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**1991-92 Needs Assessment for SPLA-Held Southern Sudan**

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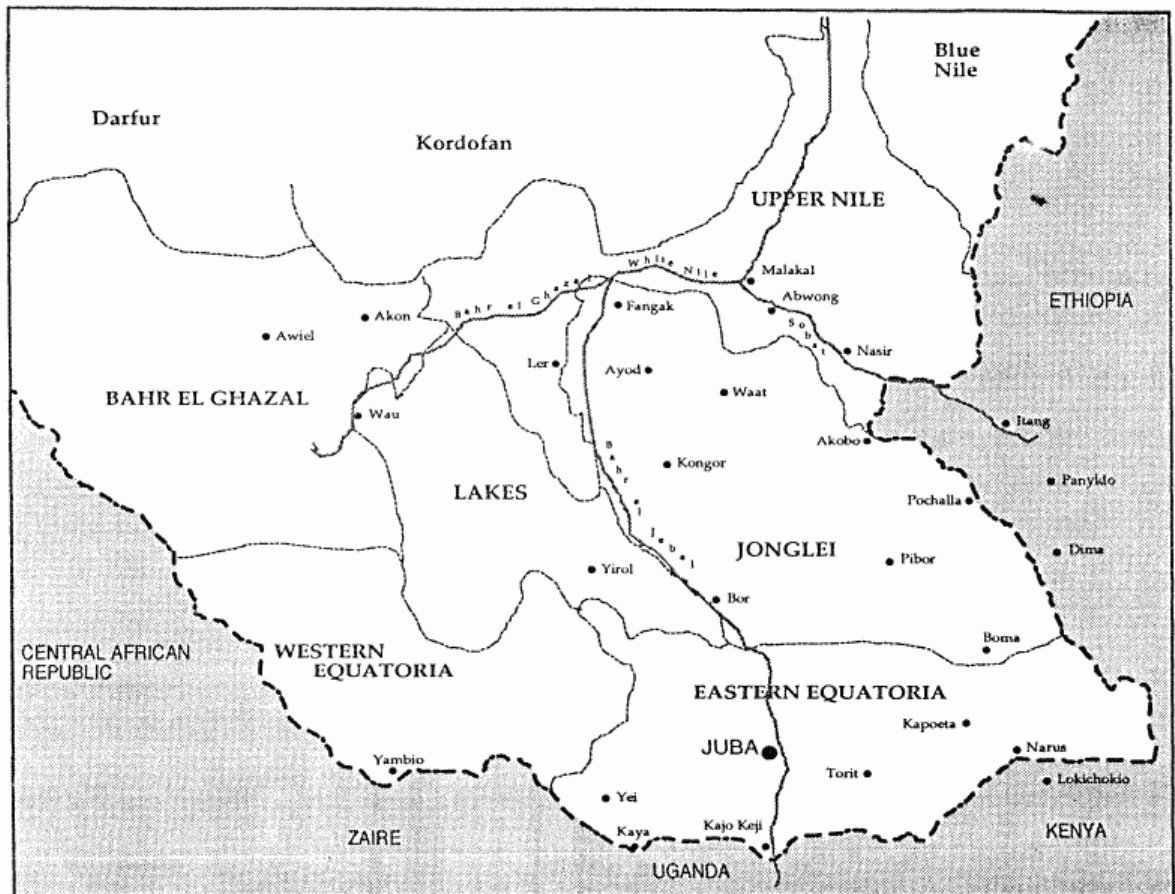
UNICEF OPERATION LIFELINE SUDAN  
SOUTHERN SECTOR

1991/92 NEEDS ASSESSMENT  
FOR SPLA-HELD SOUTHERN SUDAN

UNICEF Notes for Presentation to  
the SEPHA Preparatory Mission  
for Assistance to  
the Horn of Africa - 1992



**SOUTHERN  
SUDAN**



## OPERATION LIFELINE SUDAN - SOUTHERN SECTOR

### 1991/1992 ASSESSMENT

#### UNICEF NOTES FOR SEPHA NEEDS ASSESSMENT MISSION

## 1. EXECUTIVE SUMMARY

The main emergency facing the southern Sudan at the end of 1991 is the dramatic increase of displaced persons fleeing from war or natural disasters. Large areas are suffering from severe to acute food shortage due to extensive crop and livestock loss. The effects of the civil war have been to destroy or seriously inhibit the mechanisms of trade, traditional exchange networks and basic services that enabled the population to cope with deficit in food supply and non-food survival items. Almost all the current problems are focused in areas of southern Sudan that have been little assisted by relief services due to their remote nature and the difficulty of securing agreements for humanitarian access.

