



OIL DEVELOPMENT

in northern Upper Nile, Sudan

**A preliminary investigation by the European Coalition on Oil in Sudan
May 2006**

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The European Coalition on Oil in Sudan (ECOS) is a group of over 80 European organizations working for peace and justice in Sudan. We call for action by governments and the business sector to ensure that Sudan's oil wealth contributes to peace and equitable development. ECOS is coordinated by Pax Christi Netherlands and can express views and opinions that fall within its mandate, but without seeking the formal consent of its membership. The contents of this report can therefore not be fully attributed to each individual member of ECOS. www.ecosonline.org

I. FINDINGS

1. This report documents the impact of oil exploitation in the Melut Basin in Upper Nile State, Sudan, as told by inhabitants of the area and photographed from satellites. It focuses on the Melut and Maban Counties, Renk District, which fall into concession blocks 3 and 7, held by the Petrodar Operating Company Ltd. under a Production Sharing Agreement with the Sudanese Government.
2. Oil-rich areas in the Melut Basin have suffered the same pattern of oil-related death, destruction and displacement as the Muglad Basin fields in Western Upper Nile, though on a smaller scale. Well over a hundred villages have been emptied and the natural environment has been severely damaged, and the population has not received substantial benefits.
3. The oil fields have been developed against the background of a war in which the Petrodar Operating Company Ltd has not acted as a neutral party but as a loyal partner of one of the warring sides, the Government of Sudan. The Petrodar consortium has shown no due regard for the natural environment or concern for the rights of the population. The signing of the Comprehensive Peace Agreement (CPA) has not brought publicly visible fundamental changes in its attitude or business practices.
4. Oil exploitation has coincided with a decline in the rural population in parts of Melut and Maban Counties. This is mostly due to forced displacement of the Dinka and Maban populations, and partially to the effects of cheap and environmentally harmful engineering. The total number of people that has been forcibly displaced can be safely estimated at well above 15.000 minimum; the true number could easily be double that figure. Several hundreds of people have reportedly been killed.
5. Recently, a limited number of displaced people have begun to return, some of them to find that their land has disappeared. Many of the sandy ridges where Dinka build their settlements have been excavated and used for road construction. There is widespread resentment because of the loss of livelihood, but even more because the graves of the ancestors, who are buried in the villages, have been desecrated. Their remains are now scattered in the oil roads.
6. Crop patterns in Melut County have changed dramatically between November 1999 and 2005. This is consistent with the displacement pattern as described by our respondents and can be attributed mostly to displacement, partly to hydrological alterations as a result of cheap and inconsiderate engineering.
7. The hundreds of kilometres of all-weather roads that have been constructed have hugely improved the trade of goods and access to markets, which is key to economic growth. On the other hand, they have hurt agricultural production and have partially dammed seasonal tributaries to the Nile, including the Khor Adar.
8. It is urgent to appraise the environmental risks and to determine the full environmental impact of Petrodar's operations, which cuts right through the world-famous Machar Marches wetland and borders the White Nile. Pollution of the Nile may have major consequences for both Sudan and Egypt.
9. Despite the fact that oil production in Melut County currently generates well over \$ 10 million a day, the region remains extremely poor with negligible service levels, whether in education, health, sanitation, drinking water, or other. The meagre and contractually obligatory Community Development activities by Petrodar have served to reward militias with highly abusive records and to perpetuate forced displacement. Their benefits have

gone largely unnoticed by the population.

10. Fellata agro-pastoralists are settling north of Paloic, raising fears for future tension and conflict.
11. The oil industry in northern Upper Nile has no social support base, which is a negative indicator for the reliability of this crucial source of State revenues. The CPA contains a range of principles and measures that offer a coherent framework for popular trust-building, but they have remained a dead letter. While the security situation in the Melut Basin oil fields has improved since January 2005, there is no process in place that could lead to just compensation and redress for the people who have suffered for the exploitation of oil.
12. The key issue now for the competent authorities and Petrodar is to set and implement standards and practices that protect the rights of people and their natural environment, and to repair the damage done.
13. This report is not an unfriendly act towards Petrodar. On the contrary, it is an invitation to the consortium to get to know the people of northern Upper Nile, acknowledge their rights and interests, and build a solid and harmonious basis for the continuation of its work, in the spirit of the Sudan Comprehensive Peace Agreement.

II. RECOMMENDATIONS

TO THE PETRODAR OPERATING COMPANY LTD

1. To take all appropriate action to contribute to the implementation of the Sudan Comprehensive Peace Agreement, starting with the acknowledgement of its fair share of responsibility for the damage done to people and the natural environment in northern Upper Nile.
2. To fully assess the impact of oil exploitation in northern Upper Nile on the people, the natural environment and the economy in the affected areas, taking into account physical safety, economic sustainability, land rights and human rights, and the provisions and the purpose of the Sudan Comprehensive Peace Agreement; to draw its assessment upon independent experts and local communities; to involve government and civil society organisations; to include recommendations for action, consultation, and dispute settlement; and to compensate losses and repair damage in accordance with its fair share of responsibility.
3. To share its impact assessment with all stakeholders and the wider public, to implement its recommendations, and to evaluate and update it on a regular basis.
4. To establish mechanisms for consultation, dialogue and partnership building with its stakeholders – including relevant authorities, civil society organisations, communities – resulting in an economic, social and peace action programme that conforms nationally agreed principles and policies.
5. To adopt adequate standards and establish firm procedures that assure that its operations do not result in, benefit from, or otherwise contribute to human rights abuses or environmental degradation.
6. To be transparent and e.g. publish its Environmental Impact Assessment and report performance against its findings.
7. To actively support Sudan to join the Extractive Industries Transparency Initiative.
8. To fully respect the ECOS Business Principles for Sudan¹, which include e.g. the following principles and commitments:
9. To assure that all business activities are conducive to peace and equitable development, and to the realisation of the provisions and purpose of Sudan's Peace Agreement.
10. Not to discriminate on grounds of gender, race, religion, political affiliation, ethnicity, language, or region, and to actively promote that the local population sees itself equitably represented, at all levels, in the work-force.
11. To implement an effective and zero-tolerance policy on bribery and all other forms of corruption.
12. To work in accordance with the Voluntary Principles on Security and Human Rights for the Extractive Industries.

¹ See Annex 1 or www.ecosonline.org/benchmarks.

**TO THE GOVERNMENT OF NATIONAL UNITY,
THE GOVERNMENT OF SOUTH SUDAN, and
THE AUTHORITIES OF UPPER NILE STATE**

13. To set and enforce policies and regulations that ensure the application of the best known practices in the sustainable utilization of natural resources and its impact on humans and nature, in respect of the provisions and purpose of the Sudan Comprehensive Peace Agreement.
14. To assess the full impact of oil exploitation in northern Upper Nile on the people, the natural environment and the economy in the affected areas, taking into account physical safety, economic sustainability, land rights and human rights, and the provisions and the purpose of the Sudan Comprehensive Peace Agreement; and to publish its findings.
15. To fulfil the Comprehensive Peace Agreement's promise to compensate and repair all damage to people and the natural environment for the sake of oil exploitation, and to ensure just and fair compensation for all those who have suffered losses.
16. To encourage oil companies to take effective measures to combat the 'Resource Curse'.
17. To carry out the Government obligation under the CPA to review all oil contracts, and, if these are deemed to have fundamental social and environmental problems, to implement remedial measures.
18. To facilitate the safe and voluntary return of all displaced people to their places of origin.
19. To activate and strengthen the Higher Council for Environment and Natural Resources.
20. To lift all confidentiality clauses on oil contracts.
21. To make all Environmental Impact Assessments publicly available.
22. To make all state revenues and expenditures on-budget and public, as agreed in the CPA.
23. To join the Extractive Industries Transparency Initiative.
24. To implement an effective and zero-tolerance policy on bribery and all other forms of corruption.
25. To see to it that oil companies in Sudan work in accordance with the Voluntary Principles on Security and Human Rights for the Extractive Industries.

III. INTRODUCTION

1. The purpose of this report is to document the impact of oil development in the Melut Basin, northern Upper Nile, Sudan, as told by inhabitants of the area and photographed by satellites. The stories that they tell are consistent and mutually reinforcing.
2. The Melut Basin is remote and under-reported. It lies on the northernmost edge of the former North-South front line, in a region that has not had a single permanent international presence since the Sudan's civil war began. The oil development in Blocks 3 and 7 has so far not been publicly scrutinized. With this report, ECOS wishes to start correcting this oversight. This is a preliminary investigation to map the main issues. Extensive additional research would be needed to describe the full impact of the oil industry on the region.
3. Oil development in northern Upper Nile is concentrated in Melut County and Maban County, on the plain east of the White Nile, which hosts one of the world's largest and best conserved wetlands, the Machar Marches. The oil works cut right through it, from Melut to the Sobat river, 200 kilometres further south on the Ethiopian border. The area east of Nasir is currently in full development.
4. Melut and Maban Counties are part of a flat clay plain with seasonal streams (called Khor) running from the east to the White Nile in the west. The climate is hot and the area is swampy in the rainy season, between June and October, and increasingly dry during the rest of the year. The inhabitants are predominantly Dinka and Maban agro-pastoralists and non-Muslim. They mostly live by herding, cultivation and fishing. During the wet season, they stay in permanent settlements on slightly higher ground, for the most part small sandy ridges, surrounded by the black clay soil that floods and is not fit for settlement. A village in this area would typically count between 200 and 500 inhabitants. There are also numerous smaller settlements, sometimes with a handful of tukuls only. From October to May, many move to the rivers for water, pasture and fishing grounds.
5. Although one of Sudan's richest oil areas, northern Upper Nile is very poor. Although covered by UN's Operation Lifeline Sudan (OLS), it was hardly ever reached and as a consequence there was no infrastructure - most importantly, an air link - to facilitate researchers or journalists. Neither was there a sustained NGO presence. As a result, first-hand reports from the area have been limited to briefs from occasional visitors.
6. In May 2002, the European Coalition on Oil in Sudan (ECOS) published a report on the violent deaths and displacement of large numbers of people in Western Upper Nile, southern Sudan.² The ECOS report was one in a series of reports³ which showed that the development of Sudan's oil fields had been accompanied by gross human rights abuses, including indiscriminate killing, forced displacement, pillage and arson.
7. In July 2003, the CNPC announced the discovery of a "world-class" oil field in Blocks 3 and 7 east of the White Nile.⁴ CNPC called the discovery of the Paloic field, in the Melut Basin, its greatest scientific and technological achievement of 2003. It claimed proven reserves of more than three billion barrels and recoverable reserves of 461 million⁵ - an amount roughly comparable to the combined reserves of the GNPOC's Heglig and Unity fields.⁶ In

² De Guzman and Wesselink, 2002.

