



VIOLENCE HEALTH AND ACCESS TO AID

IN UNITY STATE/
WESTERN UPPER NILE, SUDAN

Médecins Sans Frontières, April 2002



SUMMARY

Since the resumption of the civil war in Sudan in 1983, life in western Upper Nile has been a struggle for survival. For civilians, the war has brought little but misery, particularly since the escalation of the conflict in 1997. Repeated food shortages, displacement and epidemics have been commonplace.

The health consequences of the war are enormous. Repeated displacement strains coping mechanisms and the loss of cattle drives people into destitution. When these factors are coupled with lack of access to health care and an environment replete with infectious diseases, the result can be deadly. *Over 100,000 people are known to have died from one disease alone – kala azar (visceral leishmaniasis).* Additional mortality from violence, from other diseases such as tuberculosis, and from malnutrition is likely in the tens of thousands.

With the intensification of the conflict since 1997, military and militia groups on all sides of the conflict have frequently targeted civilians and civilian objects in western Upper Nile. The scale of the violence is shocking. Types of abuses perpetrated by armed groups include:

- Killings, assault, rape and forced recruitment of civilians by ground troops from all sides.
- Looting and theft of civilian property: homes have been burned, belongings looted, crops destroyed, and cattle stolen by ground troops from various armed factions including the Sudan People's Liberation Army and the militias allied to the Government of Sudan.
- Bombings and burnings of civilian homes and forced displacement in Panarou and in the vicinity of the new oil road by Government of Sudan forces using aerial bombardment, helicopter gunships, and ground troops.

Access to relief has been minimal, and extremely limited in the past few years due to the escalation of the conflict. Even before 1997, civilians in western Upper Nile had minimal access to humanitarian relief. MSF was one of a handful of agencies on the ground providing vital, albeit limited, health care. Thousands of lives were saved between 1988 and 1997. Nonetheless some areas such as Panarou have remained inaccessible since the war began, with fearful consequences for the population.

The total mortality from violence, disease and hunger in western Upper Nile will never be known. What is clear is that the war in western Upper Nile is slowly and inexorably killing off the people of the area.

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I. INTRODUCTION

Médecins Sans Frontières (MSF) has been working with the people of Unity state/western Upper Nile¹ for fourteen years. Currently MSF works in both government and rebel-held areas of western Upper Nile, providing medical care to civilians under the control of all the warring parties and factions. The suffering of civilians in western Upper Nile – ethnic Nuer and Dinka alike – is clear and deeply compelling to any visitor.

In the last two years, a number of reports have been written which document incidents of violence against civilians. In the past two months alone, the issue of violence against civilians in western Upper Nile has gained public prominence due to two incidents involving Government of Sudan aerial attacks in Nimne and Bieh, both of which are locations where MSF operated medical programs prior to the attacks.

While these particular attacks have justly warranted international attention, they are only two of numerous areas affected by the conflict. With this report, MSF would like to convey both the tragedy and the strength of the people of the region; the enormous consequences of the brutal war that has been waged in the area and its appalling effects on the civilian population.

This report is based on the information collected and reported by the MSF field teams working in the western Upper Nile area over the past fourteen years. It is also based on over 100 interviews with displaced people in eight locations during late 2001 and early 2002. The aim of the interviews was to better understand the origin of and motivation for displacement in the past few years. Due to concerns for the security of individual interviewees, names and identifying details have been changed, and exact locations and dates of interviews have been withheld.

While this report was in preparation, the situation on the ground suffered a serious deterioration. These developments create an even greater urgency for public understanding of what has happened and is happening to the people of western Upper Nile.

Médecins Sans Frontières
April, 2002

¹ The area known as Unity state/western Upper Nile has been called various names over the past two decades. In this report, in the interest of simplicity and consistency, MSF will use only the historical name "western Upper Nile" or "WUN" as a matter of geographic reference. This choice does not imply a political affiliation with any of the parties to the conflict.

II. MAP OF SUDAN AND UNITY STATE/WESTERN UPPER NILE



III. GLOSSARY

Anya-Nya

Opposition group formed by southerners that became the main rebel force in the first civil war following independence.

Anya-Nya II

Opposition force, largely composed of Nuer, which was formed in the early 80s before the second war began in 1983. With the creation of the SPLA in 1983, the force split, with some Nuer leaders joining the SPLA, and others forming new militia groups supported by the Government of Sudan.

Baggara

Derived from the Arabic word for cow (baggara), a name referring to the group of cattle-raising, semi-nomadic Arabized tribes from western Sudan including the Messiriyi and the Rizeigat of Kordofan and Darfur.

Bahr (el Ghazal)

Arabic word for river (River el Ghazal)

Dinka

An African Nilotic tribe (speaking the Dinka language) originating in southern Sudan, largely in Bahr el Ghazal and Upper Nile states. The largest tribe in southern Sudan.

duel

Nuer name for the mud hut and thatched roof dwellings that are home to most rural Sudanese (also known as tukuls in northern Sudan).

GoS

Government of Sudan, based in the capital, Khartoum

ICRC

International Committee of the Red Cross, an intergovernmental humanitarian organization based in Geneva

luak

Nuer term for the large thatched hut where cattle and other livestock are housed.

MSF

Médecins Sans Frontières, an international medical humanitarian non-governmental organization

muraheel(in)

The mobile Baggara militias armed by the Government of Sudan and used to guard the train on its route south into Bahr el Ghazal.

(I)NGO

(International) non-governmental organization

Nuer

An African Nilotic tribe (speaking the Nuer language) originating in the Upper Nile area; the 2nd largest tribe in southern Sudan.

OLS

Operation Lifeline Sudan, the United Nations-led emergency relief operation initiated in 1989 which negotiates access and provides assistance to war-affected populations in Sudan on the basis of tri-partite agreements signed by the Government of Sudan, rebel groups and the United Nations.

SPDF

Sudan People's Defense Force, a Nuer faction led by Dr. Riek Machar. Originally called the SSIM and allied to the Government of Sudan in 1996-7, it recently announced a merger with the SPLA in January 2002.

SPLM/A

Sudan People's Liberation Movement/Army. Created in 1983, a political and military opposition group led by Dr. John Garang de Mabior. Peter Gadet is the Nuer commander for the western Upper Nile area (formerly affiliated with the SSUM militia group).

SSIM/A

South Sudan Independence Movement/Army. A breakaway faction of the SPLA led by Dr. Riek Machar Teny. In 1996 it signed the peace charter with the Government of Sudan and became incorporated into the South Sudan Defense Force. It was later renamed the SPDF and most forces recently merged with the SPLA, in opposition to the Government of Sudan, in January 2002.

SSUM

South Sudan United Movement, a Nuer militia group led by General Paulino Matiep and based in Bentiu, supported by the Government of Sudan.

Sudd

A Sudanese name for the great marsh formed by the tributaries of the White Nile, located in the Upper Nile area.

tukul

Name of the small mud hut dwellings in which many Sudanese live, also known as duel in the Nuer language

WFP

World Food Programme; the United Nations agency responsible for the provision of supplies to populations requiring food aid.

WUN

Western Upper Nile, the western part of Upper Nile State, otherwise known as Unity or el Wihda state by the Government of Sudan, and Liech state by the SSIM.

1.0 GENERAL BACKGROUND²

Western Upper Nile (WUN) lies in central southern Sudan. The area stretches from north of the Bahr el Ghazal river, bordering the Nuba Mountains, some 200 miles south to Ganyiel, with the Bahr el Jebel river bordering the region on its eastern side and Bahr el Ghazal on its western side. The size of the area is comparable to the Netherlands. Although still referred to as western Upper Nile or Liech state by many southern Sudanese, it was renamed Unity or El Wihda state by the Government of Sudan (GoS) in the early 90s in an administrative re-division of the south.³



The administrative capital is Bentiu, a government-held town located on the Bahr el Ghazal river in the northern part of the state. The state is subdivided into districts reflecting ethnic clan groups.

The majority of the population are Nuer, although communities of Dinka also reside in the north-eastern district of Panarou (also known as Ruweng county). Population numbers for the area were estimated at between 300,000 and 500,000 people in the early 90s.⁵

The western Upper Nile area has been historically underdeveloped. Prior to the discovery of oil in the region in the 1979, the area was of minimal political or economic interest to either the British colonial administration or the northern Sudanese regimes that replaced the British following independence in 1956. Until the recent construction of new all-weather roads around Bentiu for oil development, there were virtually no roads in the region, the exception being a dirt track from Bentiu to Adok which was only passable in the dry season. Boat travel along the rivers and walking remain the most common modes of transport.

The Nuer and Dinka, the indigenous populations of the area, share a number of characteristics. They are agro-pastoralists who survive largely through cattle herding, cultivation and fishing. The culture and livelihood of both groups is intricately linked to their cattle and their environment. Both Dinka and Nuer have developed sophisticated ways of coping with the harsh terrain and the vagaries of climate. Most communities migrate during the dry season (October – May) in order to seek grazing pasture, fishing opportunities and water near the rivers. In the wet season (May – September), people return to their villages to cultivate crops that are harvested between September and November.

For the Nuer, the majority population in western Upper Nile, a typical village settlement consists of a few dozen mud huts known as *duel* (also known as *tukuls* in other parts of Sudan), with larger huts – *luak* – housing the cattle and other livestock. Village residents are often spread out over large areas, since many families cultivate cereals and other crops around their compounds. The only brick buildings are generally found in the larger towns, which, aside from Bentiu, include Ler, Adok, Pariang (in Panarou), Koch, Nhialdiu, Mayom, Wangkei, and Ganyiel in the far south.

The challenges of the terrain in western Upper Nile cannot be overstated. The area south of the Bahr el Ghazal river is known as the *Sudd* – literally, barrier – a Sudanese name for the great marsh created by the tributaries of the White Nile as it winds its way north to join the Blue Nile in Khartoum. Much of the land is black cotton soil, a dense clay-like soil that develops the consistency of thick glue when wet. In the wet season, even walking is an enormous challenge, with every step hindered by the heavy mud.

²The information in section 1.1 General Background and section 1.2 Origins of the Conflict is based on a number of general sources including the following: *Sudan: Country Profile 2001*, Economist Intelligence Unit; Sharon E. Hutchinson, *Nuer Dilemmas: Coping with Money, War and the State*, University of California Press, 1996; Ann Moseley Lesch, *Sudan: Contested National Identities*, Indiana University Press, 1998; David Keen, *The Boyalty of Famine*, Princeton University Press, 1994.

³The southern region consisted of one state until 1985, when it was split into three states (Bahr el Ghazal, Upper Nile and Equatoria). In 1994 the GoS further divided the country into 26 states including the current Unity state. See note 1 regarding the use of terminology in this report.

⁴The geographic and ethnic boundaries presented in these maps are rough estimates. In addition, the locations of towns and villages are approximate.

⁵The total population was estimated to be about 300,000 in the last national census in 1983 (see Population Studies Centre, *Population of the Sudan and Its Regions*, 1983 Census: Total Populations by Region, Province and District, University of Gezira, Sudan, 1985). However, even the 1983 figures probably lack accuracy given the difficulties of demographic data collection among the mobile Nuer and Dinka populations.

1.1 ORIGINS OF THE CONFLICT IN WESTERN UPPER NILE

Historically, conflict in the western Upper Nile region was limited to inter-tribal competition for cattle and grazing land among the Nuer, Dinka and the Baggara tribes from Darfur and Kordofan states, who would migrate south with their cattle to the rich grazing lands around the Bahr el Ghazal river in the dry season.⁶

In earlier decades the Government played a mediation role vis-à-vis conflict between the Baggara and the Dinka. However, in the mid-80s, the Government of Sudan began arming Baggara militias, encouraging them to raid the Dinka and Nuer communities of northern western Upper Nile and northern Bahr el Ghazal.⁷ The Baggara raids, and Nuer armed action in this period, were largely limited to north of the Bahr el Ghazal river, but did result in the displacement of significant numbers of Nuer communities from the area known as Alor.⁸ The family of one of MSF's Sudanese health workers was among hundreds who fled the Baggara raids of the early 80's:

Originally from the Kailouy area, northwest of Bentiu and north of the Bahr el Ghazal river, George is 36, old enough to remember the Baggara militia raids of the early 80s. He describes the attacks in 1982-83 as the worst – they would arrive on horseback, sometimes in vehicles, and shoot people, burn the tukuls, and steal livestock and grain. This was also the time when the militias first began using small arms. He remembers leaving his home in 1983, when the head chief of the Nuer in his area decided to move his people south of the river in search of a safer place. George's family moved, along with other communities, to the Nhialdiu area.