As such the primary recommendation for action by the international community in 1992 is continuous access and consolidated assistance to Upper Nile, Jonglei, Bahr el Ghazal, Lakes and Western Equatoria. Displaced or otherwise affected populations need to be enabled to return home or at least spread out to find land and security so that as many as possible can gain self sufficiency in the shortest possible time. This means providing relief and support services across a wide area. Food relief will be required for both long and short term assistance. Non-food relief requirements are agricultural tools and seeds, fishing equipment, veterinary inputs, life-saving drugs and vaccines and water supply. To reduce the chronic vulnerability of the populations in southern Sudan to their endemic state of emergency, basic service requirements are fundamental structural support in all sectors, primary health care, education and water supply.

## 2. BACKGROUND

Operation Lifeline Sudan was launched in April 1989 in response to the disaster of 1988 in which 250,000 civilians are believed to have died as a result of famine caused by civil conflict. Also during that year thousands of people were displaced from their homes and large numbers arrived at refugee camps in Ethiopia. The operation set historic precedents in the delivery of humanitarian relief aid based on principles of provision of emergency assistance to civilians in need in any location, however relief has been inconsistent due to largely political constraints, insecurity has once again worsened and the crisis continues.

### 2.1 Insecurity

#### 2.1.1 The Civil War

- In March 1991 significant areas of Western Equatoria were taken by the SPLA resulting in displacement of civilian populations, however the area has already begun to settle down and appears to be recovering well.

- There is continued insecurity around the garrison towns of Juba, Rumbek, Wau, Malakal etc. and militia activities in Fangak and Mayom whose main effect on the surrounding SPLA-held countryside has been to restrict access for essential trade and for the homecoming of displaced persons.

- Improvement in security was reported in northern Bahr el Ghazal where a peace agreement with the government-supported Messeriya militia led to a cessation of the violence and raiding in the area south of the Kordofan boundary.

- During the whole of 1991 the rural area around Kapoeta has been virtually inaccessible to outsiders due to fighting between the SPLA and the government-supported Toposa militia. Road links have also suffered during certain periods. Peace agreements reached during the year were largely unsuccessful, but it may be that the latest of end-November will be effective.

- Bombing by government has continued in virtually every location within the SPLA-held south with deaths and casualties reported from many sites and consequent temporary dispersal of population.

Despite all this insecurity, large areas remained essentially peaceful and potentially productive until the dramatic effects of external insecurity and internal factionalism.

### 2.1.2 External Insecurity

In May/June 1991 the fall of the Mengistu Government resulted in severe insecurity in western Ethiopia and closure of the three large Sudanese refugee camps at Itang, Funyido and Dima. Some 285,000 southern Sudanese who had sought refuge in these camps from war, food scarcity and disease were forced to flee back into Sudan. The ex-population of Fugnido, some 100,000 are almost all in Pochalla, being assisted by ICRC. The ex-population of Itang, c.150,000 are located along the Sobat and Pibor rivers (c. 90,000 around the town of Nasir) assisted by OLS, UNHCR and NGOs. The ex-population of Dima (c.35,000) are divided between Pakok (10,000) assisted intermittently by any agency that is given permission (OLS/ICRC/NGOs) and the rural areas of Kapoeta/Chukudum. Many of the returnees come from areas inaccessible due to the civil war, but a further proportion come from areas that had been peaceful until affected by the devastation resulting from internal factionalism within the SPLA.

### 2.1.3 Internal Factionalism

In August 1991 a group of SPLA commanders at Nasir initiated what amounted to an internal coup against John Garang, leader of the SPLA. This resulted in factional fighting in Akobo, Ayod, Ler, Kongor and Bor. The fighting in Kongor and Bor has been the most serious resulting in huge displacement and loss of life, food and property:

*"In our joint opinion the whole population of the area between Mongalla and Kongor is seriously affected by conflict. There is not one village we have been to whose grain stores have not been looted, cattle camps have also been raided and the only cows have been shot. All villages are empty, the population having scattered into the bush. People are seriously traumatized and appear to be wandering around looking for food and relatives in a confused state. There are also many bodies of the civilians who have been shot littering the road side..."*

*Food and non-food requirements are vast and to efficiently implement the programme we have real challenge ahead, in particular in how to deal with a whole pastoral community who have lost their cattle..."*

UN/NGO Team, Bor, 2 December 1991

The fighting also interfered to a critical extent with the inter-tribal exchange mechanisms of those in surrounding areas not directly affected by fighting but seriously affected by flood-induced loss of crops. It created a front line which stretched east-west across southern Sudan effectively preventing any overland relief movement.