³ See references for further reading.

⁴ CNPC website, *CNPC discovers a large oil field in Sudan*, 21 July 2003
<http://161.207.1.180/english/xwygg/news/022.htm> (last accessed 08 May 2006).

⁵ CNPC website, *CNPC's 10 greatest scientific and technological progresses in 2003*,
<http://www.cnpc.com.cn/english/rd/Achievement.htm> (last accessed 08 May 2006).

⁶ A presentation to the IGAD peace talks in August 2002 put the reserves of Unity oil field at roughly 250 million barrels and of Heglig at roughly 200 million barrels.

2004, the company announced an additional new oil in place of 1.06 billion barrels, lifting cumulative oil in place at 4.4 billion barrels. A pipeline linking the two fields to Port Sudan was inaugurated on 10 April 2006, with a total length of 1,392-kilometre and a diameter of 32 inches. Construction included a 300,000 bbl/d central processing facility at Al-Jabalayan and production facilities near Paloic.⁷ Blocks 3 and 7 are expected to produce 300,000 bbl/d⁸ in late 2006.

8. Sudan's oil industry is dominated by foreign state-controlled companies, prime among them the China National Petroleum Company (CNPC), Petroliam Nasional Berhad (Petronas, Malaysia), and ONGC Videsh (ONGC, India). Total oil production averaged 304,000 barrels a day in 2004, up from 270,000 b/d in 2003. Expectations for 2006 vary from well over 600,000 bpd⁹, to 434,000 bpd¹⁰. Production from the Melut Basin is to more than compensate for the decreasing GNPOC production.¹¹ With the current oil prices around \$70 per barrel, by the end of this year, the Melut Basin could generate well over \$10 million per day for the State, in addition to significant contributions to the profitability of Petrodar's shareholders.

⁷ US Energy Intelligence Agency (EIA), *Sudan Country Analysis Brief*, March 2005.

⁸ Sudan Tribune, *Sudan's Kiir to inaugurate pumping of oil from Block 3, 7*, 10 April 2006

⁹ Government of National Unity, Minister of State for Energy and Mining Angelina Teny, 13 February 2006, reported in Sudan Tribune, *Sudan oil output to surge to 650,000 bdp*, 14/02/2006.

http://www.sudantribune.com/article.php3?id_article=14070 (last accessed 08/05/2006)

¹⁰ February 2006 estimate by WoodMacKenzie Ltd.

¹¹ Daily Star, *Thirst for Crude Pulling China into Sudan*, 17 August 2004.

IV. METHODOLOGY

9. Renk District was visited three times by three different ECOS researchers, in December 2004 (to Payuer, south of Melut), April 2005 (Khor Adar region), and March 2006 (Khartoum, Renk, Melut and Paloic¹²). They held extensive in-depth interviews with approximately 150 people, including politicians, members of parliament, church leaders, villagers, internally displaced people and civil servants. They were unable to realise interviews with representatives of Petrodar. The researchers asked not to be mentioned as authors. Their reports were edited into this one by a small team at Pax Christi Netherlands led by Egbert G.Ch. Wesselink, co-ordinator of ECOS.
10. The findings from the visits and interviews were compared with satellite imagery analysis by PRINS Engineering, which shows e.g. vegetation, hydrology, human settlements, and infrastructure. By comparing Landsat images of November 1999 with November 2005, the company was able to identify significant changes in the agricultural use, settlement patterns and hydrology, that confirmed the findings from the interviews. We therefore consider our findings reliable and significant. Also, we realise that the limited scope of our research makes this report not more, nor less, than a preliminary investigation into the impact of oil exploitation in Melut and Maban Counties.
11. Four historical Landsat ETM+ scenes were used, with 6 spectral bands in 28.5m, a panchromatic band within visible area in 14.25m and a thermal in 57m, each scene covering 173 x 185km¹³:
 - Landsat Path/Row: 173/53: 04/11/1999; 172/53: 12/09/2000; 03/02/2001; 172/54;
 - Landsat Path/Row: 173/53: 11/11/2005; 172/53: 29/11/2005; 172/54: 29/11/2005.
12. All satellite images have been projected to the UTM zone 36 North with WGS84 Datum and Spheroid. They have been calibrated for reflectance by selecting digital numbers from land covers that are not affected by clouds or burning. The images have been pan-sharpened by the use of the panchromatic band to a spatial resolution of 14.25m, applying Wavelet Resolution Merge technique (ERDAS 1994). A Tasselled Cap transformation has been applied for interpreting cropping pattern and bare farm fields (Jensen 1996). The images have been digitally classified by the use of supervised classification procedures (Jensen 1996).¹⁴
13. Quite a few of the names of villages that are mentioned in this report concern tiny settlements on small sandy ridges, that would house a few families only. Unfortunately, there are no reliable topographical maps of the area. Neither the 1970-80s Soviet maps, nor UN sources or the most recent Swiss CDE maps provide complete or even fully reliable names and locations of settlements.

¹² Paloic is also written as Palouch, Paloich, Palough Palouge, Palogue and Falouj. It is at approximately N10° 27.551' E032° 32.619'.

¹³ Landsat 7 (ETM+): <http://landsat.usgs.gov/>; <http://eros.usgs.gov/products/satellite/landsat7.html>.

¹⁴ See inside cover for details on classification.

V. CHRONOLOGY

Prelude

14. Oil exploration in Sudan started in 1959, when Italy's Agip was granted concessions in the Red Sea area. It was not until 1978, however, that Chevron, operator of a consortium in which Shell took a 25% interest, made the first important strike - not in northern Sudan, but in the Muglad Basin stretching deeply into Western Upper Nile.¹⁵ In 1981, Chevron made a second, more moderate find at Adar Yale in the Melut Basin, a predominantly Dinka area east of the White Nile. Four exploratory wells showed flow rates in excess of 1,500 barrels a day, and Chevron believed there was a potential for deposits all the way south to Malakal and further east to the Ethiopian border.¹⁶ A year later, Chevron made a third, much larger discovery at Heglig, 70 kilometres north of the Unity field. The next 20 years, the fields in Western Upper Nile were to be the main focus of interest for the Sudanese oil industry.
15. In late 1983 and early 1984, less than a year after the outbreak of civil war, the SPLA kidnapped and subsequently released a number of Chevron employees. Shortly afterwards, Chevron's base at Rub Kona, near Bentiu, was attacked. The Chevron management was warned about the attack by the SPLA, but did not inform the contractors on the spot. Three expatriate staff were killed and six injured during the assault. Chevron suspended its operations and virtually all its staff was evacuated by air within 18 hours of the attack. The Rub Kona base was subsequently looted by regular Government forces who were ostensibly guarding it.¹⁷
16. Soon after Chevron suspended its operations in 1984, Khartoum defaulted on debt service payments of US\$264 million to international creditors, including US\$218 million to the International Monetary Fund. The IMF threatened to declare Sudan ineligible for new loans.¹⁸ In 1989, a *coup d'état* brought the National Islamic Front (NIF) to power and the civil war intensified. Chevron left Sudan in 1990, under pressure from the Sudan Government to operate or quit.¹⁹ Shell and Chevron lost about 1 billion \$.
17. Chevron's huge concession was divided into smaller units and in 1992, Khartoum awarded the Melut Basin - Blocks 3 and 7 - to Gulf Petroleum Corporation-Sudan (GPC), a private consortium in which Qatar's Gulf Petroleum Corporation had a 60% stake, Sudapet 20% and Concorp International, a private company owned by the NIF financier Mohamed Abdullah Jar al-Nabi, 20%. The GPC consortium reportedly invested US\$12m in developing the Adar Yale field and in October 1996 drilled and reopened Chevron's wells.²⁰ An all-weather road was built to connect Adar Yale with Melut.
18. In March 1997, President Omar al-Bashir inaugurated the site at Adar Yale. Production was only 5,000 barrels per day, but it was the first Sudanese crude to be exported. It was trucked to Melut, a garrison town on the White Nile, and then taken by barge to

¹⁵ The area around the so-called Unity field was home to members of the Dinka and Nuer peoples, who would later form the backbone of the SPLA. Indeed some of the Nuer had already begun a low-level insurgency long before the official start of the civil war in 1983.

¹⁶ Sudan Update, 1999, p.18.

¹⁷ Most secondary sources erroneously state that three Chevron employees were kidnapped and killed. The account given here is by John Ashworth, working as a Catholic priest in Bentiu and Rub Kona in 1983-84, who followed the events surrounding the withdrawal of Chevron first hand.

¹⁸ Human Rights Watch, 2003, p. 147.

¹⁹ Sudan Update, 1999, p. 15.

²⁰ GPC was heavily dependent on Chevron's discoveries and abandoned equipment. It lacked the expertise and financial clout to expand the operation, and in March 2000 it sold a 46% stake to Fosters Resources Ltd. of Canada. Fosters withdrew from the project two months later when its financial backing fell through. It blamed pressure from human rights groups.

