

STG Policy Papers

# POLICY BRIEF

## OIL EXPLORATION AND ITS EFFECTS ON THE ENVIRONMENT AND PASTORALIST COMMUNITIES IN THE UPPER NILE REGION OF SOUTH SUDAN

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## EXECUTIVE SUMMARY

The operations of Multinational Corporations (MNCs) in South Sudan have engendered largescale environmental degradation. Although MNCs are obligated to respect the human rights of people in host communities, this is not the case in South Sudan where the legal framework is not effectively implemented. Thus, this policy brief argues that oil contamination is a serious problem for the environment and pastoralist communities. The weak enforcement of the Petroleum Act of 2012 has allowed oil companies to compromise the welfare of pastoral communities and the environment. Oil companies often do not comply with environmental regulations for cost reasons. They can only comply when they are forced to do so by the authorities, which is not the case of the regulating institutions in South Sudan. This policy brief proffers four recommendations: to strengthen enforcement of the legislation to ensure that oil corporations operating in the region adhere to environmental standards and international law; to conduct a comprehensive environmental and social impact assessment to determine the extent of pollution; and to prioritise a budget for the recruitment of qualified staff with the technical skills to set up reporting and accountability mechanisms to address oil pollution, CSOs and development partners in the governance sector engage with state actors and MNCs to promote free, prior and informed consent in oil rich communities.

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## 1. INTRODUCTION

In the 1970s, the discovery of oil in the Upper Nile region of South Sudan and exploitation of it by Chevron, Arkais, Lundin, Talisman and the Chinese National petroleum companies led to displacement of pastoral communities and pollution of the environment.<sup>1</sup> The discovery of oil meant the Khartoum government had to spend oil revenue on arms and ammunition for the Baggara and Misseriya Arabs, who competed with the pastoralist communities in South Sudan, particularly the Dinka and Nuer, for traditional grazing lands.<sup>2</sup> It should be noted that oil became one of the most important resources for the people of South Sudan. However, the extraction process is exceedingly complex, and the toxic by-products of oil exploration frequently cause environmental degradation.<sup>3</sup> This increases the chance of environmental danger and the amount of harmful substances in the aquatic environment. A group most susceptible to crude oil contamination is the pastoralist communities, whose cattle for the most part drink from the polluted water. This is a major concern since crude oil is spilt in the water. This dirty water is a result of [oil extraction and oil transport-related leakage](#). This pollutes the aquatic ecosystem and poses a substantial threat to local communities.

Most of the pollution caused by oil exploration and exploitation in the Upper Nile region of South Sudan comes from contaminated water used in oil exploration. This is in addition to the protracted civil war, which has irreparably damaged oil pipelines and had a significant impact on the environment and lives of pastoralist communities. Moreover, South Sudan is home to around [3.5 billion barrels of oil reserves](#), ranking it third in Africa. The petroleum sector is practically South Sudan's most important industry since it accounts for around [80% of its overall gross domestic product](#) (GDP). Despite seemingly encouraging statistics, the oil industry, which could be viewed as a blessing for South Sudan, is in fact

a source of despair and frustration due to the weak enforcement of the petroleum regulations in the Petroleum Act of 2012, ageing oil infrastructure and limited information sharing on the impact of oil exploration. Attesting to the lack of information regarding relevant legislation, the Sudd Institute reports that only 26% of the information required by [the petroleum legislation](#) had been published by 2019, compared to 42% in 2016. This suggests that the local communities near the oil fields are not informed about the social corporate responsibilities of the oil companies. The undeniable negligence regarding oil spills and the related contamination have had a considerable impact on the area's flora, fauna and overall scenery. They have most significantly contributed to disrupting people's way of life by destroying grazing areas for the cattle keepers and other sources of livelihood, creating health complications.<sup>4</sup>