The hospitals in Western Upper Nile which are currently treating over 2,000 patients suffering from the fatal disease visceral Leishmaniasis are not being supplied with drugs due to the fighting and will have to cease treatment if not resupplied.

Through the mediation of the New Sudan Council of Churches backed by energetic advocacy from humanitarian agencies, notably UNICEF, the two factions declared a cease-fire on 28 November.

## **2.2 Environment**

1991 has been a year of consistent rainfall. Rains started early in most locations and continued late (April - October). Although this is a blessing in the well drained areas in the far south, it has resulted in serious flooding in much of the low-lying clay plains that border the Sudd, notably Bor, Kongor and Waat where floods started in May and have still to recede. Crops in these three counties were completely washed out. Ler and Sobat were able to plant early and reap a harvest before floods rose in August. Ayod, Bahr el Ghazal and Lakes have not been so extensively flooded and have reaped harvests although pest infestation and cattle disease has been quite serious in many areas on the periphery of the floods. Such environmentally-induced difficulties are not unusual in southern Sudan and there exist complex traditional coping mechanisms to mitigate negative effects. These include a shifting emphasis on a diversity of food sources including hunting, fishing and collection of wild food, kinship sharing and loan mechanisms and long distance grain/livestock trade. However the destruction of trade networks including complete absence of any internal transport other than aid vehicles and the interference of extensive insecurity with population movement patterns and inter-tribal exchange/loan systems has all but broken the normal survival response to the vagaries of the environment.

## **2.3 Infrastructure**

Infrastructure is virtually non-existent. Roads are in very poor shape, undrained and impassable for much of the year. Only Equatoria can boast all weather access. Water, health and education facilities are also mostly concentrated in Equatoria.

## **2.4 Economy**

Whilst some improvement in the general economic climate had taken place during 1991 in the form of a relaxation of trade restrictions and the development of small markets in many areas, the economy has come under renewed pressure as a result of both the closure of the Ethiopian camps and the internal factional fighting. Itang camp was a focal point for a trading system that included almost all of Upper Nile and large parts of Jonglei. It was Itang that supplied the grain for trade with Nuer cattle that tided people through the poor grain harvests of recent years. With the insecurity within western Ethiopia and the consequent loss of a major market, the people of the region will have to look elsewhere for trade. However the factional fighting has also seriously inhibited trading patterns since people have been prevented from moving between areas claimed by the Torit faction and those claimed by the Nasir faction. Trade on the west bank of the Nile is beginning to pick up and will be a major factor in assisting people to survive crop losses this year.

## 2.5 Relief Interventions

Significant efforts have been made since 1988/89 to assist in the ongoing emergency. Apart from food relief, considerable quantities essential drugs, water supply parts, agricultural inputs etc. have been supplied along with basic training in critical areas such as health. Many lives have been saved amongst the destitute returnees who came from Ethiopia in June 1991, amongst the local populations who suffered harvest failure in 1990, amongst the population of western Upper Nile suffering from Kala azar. Where relief inputs have been uninterrupted by the machinations of external or internal politics the results of the integrated relief and vulnerability reduction programme have been quite successful: Torit county is a model of self-reliance at least at the moment. However lives have also been lost: many locations have suffered long flight bans and no improvement in local coping capacity has really been achieved. Many of the returnees who came to Nasir have suffered seriously from repeated interruptions of needed food and non-food aid (an alarming death rate of 16/1,000/month in one site in October 1991). Other areas have been once more engulfed by conflict and as a result have lost everything once again: except for the training provided to local health workers nothing else from the international relief effort will remain.

## 3. AFFECTED POPULATIONS

### 3.1 Area Overviews

The areas requiring the greatest non-food relief inputs can be categorised as follows:

3.1.1	Refugees who returned from the Ethiopian refugee camps between May and July too late to plant sufficient crops, who are living in areas with little or no food reserves, have sold most of their possessions and are now almost entirely dependent on relief aid. This group includes 14,500 unaccompanied children:  Sobat/Pibor river basin (ex-Itang and Funyido: 150,000) Pochalla (under care of ICRC: 100,000) Pakok/E.Equatoria (ex-Dima: 35,000)  285,000
3.1.2	Persons displaced by floods and fighting from Kongor County <sup>3</sup> :  100,000
3.1.3	Persons acutely affected by fighting and extensive floods: loss of homes, goods, crops and livestock in Bor County <sup>4</sup> :  120,000

<sup>1</sup> Figures based on registration

<sup>2</sup> Of which 10,000 are in Pakok

<sup>3</sup> Based on calculated population of Kongor County and registration at Malek up to 11 Nov 1991

<sup>4</sup> Population figures for Bor, Kongor and Waat Counties were calculated from the 1983 census, multiplied by 2.5% per annum (growth rate for Sudan) less known figures for refugees/returnees who have not yet arrived in their homes.