An MSF expatriate nurse who worked in western Upper Nile in 1990 wrote about the situation as follows: "...the rest of the north of WUN across the river has been depopulated because of militia activity. By killing all the people and shooting all the cows they have made a large tract a barren quarter."⁹

In 1983, the second civil war began in Sudan. The events which provoked this second round of war have been well documented elsewhere. A key issue that catalyzed the conflict was disagreement over the exploitation and use of oil and water resources in

Upper Nile. Southerners voiced dissatisfaction with their representation in both the process surrounding oil discovery and development in the region and the process surrounding the Jonglei Canal scheme, two projects which were bound to have enormous effects on the indigenous peoples of western Upper Nile.¹⁰

An opposition group called the Sudan People's Liberation Movement/Army (SPLM/A) was formed at this time, with most southern ethnic groups represented, including the Dinka and the Nuer, the two largest tribes in the south.

The mid-80s also were a time of drought throughout much of the east African region, and the combination of drought and war led to a terrible famine in southern Sudan in 1988. The population of western Upper Nile also suffered from these developments. Many Nuer left the area fleeing the famine and war. Some went to Ethiopia, where they joined large numbers of refugees in camps, others went to Khartoum, seeking the relative stability of the government-controlled areas.

Between 1983 and 1991 the SPLM/A gained control over most of the region with the exception of Bentiu, the government-controlled administrative capital. Several incidents of aerial bombardment by the Government of Sudan¹¹ took place in this period, as well as some ground fighting out of Bentiu, but communities affected by the conflict were largely able to either remain in place or return to their homes after incidents. Aside from displacement due to insecurity and the search for food, another major development in this period was the increased impact of disease, particularly the kala azar epidemic, which emerged partly as a result of increased malnutrition, displacement and minimal health services.¹²

In 1991, a split of the SPLA, and the defection of several non-Dinka leaders, led to clashes between the SPLA and the creation of a breakaway faction. The new faction, initially called the SPLA-United, evolved into a largely Nuer-led group later renamed the South Sudan Independence Movement/Army (SSIM/A), which retained popular support in much of western

Upper Nile under the leadership of Dr. Riek Machar. Clashes on the ground occurred mainly in areas of Dinka-Nuer cohabitation such as Panarou, along the western border of western Upper Nile as well as in other areas of Upper Nile.

In 1996, the SSIM/A became formally aligned to the Government of Sudan, first through a Peace Charter, followed by a peace agreement in 1997. The signing of the peace agreement set the stage for two new developments:

1. The resumption of oil exploration¹³ and
2. Inter-factional rivalries between two Government-backed Nuer militias – Machar's SSIM (later renamed the SPDF) and Paulino Matiep's faction (later known as the SSUM).

These developments were to signal the end of even relative stability in the western Upper Nile area, which has been consumed in terrible fighting on the ground, a serious escalation of the conflict, and a deepening humanitarian crisis since 1997.

In 2002, Machar's faction changed alliance again, re-joining the SPLM/A in opposition to the Government of Sudan. The practical implications of this move are that western Upper Nile is now formally a battleground between the two principal sides in the Sudanese war, the Government of Sudan and the SPLM/A. Several militia groups are also involved on each side.

⁶ Baggara is the Arabic word for cow, therefore the term Baggara is a general name for several of the semi-nomadic, Arabized, cattle-raising tribes (mainly the Rizeizat and the Misseriya) originating in western Sudan.

⁷ In his study of the 1988 famine, *The Benefits of Famine*, David Keen explains that the factors leading to the government's change of policy included the need to appease the Baggara – a key political constituency for the then-ruling Umma party – and divert their dissatisfaction over increasing economic and environmental problems, among other reasons.

⁸ African Rights, *Food and Power in Sudan*, 1997.

⁹ MSF internal report on Sudan, June 1991.

¹⁰ See generally note 2.

¹¹ While all armed factions and military have participated in ground attacks in Sudan, aerial attacks – whether by Russian-built Antonov aircraft or by helicopter gunship – are believed to be exclusively used by the Government of Sudan, as the rebel groups are reported to lack this type of equipment.

¹² Although not addressed in this report, another serious impact of the war has been the complete disruption of education in western Upper Nile and other areas of southern Sudan. Even if peace were to occur tomorrow, a generation of southern Sudanese currently lack basic education, literacy and skills. While illiteracy and education are serious issues throughout much of Sudan, it is demonstrably worse in conflict-affected areas of the country, where most teachers have fled or died, buildings have been destroyed, and no materials are available.

¹³ Chevron, the US oil company, discovered large deposits of oil in the late 70s. The company suspended operations in the early 80s after several employees were killed in an attack by rebel forces. Chevron later sold its concessions to Arakis, a Canadian company, which in turn sold its holdings to another Canadian company which is currently active in the area – Talsman Energy Inc. See *Sudan Country Profile: 2001*, Economist Intelligence Unit.

1.2 MÉDECINS SANS FRONTIÈRES IN UNITY STATE/WESTERN UPPER NILE

Médecins Sans Frontières (MSF) began operating in western Upper Nile, south of the Bahr el Ghazal river, in 1988. In the late-80s, prior to the creation of Operation Lifeline Sudan (OLS), few humanitarian agencies were active in southern Sudan, and aside from the International Committee of the Red Cross (ICRC), MSF was one of only two international humanitarian organizations working in western Upper Nile. At that time, the population of the area was estimated to be between three and five hundred thousand people.

Initially MSF provided basic health care services and supported a feeding program in Ler town. Simultaneous with the start of the program in Ler, MSF staff working with displaced people in Khartoum in 1988 treated 800 cases of a wasting disease, later identified as kala azar (visceral leishmaniasis).¹⁴ Clinical kala azar is considered to be at least 95% fatal if left untreated. On investigation, it was found that all of the kala azar cases were originally from the Bentiu area of western Upper Nile, north of Ler.

In 1989, in addition to the basic health care program, MSF staff in Ler town opened a kala azar treatment center, which was soon followed by basic health and kala azar treatment centres in Duar (1990) and Nimne (1993). Tuberculosis was identified as another serious problem (tuberculosis can be fatal if untreated) and MSF opened treatment programs in Ler and Duar in 1993.

By 1994, MSF supported a basic health care system through 14 dispensaries or rural clinics in different villages of WUN. These clinics received over 100,000 consultations annually and treated the most common sources of illness – diarrhoea, acute respiratory infection, and malaria, among other diseases. In this five-year period, 6,413 patients were also admitted to the hospital in Ler and 224,110 patients were treated in the outpatient departments. Kala azar treatment centers in Ler, Duar and Nimne treated more than 20,000 patients between 1989-1995. MSF also responded to outbreaks of meningitis, measles, polio and Hepatitis E.

For some communities, the health services offered by MSF in the late-80s and later, by other agencies operating through OLS, presented the first opportunity for consistent access to medical care – ever. Due to lack of infrastructure and the war, southern Sudan is one of the more remote and inaccessible places in the

world, and western Upper Nile is historically one of the least developed areas of the south. Throughout the early-mid '90s, western Upper Nile remained under-served in comparison with other areas of Sudan, due to insecurity, flight restrictions, and the difficult operating environment.

By 1996 access to health services in western Upper Nile had increased substantially, although they were still far from sufficient. In the health sector, MSF had established a network of 15 functioning rural dispensaries supervised from five rural health clinics. Ler hospital had become the referral hospital for the area (run by another organization after MSF handed over the program), with a substantial training program for health workers. Aside from MSF, three other international non-governmental organizations had become active in the health sector. At least five other organizations also operated in WUN, implementing activities ranging from education to food security to agriculture and veterinary programs. The increased presence of international agencies illustrates the improved humanitarian access to the population of western Upper Nile in the mid-90s, a situation that was to change quite dramatically in the next few years.

In late-1997, tension between two Nuer commanders sparked wave after wave of ground fighting in western Upper Nile. The significance of this conflict for the civilian population is explored in more detail in subsequent sections of this report. For MSF and other humanitarian organizations, the relative stability of the area ended in early 1998.

By late-1998, locations such as Ler and Duar – towns where MSF had run medical programs for almost a decade – had been attacked and destroyed not once, but several times. MSF's expatriate staff were forced to evacuate from location after location as the conflict spread throughout the region, threatening to leave malnourished children without food and severely ill tuberculosis and kala azar patients without treatment. Several of MSF's Sudanese health workers were killed and many civilians fled the region, seeking safety in government-held towns like Bentiu or as far away as Khartoum. MSF attempted to initiate programs in the government-held town of Bentiu, where some displaced people had fled, but insecurity and lack of authorization continued to limit access.

Early 1999 showed little sign of improvement. MSF attempted to access western Upper Nile numerous

times, but continued ground fighting prevented any consistent medical activities on the ground. Occasionally medicines were left in the care of local MSF health workers, where adequate supervision was available. In late-1999, however, the southern part of western Upper Nile stabilized somewhat, and MSF was able to open programs in several new rebel-held locations.

In 2000, MSF was active in seven locations in western Upper Nile, including Bentiu town, which was served from Khartoum. Initial activities in Bentiu focused on out-patient consultations, in-patient services and therapeutic feeding in an effort to address the needs of thousands of newly displaced who had fled recent ground fighting in the rural areas. This conflict also affected MSF's programs in the rebel-controlled areas, and three locations were closed even as programs opened in new areas. This fluid operating environment continues to constrain delivery of medical services to many parts of western Upper Nile.

In the latest round of conflict, in February 2002, MSF was forced to evacuate and suspend its program in Nimne due to a ground attack and aerial bombardment. An MSF health clinic in Bieh has also suffered disruption of medical programs following a helicopter gunship attack. While these two incidents have been well-publicized, they represent only a fraction of the consequences of the conflict for the civilians of western Upper Nile.

¹⁴ The disease is transmitted by a parasite carried by the sandfly and is endemic in much of east and south-eastern Sudan.

2.0 DIRECT CONSEQUENCES OF THE CONFLICT IN WESTERN UPPER NILE

The Sudanese civil war reignited in 1983. The effects of this war have been pronounced throughout Sudan. Displacement, violence, malnutrition and disease, disruption of local economies and services – all of these results of the conflict have had enormous impact on the lives of civilians in many areas of the country. While western Upper Nile certainly felt the impact of the war in the period from 1983 – 1996, the war has escalated since 1997.

Since 1997, fighting on the ground between and among various government-backed and SPLA factions has affected all districts. In these battles, troops from both sides and all factions have burned villages and crops, stolen cattle, and killed, raped and assaulted civilians. Civilians have also suffered directly from aerial bombardment, and in latter years, from helicopter gunship activity.

The violence against civilians has led to further displacement, which, when coupled with the malnutrition, lack of clean water and shelter resulting from the conflict, have led to increased mortality from disease. In western Upper Nile, the health-related consequences of the conflict fall largely into three categories:

1. Increased malnutrition and subsequent illness: often related to violent displacement and loss of cattle and other food security.
2. The increase of infectious diseases: exacerbated by the destruction of health services and loss of health staff, but also related to increased displacement, increased violence (such as rape), and lack of access to clean water and sanitation.
3. Violence-related consequences: injuries caused by war such as bullet, grenade, and shrapnel wounds, mental trauma, and increased sexually transmitted diseases due to rape.

In the past three months alone, new offensives have resulted in civilian deaths and further displacement.

All of the warring parties bear responsibility for deliberate violent targeting, displacement and mortality of civilians, destruction of health services, and theft of essential civilian property in western Upper Nile.

2.1 DISPLACEMENT AND HEALTH

"When you want to settle, you cannot be sure when the war will dislodge you." John, from Kuaç

Since the 1970s and the growth in refugee movements, it is clear that displacement increases vulnerability and mortality. Displacement is a common effect of violent conflict, not only in western Upper Nile, but also in other areas of Sudan affected by the war and other countries affected by conflict.