Khartoum. The exports were minimal - one cargo every fortnight, or up to 2,500 b/d.²¹ By May 1998, production had increased to 10,000 b/d, still a tiny fraction of the field's potential.²²

First Blood

19. A chief of the Dinka Nyiel in Adar, where oil was first discovered, told ECOS that the first signs of trouble came within months of Chevron pulling out of Sudan. Chief Chol Nul said the violence was not, at this stage, systematic.
Problems began in 1991. The army began chasing the people without warning. They came, they shot and they burned. Why? The SPLA was far away. It was because the Government was greedy for oil and saw any southerner as a threat, a possible supporter of the SPLA.
~Chief Chol Nul, Payuer, 25 April 2005
20. The violence took on a more organized character in 1994, the year that drilling began in the area, according to Chief Chol Nul. Attacks on villages north of Adar Yale intensified and large numbers of people were killed.²³ The Government suppressed all mention of the killing in the media, but because many of the wounded were treated in the military hospital in Omdurman, the bloodshed in northern Upper Nile became a public secret. Civilians were loaded onto army trucks and taken away to the garrison towns Renk and Melut, where military intelligence officers controlled all movement of goods and people in and out of the towns.²⁴
21. In 1995-2000, the years of GPC-Sudan, villages in the Khor Adar area were attacked and burned time and again, according to Chief Chol.
People were driven out of their homes in the dry season, when soldiers could move with ease, but returned and rebuilt their homes every rainy season. Almost half the population died from sickness, starvation and shooting. Children died in the bush. Antonovs and gunships killed so many people. Government patrols killed even small groups of civilians. It became impossible to survive in the area.
~Chief Chol Nul, Payuer, 25 April 2005
22. Subsequent offensives cleared the way for GPC to cut a road through inhabited, cultivated areas. The paramount chief of the Dinka Nyiel, Deng Nuor, said the burning reached as far south as the Khor Adar in 1998.
Our cultivation areas north of the Khor Adar were attacked by Nuer militias from Nasir, on the Sobat river. After the militias attacked and killed, the army came with tanks and burned villages. They chased us away from our areas - and then they built roads and brought electricity! Now all our areas are covered in wells.
~Chief Deng Nuor, Payuer, 28 April 2005
23. Deng Nuor said the first large villages destroyed on the Khor Adar were Agor Ti and Agor Dit in 1999, villages close to the place where the main oil road south from Paloic crosses the Khor Adar. Like Chief Chol Nul, he estimated that almost half the population perished in the attacks.
Approximately 1000 people lived in Agor Ti. About 400 died, most of them by shooting. My uncle, Koch Alath, was killed. He was 70 years old and he was blind. My cousin, Yak Bol, was killed too. He was 60.
~Chief Deng Nuor, Payuer, 28 April 2005
24. Kur Ajong, 42, was in Darapul, a village of 400 inhabitants just north of the Khor Adar, when Government troops and Government-backed militiamen driving small trucks and cars attacked in April 1999.

²¹ Alexander's Gas and Oil Connections, *Sudan's export slowly increasing*, 26 March 1997, <http://www.gasandoil.com/goc/news/nta71602.htm> (last accessed 10/05/2006).

²² Sudan Update, 1999, p. 16.

²³ Sudan Update, 1999, p.16.

²⁴ ECOS interviews with displaced in Northern Upper Nile, May 2003

They fired mortars without warning. We went back to see that evening, but there was nothing left. Food, cattle, everything was taken away from us and the village was burned down. There was no SPLA in the village in those days. They were fighting somewhere else. We had no guns, and could not defend ourselves. Nine people were killed, and 58 children and girls were kidnapped. We heard that they were taken to the north, but we are not sure; we haven't heard from them since. It all happened because the road was built near us. In the end, all villages along the road were destroyed - more than 20,000 people.

~Kur Ajong, Payuer, 19 December 2004

25. Dinka displaced from villages along the path of the road said they were visited by Government officials, who would typically order them to leave within three days. As they had no place to go to, they would stay. On the fourth day, they would be attacked and driven out.²⁵ Monybai Ayong was a commander in the Dinka Dong Jol militia of Thon Mum Kejok until he joined the SPLA after peace was signed in January 2005. He said his militia, based in Akoka near Malakal, was sent out to kill civilians in villages where there was no SPLA presence, but which stood in the path of projected oil roads.

We only killed. The Government burned the villages. One of the villages we were ordered to attack was Adair. We cleared it for the road [from Melut to Paloic].²⁶

~Monyba Ayongi, Payuer, 26 April 2005

26. Elijah Bioch, SPLM commissioner for Melut county, estimated that 12,000 people were forcibly displaced in 1999-2000 during the construction of the all-weather road between Melut, Paloic and Adar.²⁷

The China National Petroleum Company Steps In

27. In November 2000, nine months after the Harker report confirmed that "oil is exacerbating conflict in Sudan"²⁸, the Sudanese Government awarded Blocks 3 and 7²⁹ to the Petrodar Operating Company Ltd (PDOC) On 31 October 2001, Petrodar was officially incorporated under the laws of the British Virgin Islands, with the China National Petroleum Company (CNPC) holding 41%, Petrolim Nasional Berhad (Petronas, Malaysia) 40%, Sudan Petroleum Company (Sudapet) 8%, China Petroleum & Chemical Corporation (Sinopec) 6%, and Al Thani Corporation (United Arab Emirates) 5%.

28. Since 1996, CNPC held a 40% stake in the GNPOC consortium³⁰ that developed Chevron's finds in blocks 1, 2, and 4 in Western Upper Nile. CNPC's move into the Melut Basin in 2000 confirmed its dominant position in Sudan's oil industry, with Petronas coming in second.³¹ Chinese companies are involved in many major construction projects, currently e.g. the Merowe dam and China's Petroleum Engineering Construction Group's building of a \$215 million oil terminal in Port Sudan. In 2003, CNPC built an oil pipeline from Western Kordofan to Khartoum. Petrodar joined with Sudan's Energy Ministry to expand the

²⁵ Paramount Chief Deng Nuor mentioned a total of 33 villages that had been wholly or partially destroyed by the time the road from Melut had been pushed through to Guelguk: Athamrou, Wunnguel, Mabil, Pochbei, Aguat Ker, Padiet, Gakbany, Jibkir, Moiriok, Paloic, Ajing Aniel, Bany, Ayan, Dongchir, Donjok Bior, Leu Weng, Kunbar Ku, Tony Gor, Agor Dit, Maiadol, Athians, Wunkier Amon, Loknyang, Niyamana, Wun-Amum (the centre of the Adar oil field), Mayom, Gananyoul, Athalei, Panang Luel, Pakoyei, Gual Gok, Wunayuer and Kalaja. Interview with Den Nuor and Daniel Deng Along, Payuer, 19 December 2004.

²⁶ Oil companies claim their roads benefit the community. The community says otherwise. In the words of Omda Juach Ngor of Tir, near Paloic: "If you walk on the roads, you can be caught and killed. So many people died that way - Akol Deng, Ajang Deng, Diing Ayuer, too many to remember them all. People don't use the roads any more." Interviewed in Payuer, 26 April 2005.

²⁷ Interview with Mr Elijah Bioch, SPLM Commissioner of Melut, in Payuer, 17 December 2004.

²⁸ Harker, 2000, p. 15.

²⁹ Officially 3E, 7E and 3D, but usually referred to as 3 and 7. Petrodar's concession area is situated between longitude 31 and 34 and latitude 8 and 10 with a total area of about 72,000 Km².

³⁰ The Greater Nile Petroleum Operating Company (GNPOC): CNPC (40%), Petronas (30%), ONGC Videsh (25%), purchased in 2003 from Talisman Petroleum, and Sudapet (5%).

³¹ CNPC currently holds stakes in six blocks, including a 96% stake in Block 6, stretching into Darfur, which began trial production in 2004.

Khartoum Oil Refinery capacity, a \$300 investment.³² In 2004, 64.3 percent of Sudan's total exports went to China. China is Sudan's top trading partner.³³

29. Once Petrodar was formed, changes on the ground in northern Upper Nile were immediate and impressive. A comprehensive oil development infrastructure began to be built, including 31,000 b/d field production facilities at the Adar Yale and Agordeed fields, an full-size airfield, and hundreds of kilometres of all-weather roads and feeder-pipes. Kotolok³⁴, just west of Paloic, became the centre of operations and the hub for the 1,392-kilometre pipeline to Port Sudan that was inaugurated on 6 April 2006.³⁵

Against the Background of a Civil war

30. As Government forces displaced tens of thousands of civilians to open the way for oil exploration in Western Upper Nile, the SPLA declared oil fields a military target. Having no fighting capability in the Melut-Paloic area itself, the SPLA advanced from the East, the areas bordering Ethiopia.³⁶
31. Early in 1997 SPLA forces under the Southern Blue Nile command had greatly increased the area they controlled to include Kurmuk, Yabus and the town of Buony (often known as Maban), which is east of Adar on the road from Melut. Buony was quickly recaptured by Government supported militia, and changed hands more than once. In June 1998, the SPLA captured another strategic town, Ulu, bringing Adar Yale within range of its artillery. Government forces besieged the town, but in March 1999 the SPLA broke out of the siege and went on to destroy a string of army garrisons. In 2001-2002, Government forces made a number of attempts to wrest control of Southern Blue Nile from the SPLA. All failed, while the Government succeeded in cementing its control of blocks 3 and 7, as Energy Intelligence noted in 2003:

Petrodar has capitalized on the fact that both blocks have been in Government hands since 2001. The northern National Islamist Front (NIF) Government has invested significant military capital in holding Maban, the gateway to Block 3's Adar Yel field, against rebel forces who control the area bordering Ethiopia further east. That has discouraged scrutiny by non-Governmental organizations.³⁷
32. With Government control of Block 3 and 7 reasserted by 2001, the destruction of Dinka villages took on new momentum.³⁸ Local church leaders claim Government-backed militias destroyed 48 villages 2000-2001 and several villages were destroyed in the Guelguk area too.³⁹

³² In addition to the oil sector, Chinese state owned companies operate a series of other projects in Sudan, including the construction of roads, dams, power plants and a weapon's factory. Oil is not the only area of controversy. The building of the Chinese Government financed Merowe Dam on the Nile, a major future source of electricity, has been accompanied by serious rights abuses against members of the communities that have been affected by the works. Peter Bosshard, International Rivers Network & Nicholas Hildyard, 2005.