3.1.4	Persons affected by severe food shortage through loss of all crops due to flood and pests, with access to livestock and fish, but lack of fishing equipment or trading possibilities: Waat County:	108,000
3.1.5	Persons infected by or at risk of infection by visceral leishmaniasis currently epidemic in Western Upper Nile and White Nile:	200,000
3.1.6	Persons affected by food shortage through partial loss of grain crop in Yirol County:	70,000
3.1.7	An unconfirmed number of returnees from Zaire in Western Equatoria; areas with fair food supply and critical health problems:	70,000
3.1.8	Refugees from Western Equatoria still in CAR, Zaire and Uganda, some of whom might return this year:	70,000
3.1.9	<i>An as yet unconfirmed number of displaced persons in Bahr el Ghazal reported by SRRA (the assessment team did not have clearance to fly to Akon, therefore it did not have the opportunity to verify these numbers produced by local authorities), which are said to include the following:</i>  <i>Moving from N. Sudan to S. Sudan (113,000)</i> <i>Internal war displaced (66,000)</i> <i>Flood/drought/locust affected (580,000)</i>	
		759,000

In addition to these known figures, the current fighting within the southern Sudan will lead to further internal displacement. As yet there is no way to predict the number of persons who will be so affected.

**Breakdown:**

Displaced populations:	370,500
Displaced unaccompanied children	14,500
Affected local populations:	568,000
Refugees likely to return	70,000
<b>TOTAL ASSESSED</b>	<b>1,023,000</b>
<i>(Unconfirmed, unassessed)</i>	<i>(759,000)</i>
<i>(Total including unconfirmed)</i>	<i>(1,782,000)</i>