It is well known that populations affected by armed conflict experience severe public health consequences, often aggravated by displacement, food scarcity and the collapse of public health services.¹⁵ People normally experience high mortality rates following displacement. Measures to reduce mortality are equally well understood: protection from violence, provision of adequate food rations, diarrhoeal disease control, measles immunization and management of common endemic communicable diseases.¹⁶

The Nuer and Dinka people of western Upper Nile are semi-nomadic cattle raisers. As such, migration is a seasonal event. They have adapted to a mobile existence and accustomed to walking long distances in search of water, grazing land and fishing opportunities. In itself therefore, migration as such may entail less hardship for the semi-nomadic people of western Upper Nile than for settled agriculturalists of other areas of southern Sudan.

However, repeated violent displacement combined with the inability to cultivate, the increase of disease and malnutrition, loss of access to clean water, loss of livelihoods, loss of seeds and fragile food security combined can have serious effects. In addition, traditional sources of income such as labour markets and economic migration have been disrupted, while many families have sold or been robbed of key assets such as cattle. This means that when people displace to other areas, they have few resources and are forced to rely on indigenous communities or relief.

When displacement occurs and relief is absent, this combination of factors can kill the most vulnerable members of families – most often the elderly and young children. As described below, displacement has been a common feature of the conflict in western Upper Nile, and increasingly, the displacement is permanent, leaving communities in areas where they may have little access to land or cattle and are unfamiliar

with the terrain.

"Before (1997), there would be specific events – it's not as if (the war) wasn't disruptive before, but before people could return to their villages and go back to 'normal.' Now their lives are permanently disrupted – they are permanently displaced and can't go home again."
– Dr. Jill Seaman¹⁷

For many Nuer, dependent as they are on their cattle and traditional coping mechanisms for the climate and terrain, displacement can create acute vulnerability to disease and death. Given that many Nuer have now been repeatedly displaced over the past four years, their ability to cope with further displacement is diminishing. The following examples illustrate the type of forced displacement taking place in different areas of western Upper Nile and the effects of this violence on civilians.

Displacement in the Nhialdiu area

Displacement associated with ground fighting has affected most people across western Upper Nile in the past four years. The initial round of fighting took place in 1997-99, between the troops of two Government-allied militias: the SSIM (later known as the SPDF), led at the time by Riek Machar and Tito Biel, and the SSUM, led at the time by Paulino Matiep and Peter Gadet. The second wave of fighting took place between the troops of the Government-allied SSIM/SPDF and those of the SPLA (led by Peter Gadet, who switched alliances) in 2000 and 2001. Both rounds of fighting swept across the entire central region of WUN, with few villages escaping destruction.

People interviewed from the Nhialdiu area originally came from at least a dozen villages within a two-hour walking distance of Nhialdiu. Their stories were consistent in describing the same pattern of events in the 2000-01 fighting. The stories of Nyageai and Nyanluit illustrate this pattern:

Nyageai, a woman in her early 30s, is originally from Nyroamni, a village about one hour's walk from Nhialdiu. She left Nyroamni in July 2000 when soldiers from the SPLA came to the village and began fighting with the forces of the SPDF. She and the other women in her compound were beaten by the soldiers and they fled into the bush. When the noise of the fighting stopped, they returned to the village only to find that their tukuls

¹⁵ Michael J. Toole & Ronald J. Waldman, Refugees and Displaced Persons: War, Hunger and Public Health, JAMA August 4 1993, Vol. 270, No. 5.

¹⁶ Refugee Health: An approach to emergency situations, Médecins Sans Frontières, 1997.

¹⁷ MSF doctor in WUN, 1989-98, interviewed in March 2002.

¹⁸ There is no word for rape in Nuer. However, the expression "used as wives" in this context connotes forced sexual intercourse.

had been burned and their cattle were stolen. She heard that some girls from the village were taken by the SPLA troops and "used as wives"¹⁸ She and her children and her husband's second wife spent two days and nights walking through the bush to Bentiu. There they received some relief items and stayed for six months. They left in December 2000 for Jikany because there were "too many people in Bentiu" and the children of breast-feeding age were dying.

Sitting in her small shelter in a cattle camp north of Nimne, Nyageai stated at the end of the interview: "We have no hope when we are sitting in this place. We have no hope where help will come from. We have no hope."

Nyanluit is a 25-year old woman from Duar Gatluak, an hour's walk from Nhialdiu. She was in her compound with her husband and children when the fighting began, along with her brother's and mother's families. She hid in the nearby grass and saw the SPDF soldiers take her family's cattle and mosquito nets, and then burn her home. She knew 5 women who were taken away by the SPDF and heard later that they were taken to the Adok area and used by the soldiers of Peter Par. Nyanluit left her home in July 2000 and came east because she heard that relief was available near Nimne.

John, a man in his 20s from Wangjai described September 1997 as the beginning of the fighting. He said that in 1997, the soldiers did not burn down tukuls, but in 1998 things became worse: tukuls were burned and crops destroyed. Although his village was destroyed 3 times before 2000, the cattle were not taken. Even when the area was bombed by Antonovs and helicopter gunships in November 1999, he and the other villagers stayed in the area. However, during the fighting of 2000, the troops killed and abducted women and children and stole people's cattle. He and his family fled to the area near Nimne because of the possibility of accessing relief, and because the river was nearby.

For most of the displaced from the Nhialdiu area, the primary reason for displacement was the impact of the fighting between SPLA and SSIM/SPDF forces. Many described the fighting in 2000 as worse than in previous years.

In a series of attacks during July 2000, the SPLA troops moved through most of Lek and Jikany south of the Bahr el Ghazal river – SPDF territory – and devastated the region: they burned crops and villages, looted property and cattle, and abducted women as sexual slaves. The ground offensive went as far as Nimne in the far east of western Upper Nile. The

SPDF responded with counter-attacks that often used the same strategies against the civilian population – burning villages, looting cattle and abducting and raping women.

The Nhialdiu area has been particularly hard hit by the conflict for several reasons. One, it is a fertile area, a good agricultural area, and therefore a prize for competing troops. Two, it lies fairly close to the dividing lines between the areas controlled by different factions. Since 1997 and the escalation of the conflict, villages around Nhialdiu have therefore been the subject of repeated attacks and counter-attacks.

The impact of fighting on the civilian population in the Nhialdiu area has been escalating over the years. A number of people had lost their homes or crops several times since 1997, but had always managed to return after the fighting was over. However, many people cited the scale of violence and destruction, including the burning of homes, theft of cattle and the violence against civilians (killings of men, abductions of women and girls) in 2000-01 as decisive factors that caused them to permanently leave their homes.

Many displaced people went to the eastern part of western upper Nile via the government-held towns of Bentiu or Rubkona, searching for relief.

"When the war started, it was soldiers fighting each other. Then the soldiers turned on the community and started taking their cattle. We, the citizens, are suffering between the two forces. We don't know why the soldiers have turned against the community." Diu, from Rupnyagai

Once people are displaced, many decide not to build permanent shelters anymore. For instance, a number of families interviewed in the Nimne area who were displaced from Nhialdiu or along the road, had been living in temporary shelters made of plastic sheeting and wood for more than a year. When asked why they had not built permanent dwellings, they responded that they anticipated that they might be forced to flee again. This indeed happened in February 2002, when ground and air attacks on Nimne dispersed the several thousand people who lived in or around the village.

In the same month, the Nhialdiu area suffered another attack, this time by GoS forces and SSUM fighters, who came from Bentiu. The numbers of displaced civilians, and their whereabouts, are currently unknown.

Bombings and burnings of civilian homes along the 'new oil road'

"The road is very bad; it can't be a good road when so many people have to leave their tukuls." Gabriel from Kuac

In 1997, the rebel faction in control of most of western Upper Nile – Riek Machar's SSIM – signed a peace agreement with the Government of Sudan. For the first time since Chevron's suspension of activities in the early 80s and the outbreak of the 2nd war, this event opened a window of opportunity for the government and oil companies to explore development of the rich oil reserves located in the region, which had hitherto been largely under rebel control. Oil development had been suspended in the early 80s after the then-concession holder, Chevron, had lost several employees in an attack by the SPLA.

Two consortiums of oil companies are now active in western Upper Nile. The first consortium, called the Greater Nile Petroleum Operating Company (GNPOC), includes the following companies: Talisman Energy (Canadian), the China National Petroleum Corporation (Chinese), Petronas Carigali (Malaysian) and Sudapet (Sudanese), and is active in blocks 1 & 2, north of the Bahr el Ghazal river. The second consortium, led by Lundin (Swedish), includes Petronas, OMV (Austrian) and Sudapet, and has been actively drilling in block 5A, south-east of Bentiu and the Bahr el Ghazal river.¹⁹

One of the first challenges to the development of the oil potential was to create infrastructure in the area. As a result, in 1998, the first steps in constructing a major new all-weather road were taken.

Information collected from interviews suggests that a large number of people have been displaced from Chotyiell, Kuac, Guit and other locations due to construction of the new road by the Government of Sudan and oil companies in 1998-2000. This all-weather road begins near Bentiu and was constructed to facilitate the development of oil reserves south-east of Bentiu. The road passes through or very close to the towns of Chotyiell, Guit, and Kuac, ending in Rier, which is located along the White Nile or Bahr el Jebel river.

Interviews with the displaced civilians from Chotyiell, Guit and Kuac produced consistent accounts of regular aerial Antonov bombardment²⁰ and systematic



attacks by helicopter gunships flying at low levels, as well as ground forces bulldozing and burning villages located on or within a 30-minute walking distance of either side of the new road.

Some families who survived the fighting between the SPLA and SPDF factions in mid-2000 returned to their villages, only to be forced to flee permanently as aerial attacks and ground units of the road construction units targeted their homes in late-2000. As one man described it, "First the war (between SPDF/SPLA) made the young people leave, but the old people stayed. Then the road made the old people leave." Gabriel from Kuac

Nyarial, a 45-year old woman from Kuac, left her village in December 2000 because of the road construction. The trouble started in November 2000, she said, when the Antonov bombing started. There were two months of Antonov bombing, and for one month, helicopter

¹⁹ Sudan Country Profile: 2001, Economist Intelligence Unit.
²⁰ Antonov airplanes are Russian-built aircraft often used by the GoS for high-altitude bombing.

2.2 DISPLACEMENT, FOOD INSECURITY, AND MALNUTRITION

gunships which came once or twice a week as well, shooting at people as they ran. Then she heard that the soldiers were coming, so she fled. She heard from other people who returned to see what had happened, that her tukul was burned. She is afraid to return to the area because she has heard that there is a GoS garrison nearby.

Another person, Gatluak, a man in his mid-30s, described the situation near Chotyiel as follows: *Gatluak had just returned from visiting Chotyiel, his home village. He described the place as deserted, he said that no one was living there now because the road passes through and they are afraid of the GoS troops stationed along the new road. Gatluak also mentioned that the road was built in late-2000. First there was bombing, sometimes 2-3 times per week, and sometimes helicopter gunships which shot at people from tree-level. He said that "Chinese people" came with bulldozers to clear the road in November 2000. Then GoS soldiers and some of Matiep's men came in vehicles and burned all the tukuls along the road and within a 30-minute walk along each side of the road. His own tukul was among them.*

For most of the people displaced from the road area, the motive for departure was mixed: fighting between SPLA and SPDF and road construction contributed to their displacement. According to these people, whose accounts were consistent, road clearing first began in 2000, often preceded by Antonov aerial bombing and helicopter gunship activity. Then the Government of Sudan and Nuer troops, along with Chinese laborers, brought bulldozers to clear the site of the road and the surrounding area. After the bulldozers cleared a track, troops arrived in vehicles and burned all the tukuls in the path of and alongside the road. Government garrisons were then established at 30-minute intervals along the road. Most people displaced from the road area expressed fear about returning to their homes and doubted they would be able to return. They also expressed fear about using the road given the heavy military presence.

"The war begins when the sorghum is high." Elderly woman from Nhialdiu

During peaceful times, the Dinka and Nuer survive the challenging environment and temperamental weather through a delicate balance of agricultural activity, cattle raising and trade, and seasonal migration. For instance, each year, there is a traditional "hunger gap": the period between the cultivation of crops and the harvest, when people eat the remainder of their food stocks and employ coping mechanisms such as fishing and gathering wild foods to sustain themselves until the harvest.