³³ Almanac of China's Foreign Economic Relations and Trade, various years, and China Statistical Yearbook,

³⁴ Approximately N10° 27.272' E032° 28.353'.

³⁵ In June 2004, Petrodar awarded a \$239 million contract to Ranhill International of Malaysia and Petroneeds Services International of Sudan for development work on blocks 3 and 7. Nam Fatt of Malaysia and Bentinin of Italy obtained the order to build pumping stations.

³⁶ Chege Mbitiru, Associated Press, 13 June 1998.

³⁷ Energy Intelligence, 7 March, 2003.

³⁸ With the exception of 11 civilians killed in Dhowanyawa and another 12 in Tenyak - along them, six elders and seven children (<http://web.amnesty.org/web/ar2002.nsf/afr/sudan?Open>) - death tolls have not been recorded. Omda Juach Ngor was driven out of his village, Aturuc, in 2001, when it was attacked by Deng Guer's men. He said 74 people were killed in the attack, including his mother, two brothers, an uncle and a cousin. Commander Awan Ajak, who left the Government-backed militia of William Deng Guer after the CPA was signed, told ECOS death on that scale was not uncommon: "The militia chased people away from the village before the Government burned them. So many people lost their lives. So many women were raped. We call Deng Guer the "marcher ant" (a variety of ant that marches in straight lines and eats, or flattens, everything in its path). He tells people to kill. He leaves nothing."

³⁹ ECOS interview, Payuer, 17 December, 2004.

33. In 2002, an all-weather road from Paloic to the south reached the Khor Adar. Rather than bridge the river, Petrodar dammed it at Maker, causing the river west of the crossing to fall dry. Villages west of the road lost their only source of water and had to be abandoned. Chief Chol Nul said thousands left with their cattle to settle further south on the White Nile.

Villagers returning to cultivate were digging wells five to six meters deep. But even they were not sufficient. It became impossible to survive in the area.⁴⁰

34. Government-supported militias burned a number of villages in the vicinity of the dam - among them Thak, Thak Rial, Theb Ngol and Nyanyok.⁴¹ SPLA officials said about three-quarters of the population in this region - at least 3,000 people - was displaced, including the whole of the Dotrot Dinka, a sub-clan of the Nyiel Dinka. Commission Bioch charged that the dam was an attempt "to empty the area by drying it up". He claimed the reason was his refusal to allow oil roads to be extended through SPLA-controlled territory south of the Khor Adar.⁴²

35. In an appeal to the international community in 2002, the Episcopal Bishop of Renk, Daniel Deng Bul, said Government troops burned down 21 villages⁴³ within 20 miles of Melut as part of a policy of "clearing the area of the local population, whom they expect to have relations with the rebels."⁴⁴ Bishop Bul said girls had been taken "as wives to the army" and the area around Melut had been thoroughly looted, including 500 cows that were brought to Melut and distributed among the soldiers.

The army declared a rule. If a person is found after this in the area where the Chinese are working, [it] can cost his or her life [...]. Most young people have left Melut towards the North, afraid of being captured, arrested, or killed by the army.

36. By the time the Government of Sudan and the SPLA signed the Machakos Protocol on 20 July 2002, agreeing to an overall framework for peace, most villages around the oil roads and oil wells in northern Upper Nile had been emptied and destroyed. The Machakos Protocol did not include any agreement on a ceasefire and was followed by fierce fighting around the oil fields of Western Upper Nile. In northern Upper Nile it ushered in a new phase of the oil war - a "cold war", in the words of Commissioner Boich. Despite the burning of their tukuls, often more than once,⁴⁵ some of the displaced people, most of whom had no alternative livelihood, were forced to return to Government-controlled territory north of the Khor Adar to cultivate in the rainy season.

Seeking Refuge in Paloic

37. In October 2002, Petrodar spudded its first wildcat well in the 80-square-kilometre Paloic

⁴⁰ Interview with Chief Chol Nul.

⁴¹ Interview with John Aban Deng.

⁴² Although it is impossible to substantiate the allegation, blocking the river rather than bridging it had a military advantage. It cleared the area of its Dinka population, depriving the SPLA of a potential support base there. The same reportedly happened in 2004 with the Khor Machar east of Nasir.

⁴³ The 21 villages destroyed south of Melut in mid-February 2002 were named as Ariac, Bayaath, Bom, Catony, Doolbeer, Thieng, Duweng, Ngual, Nyagoka, Nyangjak, Them-Ngol, Thiengriaal, Thianyrot, Thumbeng, Tongrial, Wjaal Nhin, Wunbol Deng, Wunbut, Wunchok Majok, Wunheer, Wunyit, and Wunyok Daau. During attacks south of Melut in mid-February 2002, at least 9 civilians were captured by Government forces and taken to Melut, including several women (Mrs Nyawiir Ayiik Monyluak, Ajith Ahooc Ajak, Adut Monyluak Deng, Nyantit Majak Lual, Nyabeer Chol Diing) as well as two men (Agaar Anai Rialgak, Bon Ayiik Adoor). More than 500 sheep were looted. On 15th March 2002 at least 6 civilians were captured by Government forces and taken to Adar (Wai Dau Nyok, Alath Biar, Deng kuei, Monychol Akuei, Aduer Deng Ngor, Chok Lual Baweng); a further 3 were subsequently released (Chol Deng Gwong, Akol Ngor Akol, Kueer Ayuel). At that time, the Government was still holding civilians in Melut who had been detained since November 2001, including Barac Jok Yuat and Akuai Guer Akunaai; Mr Ahooc Lual Deng died in custody. 5 others were subsequently released (Deng Malut, Dok Guac Dok, Wankeer Wengwiir, Ajak Kaman Jok, Awual Ajing). *War-related Human Rights Abuses by GoS and SPLM/A January to April 2002*, Sudan Focal Point – Africa, 0/05/02.

⁴⁴ Communication to Russ Randle, Lay Deputy, Diocese of Virginia, the Cathedral Church of the Advent, 1992.

⁴⁵ Interview with Chief Chol Nul.

Basin and found a daily flow capacity of 7,350 barrels. But Paloic had more than oil. By 2002, an estimated 4,000 displaced villagers had settled there. It was the highest ground in the area, not prone to flooding, and being the centre of the oil industry, it had fresh water trucked in every week from Melut.

38. After July 2003, the displaced people were pressured to leave Paloic. With the signing of the Protocol on Security Arrangements on 25 September 2003 as part of the IGAD negotiations which led to the Comprehensive Peace Agreement (CPA), the Government relied less on brute force only, as in the past, but rather used threats, imprisonment and torture.⁴⁶ Displaced needing to cultivate outside the town were required to obtain special passes from the *Amn*, or internal security service. They had to specify exactly how many days they would be away, or risk imprisonment as SPLM/A collaborators on their return.⁴⁷ Ten community leaders were imprisoned for two to three weeks, and many of them beaten, after refusing to be relocated. One of the displaced leaders, who still lives in Paloic and cannot be identified, said the 10 represented seven destroyed villages - Pithi, Joh, Joh Yom, Ayawal, Kil, Tir and Rom - and approximately 580 families.⁴⁸
39. In 2004, according to Commissioner Bioch, the displaced chiefs in Paloic were warned that they 'must' move. When they refused, attacks and burnings resumed. Cmdr Awan Ajak said the Deng Guer militia burned six settlements around Paloic in 2004 - Tir, which had been rebuilt more than once, Pagang, Thaaq, Padiet, Nyek and Ayau. In mid-December, the people of Manapiok and Wunkir, east of Paloic, were also ordered to leave.

Along the Pipeline

40. In June 2004, the Government increased its military forces in northern Upper Nile and moved in a battalion of 700 men. The reinforcement, which violated a Memorandum of Understanding requiring the parties to cease fire and "retain current military positions",⁴⁹ coincided with the transport of sections for the pipeline from Kotolok to Port Sudan.⁵⁰ The pipe chosen is 32 inches in diameter, four inches larger than the GNPOC pipeline from Heglig to Port Sudan. Commissioner Bioch:
When the pipeline was being built, people started to disappear on the road. If you travelled in a bus or lorry you would be safe. If you were footing, you would be killed.⁵¹
~Elijah Bioch, Payuer, 17 December 2004
41. North of Paloic, the pipeline passes close to the garrison town of Renk. A number of villagers complained about the damage done to their farming lands. Petrodar responded by calling in the army.⁵² A similar problem arose in Kubri village in November 2004. People in Kubri complained to the Chinese workers that the pipeline prevented them from cultivating their land. The Chinese complained to the army, who arrested many people. They were released after the intervention of the civil authorities, but the pipeline is still there.⁵³

⁴⁶ Interviews in Payuer with displaced residents of Paloic, April 2005.

⁴⁷ Interview with Elijah Bioch.

⁴⁸ He identified them as Sheikhs Deng Akwoch and Ahoch Monyjok of Pithi; Sheikh Areng Padiet of Joh; Deng Bol Teng of Joh Yom; Deng Jok Aduer of Ayawal; Buny Ajuot and Ayul Dok of Kil; Anyong Koch of Tir; and Koch Monydhon and Aguer Padiet of Rom.

⁴⁹ Memorandum of Understanding Between the Government of the Sudan and the Sudan People's Liberation Movement/Army (SPLM/A) on Resumption of Negotiations on Peace in Sudan", 15 October 2002.

⁵⁰ Interview with Elijah Bioch.

⁵¹ The pipeline linking blocks 3 and 7 to Port Sudan came on stream in April 2005.

⁵² According to one interviewee: "In the middle of October 2004, Chinese workers started drilling a well in Jalhath, a village of 150 inhabitants just outside Renk. The people protested and wanted to stop them. The Chinese then went to the Government army in Renk and a military unit came. Five people were arrested and taken to army headquarters, where they were held for eight hours and threatened. Now there is a well near the village, and everyone has been ordered to leave. They live in Molbok and Jalhak now. Jalhath is a military post." Interviews in Payuer, 19 December 2004.

⁵³ Interviews in Payuer, 19 December 2004.

What about the Peace Agreement?

