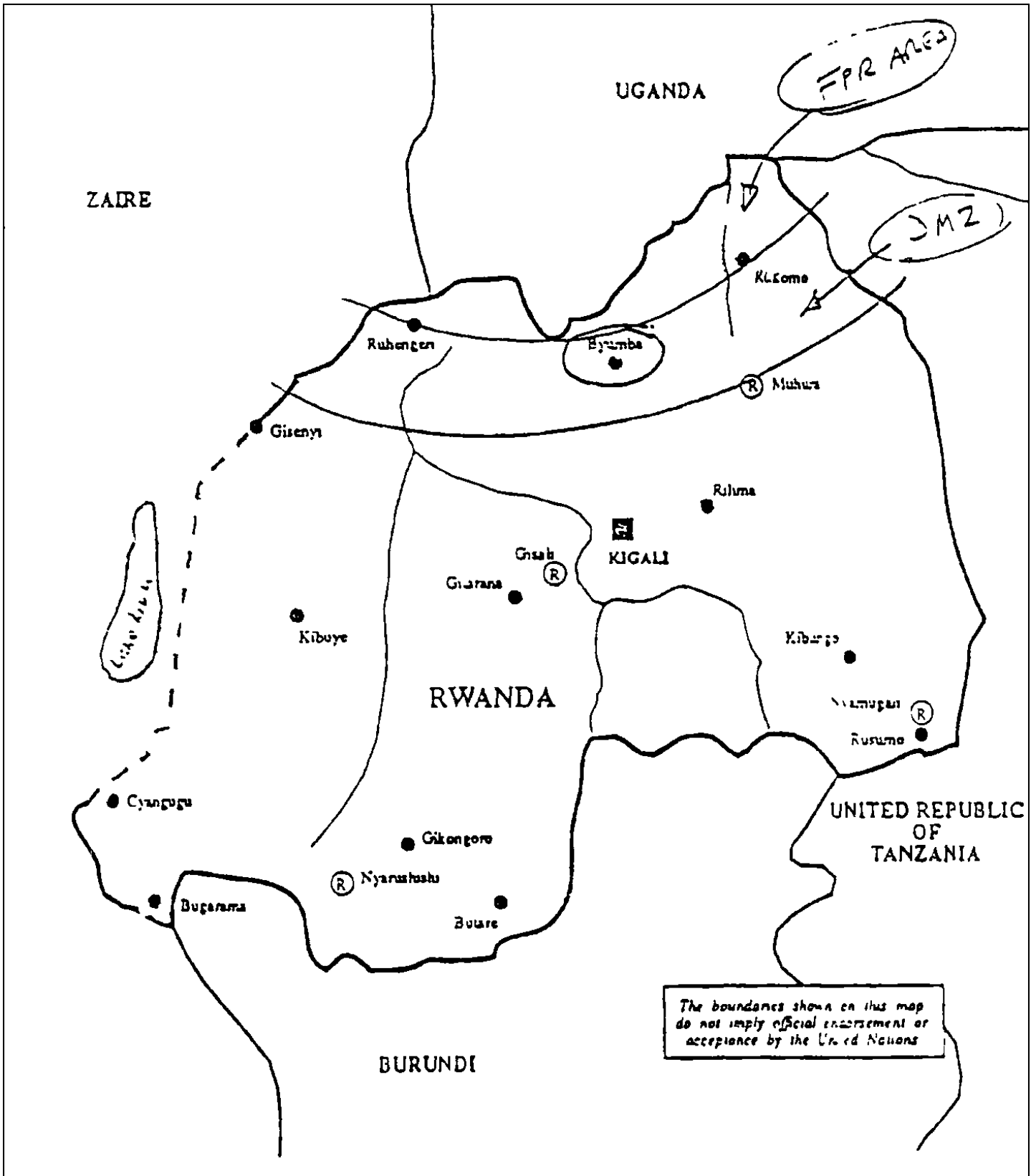


MAP 4 Kenya

