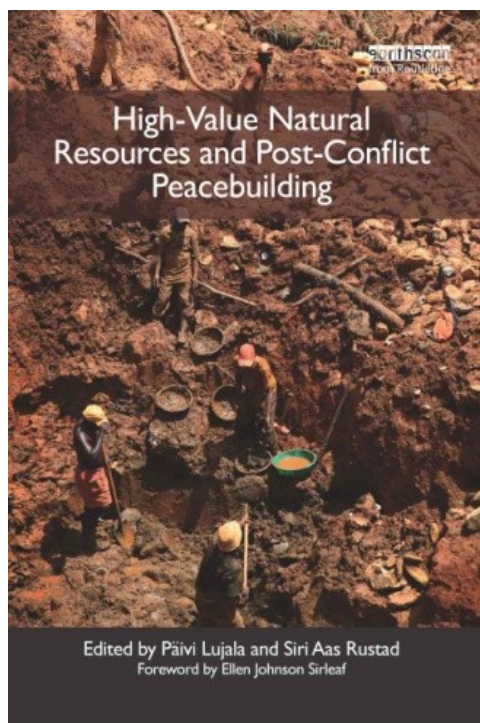


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Lurking beneath the surface: Oil, environmental degradation, and armed conflict in Sudan

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Lurking beneath the surface: Oil, environmental degradation, and armed conflict in Sudan

Luke A. Patey

Sudan has a long history of armed conflict. The first North-South civil war (1955–1972) was followed by a decade of relative peace, but by 1983 a second conflict had begun that left over 2 million dead and 4 million internally displaced (ICG 2002). The signing of the comprehensive peace agreement (CPA), in 2005, brought an end to the second North-South civil war, but peace remains elusive in Sudan. As the planned 2011 referendum for the secession of Southern Sudan approaches, environmental degradation linked to oil development—which is among the many causes of armed conflict in the region—continues to inflame violence at the local level.

Oil played a role in fueling violence during the second civil war. The Sudan Armed Forces and progovernment militias orchestrated the killing and displacement of thousands of civilians to make room for the oil sector's undisturbed development. In the years since the signing of the CPA, oil has continued to weigh heavily in recurrent bouts of armed conflict. Nonetheless, civil war between the North and South has been held at bay by a number of factors, one of which is that the Government of National Unity, in Khartoum, and the Government of Southern Sudan, in Juba, have a mutual interest in sharing oil revenues. The resulting political accommodation may well continue in the years beyond 2011, when the peace agreement ends. But the partners in the CPA—the ruling National Congress Party and the Sudan People's Liberation Movement (the dominant southern rebel group)—have largely neglected the social and environmental damage caused by oil development in Southern Sudan.¹

Luke A. Patey is a project researcher at the Danish Institute for International Studies. Because of the sensitive nature of the subject matter, the author has relied on confidential interviews and materials. This chapter also draws from material originally published in Luke A. Patey, "Crude Days Ahead? Oil and the Resource Curse in Sudan," *African Affairs* 109 (437): 617–636.

¹ In 2010, oil-producing states in Sudan included Unity, Southern Kordofan, and Upper Nile.

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Although the violent displacement that was common during the second North-South civil war has subsided, the expansion of the oil sector nonetheless continues to exacerbate grievances in oil-bearing regions. Forced relocations and the contamination of water by oil development at Thar Jath—south of Bentiu, in Unity State—led one local to warn, “If the government ignores us, we will go Nigeria style” (AFP 2008a). In fact, protracted armed resistance that is reminiscent of events in the Niger Delta has already begun to materialize in Southern Sudan. In late 2007, the Darfur rebel group JEM (Justice and Equality Movement), with the assistance of a local armed group made up of ethnic Misseriya from the area, attacked an installation of China National Petroleum Corporation (CNPC) near the Defra oil field, in Southern Kordofan, seizing five Sudanese, an Egyptian, and an Iraqi (Reuters 2007). In May 2008, four Indian oil technicians were kidnapped near the oil town of Heglig; in October of that year, nine Chinese oil workers were taken, and five died in what was apparently a botched rescue attempt by Sudanese authorities (AFP 2008b; *Sudan Tribune* 2008). Local armed groups argue that such attacks are justified by the absence of any peacetime benefit from oil, and by oil-related damage to the environment. Unless the concerns of communities in and around oil-bearing regions are addressed, these violent altercations will likely continue.

Regardless of the outcome of the referendum, assigning priority to—and acting on—the often-neglected environmental consequences of oil development will be fundamental to dampening oil-linked violence in the years to come. Once obfuscated by civil war, the problems of environmental degradation have become more apparent in the post-conflict period. Environmental damage has largely destroyed hope, in oil-bearing regions of Southern Sudan, that oil development will lead to better living standards. And, as environmental degradation continues to damage livelihoods in the region, what has so far been mainly sporadic violence may blossom into organized rebellion. Post-conflict resource management must therefore assign priority to environmental protection and remediation, in order to ensure that fresh grievances do not spark new conflicts.