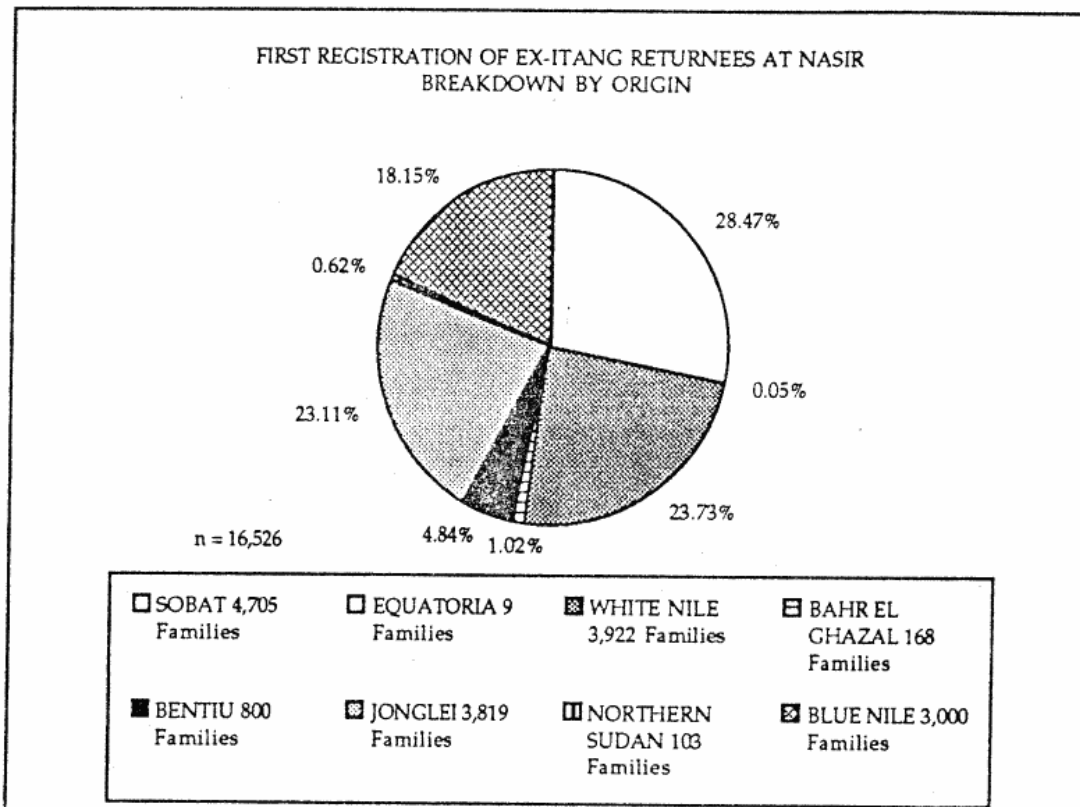
### 3.2 Future Prognosis

The situation within southern Sudan demands rapid and comprehensive attention. Returnees and most notably the unaccompanied children amongst them will need to be assisted to normalise their situation and promote their own self-sufficiency ideally through reunification with their home areas and kin. All groups listed above will need relief and their future will to a large extent depend on the response of the international community as well as the path of conflict in the region. Although it is difficult to predict anything in the continuously fluid state of war and chronic vulnerability in southern Sudan the following may perhaps be scenarios for 1992:

#### 3.2.1 Returnees

A proportion of the returnees along the Sobat are likely to wish to move homewards during the dry season, if the factional fighting ceases. Although a large number come from areas such as White Nile and Blue Nile which are on the front line of the SPLA-GOS war they have expressed their wish to move away from Nasir and towards their home areas. They will carry with them very limited supplies and will depend a great deal on relief from both their kin and from the international community.

In Pochalla 60 - 70% wish to remain in the area, moving out to locations with better water supply. However, if Bor and Kongor become peaceful and services are re-established, significant numbers may decide to return to their home areas as around 60% of the 100,000 at Pochalla originate from Bor area.



### 3.2.2 Unaccompanied Minors

Those of the 14,500 unaccompanied minors still in Nasir, Pakok and Pochalla that can go back to their home areas and be reunited with parents, relatives or guardians will be assisted to do so. Meanwhile efforts will continue to protect, feed and look after the children in their current locations. A number have already made it back home or are on the way by themselves.

### 3.2.3 Kongor/Bor Displaced

Until the two SPLA factions cease fighting, the prognosis for the Kongor and Bor populations remains very unclear and extremely worrying. It is hoped that peace will prevail and relief, already initiated in areas south of Bor be allowed to increase and continue, however if trouble does not stop the 220,000 affected may even migrate as far as Uganda in search of safety and assistance. In addition further areas will become insecure and further displacement can be expected.

### 3.2.4 Waat and Yirol

The people of Waat County, if assisted with some basic relief, will survive. However, without it they may also be joining the ranks of the displaced, perhaps moving to Nasir in search of assistance. Those in Yirol will suffer hardship this year and may be selling significant numbers of livestock.

### 3.2.5 Kala Azar

Without continuation of the Kala azar programme and related primary health care services a large proportion of the population of western Upper Nile may die of the disease. A recent survey showed that only 18% of those infected actually recovered without treatment. The prognosis for surrounding areas is not necessarily the same but should be investigated.

## 3.3 Most Vulnerable Groups

Within each area the degree to which the fighting, displacement and crop loss affect individual survival varies. However, the close-knit structure of society in southern Sudan is such that generally the stress is spread as widely as possible between the members of each ethnic group and sometimes intra-group as well.

- The most critically vulnerable group are the 14,500 unaccompanied children, who are completely without the usual means of support. A nutrition survey in August found 60% moderate malnourishment<sup>5</sup> amongst the unaccompanied children at Nasir and 66% amongst those at Pakok in November.
- The people of Bor and Kongor have lost everything in the floods and fighting and have few neighbours to turn to for assistance.
- On the Sobat river, over two thirds of the returnees from Ethiopia (c. 110,000) are relying primarily on assistance from the local population, with only 40,000 actually in "displaced centres". The international agencies are providing assistance to both the 40,000 visible returnees and the 110,000 less visible ones. Local support mechanisms have been placed under considerable pressure during the years of war so the hosting by the local population estimated at 200,000 (or less) of a returnee group of some 110,000 is significant: ie every household of 8 has an average of 4 returnees to support.