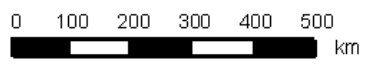
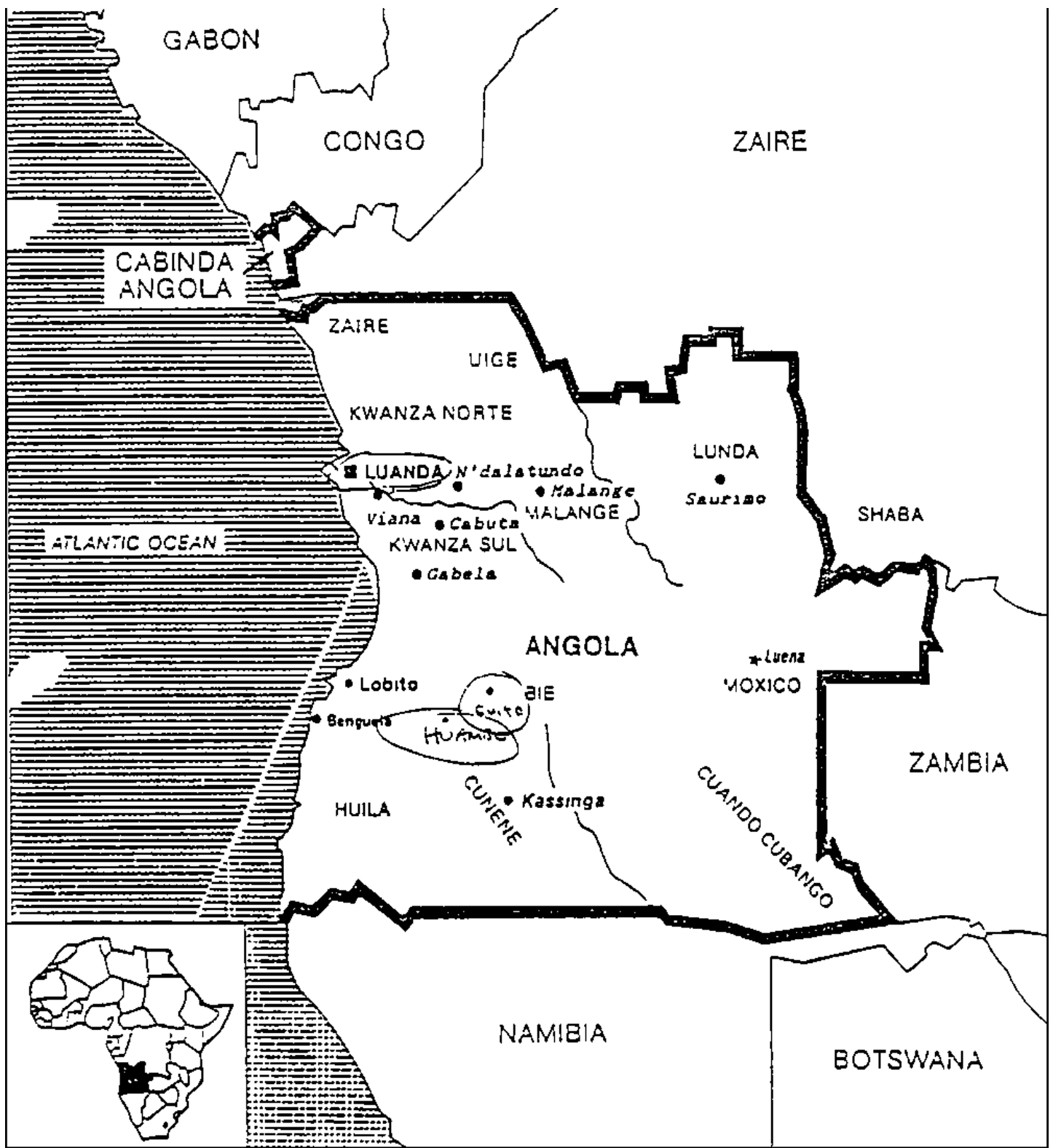