Cattle play a vital role in the food economy of the Nuer and Dinka. Even when the harvest is poor, cattle have always remained a key source of food security, both in terms of direct milk and meat consumption as well as their value as an asset to be traded for seed or grain. As mentioned above in the section on looting and theft of civilian property, the loss of cattle can therefore provoke permanent destitution, unless a family has daughters who can bring cattle back to the family upon marriage. While a family retains cattle, they always maintain some resources. As one person described it: *"the hunger gap is not a serious problem if you have milking cows. The food security plummets when the cattle have been raided."*²¹

Looting and theft of cattle

"Life in southern Sudan is the cow; nobody leaves their homes without the cow. That is why people were killed." Deng from Panarou

For the Nuer and in large part also the Dinka, cattle are far more than simply an economic asset or a source of milk and meat. The cow has economic, cultural and spiritual meaning: it is the source of wealth for marriage and status, the asset to be sold for seed or grain, the price to be paid for infractions of customary law, a symbol of family bloodlines, and its milk is a source of food for young children. When many cattle are slaughtered in times of need, it is the clearest sign of a deteriorating humanitarian situation, for the Nuer and Dinka will attempt to retain and maintain the lives of their cattle at almost all costs, knowing that the loss of their cattle renders them destitute.

The story of a 59-year-old man displaced to Bentiu illustrates the key role of cattle in Nuer culture: *The day they (the villagers) heard that the SSIM soldiers were in the area, ... they decided to send out their cattle*

with boys and girls to protect them. In the evening the soldiers were in their village. Even if the soldiers said they would not loot, experience taught them to be careful and therefore to protect cows and girls. The soldiers might be angry not to find anything but the most important things remain protected.

As mentioned above in the description of events in Nhialdiu, men were killed while trying to protect their cattle.

Nyot, a 60-year-old man from Nhialdiu, had lost all his cattle in July 2000, when the SPLA fighters came to his village. In July the grass is very tall, and the soldiers came up to the house through the grass. First they collected the cows and rounded up the people in the house. There were ten people. Some of the men, including himself, were tied together and beaten. One man – Gatluak Deng – who tried to protect his cattle, was taken and shot. The SPLA put all Nyot's goats in the luak, and then burned it down. His sheep and cows were taken away, as were four of the younger men.

Mary, a 35-year-old woman from Wangloup, left her home in April 2001 when her village was destroyed. She ran from her home in the early morning when the fighting began. It was the fourth time that Wangloup had been attacked. Each time previously, her family returned after the attack because they managed to safeguard their cattle. Last year, her neighbour was shot while trying to defend his cows. Mary and her family did not return after the last attack because her home and crops were burned and their cattle were stolen.

The significance of cattle raiding goes beyond the immediate violence surrounding the attacks and looting. Cattle represent a vital asset for the Nuer and Dinka. For many families, therefore, one of the most serious impacts of the conflict in western Upper Nile has been the raiding of cattle. Individual accounts of looting of property and raiding of cattle during the last decade, but especially in the past four years, are numerous. All the warring parties, including the SPLA, the Government of Sudan, and the allied factions – the SPDF (SSIM) and the SSUM – have stolen cattle and other property from civilians. This looting deprives families of their key method of survival.

Food insecurity and malnutrition

While wild foods, fish and cattle are vital elements of food security, grain remains a staple of the Nuer and Dinka diet. As noted, the cultivation of crops usually

²¹ Koert Ritmeijer, MSF nutritionist and health advisor 1996-present, interviewed in March 2002.

takes place in May/June, when the rains begin. Crops are harvested between September and November, depending on the variety. Grain is then stored and eaten over the next six months of the dry season. If people have cattle and access to wild foods, then there is some ability to cope with crop failure or destruction. However, if there is no access to cattle, no access to grain, and increasingly, little access to seed, then the situation becomes extremely difficult.

Another factor that must be mentioned is the diversity of the land in western Upper Nile. Traditionally the Nhialdiu area and Nyong in the southern part of the region were considered the bread basket of western Upper Nile. A doctor who spent a decade working in western Upper Nile for MSF described the Leek area, where Nhialdiu is located, as follows:

"Leek used to be called the United Nations of western Upper Nile. When you lose Leek, you lose your food security... (because) that's how people get food - they walk to where the food is, where they have relatives."
Dr. Jill Seaman²²

Even when crops failed or were poor in other areas, people could come to buy food or trade in the markets for grain from the rich agricultural land of Nhialdiu. Now, however, the conflict has caused the collapse of most local markets and any remaining commercial cattle trading links with the north, and the repeated raiding of Nhialdiu has destroyed several years of crops and displaced hundreds of families from their land.

The fact that fighting traditionally starts in the dry season has therefore developed an ominous subtext. Increasingly it appears this is not merely a logistical issue, since accounts from displaced people emphasize that in addition to stealing cattle, the soldiers from all the factions are increasingly burning and destroying the crops, thereby jeopardizing the food security of thousands of civilians.

During the nearly two decades of war in the region, most civilians have been forced to resort to survival strategies even outside of the traditional lean times; foraging for wild foods: leaves, plants, fruit, digging out the grain stored in ants' nests, and fishing have become vital food sources. However, these survival

strategies have sometimes had unexpected long-term consequences - the rapid increase of the kala azar epidemic is believed to be linked to the fact that in the late-80s, many people were forced to seek shelter or forage for food in the acacia forest. The acacia forest is the known habitat for the sandfly - carrier of the kala azar disease. Even aside from the potential health threat of the sandfly, these survival strategies are by no means sufficient when the majority are hungry and no other source of food, including humanitarian relief, is available.

The link between malnutrition and mortality from disease has been clearly established in medical research.²³ Malnourished children are more susceptible to die from diarrhoea and other basic diseases when they lack treatment. In western Upper Nile, the link between the conflict, food security and malnutrition is clearly demonstrated in the example of Padeah village: Padeah is located north-east of Ler town. In May 1999, armed conflict around Ler affected most villages in the area, right at the start of the period of cultivation in southern Sudan. Between June 1998 and early 2000, no humanitarian agencies had been present in the area, and no food distributions had taken place. MSF initiated activities in Padeah in early 2000 and became alarmed by the visible malnutrition among young children. MSF conducted two surveys in Padeah. The first survey, in June 2000, was a nutritional survey which also gathered information about rates of displacement and cattle losses.

Survey results showed that of the 271 families surveyed, 203 households (75%) had been displaced by the fighting and 253 households (93.4%) had lost cattle in the 1999 fighting. The global malnutrition rate was 28.6% and the severe malnutrition rate was 8.7%.²⁴ The crude mortality rate was 1.5 deaths/10,000/day.²⁵ The high malnutrition rates were related to the fact that people had been unable to cultivate in 1999 due to their displacement, had lost their cattle, had received no relief food, and were forced to await the new harvest in 2000.

A second nutritional survey was conducted in Padeah one year later, in June 2001. The area was more or less stable in this period, people were not displaced, and were able to harvest satisfactory crops. The second survey showed malnutrition rates that while still high,

were substantially less than the previous year - the global malnutrition rate was 18.9% and the severe malnutrition rate was 3.5%.

Parts of western Upper Nile have experienced famines over the past decades, often provoked by poor harvests, drought and flooding, and exacerbated by the conflict. The 1988 famine, the worst in living memory for many people in western Upper Nile, was clearly linked to the disruption of agriculture and cattle rearing due to the war.

The prevalence of malnutrition present among some communities over the past four years is also linked to lack of agricultural opportunities and food insecurity. Humanitarian relief has been absent during much of the past twenty years.

For instance, in early 1998, MSF was concerned over the nutritional status of the population of western Upper Nile following a year of flooding in 1996, drought and a poor harvest in 1997, and six months of ground fighting in which the people of the Nhialdiu area were subjected to repeated looting by soldiers from the two warring factions - Matiep's SSUM and Machar's SSIM. MSF conducted a series of nutritional screenings and surveys in Ler town which established that children under 5 years, generally among the first group to experience malnutrition in a food shortage, were suffering a global malnutrition rate of 42.4%.²⁶

Over 700 children were promptly enrolled in therapeutic and supplementary feeding centers by early-June 1998. However, by the end of June, the MSF team were forced to evacuate due to insecurity and were never able to re-establish a presence in Ler. The World Food Program, whose deliveries of relief food were a vital source of sustenance for the population, also had limited access to the area for the remainder of 1998 due to the ground fighting. This example highlights the interconnection between the conflict, food security and relief. It also underlines the tragedy of western Upper Nile: how many of those children, and others who were never identified, managed to survive?

²² See footnote 17.

²³ Médecins Sans Frontières, Nutrition Guidelines, 1995.

²⁴ The first survey in June, 2000 was a 2-stage, random-cluster sample of 518 children between 6 and 60 months. The global malnutrition rate is defined as the proportion of children with weight for height Z scores < -2 or 80% of the median W/H or with a MUAC < 125mm or edema. The severe malnutrition rate is defined as the proportion of children with weight for height Z scores < -3 or 70% of the median W/H or with a MUAC < 110mm or edema. The second survey, in March 2001, applied systematic household methodology. Definitions of global and severe malnutrition rates remain as above.

²⁵ A crude mortality rate of more than 1.0/10,000/day is considered an emergency. Normally, in a resident African population, the crude mortality rate is less than 0.5/10,000/day.

²⁶ Over two days in May, 462 children were surveyed in a random 10% representative nutritional weight/height survey. The global malnutrition rate of 42.4% represents the percentage of children with weight/height < -2 Z scores.

2.3 INCREASED MORTALITY FROM INFECTIOUS DISEASES

Even without displacement, disease has taken an enormous toll. The conflict has denied thousands of families access to basic health services and to regular nutrition, a combination of events with serious consequences. Due to the historical lack of health care and health surveillance in western Upper Nile it is difficult to estimate the specific impact of the conflict on morbidity and mortality rates.

However, over the 14-year span of MSF's presence in the area, the epidemic of kala azar has been well-documented and considerable research has been undertaken linking the origins of the epidemic to factors associated with the conflict. Clearly, large numbers of people have died unnecessarily from diseases – such as kala azar – which are treatable, had the war not prevented treatment.

The case of kala azar

"The scale of the epidemic is hard to describe as no census data is available. Even so a guesstimate of the population of WUN is 350,000. Working there it is clear that almost everyone has lost at least one relative. In areas such as Jikany and Jagei whole villages have been emptied. Those that have not died have moved away.... The story from Panarou is more extreme with a typical patient reporting that they were the only person left out of a family group of 20 or so. The scale of the epidemic is hard to convey without using emotive language, in essence the kala azar is, and has been massacring the population for six years." Geoff Prescott, MSF nurse in WUN 1990-91, MSF internal report, June 1991

Historically, there has been little or no health surveillance in western Upper Nile, so the patterns of disease and mortality are little known. However, it is clear that the changes in lifestyle produced by the conflict – the displacement, increased malnutrition, cattle raiding and violence – have permitted diseases of various kinds to proliferate. Kala azar is one such disease.

Kala azar (visceral leishmaniasis) is a parasitic disease, spread by the bite of a sandfly. It is a systemic disease, affecting the immune system, and presents with a variety of symptoms: fever, anaemia, weakness, and wasting. Patients will die of complications (e.g. pneumonia, diarrhoea) unless treatment is available. Not all persons infected with the parasite will develop the disease. However, malnutrition is an important risk factor for developing the clinical disease. Kala azar can be treated with the right medicine and medical and

nutritional care. A series of 30 daily injections cures the disease in at least 90% of cases. Once successfully treated for kala azar, people become immune for the rest of their lives.

Kala azar is endemic in eastern Sudan, particularly east of the White Nile. The sandfly lives in *Acacia* or *Balanites* trees, which are plentiful in eastern Sudan and parts of western Upper Nile. Prior to the outbreak in the mid-80s, western Upper Nile is believed to have been free of the disease.²⁷ Now however, kala azar is well known among the people of western Upper Nile. Medical data and the first-hand experience of MSF staff suggest that every family has either lost members to the disease or knows someone who has died.