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<sup>5</sup> Body Mass Index < 14

- Whilst women and children are essentially the most vulnerable amongst the affected, in their home areas they are part of a complex support system which includes milk rights for children.
- Of the 40,000 displaced returnees around Nasir, two groups are especially vulnerable: the returnees at Nordeng village who come from Blue Nile Province and the Dinka returnees at Kot village both of whom have no links whatsoever with the Sobat and consequently receive no assistance from the local community. The state of malnourishment at Nordeng and Kot is a measure of the failure of the relief effort to cope even after several months<sup>6</sup>:

Site	# measured	% <70% wt/ht (Severe)	% 70-79% wt/ht (Moderate)	Mean
Nordeng	428	3.9%	21.9%	86.9
Kot	121	2.5%	25.6%	85.6
Average (all Nasir sites)	902	3.4%	17.9%	87.7
Baseline <sup>7</sup>	437	0%	11%	89.7

- In Pochalla the returnees are not related to the local ethnic group (the Anuak) and are 100% reliant on assistance.
- All people living in the *Balanites aegyptiaca*-*Acacia seyal* forest lands of western Upper Nile and surrounding areas are vulnerable to Kala azar. Studies indicate that women and men aged between 10 and 30 are most at risk, with degree of stress having a bearing on transmission.

#### 4. NUTRITION, MORBIDITY AND MORTALITY

##### 4.1 Surveillance Data

A nutrition survey conducted in three locations in November 1991 found the following<sup>8</sup>:

Site	# measured	% < 120mm MUAC (Severe)	% 120-130mm MUAC (Moderate) <sup>9</sup>
Bor (Recent harvest failure and recent severe insecurity)	182	8.0%	21.0%
Ayod (Some harvest and no insecurity)	117	1.7%	12.8%
Pakok (Returnees from Ethiopia)	138	1.4%	10.7%

<sup>6</sup> UNHCR/UNICEF nutrition assessment, Sept 1991

<sup>7</sup> IRC nutrition survey, Oct 1989

<sup>8</sup> Epicentre/WFP nutrition assessment, Nov 1991

<sup>9</sup> The study used < 120mm for severe malnourishment and 120 - 130mm for moderate to gain better specificity.

The same survey also collected mortality data:

Site	# households	Under five mortality <sup>10</sup>	Probable Cause
Bor	157	7.5	Health - flooding (displacement recent)
Ayod	81	15.4	Health - poor water supply (diarrhea)
Pakok	134	14.2	Malnutrition and sanitation (diarrhea)

Morbidity data from all locations underline the high prevalence of diarrheal disease and malaria both amongst displaced and local populations. Deaths from preventable diarrheal disease outweigh almost all other causes especially in the crowded and unsanitary conditions prevalent amongst the displaced. In Nasir, from June 1990 - April 1991 (local population) the following three most prevalent and serious diseases are reported:

Disease	% of caseload	% of reported deaths caused by each disease	% under five
Diarrheal	20%	31%	39%
Malaria	20%	20%	
Respiratory infection	7%	9%	

During one week in October 1991 amongst the Nordeng displaced the morbidity and mortality were as follows:

Disease	% of reported deaths caused by each disease	Approximate crude mortality rate <sup>11</sup>	% under five mortality
Diarrhea	75%	16	45.8%
Malaria	4%		
Respiratory	4%		

<sup>10</sup> per 1,000 per month, NB. in refugee situations a under-five mortality rate of 12 deaths/1,000 children/month is considered alarming

<sup>11</sup> per 1,000 per month NB in refugee situations a mortality rate of 6 deaths/1,000/month is considered alarming

## 4.2 Visceral Leishmaniasis - Kala Azar

The epidemic of visceral leishmaniasis (Kala azar) in western Upper Nile is causing unprecedented mortality. At the centre of the epidemic a death rate of 30 - 40% of the population was recorded in May 1990. Tens of thousands of people have died in the last four years and the rate of infection is increasing. An entomological survey found 10% of sand flies in one area to be carrying the parasite. The disease is known to be spreading into Kordofan and Bahr el Ghazal and is reported on the White Nile. Its progress has been assisted by significant population displacement. Treatment of 2,000 patients each month in Upper Nile has been interrupted by fighting.

## 4.3 Immunizable Diseases

Some serious immunisable disease outbreaks have been reported: polio in Ler, meningitis in Ler and Yirol and measles in Yirol and earlier in 1991 in Nasir.

## 4.3 Health Care

The provision of preventative and curative health care is precarious. In Bor, all inputs appear to have been lost and health workers dispersed as a result of the fighting. The same was noted at Waat and could also be the case in western Upper Nile. Basic primary health care units were functioning at 250 sites but many have recently closed due to the factional fighting and vast areas remain either completely unserved or have only one or two functioning units and very erratic supplies of inputs. Health worker training continues to provide the best base for rapid re-establishment of services and is given high priority by the relief agencies. Given the prevalence of preventable diseases and the continuous disruption of health services there is an increasing focus on the village-based services of the traditional birth attendant, the village health worker and the immunisation provider.