42. On January 9th 2005, the Government of Sudan and the SPLM signed the Sudan Comprehensive Peace Agreement (CPA). Later that month, the Deng Guer militia attacked and burned civilian homes near Kotolok, killing at least 32 people by the militia's own count.⁵⁴ Government officials took serious efforts to clear Paloic of rural IDPs, demanding that chiefs lead their kinsmen to Beny, renamed New Paloic, a swampy area five kilometres to the north-east. The move would affect some 4,000-5,000 people, the majority of them already displaced at least once. The chiefs requested either compensation or building materials for new tukuls, but that was refused.⁵⁵ In March, a number of chiefs were arrested and beaten.⁵⁶ Stalls belonging to Dinka's in Paloic market were attacked and burned.
43. Commander Ajak, who defected from the government-backed Deng Guer militia after the CPA was signed, said Deng Guer had been ordered to find 400 extra men. He said Dong Jol Dinka were being brought from Renk and Melut and trained by army officers at Dintama south of Melut.
44. In February 2005, Government-supported militias attacked two SPLA positions - Liet and Tibin - and burned a number of villages north of the Sobat river, the southern limit of Blocks 7.⁵⁷ Commissioner Bioch was at a meeting of the SPLM/A leadership in Rumbek when Liet was attacked.

I was telling [the late SPLM Chairman Dr John] Garang that peace will break in my area. The Government is trying to get the SPLA out of the area. It is spending a lot of money to keep militias in their positions. Thon Mum has been ordered to recruit 400 men. They are training now at Payuer, near Renk. The Government will be happy if southerners fight each other because they will be able to say we have failed to administer ourselves. Then they will take the oil.

Elijah Bioch, Payuer, 17 December 2004
45. In the south of block 7, Government and militia forces are reported to have been militarising the Sobat river. International observers told ECOS that at least nine Government garrisons were established on the Sobat in the first half of 2005 - "described as town halls, community centres and such, but clearly not!"⁵⁸ Rev John Aben Deng, who made a fact-finding trip to the region for ECOS, said everyone blamed oil.

Why is the Government building new garrisons on the Sobat? To occupy and secure the oil area and to protect the companies because the communities are against the drilling of the oil.

Rev John Aben Deng, Nairobi, 30 April 2005
46. Later in 2005, the Comprehensive Peace Agreement and the gradual implantation of SPLM's political authority in the region made a number of Government supported militia's

⁵⁴ Interview with Cmdr. Awan Ajak.

⁵⁵ Interview with Elijah Bioch.

⁵⁶ When some of these leaders planned a meeting with ECOS in April 2005, the Government commissioner of Melut, Elijah Awan Bol, traveled to Paloic to warn them against speaking out.

⁵⁷ On 13 February, a force from the Thon Mum militia advanced towards near Liet, equipped with 60 mm and 82 mm mortars and with ammunition that defectors said was newly supplied by the Government. The SPLA ambushed the force, killing nine men, wounding 11 and capturing three officers, identified only as Commander Dak, Captain Dak and Captain Athian Ayong. An officer in the regular army was also captured, according to one source. The prisoners were taken to an SPLA garrison at Abuong on the Sobat. Two days later, an Arab militia from northern Sudan attacked an SPLA enclave at Tibin, a gum Arabic-producing area north of Adar. The SPLA defeated the militia after two days' heavy fighting that claimed the lives of three militiamen and two Government soldiers, according to identity cards found on the bodies. Prisoners were taken to SPLM/A headquarters at Kurmuk in Southern Blue Nile. Interviews with SPLA officers and militia defectors in Northern Upper Nile, and UN security officials in Lokichokkio, April 2005.

⁵⁸ Church sources said the army had moved 64 trucks loaded with military supplies to the town of Gel Achel, and was planning to establish a string of garrisons from Gel Achel to Nasir to match those already established between Malakal and Gel Achel. The same sources said the militia of Simon Gatwich had also moved reinforcements to Gel Achel. North of Gel Achel, the Government-supported militia of Chol Biliu burned a number of villages including Chenglang, Wundeng and Lonyi in January and February, sending more than 300 displaced fleeing to Gel Achel. Interview with Rev. John Aban Deng in Nairobi, 30 April 2005.

defect or disappear. The security situation of the local Dinka population improved dramatically, even though the important presence of Government forces compared with virtual absence of SPLA forces in the oil fields, warn against the conclusion that the CPA has already changed the military balance in the region.

47. The CPA holds a number of important provisions concerning the management of the oil sector, that could lead the way for responsible management of the oil industry, but have remained a dead letter. A selection:
- The sharing and allocation of wealth emanating from the resources of the Sudan shall ensure that the quality of life, dignity and living conditions of all the citizens are promoted without discrimination on grounds of gender, race, religion, political affiliation, ethnicity, language, or region. The sharing and allocation of this wealth shall be based on the premise that all parts of Sudan are entitled to development.
 - That the best known practices in the sustainable utilization and control of natural resources shall be followed.
 - Persons enjoying rights in land shall be consulted and their views shall duly be taken into account in respect of decisions to develop subterranean natural resources from the area in which they have rights, and shall share in the benefits of that development.
 - Persons enjoying rights in land are entitled to compensation on just terms arising from acquisition or development of land for the extraction of subterranean natural resources from the area in respect of which they have rights.
 - If contracts are deemed to have fundamental social and environmental problems the Government of Sudan will implement necessary remedial measures.
 - Persons whose rights have been violated by oil contracts are entitled to compensation. On the establishment of these violations through due legal process the Parties to the oil contracts shall be liable to compensate the affected persons to the extent of the damage caused.
 - [A National Petroleum Commission shall] formulate public policies and guidelines in relation to the development and management of the petroleum sector
 - All the revenues and expenditures of the Government will be on-budget operations and made public.⁵⁹

⁵⁹ *Agreement on Wealth Sharing during the Pre-Interim and Interim Period*, Naivasha, 7 January 2004.

VI. ISSUES

Issue 1: Destruction and Displacement

48. Northern Upper Nile has suffered the same pattern of oil-related death, destruction and displacement as Western Upper Nile, though on a smaller scale. Many villages north and east of the Khor Adar – formerly a frontier between the Government of Sudan and the SPLM/A - have been emptied. Destruction in Blocks 3 and 7 was carried out primarily by the regular Sudanese army and Government-supported Dinka militias, at several occasions backed by helicopter gunships or even high-altitude bomber aircraft, despite the fact that the SPLA presented no direct threat to oil exploitation. Many settlements were burned. The wave of destruction peaked in 1999-2002, preceding and coinciding with the development of the oil fields. We estimate that in total over a hundred villages and settlements have been victimized, and often disappeared. Hon Lela Ajout Along, MP for Melut and Renk, has recently carried out a survey which lists a total of 168 displaced villages.⁶⁰
49. International law allows for forcible displacement only in extremely limited circumstances and for restricted periods of time. There is no support in international law for the type of displacement taking place in northern Upper Nile, where people are forced to flee for economic purposes. In the rare instances where forcible displacement is permitted, parties have a wide range of obligations concerning the security, safety and general well-being of the displaced. In keeping with these obligations, the Sudan Government vouchsafed, in 1999, that “communities will only be relocated to suitable sites with basic services and proper accommodation in place prior to relocation.”⁶¹ This has not happened.
50. The majority of the displaced from the oil fields have found refuge in the regional centres Renk, Melut, Paloic and Maban, and in the SPLM controlled area along the White Nile, south of the Khor Adar. They are ruined and have inadequate access to all basic human needs from shelter and food, to education and health services. To return to their places of origin, they will need security guarantees, tools and equipment, food, livestock and seeds.
51. Since the signing of the Sudan Comprehensive Peace Agreement, some people have begun to return to find that their villages no longer exist. Most of Upper Nile consists of black cotton soil which is swampy in the wet season and forms deep cracks in the dry season. It is extremely difficult to build on. However there are numerous sandy “ridges” of slightly higher ground and it is on these that the people build their villages. To economise, Petrodar has unearthed neighbouring sandy ridges for road construction. Alongside oil roads, one sees huge holes in the ground, where often villages used to stand. Some sandy ridges have been appropriated for use by the companies, e.g. Kotolok⁶², formerly an important village, on which now sits the main oil base, about 15 km from Paloic on the road to Melut.
52. The Dinka in this area bury their dead in their villages. They return to find not only that their villages have disappeared, but that the graves of their ancestors have been desecrated and the remains disappeared into the roads. This constitutes a major violation

⁶⁰ Including Pariak, Tengnya, Luangnor, Paloic, Kiri, 10 to 12 villages in the Tir area (where the airport has been built), Bany, Kamkom, Ajingnyel, Dong Ciir, Dong Jongbio, Lerwing, Wunbarko, Tonygor, Agordit, Tak Agorti, Palagat, Wulamon, Tikweatien, Mat, Kwom, Wulkiramun and Loknyang (Interview with Hon Lela Ajout Along, MP for Melut and Renk, 5 March 2006) as well as Miotriok and Jangbio (Interview with Pastor Zakaria Awer, SIC, Member of Regional Legislative Assembly, 08/03/06). The former village of Nyuanuon (approximate location N10° 27.551' E032° 32.619') is now a large hole in the centre of the sprawling market of Paloic. (Interview with Pastor Zakaria Awer, SIC, Member of Regional Legislative Assembly, 08/03/06).

⁶¹ Government of Sudan, SPLA and UN OLS, *Agreement on the Implementation of Principles Governing the Protection and Provision of Humanitarian Assistance to War Affected Civilian Populations*, Geneva, 15 December 1999.

⁶² Approximate location N10° 27.272' E032° 28.353'. Also written as Katalok.

of their dignity and beliefs.

53. Beny, or New Paloic, 5 km north-east of Paloic, whereto some 4,000-5,000 displaced people were relocated in 2005, is low and sandy - "like the desert"⁶³ - and prone to flooding. It has no fresh water and none of the trees or plants that are needed for building *tukuls*. It has a mosque, built in January 2005, and a new *khalwa*, or Islamic school, built in March 2005⁶⁴, but the displaced are Christians and followers of traditional African religions - not Muslims. Paramount Chief Deng Nuor said the people being targeted in Paloic would rather die than move:

Even the people who live in Beny don't like it and want to settle somewhere else. Paloic is the best place in the area. It is high. The war will start again - and even I will take up arms.