ENVIRONMENTAL DEGRADATION

The oil sector in Sudan expanded significantly in the years following the signing of the CPA (see figure 1). As the security situation improved, exploratory wells, permanent roads, pipelines, pumping stations, and electrical facilities spread across the region. The Chinese, Malaysian, and Indian state-owned companies that dominate the sector expanded their activities. But as civil war came to a formal end, a variety of environmental concerns associated with oil development began to emerge more clearly. The environmental impact of oil development in Sudan is complex, ranging from oil spills to the ecological imprint of road construction (Cooper and Catterson 2007; El Moghraby 2009). The most worrisome issue, however, is “produced water,” which comes to ground along with extracted crude oil and holds toxic concentrations of chemicals and minerals; if it is discharged



Figure 1. Oil in Sudan and South Sudan

Source: Oil block and oil pipeline data adapted from ECOS (2007).

Notes:

A – The Hala’ib Triangle, claimed by Sudan and de facto administered by Egypt.

B – The Ilemi Triangle, claimed by Ethiopia, Sudan, and Kenya and de facto controlled by Kenya.

For information on ownership of specific concession blocks, see the annex to this chapter.

into the surrounding area without proper treatment, it becomes a severe hazard. The Heglig oil facility alone, for example, generates 10 million cubic meters of produced water a year. Water levels have risen as the Heglig oil field has matured, and the facility’s reed bed technology is no longer able to handle the increasing quantity of produced water (UNEP 2007). Contaminated water—as well as hazardous-waste dumping—threatens not only the vast marshland of the Sudd, but also the region’s inhabitants: after consuming contaminated water, livestock have died and civilians have fallen violently ill, building further resentment against the oil sector.

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Failure to address the issue of produced water stems from a number of factors. First, oil companies tend to underestimate the amount of produced water generated by an oil field. Second, financial constraints and Sudan's lax environmental policies all push companies to cut corners: when it comes to protecting the environment, oil companies have essentially been left on their own. Third, oil companies that operate in Sudan come from countries with poor environmental practices; hence, there has been little regard for international standards and norms. Finally, in a place like Southern Sudan, where there are few roads and only limited infrastructure for waste storage, companies that are keen to slash costs are reluctant to take on the added expense of proper environmental management.

The construction of access roads (for oil exploration) and permanent roads (for production sites) has hampered livelihoods in Southern Sudan by altering local hydrology. Because the oil-bearing regions are predominantly flat, even the slightest depressions can alter the drainage and flood patterns that are critical for irrigation and wildlife. During exploration, which is undertaken in the dry season, oil companies build temporary roads; but to cut costs, they rarely bother to construct the expensive culverts that are required for drainage once the rainy season arrives. And even when drainage is constructed for the permanent roads used to access oil discoveries, the culverts are designed to protect the road, not to ensure the proper flow of water. Thus, during the wet season, the culverts obstruct the flow of water. On the road from Abyei to Agok, for example, the lack of drainage culverts has caused flooding on one side and drought on the other, disrupting irrigation in the area.²

Oil-related environmental degradation not only leads to resentment against oil companies—as well as against political leaders, in both the North and South—but can also pit communities against one another. Tainted water (or water that is perceived to be tainted) and alterations to natural hydrology intensify water shortages and force locals to travel longer distances to find fresh sources. Thus, by exacerbating environmental scarcity, oil development in Southern Sudan threatens to intensify local conflict.

THE MISSING PEACE DIVIDEND

The absence of a visible peace dividend is one of the principal grievances of communities in the oil-bearing regions of Sudan. Although the expansion of oil-related infrastructure has yielded wider mobile-network coverage and improved roads, public transportation, and access to markets, it has also threatened livelihoods and uprooted settlements (ECOS 2008).

Oil development has provided local communities with few economic benefits or compensation—and where compensation has been granted, it has occurred

² Confidential telephone interview with an official from an international organization, January 2009.

through ad hoc agreements, with little governmental or legal oversight. There has been little transparency in how oil funds transferred to producing states are spent. Furthermore, instead of spurring economic development in Southern Sudan, oil production has resulted in calls for economic compensation to cover oil-related environmental damage. For example, when Taban Deng Gai, the governor of Unity State, demanded that his state begin to receive a 15 percent share of oil revenues produced from his state when the CPA ends in 2011, he cited the state's vulnerability to environmental hazards resulting from oil production (Dak 2009).

Finally, employment opportunities in Sudan's oil sector are poor. The oil business does not produce many jobs, particularly for low-skilled workers. Moreover, employment decisions—even for temporary, low-level positions—are often made in Khartoum; as a result, northern Sudanese and foreigners fill most positions.³ In fact, oil firms often view southerners with suspicion and deny them even casual work. In Abyei, for example, oil companies have employed few Dinka or Misseriya. Those southerners who do find employment are often treated poorly, receive no benefits, and are given lower salaries than their northern counterparts.