## 4.3 Clean Water and Sanitation

Clean water is available to no more than 10% of the population of SPLA southern Sudan. Sanitation is a major problem in the areas where displaced are congregated (Nasir, Pakok, Pochalla and Bor)

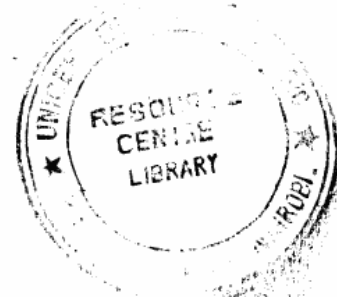
## 5. EMERGENCY NON-FOOD ASSISTANCE

To support a comprehensive programme of assistance for re-establishing self-sufficiency through attempting to normalise the situation of returnees, unaccompanied children and displaced, supply of fishing equipment, agricultural tools, seeds, essential drugs, clean water systems, shelter materials and supplementary foods, not to one concentrated area, but across broad zones will be critical to saving lives and to ensuring that populations are not clustered together in unsanitary and unproductive conditions. Continued support to revival of basic health and other services in all areas will assist in ensuring the spread of populations and the erosion of the chronic state of vulnerability.

### 5.1 Food Security

#### 5.1.1 Fishing

A large proportion of the affected populations are currently relying on a diet of fish and wild foods such as roots and nuts. Fish are being caught with spears and limited numbers of hooks and line. Supply of



fishing equipment will complement grain inputs and help to provide the needy with protein (hooks and line sizes as previously supplied):

Waat	13,500 hh <sup>12</sup>
Bor	27,500 hh
ex- Ethiopia returnees <sup>13</sup>	31,000 hh
All other districts <sup>14</sup>	128,000 hh
Total	200,000 hh

### 5.1.2 Agricultural Tools

All areas of southern Sudan are suffering a chronic shortage of agricultural tools for land clearance, preparation and weeding. This has significantly reduced potential production. Blacksmiths do exist but are unable to produce large numbers of long-lasting tools. Additional supplies are still needed complemented by assistance to blacksmiths. The returnees, other displaced and those who have suffered total crop failure need a full complement of tools. Others need one tool per household to boost food production.

ex-Ethiopia returnees	3 pcs x 35,000 hh	105,000 pcs
Bor	3 pcs x 27,500 hh	82,500 pcs
All other districts	1 pcs x 174,500 hh	120,000 pcs
Total		307,500 pcs

Since the local hoe is so various in shape and weight that it is recommended that large scale inputs focus on provision of sickles, pangas and axes and only a small proportion of hoes be provided which are specifically manufactured for the most needy areas.

### 5.1.3 Veterinary Drugs

Bor and Kongor counties are suffering significant cattle death. As many as 30% of cattle in the Bor cattle camps have died within the last three months, reportedly from Tripanosomiasis, Hemaorrhagic Septicaemia and Contagious Bovine Pleuropneumonia. Milk production is low and will decrease unless the progress of disease is reversed. Supplies of drugs to cope with this emergency should be provided. Rinderpest vaccination in all areas should also be stepped up. Approximately 2.5 million cattle accessible.

### 5.1.4 Seed

Local seed preservation has been shown to be given high priority by farmers in even the most extreme circumstances<sup>15</sup>. Seeds are present in all areas visited. However many will attempt to plant a final crop on land opened up by receding floods and will use their own reserves. People most acutely affected by loss of all belongings and stocks in the recent fighting are the most likely to suffer seed shortage. Limited seed inputs should be provided to these populations. In other areas, promotion of local seed

<sup>12</sup> hh (household) size based on average of 8 persons. All figures best estimates.

<sup>13</sup> not including ex-Dima as fishing equipment not a priority request for Pakok/Equatoria areas

<sup>14</sup> not including Equatoria as fishing equipment not a priority request from these areas

<sup>15</sup> A Critical Review of Seeds and Tools Programmes in southern Sudan, UNICEF, 1990

multiplication activities and seed storage should be supported as introduction of imported varieties on any large scale is not recommended.

Bor	5 kg x 27,500 hh	137.5 MT
Waat	5 kg x 13,500 hh	67.5 MT
ex- Ethiopia returnees	5 kg x 35,000 hh	175.0 MT
Total		380.0 MT

Serena sorghum and Katumani maize are reported as the most appropriate relief seed types for the marginal agricultural areas to be covered if internal seed purchase is not possible.