## 2. WEAK REGULATION AND ENFORCEMENT MECHANISMS, AND ABUSE BY OIL COMPANIES

Despite the proliferation of global resource governance frameworks like the United Nations Global Compact of 2000, Extractive Industries Transparency Initiative (EITI) of 2003, the United Nations Guiding Principles on Business and Human Rights of 2011, resource rich countries, especially those trapped in civil war face several challenges to hold MNCs accountable in their area of operations. Hence, MNCs operating in enclaves with limited government institutions and capacity flout both global and national resource governance frameworks with no repercussion. In South Sudan, with support from development partners, several resource governance legal and fiscal regimes have been enacted to promote transparency and accountability, increase revenue, and protect oil host communities from adverse environmental degradation by MNCs operations. Although these frameworks are considered to reflect international best

1 Terminski, Bogumil, Oil-Induced Displacement and Resettlement: Social Problem and Human Rights Issue (2011). Research Paper, School for International Studies, Simon Fraser University, Vancouver, Available at SSRN: [Oil-induced Displacement and Resettlement \(ethz.ch\)](#)

2 Moro, L.N., 2009. Oil development induced displacement in Sudan. Sir William Luce Fellowship Paper No. 10.

3 Omoregie, 2000. Effects of water soluble fractions of crude oil on carbohydrate reserves of *Oreochromis niloticus* (L.) Available at [https://www.research-gate.net/publication/12562447\\_Effects\\_of\\_Water\\_Soluble\\_Fractions\\_of\\_Crude\\_Oil\\_on\\_Growth\\_of\\_the\\_Nile\\_Tilapia\\_Oreochromis\\_niloticus\\_L](https://www.research-gate.net/publication/12562447_Effects_of_Water_Soluble_Fractions_of_Crude_Oil_on_Growth_of_the_Nile_Tilapia_Oreochromis_niloticus_L)

4 Chol, Jacob D. "The Reality of Petroleum Resource Curse in South Sudan: Can this be avoided?." *The African Review: A Journal of African Politics, Development and International Affairs* (2016): 17-50.

practices, the level of implementation has been considerably challenged by the lack of strong regulatory institutions, limited technical personnel, corruption and patronage, and lack of monitoring mechanisms on the activities of MNCs at the micro level. The South Sudan Petroleum Act of 2012, the Petroleum Revenue Management Act of 2013, the Public Financial Management and Accountability Act of 2011 and the current Revitalised Agreement on the Resolution of the Conflict in South Sudan (R-ARCSS) are the principal instruments which can be used to guide oil exploration and extraction. In fact, South Sudan's petroleum laws are largely regarded as embodying numerous features of good practice. For instance, section 74 of the South Sudan Petroleum Act of 2012 states that "the government shall allocate and pay to the states and communities in accordance with applicable law."<sup>5</sup> Moreover, the R-ARCSS 4.9.1. states that the Revitalised Transitional Government of National Unity (RTGoNU) shall develop comprehensive policies and legal and institutional frameworks for the preservation, conservation and sustainable use of the environment.<sup>6</sup> Similarly, section 4.8.1.14.1 of Chapter four of the R-ARCSS ensures transparent management of the oil industry and efficient and equitable distribution of oil wealth for the welfare of the people and sustainable development of the country, in strict compliance with the provisions of the revised Petroleum Act of 2012 and the revised Mining Act of 2012.<sup>7</sup> The Act states that communities living in the areas in which subsurface natural resources are found have the right to participate, through their respective states, in decision-making and contract negotiations for the exploration, development, production and use of these resources. In other words, the South Sudanese have the right to know the terms of oil production and sales. At the same time, the Transitional Constitution of South Sudan grants the people of the Republic of

South Sudan control of all subsurface natural resources, including oil and gas.<sup>8</sup> Regrettably, the majority of these regulations enshrined in law remain almost entirely unimplemented.<sup>9</sup> The Transitional Constitution of South Sudan 2011 (as amended), the Agreement on the Resolution of the Conflict in the Republic of South Sudan 2015 (ARCISS, as revitalised), the Public Financial Management and Accountability Act of 2011, the Petroleum Act of 2012, and the Petroleum Revenue Management Act of 2013 are legal instruments that prevent the oil companies from exploiting the environment and people. In fact, part of the reason why oil exploration negatively impacts the environment and pastoralist communities may be traced back to legal hesitation regarding the status of the law and inadequate will of the regulating authorities, which has allowed the operating companies to overlook some of the [laws that guide appropriate exploitation of oil](#). The companies operating in the petroleum sector are mainly the Dar Petroleum Operating Company (DPOC), which is a consortium made up of the China National Petroleum Corporation, the leading stakeholder, state-owned Nilepet, Malaysia's Petronas, Sinopec and Tri-Ocean Energy. This consortium operates [the key oil fields](#) – Blocks 3 and 7 – in the Melut Basin in the Upper Nile Region.