The disease reached epidemic levels in western Upper Nile in the late-80s, not long after the outbreak of the second phase of the civil war. A series of seven surveys carried out by MSF between 1990-1994 estimated that at least 100,000 people died from kala azar during the epidemic in western Upper Nile – at least one third of the population of the area.²⁸ In Panarou alone, surveys estimate that up to 70% of the population may have died from kala azar. MSF teams working in WUN in the late-80s and early 90s saw many deserted villages in Jikany while walking through the area. Survivors of the epidemic spoke of entire extended families wiped out by the disease.

"When we arrived in Ler – I cannot describe it. Everyone was naked and hungry.... I walked to Duar and everyone was dead. All the villages along the way were empty. In Duar, the huts were half taken by the bush.... Except for a few people, everyone had died." Wouter Kok, MSF nurse in Ler in 1988²⁹

"In Duar, thousands of people used to live there.... (By 1989) there were 5 people left. We would walk by places and people would tell me which families had lived there. Some of the numbers don't tell you the extent of the problem because you can't do a retrospective mortality survey if there's no one left from a family to tell you which family members have died." Dr. Jill Seaman

The timing of the outbreak is no coincidence. Over the past fourteen years, MSF and external experts on kala azar have identified some of the factors that led to the outbreak of the epidemic. The four factors mentioned below, and their inter-connection, are all related to the war:

- **Spread of the sandfly:** the re-growth of acacia forests due to reduced cattle grazing and cultivation and the subsequent increase in the sandfly population created a large vector pool for the parasite.
- **Introduction of the parasite:** the disease is believed to have been brought to the area by military moving within the area and between Ethiopia and Sudan in the mid-80s. Students returning to WUN from Malakal may have also brought the disease, which was then picked up by sandflies in the area biting infected individuals.
- **Increased transmission of the disease:** increased displacement due to the war, and increased numbers of people seeking safety and foraging for food in the acacia forests, contributed to high numbers of people becoming infected with the disease.
- **High susceptibility to the disease:** the population was highly vulnerable to the disease due to mass starvation of the mid/late 80s, lack of immunity, and poor health status due to the lack of health care services and the limited access of humanitarian organizations.

The first case of kala azar occurred in 1984, when access to health services collapsed with the onset of the war, and the increased movement of people, including soldiers and returning students, may have brought the parasite from an endemic area to western Upper Nile.

The epidemic started in Jikany, just north-east of Duar. Following the introduction of the disease to the area, it spread rapidly (see map 2). Reasons for the rapid spread of the disease included: the lack of immunity of Nuer and Dinka people in WUN, migration to escape the conflict and find food, and the fact that agriculture and cattle rearing were affected by the conflict, thereby contributing to higher malnutrition and therefore greater vulnerability to the disease.³⁰

Once the disease took hold in western Upper Nile, there was little hope for the thousands infected by the disease, since the disease is at least 95% fatal when untreated, and at that time there was virtually no health care available in the area as a result of the war. MSF's clinic and feeding program in Ler opened in 1988 and was the first medical care available to the people of the area. In 1988, as MSF staff opened a primary health care and feeding program, they began hearing of a "killing disease" further north. Once the

Map 2: Spread of kala azar in WUN, 1985-1987



disease was identified as kala azar, a treatment center was set up in Ler. When access permitted, additional treatment centers were established in Duar (1990) and Nimne (1993). The epidemic peaked in different areas over the years, starting around Duar in 1988-1989, during the famine, and spreading to other areas as people migrated in search of food or safety.³¹

Even after treatment became available around Ler in 1989, coinciding with the peak of the epidemic in the area, many people were not able to access the medical care:

*"Many people lived from 2-10 days walk away and were not able to reach treatment in time, did not know that it was available, or did not have relatives left to assist them on the journey and during treatment. Tragically, then, the majority of deaths there occurred before treatment became available."*³²

²⁷ J. Seaman, A.J. Mercer, and E. Sondorp, "The Epidemic of Visceral Leishmaniasis in Western Upper Nile, Southern Sudan: Course and Impact from 1984 to 1994," *International Journal of Epidemiology*, Vol. 25, No. 4.

²⁸ *Ibid.*

²⁹ Interviewed in March, 2002.

³⁰ See J. Seaman et al., "The Epidemic of Visceral Leishmaniasis," in note 27.

³¹ *Ibid.*

The epidemic spread to the Dinka area of Panarou, north-east of the Bahr el Ghazal river, in the late 80s. Between mid-1990 and early 1991, when treatment was available in Duar, more patients came from Panarou than from any other area, despite a journey of up to 15 days. Almost 1500 patients were treated from Panarou in this time period. However, from mid-1991 through mid-1992, even while MSF treated almost 10,000 cases of kala azar from other areas and the epidemic is believed to have reached its peak in Panarou, virtually no patients from Panarou came for treatment. The reason was that Dinka-Nuer relations deteriorated sharply following the split of the SPLA, so few people were permitted or dared to journey into the Nuer-held area south of the river.

Between 1990 and 1994, MSF conducted seven retrospective mortality surveys in an effort to better understand the impact of the epidemic. Analysis of these surveys produced the following conclusion:

*"On the basis of the overall death rates found in the surveys in each district and population figures extrapolated from the 1983 census, 80-136,000 people who might have been expected to live, have died since 1984. Allowing for extra deaths from VL (visceral leishmaniasis) among families with no survivors, and deaths since the surveys in areas with no access to treatment, around 100,000 people have probably died from VL in WUN."*³³

While the peak of the kala azar epidemic appears to have hit most of western Upper Nile in the late-80s, and Panarou in the early 90s, the disease still affects large numbers of people every year. Another outbreak took place in 1994, caused by the movement of large numbers of people through the acacia forests in order to attend a new market.

To date, MSF has treated over 20,000 cases of kala azar in WUN. As long as the war continues and serious preventative measures and sandfly control are not implemented, treatment of those who access health centers is the only means of reducing mortality.

Nya Puoch, a woman in her 50s originally from Kuac but displaced to Burbur, lost her mother to kala azar in 1989. She has delivered 4 children – 3 died of kala azar.

Veronica, a woman in her 40s originally from Paduong, had come seeking MSF's kala azar treatment. She lost four siblings to kala azar in the late-80s. Of her six children, three died of kala azar or other diseases. Of

three remaining children, one is infected with the disease. She had brought this child, an eight-year old girl, to MSF's treatment center in Nimne, where the girl received the painful daily injections of the medicine from MSF staff and recovered.

Nyadiet, a woman in her late 50s from Rupnyagai, had delivered four children. Her husband and two children died of disease – possibly kala azar – in the early 90s. She had come to Nimne with her adult son, who was also infected with kala azar, seeking treatment from MSF.

Monica, a woman in her late-30s from Agarak, Panarou, had delivered eight children. Four died from disease, three from what she believes was kala azar, and one from another, unspecified disease.

Awuor, a woman in her late-40s from Akot in Panarou, delivered eight children. Three have survived. Her husband and three of her children died from disease – possibly kala azar – in Panarou in the late 80s. Two other sons were shot by troops while herding cattle last year.

Based on the origins of kala azar patients in MSF's treatment center in Nimne in 2001, Panarou and Jikany continue to be the most affected districts of western Upper Nile. As of 2002, MSF offers kala azar treatment in three centers in western Upper Nile, including Bentiu. The treatment center in Nimne opened in December 2000. Over the next 13 months, MSF treated 1206 kala azar patients; 94% were cured of the disease. Of the kala azar patients, 75% were children below 15 years of age.

As of February 2002, MSF had 107 kala azar patients undergoing treatment in Nimne. In the first ten days of February, Nimne was first looted by ground troops and then bombed by Antonov aircraft. The kala azar patients and the rest of the population fled the attacks. Thus far they have not returned to Nimne and many are dispersed in the region. Of the 107 kala azar patients, 80 have arrived in nearby locations where MSF staff continue their treatment. Another 7 patients went to Bentiu, where they have resumed treatment at the MSF hospital. Without continued treatment, the remaining 20 will probably die.

The case of Tuberculosis

Tuberculosis (TB) is currently one of the most serious health problems in western Upper Nile. Due to cultural and economic reasons related to the dependence

of the Nuer on their cattle, transmission of bovine tuberculosis is probably widespread and an important factor in the high incidence of TB in the area. Tuberculosis has particular impact on communities as it is currently the main cause of death in the age group between 20-45 years old – the most productive age group. MSF estimates that the incidence of tuberculosis is currently reaching levels of 300/100,000.

MSF treated over 3,000 cases of tuberculosis in western Upper Nile between 1993-97, but this is only the tip of the iceberg. Insecurity and evacuations of health staff make TB treatment especially difficult, since sustained daily treatment is necessary to cure the disease. Between 1997 and 2000, MSF was unable to access most areas of western Upper Nile for extended periods of time. An unknown number of TB patients therefore went untreated and most likely died.

Among infectious diseases, Tuberculosis has quietly become a leading cause of fatalities around the world.³⁴ On average, every sputum-positive TB case is infecting 12 other persons each year with TB. If there is no treatment after infection, 60% will have died within 1-5 years, 20% become chronic cases continuing to spread the disease, and 20% of TB cases will spontaneously cure.

Currently, there is no TB treatment available in rebel-held areas of western Upper Nile. If security permits, MSF hopes to re-open a TB program in a rebel-held location in mid-2002, aiming to treat 250 TB patients. Meanwhile, the only available TB treatment lies in the government-held town of Bentiu, where MSF has admitted 132 patients for treatment since June 2001.

Additional infectious diseases

MSF has also intervened in numerous outbreaks of many diseases which are generally preventable through immunization programs.

Table 1 represents only a fraction of the total incidence of infectious disease. Many outbreaks have no doubt been unreported or inaccessible due to conflict, and total mortality from preventable infectious diseases will never be known.

TABLE 1: OUTBREAKS OF DISEASE (KNOWN TO MSF)

DATE	LOCATION OF OUTBREAK	DISEASE	ESTIMATED # AFFECTED
1984-94	All of western Upper Nile	Kala Azar (Visceral Leishmaniasis)	80,000 – 136,000
1990	Ler area	Meningitis	unknown
1992	Duar area	Measles	unknown ³⁵
1990s – present	throughout western Upper Nile	Shigella (bacillary dysentery)	unknown
1993-94	Ler and Duar areas	Polio	unknown
11/1993	Nimne, Duar and Ler	Hepatitis E confirmed among pregnant women	100% mortality among pregnant women, total mortality unknown
1996	Ler area	Cholera	500 deaths among 3,600 reported cases
1996	Ler area	Measles	unknown
		Relapsing fever	unknown
1997	Duar	Hepatitis E	unknown
2000	Padeah (near Ler)	Measles	unknown
2001	near Rubkona	Polio ³⁶	>100 other persons are infected
2002	Padeah (near Ler) & Tam (Bul area)	Measles	unknown

³⁴ Tuberculosis is estimated to cause 25% of all avoidable deaths in developing countries. In 2000, the World Health Organization estimated that there were 3.5 million deaths from TB, of 10.2 million cases in the world.

³⁵ The case fatality rate of measles is likely to be high, possibly as high as 30%, because many children may have measles in conjunction with malnutrition and because in many cases, children are not brought for treatment, resulting in complications.

³⁶ The effort to eradicate polio is severely hindered due to inaccessibility and insecurity related to the conflict.

³² *Ibid.*

³³ *Ibid.*

2.4 KILLINGS, RAPE AND FORCED RECRUITMENT OF CIVILIANS

"Both sides, whenever they get you, they beat you."
Nyanluit, from Nyroamni

"The attacks in 2000 were not the first fighting, but it was the worst, because if soldiers found people, they killed them." Nyanyung, from Nhialdiu

Mortality and injuries of civilians as a result of violence from military and militia factions are perhaps the most obvious effect of the conflict, but data is incomplete given that many civilian victims of violence do not reach health centers. In addition, while many war-wounded patients are medically evacuated every year from locations throughout Sudan to the ICRC hospital in Lokkichoggio, these patients include wounded combatants as well as civilians. From MSF's own records, it is clear that each year dozens of people, including women and children, have been medically evacuated due to war injuries such as gunshot wounds.