MAP 5 Somalia

MAP 6 Mozambique

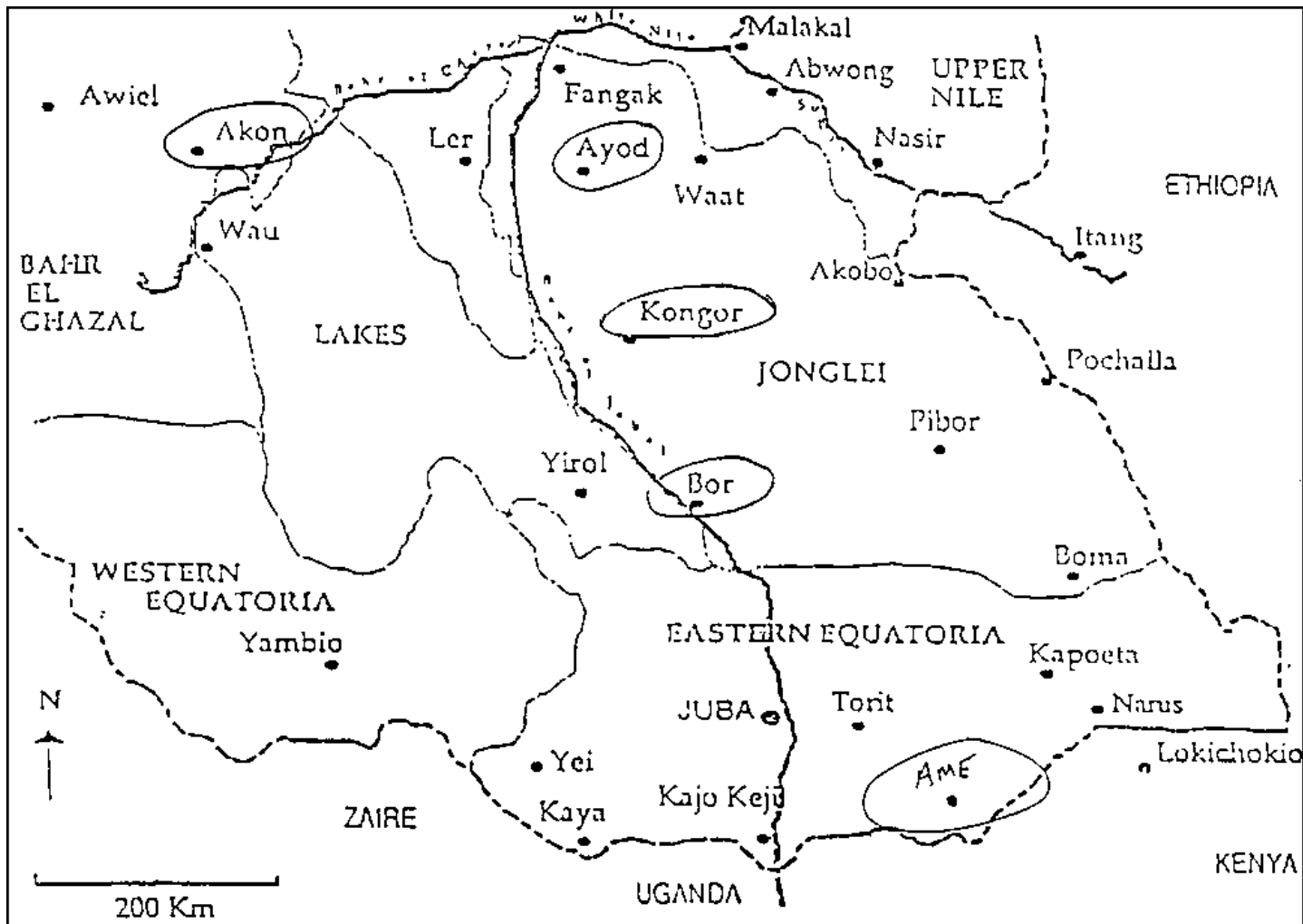


MAP 7 Rwanda