### 3. THE SOCIAL AND ENVIRONMENTAL EFFECTS OF OIL POLLUTION ON PASTORAL COMMUNITIES AND THE ENVIRONMENT

The people who suffer the most from the impact of oil pollution are the pastoral communities that live in close proximity to oil-operation zones, which heavily depend on the land for their livelihoods and livestock. They were considered a threat to oil extraction and were displaced to 'protect' oil extraction. During the civil war era (1983-2005), the Khartoum

5 Reng, Ariic David Aguto, and Nhial Tiitmamer. "The Petroleum Revenue Sharing Arrangement in South Sudan." (2018).

6 Government of South Sudan. Revitalized Agreement on the Resolution of the Conflict in the Republic of South Sudan (R-ARCSS). Available at: <https://www.peaceagreements.org/viewmasterdocument/2112>

7 Government of South Sudan. The Petroleum Act, 2012. Available at: <https://dr211check.org/wp-content/uploads/2021/12/THE-PETROLEUM-ACT-2012.pdf>

8 Government of South Sudan. The Transitional Constitution of the Republic of South Sudan. Available at <https://www.ilo.org/dyn/natlex/docs/MONO-GRAPH/90704/116697/E762589088/SSD90704%202011C.pdf>, 2011

9 Tiitmamer, N, 2019. Compliance with Petroleum Industry Transparency and Accountability Rules in South Sudan. Available at <https://www.suddiinstitute.org/publications/show/5d2efcd9090fd>

government engaged in an insurgency in the oil field in an attempt to seize [control of the oil area by force](#). The insurgency caused hunger among the pastoralist communities. Moreover, clashes aggravated by herders from the north against the pastoralists in the south compelled the communities to flee.<sup>10</sup> Unregulated oil exploration and production, inadequate maintenance of oil pipelines and faulty equipment allowed oil to spill, and a lack of monitoring and enforcement resulted in human and animal deaths, illnesses, infertility, premature births, abortions, birth defects, blindness, population displacements, ground and surface water contamination, soil contamination, land dispossession and polluted agricultural and pasture lands.<sup>11</sup> A study conducted by the Sudd Institute following a focus group discussion with Paloich community members indicates that spinal bifida, facial and head deformities, sexual organ deformities, limb deformities and growth retardation are some of the common complications that the pastoral communities living in the oil producing areas of South Sudan continue to grapple with.<sup>12</sup> Most pollution in South Sudan comes from produced water, which is a poisonous liquid made of crude oil and water, which before it is released into the environment must be treated. Organic and inorganic substances such as dissolved and dispersed oils, treatment chemicals, heavy metals, grease, formation solids, radionuclides, salts, dissolved gases, waxes, scale products, microbes and dissolved oxygen are present in produced water. These substances are very detrimental to human and environmental health.<sup>13</sup> A [study](#) commissioned by the European Coalition on Oil in Sudan shows that pollution has completely affected the designated grazing for cattle herders. This has caused much mistrust between the local population and oil companies, in part owing to the absence of local benefits and labour-related issues. South Sudan's petroleum pollution is a [ticking time bomb](#) that will disrupt the local economy and cause conflict between locals and oil firms if it continues to affect the local population. The enforcement

authorities of the petroleum institutions appear unconcerned with the pollution. They continue to cooperate with oil corporations to ensure that their operations remain ongoing despite any detrimental effects oil pollution may have on the local community and the environment.