The story of Nyakuon illustrates this issue: *In January, 2002, Nyakuon, a 14-year old girl was walking from Dablual to Padeah to attend a wedding with her 16-year old friend Nyatek. On the way they ran into a Government of Sudan patrol. Nyatek was raped by a soldier. Nyakuon resisted the rape and was shot in the chest by one of the soldiers. She was brought to a nearby MSF clinic where she was given first aid and then evacuated to Lokkichoggio for surgery.*

Aside from the health impact of direct violence, the following sections illustrate the overall pattern of violent targeting of civilians by armed factions on all sides of the conflict.

Targeting of civilians in Panarou

"Panarou is now without people." Duth, from Panarou

The situation in Panarou, also known as Ruweng County, is somewhat different from other parts of western Upper Nile. Panarou is divided into two parts: Awet, the northern half, where the town of Pariang is located, and Kuel, the southern half, which borders the Bahr el Ghazal river. In Panarou there has been severe conflict for at least ten years. Located north of the Bahr el Ghazal river, Panarou borders the Nuba mountains in the north and the Heglig oil fields to the west. Reports from Panarou over the past decade have been extremely alarming from a humanitarian and human rights perspective. In recent months, MSF has learned more about the current situation from displaced Panarou Dinka arriving in the Jikany area.

The stories told to MSF by these people provide a shocking insight into the area. Killings of civilians, even young children, appear to be commonplace.

Majak, a man in his late 40s, was visibly distressed when telling his story. Majak is from the Kuel area of Panarou, from a village near Agarak, a town in the south of Panarou, not far from the Bahr el Ghazal river. Majak described the events which forced him to leave Panarou in graphic detail.

In March of 2001, Majak walked to Lake No to do some fishing. Early the next morning he heard the sound of bombing and shooting and started walking back to his village. As he walked he saw fire and smoke rising and realized that villages were burning. As he neared Bol, he was spotted by troops in vehicles and ran into the forest. He hid there until sunset, when he ventured out again under cover of darkness, and walked to Bol. In Bol he found a devastated village. One person had survived the day's massacre: a young boy – mentally handicapped – was spared by the soldiers. He found thirty people in a luak, all dead, two of them young women who had been brutally mutilated. Majak and other men from the area buried the dead and he then walked to Manyang, a village north of Lake No, searching for displaced from Bol. A few days later, Antonov planes and helicopter gunships came to Manyang and neighboring villages and began bombing and shooting at the villages. People began running towards the river, but the helicopter gunships kept following and shooting at the people. People drowned in the rivers because they did not know how to swim.

Majak walked to Lake No and met some other survivors – people walking without their children. When he asked where their children were, they said they didn't know, they had been lost in the confusion. Antonovs also came to bomb the people at the riverside, where they were hiding in the tall reeds. Majak had spent the last five months walking around Jikany, trying to find his people and bring them to places like Nimne, where they could receive relief.

Kulang, in her mid-40s, fled her home in Agarak in July 2001. Agarak is located in southern Panarou, due north of Lake No. Kulang's parents, both in their 60s, were killed during an Antonov bombing earlier in the year. Kulang had stayed in her village after the bombing, but decided to leave in July when the Antonovs returned, this time accompanied by ground forces in "new kinds of trucks." Helicopter gunships also came in pairs, at any time. Last year, Kulang had fled Agarak (late 2000) when the dry season fighting began. When she returned in early 2001, everything had been burned and she saw 10 bodies of people who had been killed, including three

people she knew: two men in their late 50s and a four-year-old child. "The war is different now," stated Kulang, "because before the Arabs would come only in the dry season. Now they bring helicopter gunships and a new kind of truck and come any time."

Nyalweth, 38 years old, from Biu, also left Panarou in the dry season 2001. She left because of the shooting and bombing. Three helicopter gunships came, flying at the level of the trees, and started shooting at people. She was in her compound and became frightened after some people were killed. She ran away, south to Manyang. She saw people falling down from the shooting as she ran. Two of her grandchildren – a three-year old girl named Mapei and a five-year old boy named Deng – were killed by helicopter gunships several years ago.

Daw, a woman in her late-30s, is originally from Nyak (near Biu). Daw left in the dry season, 2001 after her brother and cousin were killed in a helicopter gunship attack. She fled south to the riverside, where she hid in the reeds in the middle of the river. But the gunships came there too, and they would circle the area. The Antonovs also bombed the riverside. Daw said that the Antonovs and helicopter gunships were very frightening because sometimes the Antonov would come and didn't bomb, other times it would bomb a lot. "You cannot be sure when it or the helicopters will come, sometimes they come at night, in the afternoon, or in the morning, but you can never be sure," she said. Daw stayed near the river, eating the root of water lily, for several months. She has not been able to cultivate any crops because she left her home before the rainy season began. Now she eats wild greens – etnom – which she gathers from the riverside, and begs from other people.

While people from Panarou acknowledge that there has been fighting there for years, they described two ways in which the degree of conflict in 2001 differed from previous years. First, all of the people interviewed described regular attacks by helicopter gunships, a new and fearsome development in the last two years. Everyone interviewed described the helicopter gunships as flying at very low levels ("the level of the trees"), and firing at groups of civilians, including women and children. Second, people stated that the establishment of Government garrisons within Panarou limited the ability of people to return to their homes and cultivate in the rainy season.

These two factors give the Panarou conflict a new intensity, which results in forced displacement of the Panarou people.

"When they (GoS troops) capture people, if they are young women they rape them. If they are old, they take them to Pariang (GoS-held town). If very young children, they knife them and throw them inside the tukuls."
Arup, from Awet, Panarou

Rape and abduction of women

Of particular note is the scale of rape and abduction of young women by fighters from both sides. Almost every person interviewed in several different locations, knew either a family member or a number of unrelated women who had been abducted and raped by either SPLA or SPDF troops, or by SSUM militiamen in and around Bentiu. MSF heard of at least 50 individual women who were abducted, a number that is likely to be only a small fraction of the total.

Nyadet left Nhialdiu in February 2001, when the SPLA and the SPDF began fighting. She described how the fighting began, early in the morning. During the fighting, she and her neighbours stayed in their homes, lying down on the floor with their livestock. When the fighting was over in the evening, SPLA soldiers came to her compound and ordered her to pack up her belongings and come with them. Nyadet, her 14-year-old sister, and two neighbors, women aged 25 and 36, were forced to accompany the soldiers and carry goods along the journey. Along the way, they were beaten and raped by different men. Nyadet described being raped by three-four men each night for the nine days she was with the troops. When the troops reached the area of Tam, north of the river, Nyadet managed to escape one morning while collecting firewood in the forest. She made her way back to Nhialdiu, searching for her family, but the village was deserted. She eventually made her way to Rubkona, where she received some relief items but did not find her family.

Nyatang, a woman in her mid-20s from the Nhialdiu area, was at home when the fighting began. The soldiers of the SPDF came to her compound and beat her and her husband, then they left to fight. When she and her family "heard the song of the gun," they managed to run into the nearby grass and hide while the fighting took place. The soldiers returned to the compound later in the day and stole the cattle and property, then burned the tukul. Nyatang said that one man and about 30 women were taken away by the SPDF soldiers. Some of the women returned after several months, and described repeated rape by the soldiers during their captivity.

Nyariék, a woman in her 30s, left her home in Mirmir in 1998 after her husband died of kala azar and her 11 cows were looted by the SPLA. She went to Bentiu

seeking relief. She stayed in Bentiu for several years, surviving on the food given by international NGOs. She left in August 2001, when the food stopped being distributed and the Government forces began beating people. It took her seven days to travel back from Bentiu. Along the way she and two other women were raped by the SSUM militia men of Paulino Matiep.

In the cases of women who were abducted, most families had little news of these women or knowledge of their whereabouts. Some women managed to escape in the early morning or evening while collecting firewood. These women described arduous journeys east to Bentiu, Rubkona, or to the relative safety of Jikany.

Nyadang is originally from Rupnyagai, a town several hours walk north of Nhialdiu. Nyadang is a woman in her 30s, who has given birth to three children. She knows conflict – last year there was fighting but her family hid in the bush until it was over. Last year the cattle were not taken nor were the crops burned. This year was different. She left Rupnyagai in March, 2001, when fighting started again near her village. Her home was near the forest, so when they heard the sound of the guns, the men from her family ran into the bush, afraid that they would be killed by the SPLA soldiers. The women stayed in the compound. Nyadang had her newborn baby with her and believes that the soldiers left her alone because of her infant child. Her 15-year-old daughter, Nyabut, had gone to fetch water before the fighting began. Nyabut was abducted by the soldiers. All of Nyadang's belongings were looted or burned. Her family's cattle were taken; their tukul and crops were burned. They had no food left, so Nyadang's family went to Bentiu to find some relief. They stayed in Bentiu several days and received some food, then left for Nimne. Nyadang heard from a woman who escaped from captivity that her daughter, Nyabut, is in Mankien. She is the "wife" of a soldier.

In addition to the incidents of rape during and after fighting in the villages in the Nhialdiu area, many women who fled to Bentiu and Rubkona for relief and protection were raped by Paulino Matiep's SSUM militia in the town. MSF interviewed at least a dozen women and men who were either victims of rape or witnessed rapes by SSUM fighters and Government soldiers either in or on the outskirts of Bentiu.

Nyareu is a 45-year-old woman originally from Bieh vilage (near Koch). She left her home in 1999 after her home was burned down and her cows were taken by the SPLA. Her family spent six days walking to Bentiu and was registered upon arrival. She left Bentiu in August

2001. The food distribution had stopped. Nyareu said that she had been beaten and raped many times by SSUM militia men and Government soldiers. She remembered four times, when up to six men raped her. On her journey out of Bentiu, the soldiers took away all her belongings, leaving only the clothes she was wearing.

Elizabeth, a 25-year-old woman from Bieh, also left to Bentiu in 1999 after fighting in her village. Her home was burned and her family's 40 cattle were stolen by SPLA troops. Elizabeth was pregnant when she went to Bentiu and delivered her child there. Elizabeth narrowly escaped being raped one night when four fighters came and tried to rape her. A fifth man came and stopped the rape because she had a new baby. Instead, the men beat her on her back with sticks. On her journey back to Bieh, everything she had was looted by soldiers. "Everything we carried was taken away by soldiers – clothes, mosquito nets, pots, fishing nets – I reached here naked."

Medically, the high incidence of rape also has worrying implications in terms of the spread of sexually transmitted diseases. Incidence of HIV-AIDS in western Upper Nile currently remains low, probably due – ironically – to the isolation and inaccessibility of the area due to the conflict. The incidence of sexually transmitted disease, the scale of rape taking place, and the displacement and malnutrition caused by the conflict are all factors which could lead to an explosion of the disease once it is introduced.

"This year's attack (in 2001) is worse than last year's. The people who managed to run away last year took their cattle. Also, women were raped but then sent back. This year was different, women were kept by the SPLA." Nyateak, from Nhialdiu

"If they (the soldiers) like you, they will take you and leave your child. The child will die. They will use you as a wife." Nyadang, from Rupnyagai

Forced recruitment

Coercion and assault related to forced recruitment of men was also consistently mentioned as a problem, and appears to be common practice by all factions operating in western Upper Nile.

The story of Francis, a young man in his 20s, reiterated the danger of forced recruitment in Bentiu:

Francis was originally from Kuac. He left his home in July 2000 during the fighting between the SPLA and SPDF. His wife went to Bentiu and he went east. He later went to Bentiu to visit his family, and spent the

whole time inside the tukul, afraid of being seen by the troops. Earlier, his brother had been caught in Bentiu and forced to be a soldier. If men refuse, they can be killed. Francis also mentioned that men had to pay 5,000 Sudanese pounds to enter and leave the town; women only paid on exit.

The SPLA troops have also conscripted young men, sometimes by threatening assault or taking the family cattle if men refused to join the troops. Displaced people from Panarou, Bentiu and areas south of the river have reported forced recruitment by SPLA troops. According to these accounts, boys as young as 10 years old have been forcibly recruited.