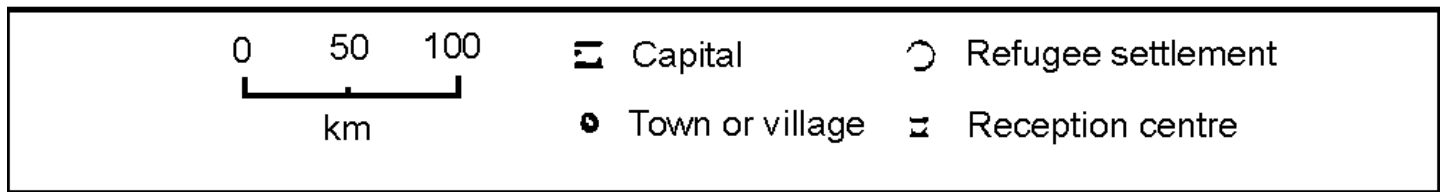
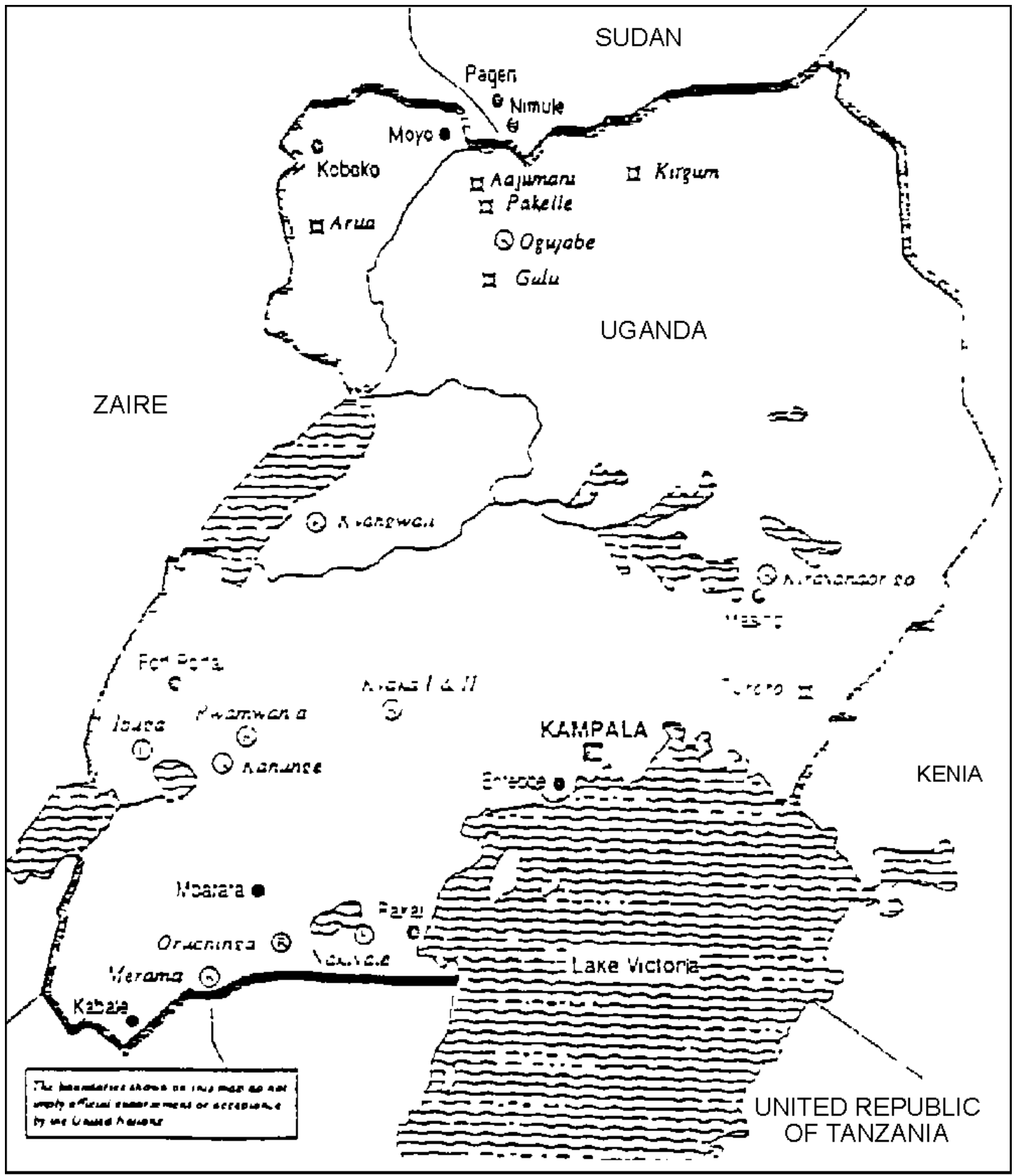