### 5.1.5 Nutrition

#### Estimated Therapeutic Feeding Requirements (6 months):

Bor <sup>16</sup>	3,500 under 5 years severely malnourished <sup>17</sup>
ex-Ethiopia returnees	2,000 under 5 years severely malnourished <sup>18</sup>

## 5.2 Other Relief Requirements

### 5.2.1 Preventative Health and Essential Drugs

- Diarrheal disease control is critical to saving lives in all areas. ORS and basic life saving drugs for treatment of malaria and common infections are essential.
- The extent of the Kala azar epidemic transcends regional boundaries. To combat the crisis, a national effort to eradicate the virus in humans in White Nile, Kordofan, Bahr el Ghazal and Upper Nile is required. Mosquito nets can help to reduce transmission and extensive treatment must be supported. A minimum of 200,000 affected or at serious risk.
- EPI coverage will be continued and extended.

The primary health care (PHC) structure and its referral centres have made some impact on the emergency health situation within the region, especially in Eastern Equatoria and southern Bor (Jonglei) although now much has been destroyed by the factional fighting. It is essential that not only are the existing networks supported to expand their coverage and their attention to preventative health care, but also that the home areas of returnees and displaced are given particular emphasis and consistent service. This is especially relevant to the return of the unaccompanied minors to their homes. Three essential areas must be covered:

- Expansion/sustenance of life saving drug provision along with supervision and basic training for Western Equatoria, Bahr el Ghazal, Lakes and southern Upper Nile.

<sup>16</sup> Based on pre-fighting nutrition survey in November 1991

<sup>17</sup> 20% x 220,00 = 44,000 under-fives  
44,000 x 8% severely malnourished = 3,520

<sup>18</sup> 20% x 285,000 = 57,000 under-fives  
57,000 x 3.4% severely malnourished = 1,938

- ii) Expansion of consistent EPI coverage as above.
- iii) Basic assistance to health facilities in each major centre: Kapoeta, Torit, Bor, Ler, Yirol, Maridi, Yambio, Kaya, Kajo Keji.

### 5.2.2 Clean Water and Sanitation

While almost all existing handpumps in eastern Equatoria have been reconditioned and a maintenance system re-established, the population of areas beyond eastern Equatoria rely on extremely poor quality water supplies which reduce in quality and quantity during the dry season resulting in significant unnecessary mortality due to diarrheal disease. Most of the pumps installed in the 1970s and early 80's are broken. However trained technicians are found in all locations and expansion of the pump repair would be possible.

In the light of current logistical constraints only Western Equatoria and southern Bahr el Ghazal can currently be recommended for new support in addition to current programmes in Eastern Equatoria and the proposed work in Bor. Spring protection and hand dug wells particularly in areas of concentration of displaced will also be essential.

Sanitation measures for the displaced populations are critical to also ensure the maintenance of clean water supplies and reduce disease transmission.

### 5.2.3 Shelter

- The people of Bor and Kongor will need assistance with shelter materials to help them rebuild their homes.

### 5.2.4 Education

For the unaccompanied minors the presence of community schools in their home areas is the keystone to their resettlement since school represents security. In addition to systematic feeding of children through a school meals programme, the provision of rudimentary educational materials is vital to ensuring the resettlement of displaced persons. The returnees and others will choose settlement areas on the basis not only of security and food, but also of health and school services.

Existing services are very limited. Significant efforts need to be made to increase coverage of education so as to ensure the return and integration of the unaccompanied minors in terms of stationery, text books, teacher training and management support in particular to Upper Nile, Bahr el Ghazal and Western Equatoria.

## 6. LOGISTICS

- 6.1 Given security improves, road transportation should be possible to Bor and Kongor, Eastern and Western Equatoria, Yirol, and possibly other locations beyond Yirol. Because of heavy rains many roads will not be open until late in the dry season. For this reason airdrops/airlifts to Waat and Pakok, as well as Pochalla, will have to be employed during the first two months of 1992.



- 6.2 A firm agreement will have to be secured to open the road from Bor to Waat in February-April if the areas of Bor, Kongor and Waat are to be supplied according to need.
- 6.3 Food and non-food deliveries by barge along the Sobat will not be possible much beyond December. The overland route via Waat to Abwong and Ulang on the Sobat is not yet a certainty. For this reason continued airdrops to Nasir and the possible extension of airlift/airdrops to Akobo, Abwong, Ulang and Yomding will be necessary to ensure an uninterrupted supply of relief items to these areas.
- 6.4 Continuous air access to all areas included in the OLS programme is essential if we are to avert further crisis.

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