Issues 2: Deep Poverty, no Services, no Employment

54. Northern Upper Nile is extremely poor by any standard. More than 90% of the population in Renk District live on less than 1 \$ a day. Data available from nutrition surveys conducted in Melut county indicate persistent food shortages, with Global Acute Malnutrition (GAM) rates of 20.5% in May 2002 and 28.1% in April 2005.⁶⁵
55. In acclaiming the discovery of the Paloic oil fields ("a petroliferous system with extremely rich oil and gas reserves") as its greatest scientific and technological achievement of 2003, CNPC stated "the discovery cost per barrel is much lower than that for big international oil corporations, yielding both high exploration and social benefits."⁶⁶ By lack of publicly available data, the cost-efficiency of Petrodar's operations cannot be independently judged. All available evidence, however, indicate that the development of the Melut Basin has brought no substantial social benefits, but has rather taken the area backwards.
56. Paloic, the main oil centre, may serve as an example. Before 2001, Paloic was a small village which had a clinic run by foreigners, with free treatment for the poor. Today's clinic is larger and better equipped, and almost exclusively for army use. The Dinka population is obliged to sell goats to buy medicine, and has no other option now but to treat themselves. So few facilities are there in the area that the local Dinka have been crossing to relief-starved SPLM/A-controlled areas in search for medical care.⁶⁷ Despite the flood of displaced, there is only one small school in Paloic, composed of four straw huts. The school is Islamic; its pupils are not. There is not a single bore hole to provide clean water.⁶⁸
57. A universal complaint from all respondents was the lack of basic services in the area. Production areas have electricity, but no indigenous population to use it. Rural settlements and IDP camps where people do live, have no electricity. Oil centres like Adar and Paloic have clinics, but local people say they cannot access, unlike oil workers and the military. Paloic has an important up-to-date airport, but its population has no fresh water, no jobs and no security.
58. Absence of safe drinking water causes major health problems.⁶⁹ Village chiefs claim that

⁶³ Interview with Paramount Chief Deng Nuor, Payuer, 27 April 2005.

⁶⁴ Interview with Sheikh Thon Yor.

⁶⁵ OCHA and NSCSE, 2005.

⁶⁶ CNPC website <http://www.cnpc.com.cn/english/rd/Achievement.htm> (last accessed 08/05/2005).

⁶⁷ "People are coming from Government towns to our clinic," said a medical assistant in a mobile clinic in SPLM/A-controlled Payuer in April 2005. "Some have been beaten with sticks and guns. Others have had needles stuck in their feet and private parts. Others cannot afford the medicines that have to be bought in Government areas. Oil has brought nothing but suffering."

⁶⁸ The only resource being tapped is oil. Locals identify 32 wells in and around the town, and more than 100 in the wider area. Seven kilometres west of Paloic there is a new concrete airstrip two and a half kilometres long. Interviews with displaced inhabitants of Paloic, April 2005.

⁶⁹ Available literature indicates that the water situation in Renk is considered precarious and most of the water utilities

they are not aware of a single bore hole having been drilled in the areas where the consortium operates since 2001.⁷⁰ Oil companies do provide water for people from their own tankers or water pipelines at certain key installations, including Paloic airport, but they cut the supply if there is any problem with the local community, for instance when there were tensions over jobs in January 2006.⁷¹ In March 2006, ECOS witnessed tankers dumping water into old oil drums by the side of the dusty road between Paloic and Melut, and people dipping their plastic jerry-cans into the open drums to obtain water; hardly the most hygienic of practices.

59. The lack of development is not confined to southern civilians only. The Government allied militia have been treated little better. Akoka, headquarters of the Thon Mum militia, has a small Islamic school and an army clinic. Commander Munjok Deng, who joined the SPLA in February 2005, said in March 2006 that the militia had to buy medicines, even when wounded in the course of operations in the oil fields.

If we need medicine, we have to sell durra. But we don't have enough food even for eating. We have to take it from civilians.

60. We heard many complaints that educated southerners are not employed and that working contracts are dishonoured. MP Lela Ajout Along alleges employment discrimination against southerners. In a recent example local people were promised work but in January 2006 buses came bringing newcomers from the north, causing anger amongst the local youth.⁷² A Dinka respondent in Paloic who has worked for the oil companies but who wishes to remain anonymous told ECOS that Petrodar recruits mostly in the north and that northerners receive higher salaries while southerners are given the lowliest jobs. They are not given any training and are not allowed to stay in the same job long enough to obtain true skills; they are frequently re-assigned and rotated from job to job.⁷³

Issue 3: Environment

61. Oil exploitation is a high risk activity when it comes to its potential to damage the natural environment. The nightmare scenario in the Melut Basin would be a blowout, which can have massive spills and could make the Nile waters from Melut to Alexandria unfit for irrigation or consumption. Also of great concern are the Machar Marches - one of the most important wetland in the world. Other issues are the treatment of polluted water that is pumped up in massive quantities together with oil; the choice of chemicals and their handling; the vulnerable hydrology; and the opening of large areas to poaching and logging.
62. There are about 150 Acts, Orders and related regulations governing environmental issues in Sudan. The Sudan Environmental Policy Act (2001) is the most recent and relevant, but remains without bylaws or real law enforcement capabilities.⁷⁴ The Energy and Investment sectors for example superseded this law by drafting their separate Regulations. Projects sponsored by foreign donors do sometimes carry out the obligatory Environmental Impact Assessment as prerequisites imposed by their own governments, while the Sudanese Government projects tends to overlook them. The Higher Council for the Environment and Natural Resources remains powerless against a pattern of systematic violations of the law. There are at least 81 governmental institutions belonging to 17 different Central Government Ministries that are linked to the environmental laws. They all lack the will and/or capacity to enforce them.

in the region are not functioning. The majority of people therefore depend on the White Nile for their water needs. More than 75% of supplies is drawn directly from the river without treatment. OCHA and NSCSE, 2005.

⁷⁰ Interviews with chiefs in Northern Upper Nile, April 2005.

⁷¹ Interview with Hon Lela Ajout Along, MP for Melut and Renk, 5 March 2006.

⁷² Interview with Hon Lela Ajout Along, MP for Melut and Renk, 5 March 2006.

⁷³ Interviewed 8 March 2006.

⁷⁴ El-Moghraby, 2006, p 10.

63. To minimize environmental risks in a wet and swampy area like northern Upper Nile requires adequate technology, ambitious and clear standards and procedures, their integration into effective management systems, and strong commitment from the highest management. None of this is visibly present within Petrodar. An Environmental Impact Assessment has been undertaken by the University of Khartoum for Petrodar, but the results are not publicly available. The consortium does not publicly provide meaningful information on its environmental policies or performance. What can be observed suggests that Petrodar is inclined to chose from among the cheapest available technologies and to disregard the full environmental implications of its operations.
64. The all-weather roads and pipelines are causing major problems. Satellite imagery confirm the statements from interviewed sources that they are acting as dams and preventing the natural flow of water (see back cover). This leads to flooding in some areas and drought in others. In 2005 even parts of Renk town were flooded. People have reportedly cut the road open themselves to allow the water to drain away.⁷⁵ In March 2006 an ECOS researcher was still able to see the remains of houses destroyed in the 2005 floods in the northern part of Renk. Between Geger, 40 kilometres from Renk, and Renk itself there are reports that agriculture was seriously affected by floods.⁷⁶ The Member of Parliament (MP) for the Renk and Melut area, who made a fact-finding trip in January 2006, reported food shortages in the area and referred the matter to WFP for investigation.⁷⁷
65. The raised roads have small culverts, approximately half a meter wide, about every kilometre. Not only are these too small and too infrequent to handle large volumes of water, but they will also block easily with soil, vegetation, plastic bags and other debris. In places where the road risks to be flushed away, they have been replaced by a larger square culvert.⁷⁸ Like in Western Upper Nile, the drainage of the roads is engineered to adequately defend the road from being flushed away by water, not to preserve the natural environment.
66. The oil roads have also brought benefits to the area, as can be seen by the number of buses. In combination with the oil-industry related increase of mobile network coverage, the roads have hugely improved the trade of goods and access to markets, which is key to economic growth. People travelling from Khartoum to Malakal are able to travel by bus as far as Melut and then board a barge. The passengers seem to be mainly travellers rather than returning IDPs, the bulk of whom board the barges in Kosti. However, the roads have been built to serve oil exploitation and it is only by chance that some of them connect people and markets. There is no road to Malakal, the most important town in Greater Upper Nile. The Commissioner of Maban County has demanded that the oil companies build an all-weather road from Buony to Jaman, but so far they have prevaricated.⁷⁹
67. Oil is always pumped together with water and they must be separated. There are cheap techniques and chemicals on the market that do a poor job, and more expensive ones that do a better job. The GNPOC consortium in Western Upper Nile is known to economize on this process and discharge large quantities of contaminated water onto the surface, much

⁷⁵ Interview with ECS Bishop Daniel Deng, 9 March 2006.

⁷⁶ Interview with Catholic Bishop Daniel Adwok, 5 March 2006.

⁷⁷ She also discovered that vegetable gardens around Abu Khadra had failed and reported that in some areas cows have died near the pipeline because they cannot cross it, and that during construction children died when playing on the half-completed pipeline. There was no awareness-raising on health and safety for the local communities (Interview with Hon Lela Ajout Along, MP for Melut and Renk, 5 March 2006). The Commissioner of Maban County, Ali Kata Oshi, stated that partially-constructed pipelines were causing difficulties for people and livestock (Interviewed 6 March 2006). Local people also complain that the restrictions on natural water-flow patterns are having a detrimental effect on breeding patterns of fish.

⁷⁸ Where there are significant dry river beds, bridges have been built. A prominent sign at the Moshok bridge (Approximate location N10° 46.649' E032° 36.125') on the road between Renk and Melut states that it cost US\$528,635, which may explain why Petrodar has avoided building bridges whenever it can.