James, a 25-year old man from Nhialdiu, was at home with his family in March 2000, when SPLA soldiers and local chiefs came to collect young men. He agreed to go because he was afraid he might be beaten or the family cattle taken if he refused. He was taken for four months of training by the SPLA. During the training, at least 20 people died of diseases, out of a group of about 250. James said that if you get malaria or diarrhoea there is no medicine, so you can die. The men ate boiled grain porridge and fruit, but no meat. Some people escaped, but then their parents were beaten or forced to work for the SPLA by cutting wood, building houses etc. If the SPLA found an escaped recruit, sometimes they beat him until he died. James knew two men who were beaten to death because they tried to escape. James fought several times. In one incident he fought with a "red soldier," a young fighter between the ages of 12 and 15. James said that they are called red soldiers because they are young. They are very brave, but when they are shot, they cry.

MSF has also witnessed inhumane treatment of the forced recruits within the SSUM forces. In 2001, several dozen severely malnourished and ill soldiers were admitted to MSF's clinic in Bentiu. These men were all originally from various locations in western Upper Nile. They were forcibly recruited in Khartoum or other places in the north, where they had gone to seek work or safety.

The men's stories were consistent in describing capture under gunpoint by SSUM soldiers in Khartoum and in eastern towns like Sennar and Gedaref. They were then taken for training and then transported to Mayom or Bentiu. Most became ill while undergoing military training, apparently from malnutrition. Some received treatment at the local government clinic in Bentiu, others died.

When these men were admitted to the MSF clinic,

they were in a desperate condition. Samuel's story illustrates the terrible plight of these men.

Samuel is in his late 20s. Originally from the Ler area, he has been living in Jebel Aulia in Khartoum for the past four years. In January 2001, Samuel was in the market in Jebel Aulia when armed SSUM militia men began rounding up Nuer men and forcing them on a truck. One person who tried to run away was shot in the hand. The SSUM men took them to a training camp in Kala Kala, and then to Mayom, near Bentiu. There were more than 1000 recruits, plus SSUM men guarding them. In Mayom they started military training – every day, from morning to evening. It was very hard, more than 100 died from hunger during the training. The only food they got was sorghum porridge (assida). Samuel became ill with diarrhoea and coughing in February. He gradually became worse until by May, he was no longer able to continue training. He was transferred to Bentiu and diagnosed with tuberculosis. By the time Samuel reached the MSF clinic, he weighed only 37 kg.

2.5 DESTRUCTION OF HEALTH SERVICES AND ATTACKS ON HEALTH WORKERS

Through its presence in the area since 1988, MSF has observed the deterioration of the situation in western Upper Nile, but especially in the past few years. By 1996, MSF and other organizations working in the health sector had established a network of local health posts or dispensaries and health centres offering additional services. This network, consisting of 19 dispensaries and five health clinics, as well as the functioning regional hospital in Ler, provided health care to several hundred thousand people in western Upper Nile. MSF's records for this period indicate that more than 100,000 consultations took place annually in the health posts between 1990-1994 alone.

One of the less evident, but hugely significant effects of the conflict in the area has been the almost total destruction of the health infrastructure that was built up over the past decade, and the dispersal of many trained health workers. The provision of health services has always been poor in WUN, and with the onset of the civil war the situation further deteriorated. The sparse health infrastructure was largely destroyed and many health personnel were killed in the violence or the kala azar epidemic, displaced or recruited into the fighting forces. Medical doctors and other professionals fled abroad.

A lack of health facilities and health staff have immediate consequences. Water borne-diseases such as diarrhoea and vector-borne diseases such as malaria account for the majority of the morbidity among patients in MSF's health centers. With both types of disease, children under five years of age are at high risk of dying if treatment is absent. In addition, epidemics of other diseases regularly affect communities in western Upper Nile. Some of these diseases are easily prevented or reduced with vaccination programs, however, the conflict has rendered many areas inaccessible for regular immunization.

In addition, diseases affecting cattle, such as brucellosis, are easily transmitted to humans where there are no programs to prevent such infection. MSF staff have treated many people against brucellosis and the link with cattle is clear:

"I noticed all these people having really hot joints and fevers... (it was) brucellosis. We actually did a study and 20% of the cattle had brucellosis, which might not happen if there's not a war, because brucellosis is a disease you can vaccinate against." – Dr. Jill Seaman

In 2001, MSF worked in six locations in rebel-controlled WUN, offering basic health care, some in-patient

services, and in one location, kala azar treatment through simple village clinics. In addition, the MSF programs in Bentiu offered in-patient and outpatient facilities, therapeutic feeding, and treatment of kala azar and tuberculosis patients. The estimated catchment population for these programs was over 150,000 people. A total of 70,000 consultations took place in the six clinics alone over a one-year period, and almost 30,000 consultations and admissions took place in Bentiu in 2001. These seven clinics provide virtually the only source of preventative and curative care for the population in WUN. Aside from a Ministry of Health clinic in Bentiu, all health services in WUN are provided by international organisations.

In MSF's clinic in Thonyor, for instance, which is a health center with in-patient capacity, an average of 1400 patients were seen each month in an area with an estimated population of approximately 12,200. In a four-month period from October 2001-January 2002, the center received 120 in-patients, people whose medical conditions were serious enough that they would die without treatment. The main diseases seen among the in-patients included malaria, pneumonia, malnutrition and serious wounds (including war wounded suffering from grenade and gunshot wounds). The center also treated 67 kala azar patients. These figures – a snapshot of one small health post in one pocket of WUN – indicate the huge health needs in the region. The fact that the conflict has destroyed or rendered inaccessible large areas of the region is that much more worrying when set against the backdrop of such enormous human needs.

Attacks on health workers

All of the warring parties have been responsible for the destruction of health facilities, the looting of medical goods and materials, and the deaths of health workers. Despite the protections afforded to medical units and personnel by the Geneva Conventions of 1949, armed troops have targeted health units and staff with total impunity. The following list of attacks illustrates the pattern of attacks on health facilities and medical personnel. It is far from complete and represents only those incidents confirmed by MSF staff in western Upper Nile.

MSF alone has lost eight Sudanese health workers to violence in the past 10 years. In 1993, three Dinka nurses were killed during the Dinka-Nuer clashes following the split of the SPLA. Two more health workers were killed during the violence of the 1998 fighting between Matiep's SSUM and Machar's SSIM factions. In September 2000, two health workers were shot at

TABLE 2: ATTACKS ON MSF HEALTH FACILITIES AND HEALTH WORKERS, 1989-2002

DATE OF ATTACK	LOCATION AND DESCRIPTION OF EVENT
12/1989	Ler bombed by GoS.
9/1990	Ler bombed by GoS.
11/1991	Ler looted by SPLA troops.
6/1993	Nimne attacked twice in Dinka-Nuer clashes, 3 MSF health workers killed by militia (Peter Nyok, Michael Mayak, Piok)
11/1993	Duar fighting, 2 tuberculosis patients killed
1/1994	Nimne attacked and health center burned down, multiple gunshot wounds leading to 3 deaths
9/1997	Nhialdiu clinic and surrounding villages attacked and destroyed (for the 1st time.) by militia.
3/1998	Duar clinic and village attacked and destroyed by SSIM forces under the command of Tito Biel. MSF nurse (David Diapp) killed while fleeing Duar.
6/1998	Ler hospital, MSF feeding centers and town attacked and mostly burned by Peter Gadet forces (then-allied to the SSUM). MSF nurse (William Diu) killed while fleeing Ler.
4/2000	Wicok & Bow attacked and kala azar center looted by unknown militiamen.
9/2000	Koch attacked, 2 MSF health workers killed (Paul Tap and Stephen Gatdet) and medical supplies looted by the SPLA.
3/2001	Nyal attacked, OLS compounds and facilities destroyed by SPLA.
2/2002	Nimne looted by unknown militia and bombed by GoS, 1 MSF health worker (James Koang) killed in aerial bombardment and medical supplies looted.
2/2002	Bieh attacked by GoS, MSF health services suspended in Bieh

close range by SPLA troops when they fled, unarmed, from an attack on Koch (see below).

The attack on Koch: September 2000

Stephen Gatdet and Paul Tap, health workers supported by MSF, were in the health clinic in Koch when they first heard the gunfire. They tried to escape carrying the medical supplies with them, but the soldiers were already nearby and fired at them. Paul was killed instantly, Stephen was seriously injured with bullet wounds in his face, chest and leg, and survived only a few hours. A total of five civilians are believed to have been killed in the attack, including Stephen and Paul. (Compiled from witness reports.)

Most recently, an MSF health worker, James Koang was killed in the bombing of Nimne in February 2002.

The loss of health staff and basic health facilities have had serious consequences for the people of WUN. First, the complete lack of local resources and facilities remaining to treat the numerous diseases and huge health needs of the civilian population, and second, the insecure situation renders locations inaccessible for international relief agencies to fill the vacuum of local health workers and bring essential drugs and medical materials.

The effects of the attacks on health clinics and health

workers is significant. Health workers who were trained in Ler and other locations over a decade have fled the region. Some have found work in MSF's kala azar programs in government-held areas such as Bentiu and in Gedaref, or with other organizations in Khartoum. However, for the civilians remaining in western Upper Nile this is scant comfort, as most communities are bereft of trained health staff and access to essential medicines.

In attacks, the clinics and health posts have almost always been completely destroyed, with the buildings burned, medicines and other materials stolen, and water and sanitation facilities damaged. Ground attacks have generally been carried out by factions allied to the Government of Sudan and the SPLA. Aerial attacks via Antonov bombers and helicopter gunships have been used exclusively by the Government of Sudan military. While aerial bombing has been frequent and has often hit civilian targets such as in Nimne in February 2002, the principal impact of aerial bombardment of hospitals has been in other parts of southern Sudan and is well documented elsewhere.³⁷

³⁷ See, for instance, reports of U.S. Committee for Refugees.

2.6 CONSTRAINTS ON ACCESS TO HUMANITARIAN RELIEF

Relief operations in the context of conflict are not uncomplicated. Many of the problems associated with emergency relief in Sudan and other chronic conflicts are well known.³⁸ These include: diversion of aid to the military, manipulation of aid, lack of accountability, and associated human rights violations. Many of the less obvious dilemmas of relief in chronic conflicts are also characteristics of the Sudanese war – the use of humanitarian aid as a fig-leaf for political inaction, the distortion of traditional indigenous modes of authority and representation, and assistance rendered with little regard for cultural imperatives or needs.³⁹

Nonetheless, there is no disputing the fact that for the people of western Upper Nile, humanitarian relief – when available – has made a significant difference for people on the edge of survival. The medical programs provided by MSF alone have saved large numbers of people from death. Close to 30,000 people have been treated by MSF for kala azar and tuberculosis alone – these people would otherwise have died.

The humanitarian aid operations in Sudan mirror the political and military divide of the war. Over the past 15 years, two distinct operations have emerged. A number of UN agencies and non-governmental organizations operate from Khartoum, under the authority of the Government of Sudan. These organizations access government-held areas in the southern conflict zone with Government permission. In western Upper Nile, the key areas served from Khartoum are largely north of the Bahr el Ghazal river and include Bentiu town, Pariang town in Panarou and the area surrounding the oil road. The second part of the relief operation is based in Kenya and operates in the rebel-controlled areas of southern Sudan, under the authority of the SPLA or other controlling opposition groups. In western Upper Nile, most of the area south of the Bahr el Ghazal river, and north-east in Panarou, is served by humanitarian agencies operating out of Kenya.

When discussing constraints on access, it is useful to distinguish between denied access – when for instance, humanitarian agencies are refused permission to enter an area and provide services – and access limited by security constraints such as active fighting.

Constraints in rebel-held areas: the case of Panarou
As described in earlier chapters, the largely Dinka-populated district of Panarou, also known as Ruweng

county, has long been one of the most worrying areas of western Upper Nile. The population of Panarou was believed to number about 79,000 in the 1983 census. By 1990, the estimated population of Panarou had declined to 60,000. By 1994, the estimation had receded even further, to between 45-50,000. War-related displacement, violence, measles epidemics and kala azar are believed to have been the main causes for the deaths of thousands.