- Capital
- Town or village
- ★ Returnees

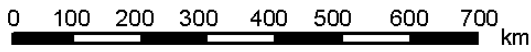
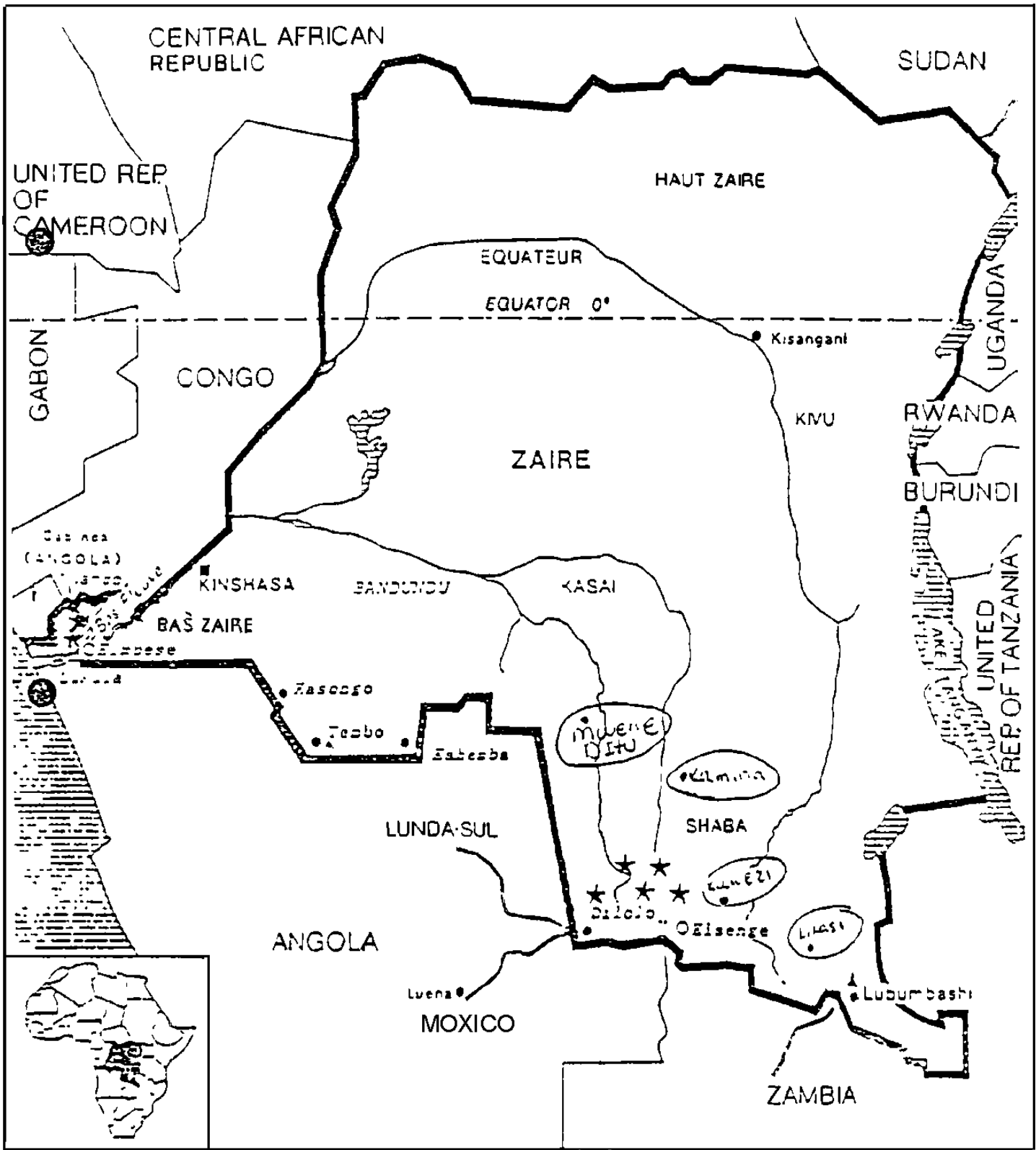
MAP 8 Angola



MAP 9 Southern Sudan



MAP 10 Uganda



- Capital
- Town or village
- ▲ Sub-office
- Field Office
- Reception centre
- ★ Refugee settlement
- ▨ Region of refugee influx

MAP 11 Zaire