⁷⁹ Interviewed 9 March 2006.

to the chagrin of the agro-pastoralists in the area. It is not potable and even too filthy for irrigation. As GNPOC and Petrodar are dominated by the same companies, it seems advisable to investigate the latter's discharges.

Issue 4: Compensation and Community Development

68. As usual in the oil industry, companies in Sudan are contractually obliged to spend specified amounts of money on 'Community Development'. Petrodar did this e.g. in Longochok, headquarters of the notorious militia leader Chatyout Nydang.⁸⁰ Reporting on atrocities in the Longochok area in July 2003, the US-led Civilian Protection Monitoring Team noted that Petrodar had carried out "a series of capital investment projects in conjunction with the [Chatyout's] Southern Sudan Defense Forces and the Government of Sudan" - the very forces responsible for destruction in the area, according to a former UN official.⁸¹ Today Longochok has a clinic built by Petrodar and water tanks for livestock provided by Petrodar. People from the area say access to the clinic is strictly limited - usually to army and militia - and note that most livestock are in the hands of the militia, which looted them in the first place.⁸² There is no bore hole.
69. Community Development by oil companies in Sudan is mostly limited to the building of schools, hospitals and clinics. No needs assessments are known to be carried out, nor any evaluations and the Community Development activities do not seem to be primarily designed to serve the needs of the people. In fact, oil companies in Sudan are discouraged to establish relations with the communities that they are supposed to develop. The Ministry for Energy and Mining, usually in consultation with local military intelligence officers, informs them what to build and where. All too often, the constructions then either remain poorly utilised or even empty, or mainly serve the military and civil servants. In the case of Beny, they seem to be meant to perpetuate the depopulation of oil producing areas.
70. Every respondent repeatedly stressed that there has been no compensation for those displaced or otherwise affected by the exploitation of oil in the region. The nearest that the oil companies have come to compensating people is Beny/New Paloic. This is a patch of dusty, barren, low-lying black cotton soil about 5 kms from Paloic.⁸³ It contains a police station (still with northern police, even though it is in the south), a mosque (even though the vast majority of the people are not Muslim), a school and a clinic, both of which stand empty (apart from more northern police) and which the local communities believe to be Islamic. They are part of Petrodar's Community Development programme. There is absolutely nothing else and the overall impression is one of total desolation.⁸⁴ The consortium has simply collected piles of reeds, currently stored in the school, for the displaced southerners to construct their own temporary shelters. People have refused to move here as they know that it floods in the wet season and is not suitable for settlement.
71. The Commissioner of Maban County, who has been in office since January 2006, has taken up the issue of compensation. In February he called a meeting of all the companies in his area⁸⁵ and demanded to be informed about their contractual obligations. They were unable to do so. The Commissioner wants to see what promises the companies made in terms of

⁸⁰ Chatyout, as he is popularly known, is the key militia leader around the Adar oil fields and the man blamed for what Christian Aid has called a "war on humanitarian agencies" early in the development of the Adar fields. (Christian Aid, 2001, p. 16). According to numerous interviewees, Chatyout is brutal even by the standards of Government-supported militias.

⁸¹ "A few NGOs traveled in and out, but found it hard to remain in any one location for long. There were constant attacks by the Government forces. NGOs were targeted as the Government did not want them in the area." Confidential e-mail to ECOS, 23 May 2005.

⁸² Interviews in Nairobi, April 2005.

⁸³ Approximate location N10° 25.657' E032° 34.680'.

⁸⁴ ECOS researcher's observation, Beny/New Paloic, March 2006.

⁸⁵ Including Petrodar, Heglig, Sadig, Dal and Masmun.

service provision and compensation. He believes that Adar belongs to the Maban people⁸⁶ and that they must benefit from their oil.

72. Commissioner Ali Kata Oshi notes systematic exploitation of local resources without compensation. He has ordered the companies to pay for gravel that they extract, and has stopped one company from doing so. He is also concerned that oil companies are entering forests without permission from the forestry department, and that they are not paying fees for charcoal. The oil companies have complained to the Governor of Upper Nile State and to the Minister for Investment in the Government of National Unity, and both have supported the commissioner.⁸⁷ This is in marked contrast to previous administrations.

Issue 5: New Settlers

73. Agro-pastoralists communities are mobile, and northerners and southerners have always mingled in the areas north of the Sudd. However, by their very nature they have not settled – they move with their herds to follow the water and the grazing. Over the past years, a pattern of permanent settlement of northerners into areas north of Paloic has emerged, particularly from the Fellata (locally known as Mbororo) community. An office for resettlement has been opened in Renk with no link to local authorities.⁸⁸ According to Catholic Bishop Daniel Adwok, Fellata have reportedly been issued with nationality certificates and are moving with their cattle, armed.⁸⁹ Anyone travelling in the area cannot fail to notice the number of Fellata settled in villages by the roadside.⁹⁰ There seems to be an aspiration among leading politicians to resettle loyal ethnic groups from Northern Sudan in the Greater Upper Nile. This could be meant to increase the chances of the northern political leadership to continue influencing matters in this region after the 2011 referendum on southern self determination.⁹¹

Issue 6: Security

74. Security in the Renk, Melut and Paloic areas is still firmly in the hands of northern troops. They take their orders from White Nile State and Khartoum, not from Upper Nile or Malakal.⁹² In Melut, Government forces are still camping in the Sudan Interior Church (SIC) compound which they took in 1997.⁹³ In most of southern Sudan peace is evident, and around barracks and garrisons the heavy weapons have been stood down and covered with tarpaulins. In fact it is quite difficult even to see an AK47 in southern Sudan these days. Not so in Melut, where heavy machine guns, anti-tank guns, mortars and artillery are mounted ready for action around the perimeter, with ready-use ammunition stacked alongside.⁹⁴

Even up to now; the security forces act as if there is no peace.

~ Hon Lela Ajout Along, MP for Melut and Renk, Melut, 5 March 2006

⁸⁶ The local name is Ban Keta.

⁸⁷ Interview with HE Malik Agar, Minister for Investment, Government of National Unity, 6 March 2006.

⁸⁸ Interview with Hon Lela Ajout Along, 5 March 2006.

⁸⁹ Interviewed 5 March 2006.

⁹⁰ ECOS researcher's observation, March 2006.

⁹¹ ECS Bishop Daniel Deng is very outspoken on the issue. He believes that this area is and has always been the front line in attempts to Arabise and Islamise the south. As far back as the 1920s when the Anglo-Egyptian colonial power operated a "closed district" in the south, the "area of Upper Nile Province from Renk to the north was specifically excluded, because of the established economic interests of Northern merchants there". (Johnson, 2003, p. 17). Bishop Deng believes that northern interests still covet this prime agricultural land which now also has oil. Indeed many northerners see it as part of White Nile State rather than Upper Nile, and orders are received from the north (interviewed 9 March 2006), In Maban County too Islamisation had been a problem. The new Commissioner confirmed that he will now allow churches to operate freely and will halt compulsory Islamisation (interviewed 9 March 2006).

⁹² Interview with Ali Kata Oshi, Commissioner of Maban County, 9 March 2006.

⁹³ Interview with Pastor Zakaria Awer, SIC, Member of Regional Legislative Assembly, 8 March 2006.

⁹⁴ ECOS researcher's observation in Melut, March 2006.

75. Government security forces routinely restrict free movement, which has a negative effect on trade and agricultural production. At the end of February 2006, for instance, a group of Dinka from the area between Melut and Maban tried to return to their homes but were not allowed to by army officers.
76. On 19th February 2006 there was increased tension in Renk, with reports that new northern security forces had arrived with the intent to destabilise the town. UNMIS forces reportedly intervened and restored calm.⁹⁵ The Commissioner of Maban is concerned that the security forces and oil companies may be conspiring to create tension and conflicts between tribes and sections over boundaries, land, and taxes.⁹⁶
77. Although Government-supported southern militia have been a major problem in the past, this issue was not raised by any of the respondent as a serious threat in March 2006. The main Nuer militia, the SSDF, has rejoined SPLM/A.⁹⁷ Some of the Dinka militia in the Renk and Melut area also joined SPLM/A at the same time as Paulino Matip, although Mohamed Chol Ahmat and Chol Nyaman may still be around.⁹⁸ Northern murahiliin are still moving with weapons in the area, and there have been reports that Popular Defence Forces (PDF) have entered the area.⁹⁹

A look ahead

78. More than a year after the signing of the Sudan Comprehensive Peace Agreement, impoverished civilians have seen very little progress on the above described issues and they are losing patience. Most of the displaced in northern Upper Nile have little or no knowledge of the Peace Agreement. They believe that, because it promises peace, it must provide for an immediate end to the abuses with which they associate oil, safe return to their villages, and development. In the words of Chief Chol Nul:
We have heard about peace, but seen nothing. I want to see a big hospital, schools, roads, free movement to Malakal and Renk without Government militias on the way. The CPA means employment, no hunger, hospitals and schools, no fear and UN troops on the front lines to monitor the ceasefire and the oil. Then there will be peace.
~Chief Chol Nul, Payuer, 25 April 2005
79. In a number of areas, local people are taking matters into their own hands. In Det, south of Guelguk, where an exploratory well was dug in 2004, civilians killed the Petrodar team leader on 25 January 2006, within a fortnight of the CPA being signed, and chased away the Government-backed militia of Jok Deng.
North of the Sobat, the Dinka agreed that anyone doing oil work south of Khor Adar would be killed. They want oil development stopped until it is done with their agreement.
~Rev John Abeng Deng, Nairobi, 30 April 2005
80. In many parts of the Petrodar concession, chiefs and civilians have asked the SPLA to arm them to enable them to return to their homes despite the continuing presence of Government-supported militias. Paramount Chief Deng Nuor is one of them.
We want to go back to our villages. If we are not helped to do so, we will fight the militia to settle in our villages. We have asked the SPLA for weapons. But we have been told: 'There is peace. We don't want fighting'.
~Chief Deng Nuor, Payuer, 27 April 2005
81. Many question marks hang over the future of the displaced - not least of all, how the

⁹⁵ Interview with ECS Bishop Daniel Deng, 9 March 2006.