MSF has been concerned about the effects of the conflict in this area for over ten years and has made numerous efforts to maintain programs in the district. Assessment missions in 1991, 1993, 1994 and 1998 continuously emphasized the grave humanitarian situation and the urgent need for humanitarian relief. Each time MSF attempted to maintain a permanent presence in the area, however, the insecurity was judged too high. In addition, the Government of Sudan continuously banned flight clearance for the area for a number of years.

The combination of violence, displacement, and the lack of medical services have been a deadly combination for the people of Panarou. Even among MSF medical staff well-acquainted with the most alarming humanitarian and medical disasters, Panarou has been described as among the worst situations ever witnessed.

Dr. Seaman, who visited northern Panarou – Awet – for the first time in 1991, described her impressions as follows:

*"We walked over an open grave and there were bones like crazy. We walked past burned huts – everything was burned to the ground. People left at sundown and wouldn't stay in the village... Many people had tropical ulcers – huge wounds – because they had no clean water and nothing to put on the wounds. In most places you will have a piece of cloth to put on the wound, but there they didn't even have cloth to put on the wounds."*⁴⁰

MSF also conducted three retrospective mortality surveys in Panarou which estimated that kala azar had killed between 40 and 70% of the population in the area, depending on the specific location. As mentioned earlier, over 1500 Panarou people managed to access kala azar treatment in Duar between 1990-92. However, after the split of the SPLA, most Panarou people were unable to travel south of the Bahr el Ghazal river due to the clashes between the Dinka and Nuer.

MSF tried alternative approaches to reach the Panarou people. The kala azar center in Nimne was established in 1993, partly to provide easier access for the Panarou people, and some did reach the services provided there. However, the Panarou people who reached Nimne were all people from Kwel, the southern part of Panarou. Awet people did not reach the services in Nimne. The explanation for this disparity lies with the attitudes of the various SPLA commanders. In Kwel, the commander recognized the gravity of the situation and permitted people to enter Nuer areas in search of treatment. In Awet, the commander took the opposite approach, barring people from going into the Nuer lands after the split of the SPLA.

MSF returned to Nyarweng, in the Awet area of Panarou, in 1994 and attempted to establish a program. In 1994, approximately 100 kala azar patients were treated for three weeks before insecurity forced the MSF team to evacuate. Medicines were left with a local health worker to continue the treatment of the patients. Later, however, MSF learned that the area commander had requisitioned all the drugs and demanded a pregnant cow for each bottle of Pentostam, the medicine used to treat kala azar.⁴¹ This example and the fear that the toxic drug Pentostam could be used inappropriately, dissuaded MSF from attempting to leave substantial amounts of medical supplies without supervision.

In summary, a combination of factors limited access to Panarou throughout the past decade: insecurity due to the conflict was a major factor, but Government and rebel authorities also imposed restrictions on the ability of agencies to freely access the area, or for the population to access relief, where available. The consequence of these access limitations has been dramatic. Approximately 50% of the population may have already died from kala azar, other diseases and violence. The recent stories of displaced people from southern Panarou are testament to the ongoing violence and forced displacement taking place in the region.

Unless protection from violence and access to humanitarian relief is made available to the people of Panarou, there may soon be few people left.

"It's nice that you are here now, but where were you nine years ago when we were dying? We are dead now."
Kala azar patient in Panarou to Dr. Seaman, February 2002

Constraints in government-held areas: the case of Bentiu

"Many people are coming out of Bentiu because outside you can get visits from relatives.⁴² Inside you can get cured but you die of hunger." Nyariaka, from Chiokborow

"SSUM loot at night. If you are not from Bul they will kill you. If from Bul then they take your property and leave you." Samuel, from Kuac area

As with most of the Government-held towns in the south, Bentiu is a source of both relief and insecurity for displaced people from rebel-held areas. Historically, when violence increases in the surrounding areas, GoS-held towns offer a relatively stable location and greater access to humanitarian relief, given the insecurity prevailing in the rebel-held areas. On the other hand, the newly displaced are often viewed suspiciously and can face discrimination and violence at the hands of armed groups, particularly when entering or leaving GoS towns. Bentiu illustrates both characteristics.

Displaced in Bentiu include people from Jikany, Lek, Jagei, Adok and Nyong areas of WUN who came mainly in two large influxes, in 1998 and 2000-1.

Until 2000, there was minimal relief available in Bentiu. When displaced entered Bentiu in 1998 fleeing the conflict, some agencies based in Khartoum began operations in Bentiu. These programs were hampered by continuing insecurity. For instance, between 1998-2000, MSF tried to initiate a program in Bentiu but was limited by on-going insecurity as well as by Government-imposed restrictions on the use of communications equipment and on free movement of expatriate staff to the area. In August 2000, MSF finally succeeded in opening facilities in Bentiu for therapeutic feeding and in-patient medical treatment.

In 2000, when the second major influx entered Bentiu, humanitarian needs were enormous. Many of the displaced were in dire need of nutritional and medical assistance, as well as food, clothes, and other relief items. Most people received vital and sufficient relief assistance initially when they arrived (food, mosquito nets, clothing etc. from INGOs and UN agencies). In 2001, however, distribution of non-food items reduced drastically and the general food distribution did not take place from April to September.

³⁸ Joanna MacRae & Anthony Zwi, edit., *War and Hunger: Rethinking International Responses to Complex Emergencies*, Zed Books, 1994.

³⁹ African Rights, *Food and Power in Sudan: A Critique of Humanitarianism*, African Rights, 1997.

⁴⁰ Interview in March 2002, and Internal MSF reports.

⁴¹ Internal MSF report, 1994.

⁴² In many African contexts, relatives are the essential caretakers for patients receiving in-patient health care. Caretakers provide food and perform most other tasks for the patient.

3.0 CONCLUSIONS

Meanwhile, people reported that GoS-allied SSUM militiamen began stealing their food. Also, the SSUM forces became much more abusive of the displaced: rape of women in the night was cited as a common event, either in the displaced areas or when women went into the forest to collect firewood and grass. The fact that this type of violence and harassment of the population coincided with the reduction of the general food distribution is little surprise, and it is clear that although both residents and displaced in Bentiu and Rubkona were affected, the most destitute and vulnerable people suffered the most.

The increased violence in Bentiu in 2001 is illustrated by the following accounts:

Tongpiny is in his 60s. He left his home in Bieh in 1999 due to the fighting. Soldiers burned down his home and looted everything he and his family owned. They arrived in Bentiu and received help in the beginning. After two years, things began to change. The Government and SSUM forces began to take the boys and the boys did not return. Tongpiny saw girls being raped under knife and gun threat. Every morning he heard stories of girls who were raped. He met people whose daughters had been raped. Some girls ran away and then returned, others did not return. He said the girls were given to lonely soldiers on a rotation basis. Sometimes they came back but most of the time they were kept by the soldiers. Sometimes girls were made wives, but most of the time the girl's future was not known.

Nyariaka, a young woman in her early 20s, was interviewed with her mother. Originally from Chiokborow, near Nhialdiu, they had fled their homes during the fighting in 1999. They had spent three days travelling to Bentiu, where they stayed for more than one year. They left in 2001 because of the worsening conditions in Bentiu. Nyariaka described lack of food and insecurity as the main reasons. For instance, many of the displaced women in Bentiu are compelled to collect grass or firewood for sale in order to buy food. Yet many women who have gone into the forest have been raped by fighters. Nyariaka also described the difficulties of leaving Bentiu, stating that most civilians must pay fees to militiamen when they leave, particularly if they want to take their cattle out of the town.

The violence associated with rape, assault and forced recruitment in Bentiu in 2001 is considerable. Nonetheless, it is a measure of the desperate situation and the importance of relief for many civilians in western Upper Nile, that people continue to flee into government-held towns when fighting erupts in the

outlying areas. There are few, if any, places of real refuge and protection for the people of western Upper Nile these days, and the presence of international humanitarian agencies is a vital source of relief for the population.

Western Upper Nile has been suffering conflict for almost 20 years. There is no question that the war is taking a heavy toll. Violence, disease and malnutrition have killed tens of thousands. Thousands have fled the region and now live in refugee camps and displaced settlements. For those civilians who have remained in the conflict zone, the way the Sudanese war has been waged has brought little but misery, especially since 1997.

The health consequences of the war are enormous. Repeated displacement strains coping mechanisms and the loss of cattle drives people into destitution. When these factors are coupled with a general lack of health care and an environment replete with infectious diseases, the result is deadly. Over 100,000 people are known to have died from one war-related disease alone – kala azar. Additional mortality from violence, other diseases, and malnutrition is likely in the tens of thousands. In addition, health workers have been killed and significant numbers of health facilities have been destroyed in the past four years, further devastating the ability of civilians to access adequate health care.

The fact that at least one third of the original population of western Upper Nile have lost their lives to kala azar and other treatable diseases must be reiterated. These are deaths that could have been prevented – had the conflict not restricted access to treatment. Whole families and villages have been extinguished as a result. Attacks on existing health resources – such as local health workers and facilities – compounds the problem. Currently, aside from one health center run by the GoS Ministry of Health in Bentiu, all health services in western Upper Nile are provided by international organizations.

MSF urges the Government of Sudan, the SPLA, and associated militia groups to provide protection to medical personnel and medical facilities in accordance with international humanitarian law. Health services are essential for the survival of the civilian population, and must be protected.

With the intensification of the conflict since 1997, targeting of civilians, both by direct violence as well as structural destruction of livelihoods, has become commonplace by military and militia groups on all sides of the conflict.

Types of abuses perpetrated by armed groups include:

- Killings, assault, forced recruitment and rape of

civilians by ground troops from all sides. The scale of rape and abduction by SPLA, SSUM and SSIM/SPDF forces is of particular note – almost every person interviewed knew either a family member or a number of unrelated women who have been raped in the past four years.

- Bombings and burnings of civilian homes and forced displacement from the new oil road, Panarou, and other areas, through the use of aerial bombardment by Antonov aircraft, helicopter gunships, and ground troops.
- Looting and theft of cattle and other civilian property by all sides. Thousands of homes have been burned, belongings looted, crops destroyed, and cattle seized by ground troops from various factions including the SPLA, the SPDF, the SSUM and the Government of Sudan. The pattern results in permanent displacement and destitution of civilians.

Violent attacks on civilians, health staff and health facilities represent not only a serious problem for the welfare of families and communities, but also a clear disregard for the obligations of warring parties under international humanitarian law. Increasingly, targeting of civilians is a strategy used by all of the warring parties. In addition, the degree of violence towards civilians appears to be increasing.

MSF calls on all of the warring parties to respect their obligations to protect civilians. Current peace negotiations must recognize the gravity of the violence, and agreements must ensure that the warring parties commit to a robust process whereby monitoring and investigation of abuses, and accountability of armed groups, is ensured.

The impact of fighting and associated violence has been escalating over the years. A number of people had lost their homes or crops several times since 1997, but had always managed to return after the fighting was over. Increasingly, however, the scale of violence and destruction, including the burning of homes, theft of cattle and the violence against civilians (killings of men, abductions of women and girls) have caused civilians to permanently leave their homes. When civilians are looted and permanently displaced, without cattle or access to grain, the question of whether humanitarian assistance is available can be critical.

Access to relief has been minimal, and extremely limited in the past few years due to the escalation of the

conflict. The people of some areas – such as Panarou – have been unable to consistently access humanitarian assistance since the war began. Unless protection from violence and access to humanitarian relief is made available to the people of Panarou and other areas, there may soon be few people left.

MSF demands full and unhindered humanitarian access to areas where permission has been denied and where civilians are in need of assistance.

The total mortality from violence, disease and hunger in western Upper Nile will never be known. This report attempts to portray a few of the concrete effects of the war through the experiences of individuals and the observations of medical professionals. It is impossible to convey a full picture of the ways that the conflict has affected the lives of thousands. Each individual has a story. What is clear is that the war in western Upper Nile is inexorably killing off the people of the area.

The people of western Upper Nile desperately need protection and assistance. The only way to ensure that civilians are adequately protected and assisted is to establish permanent and appropriate humanitarian activity in the area. This can only be accomplished if:

- *the warring parties support full and unhindered humanitarian access to and protection of populations,*
- *the international community fully commits to establishing a permanent humanitarian presence in western Upper Nile, and*
- *the warring parties cease targeting relief centers as part of their war strategy.*