POST-CONFLICT ENVIRONMENTAL MANAGEMENT

There is an utter lack of environmental regulation in Sudan's oil sector. Although the CPA states (1) that oil companies should follow "best known practices in the sustainable utilization and control of natural resources," and (2) that communities in oil-bearing regions have the right to participation and compensation, the agreement does not specify any standards for or modes of compensation, and enforcement mechanisms are nonexistent (ECOS 2008).

Not only is the peace agreement vague, but the environmental management procedures that *do* exist in national law are largely ignored. More often than not, the energy and investment sectors take precedence over environmental matters. The law is also hampered by poor enforcement mechanisms, largely because of the variety of government institutions and ministries that are connected to the environment (ECOS 2008). The absence of scrutiny has encouraged poor environmental practices (UNEP 2007); for instance, although it is not uncommon for oil companies to commission environmental impact assessments, the assessments are often conducted after operations have already begun, and are typically shelved after completion.⁴ In short, when it comes to the environment, the oil industry is largely self-regulating.

The lack of environmental regulation is fundamentally a failure of the Ministry of Petroleum, in Khartoum, which has neither the will nor the capacity to manage the social and environmental impacts of oil development. And although southern authorities have used strong rhetoric when it comes to the environment, in practice they have been similarly lax. The major foreign oil

³ Unpublished report from an international organization.

⁴ Confidential interview with an oil consultant, Khartoum, September 2006.

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companies have also failed to take the lead through corporate responsibility. Although some companies provide community development programs, the meager benefits that result are essentially negated by the environmental damage associated with the companies' everyday operations. The oil companies' failure to adhere to international environmental standards, coupled with the lack of peacetime dividends connected to oil, ensures that the sector will continue to be threatened by vandalism, theft, kidnapping, and violence.⁵

The risk of future armed conflict in Sudan can be diminished only if Sudanese political leaders begin to take the condition of the environment seriously. First, for post-conflict resource management to be successful, the domestic institutions responsible for environmental regulation and enforcement require the necessary resources, expertise, and political autonomy. Second, environmental measures must be fully set out in peace agreements, and must reflect international standards—including independent oversight. Although environmental aims may clash with other priorities of political groups, international nongovernmental organizations can assist domestic environmental groups to push environmental issues to the forefront of the government's agenda. A review of the extent to which oil companies' environmental practices meet or violate national law and contractual obligations is essential in any post-conflict setting. In Sudan, the post-conflict environmental assessment conducted by the United Nations Environment Programme offers a valuable starting point for improving environmental management. For specific recommendations, oil companies can turn to the business principles developed by the European Coalition on Oil in Sudan (UNEP 2007; ECOS 2008). Counteracting the environmental degradation caused by oil development is a vital part of building peace in Sudan.

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⁵ For a review of the leading international environmental and social standards, see Jill Shankleman, "Mitigating Risks and Realizing Opportunities: Environmental and Social Standards for Foreign Direct Investment in High-Value Natural Resources," in this volume.

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ANNEX

Ownership of oil concessions in Sudan

Block 1,2,4. Greater Nile Petroleum

Operating Company

40% China National Petroleum Corporation
30% Petronas
25% ONGC Videsh
5% Sudapet

Block 3,7. Petrodar Operating Company PDOC Oil production Sudan

41% China National Petroleum Corporation
40% Petronas
8% Sudapet
6% Sinopec
5% Al Thani

Block 5A. White Nile Petroleum Operating Company 1

68.875% Petronas
24.125% ONGC Videsh
7% Sudapet

Block 5B. White Nile Petroleum Operating Company 2

*10% awarded to government of South Sudan;
composition to be renegotiated*

39% Petronas
24.5% Lundin
23.5% ONGC Videsh
13% Sudapet

Block 6. China National Petroleum Corporation International (Sudan)

95% China National Petroleum Corporation
5% Sudapet

Block 8. White Nile Petroleum Operating Company 3

77% Petronas
15% Sudapet
8% Hi Tech

Block 9,11. Sudapak I

85% Zafir
15% Sudapet

Block 10. Free

Block 12A. Qahtani and Others

33% Qahtani
20% Ansan
20% Sudapet

15% Dindir Petroleum

7% Hi Tech

5% A.A. In.

Block 12B. Free

Block 13. China National Petroleum Corporation, Pertamina, and Sudapet

40% China National Petroleum Corporation
15% Pertamina
15% Sudapet
10% Dindir Petroleum
10% Express Petroleum & Gas
10% Africa Energy

Block 14. Petro SA

80% Petro SA
20% Sudapet

Block 15. Red Sea Petroleum Operating Company

35% Petronas
35% China National Petroleum Corporation
15% Sudapet
10% Express Petroleum and Gas
5% Hi Tech

Block 16. Lundin

Block 17. Ansan

66% Ansan
34% Sudapet

Block A. Sudapak II

83% Zafir
17% Sudapet

Block B. Total

32.5% Total
27.5% Kufpec
10% Sudapet
10% Government of South Sudan
20% Open

Block C. APCO

65% Hi Tech
17% Sudapet
10% Khartoum State
8% Hegleig

Block Ea. Free