⁹⁶ Interview with Ali Kata Oshi.

⁹⁷ Small groups remain in Nasir, Maiwut and Longochok but their differences with SPLM/A are apparently related to personalities and seniority, and they seem content to remain in their areas without causing problems, interview with anonymous Government of Southern Sudan Cabinet Minister, 15 March 2006.

⁹⁸ Interview with anonymous senior GONU official, 3 March 2006.

⁹⁹ Interview with Hon Lela Ajout Along, MP for Melut and Renk.

Government of South Sudan will deal with them.

82. The Government of South Sudan does not yet have formulated policies and standards for the oil industry. It is internally divided over the legality of the 2004 contracts that awards the promising parts of Block B to the British shell company White Nile Ltd and Block 5B to the Moldovan company Ascom SA, competing with the contracts that the National Government has signed with an international consortium in which Total from France and the US company Marathon Oil each hold 32%, and with the WNPOC consortium respectively (in which Petronas holds a majority share). White Nile Ltd has no experience at all in the oil business. Ascom SA is a tiny oil company and is not expected to actually develop its concession either. Neither company have much of a reputation on the international markets. International donors have voiced concerns about these developments. Meanwhile, members of the SPLM leadership have pressured local commanders in northern Upper Nile to allow the further construction of oil roads. Commissioner Bioch:

Since last year I don't have any rest from those in Melut, telling me to open the roads. Even the SPLA is calling me: 'Why don't you open this road?'. I am saying: 'OK, but with my security and my workers - and when the SPLA is in Melut and the displaced can return to their homes.' The civilians are saying: 'Peace has come; let us return to our places.' We are being pushed to fight.

~Elijah Bioch, Payuer, 17 December 2004

83. The displaced, if they eventually return, will be returning to a wasteland. Their villages have been destroyed or even excavated.
- All the villages have been dug and they are taking the sand for roads built two meters high. The villages are now like riverbeds. The Government wants to take all the oil. They will not give it to the south. They don't want to see a tree, or a person, in this area. This peace will not work because the militias are there. The Government won't disarm the militias. It wants to destroy the peace because it wants oil.

~Chief Thong Anyang, Payuer, 25 April 2005

84. Strong popular grievances can frustrate major industrial activities, as the past case of Chevron in Sudan, and the current situation in the Niger Delta testify. In Sudan, the grievances against the oil industry can be overcome within the existing political and business framework. The CPA details a number of principles and procedures that could kick-start a popular trust building process. Compensation and reparation are part of that. We did not for this report make an inventory of relevant liability under Sudanese law. Because the oil contracts are secret, we cannot know the extent to which Petrodar is contractually obliged to respect the rights of people and protect the environment and undo damage. It could be worthwhile, in this respect to assess the consortium's and Government's obligations under national law and regulations. In any case, the consortium has a strong interest to continue its operations, and thus, whether legally enforceable or not, to compensate losses and repair damage.

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Annex 1.

Benchmarks for Oil Exploitation in Sudan during the Interim Period

The signing on 9 January 2005 of the Sudan Comprehensive Peace Agreement (CPA) by the Government of Sudan and the Sudan People's Liberation Movement has opened up many opportunities for the private sector to invest in Sudan. The CPA does not immediately solve all of Sudan's ills. Non-equitable development, myriad internal strife, corruption, a culture of violence, racism, centre-periphery antagonism, and a legacy of oppressive, arbitrary and unaccountable governance continue to present stiff challenges to any company that wishes to secure its interests while contributing to peace and equitable development. But the peace agreement does create a situation in which companies can work in a responsible manner. The choice is up to them now.

The upstream oil business in Sudan, having stirred much animosity by being at the centre of warfare and gross human rights violations for many years, will have to start building a social support basis and thoroughly rethink the way it operates. To adapt itself to Sudan's new realities, it will have to start acting in accordance with the principles underlying international law, the provisions and purpose of the Comprehensive Peace Agreement, and existing authoritative voluntary standards for business behaviour. The 14 benchmarks underneath are based on these three sources. They are a sector-specific addition to the ECOS Business Principles for the Interim Period that provides companies with a framework with which they can maximise both their own and society's benefits of Sudan's oil wealth. At the same time, it can serve as a measurement of oil companies' commitment to peaceful and equitable development.

The ECOS Benchmarks are based on a five issues that we believe are the most crucial to the positive role that business can play in post-peace Sudan: human rights, peace and security, non-discrimination and accountability, notably:

Basic Principles

- a. Within the company's sphere of activity and influence, promote, respect and protect human rights and fundamental freedoms, including social, economic and cultural rights, land rights, and the rights and interests of indigenous peoples, minorities, and other vulnerable groups.
- b. All business activities are assured to be conducive to peace and equitable development, and to the realisation of the provisions and purpose of the Sudan Comprehensive Peace Agreement.
- c. No discrimination on the basis of race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status, while actively promoting that the local population sees itself equitably represented, at all levels, in the local work-force.
- d. Combat bribery, extortion and all other forms of corruption.
- e. Within the company's sphere of activity and influence, promotion of transparent and accountable public financial management.

Oil companies have a chance to play a positive role in post-Peace Sudan, provided the following benchmarks are met:

Circumstances and Commitments

1. The Comprehensive Peace Agreement (CPA) effectively ends all targeting of the civilian population and installations in and around the company's operating environment.
2. A formal and effective agreement is reached with all armed sides and factions in the company's operating environment, how the civilian population and installations in the

concession area are to be secured.

3. There is unconditional, safe access and freedom of movement in the entire concession area and the company spares no effort to maintain this situation.

The company commits itself to:

4. Contribute, within its ability, to the success of CPA, and mitigate all potential for conflict where possible. The company will monitor and document the breaches of the purpose and provisions of the CPA that occurs within its operating environment, report the findings to the international agency that will monitor compliance with the Peace Agreement, and actively engage with high-level government officials to end breaches; if this fails to resolve any issue, it will inform international governmental and/or non-governmental human rights bodies.

5. Set a binding time frame to shape the company's security set-up along the lines of the Voluntary Principles on Security and Human Rights, and seek support from its home government in this endeavour.

6. Fully disclose all the company's provisions in cash or in kind equipment or services for military, security, or dual use purposes.

7. No discriminate on the basis of religion, ethnicity, religion, gender, or political beliefs, and actively promote a workforce, at all levels, that reflects the make up of the local population in an equitable manner.

8. Establish mechanisms for dialogue and partnership-building with all stakeholders on all aspects of the operation that have an impact on the community, resulting in an economic, social and peace action programme for the concession area, that conforms nationally agreed principles and policies and supports the purpose and provisions of the Comprehensive Peace Agreement.

9. Use all leverage and influence with the Government of National Unity and the Government of South Sudan and use all other available venues to encourage the adoption of a transparent and comprehensive revenue management regime; and show alertness to those circumstances in which revenue allocation is a potential conflict risk, while promoting that agreed rules and transparent procedures for allocation are in place.

10. Insist on full disclosure of all net payments, including taxes, royalties, fees and other transactions with the Government and/or public sector entities.

11. Insist on full disclosure of all Product Sharing Agreements and other agreements with state parties; renegotiations of existing Product Sharing Agreements to include social, environmental and human rights standards, and insistence on these standards for newly negotiated contracts and all other agreements.

12. Support, in words and deeds, the voluntary return of all refugees and IDPs who so wish, to their places of origin in and around the concession area, in consultation with international and civil society organisations.

13. Companies that have stakes in concession areas that have seen violent displacement post 1997, publicly commit themselves to initiate or support the implementation of a comprehensive and sufficiently funded plan for compensating victims of violent displacement in their concession area, in agreement with local leaders and civil society.

Assessments and Reporting

14. Prior to any investment decision and at regular intervals, the company will assess its impact on and contribution to the communities that surround its operations and the wider society, with regards to development, peace, security, human rights – including social, economic and cultural rights – and the environment, taking into account it's impact on the physical and economic security of the population, on local and national strife and rivalries, and on the realisation of the provisions and purpose of the Peace Agreement. The assessment will draw upon external experts and local communities, and involve government, and civil society organisations. It will contain recommendations for action, consultation, and dispute settlement. The company commits itself to share the assessment with its stakeholders, to implement its recommendations, and to evaluate and update it on a regular basis.

15. The company will publicly report, on a yearly basis, its own and/or its consortium's impact on and contribution to development, peace, security, human rights and the environment,

Oil Development in northern Upper Nile, Sudan

covering all the above mentioned benchmarks, including its success in implementing the Voluntary Principles, an evaluation of the economic, social and peace action programme, and the status of the recommendations of the impact assessment.

Cover image interpretation (not applicable to text only version):

Settlements: only positively identifiable settlements have been given; they show as cleared circles surrounded by degraded vegetation / bare areas and tracks leading to them

Farming: bare areas, indicating either harvested crops or heavy grazing

Large farming: crops on large fields > 10 ha

Small cropping: crops on small fields

Unspecified Vegetation: heavy vegetation typically in association with watercourses; may also indicate growing crops

Satellite Imagery:

Four historical Landsat ETM+ scenes were used, with 6 spectral bands in 28.5m, a panchromatic band within visible area in 14.25m and a thermal in 57m, each scene covering 173 x 185km, notably:

- Landsat Path/Row: 173/53: 04-Nov-1999; 172/53: 12-Sep-2000; 3-Feb-2001; 172/54;
- Landsat Path/Row: 173/53: 11-Nov-2005; 172/53: 29-Nov-2005; 172/54: 29-Nov-2005.

All satellite images have been projected to the UTM zone 36 North with WGS84 Datum and Spheroid. They have been calibrated for reflectance by selecting digital numbers from land covers that are not affected by clouds or burning. The images have been pan-sharpened by the use of the panchromatic band to a spatial resolution of 14.25m, applying Wavelet Resolution Merge technique (ERDAS 1994). A Tasseled Cap transformation has been applied for interpreting cropping pattern and bare farm fields (Jensen 1996). The images have been digitally classified by the use of supervised classification procedures (Jensen 1996).