#### 4. CONCLUSION

Oil contamination has always been a serious problem that has cost lives and forced communities to displace. The limited response to oil pollution in South Sudan indicates that it may take oil firms many months or years to assume full responsibility, even in the face of catastrophic occurrences. The failure to comply with the 2012 Petroleum Act and other laws has resulted in environmental contamination. If the impact of oil pollution continues to remain unaddressed, it could become a major driver of conflict and potentially create inter-generational conflict. Drilling-related pollution is continuing to be detrimental to the health of communities and the environment. Pastoral communities are neither at the forefront of oil sector decision-making nor are they compensated fairly. Therefore, preventing environmental damage is a task that must be seriously considered. In order to determine the level of pollution and the social repercussions in the oil-producing region in South Sudan, it is essential to conduct an accurate environmental and social impact assessment. To do this, the South Sudan Petroleum Act of 2012 and the Exploration and Production Sharing Agreement signed with oil companies, which contain environmental and social audits, must be adhered to and stringently implemented. The guidelines must be mandated to ensure that oil firms inspect pipelines on a quarterly basis to detect recurrent leakages of oil. This is why it is important for the Ministry of Petroleum and the Ministry of the Environment to establish a partnership and develop a contingency plan that includes management policies. The contingency plan would ensure that the environment is safeguarded, that procedures for containing and treating contaminated

10 Human Rights Watch. 2003. The Chevron Period 1974-1992. Available at <https://www.hrw.org/reports/2003/sudan1103/10.htm>

11 Moro, L.N., 2014. Scrutiny of South Sudan's oil industry: Oil company-community relations: Pariang County.

12 Tiimamer, N., 2021. Sitting on a Time Bomb: Oil Pollution Impacts on Human Health in Melut County, South Sudan.

13 Igunnu, E.T. and Chen, G.Z., 2012. Produced water treatment technologies. International Journal of Low-Carbon Technologies.



water are in place and that the public and authorities are provided with accurate information. The Ministry of Petroleum should recruit highly professional staff to conduct routine assessments of cracks that result in the production of contaminated water.

## 5. RECOMMENDATIONS

In light of the above, it is recommended that the Minister of Petroleum should fully implement the Petroleum Act by ensuring that a credible environmental and social impact audit is conducted so that policy can be formulated based on the type and quantity of pollution and the social effects in the oil-producing area. The environmental audit should be carried out by the Ministry of Petroleum and Environment. In addition, the Ministry of Environment and Forestry should have the authority, capacity and responsibility to establish and enforce environmental standards for the oil industry. This should involve requiring the Environmental Management Authority to examine, monitor, evaluate and enforce South Sudan's environmental standards. To achieve this, the Ministry of Petroleum must prioritise a higher budget for the recruitment of qualified personnel to establish a reporting system, accountability mechanisms and transparency, and impose stricter regulations on oil-extracting companies to prevent pollution.

Additionally, the South Sudan Ministry of Livestock and Fisheries and the Sudan Ministry of Livestock and Fisheries should organise a pre- and post-migration conference for the Baggara and Misseriya Arabs from the north of Sudan and the Dinka and Nuer pastoralists in the oil areas. This would enable the free movement of pastoralists from contaminated areas to a relatively safer environment where they can survive and build trust for a peaceful coexistence and economic interdependence, and address concerns regarding limited resources and insecurity resulting from oil pollution. The above-mentioned ministries, with the support of the Ministry of Peacebuilding, should establish a peace committee to monitor and respond to pastoralist border disputes. The East African Community, of which South Sudan is a member, has not yet established a regional framework for pastoral and transhumance migration, with the exception of West and Central Africa. It is time for the secretariat of the East African bloc to establish a framework to regulate pastoral migration. When feasible, the East African Community could adopt the IGAD protocol on transhumance, which was enacted by the Council of Ministers in 2021, to facilitate safe and orderly mobility at transhumant livestock border crossings. The member states can ratify, adopt, and implement this framework at the county level once it has been drafted. It is crucial to encourage pastoralists to embrace climate-smart agricultural practices that enable herders to manage their landscapes, crops, fisheries, livestock and forests in the wake of oil pollution. It is essential for CSOs and the legislature to implement the Petroleum Act. As a lobbying institution, the legislature has the authority to hold forums to discuss the challenges posed by oil pollution and ways to promote accountability and integrity in its management, which is plagued by ineffective regulation. The legislature could also advocate for a future generation fund to ensure that the revenue generated continues to earn income long after the oil fields have been exhausted.

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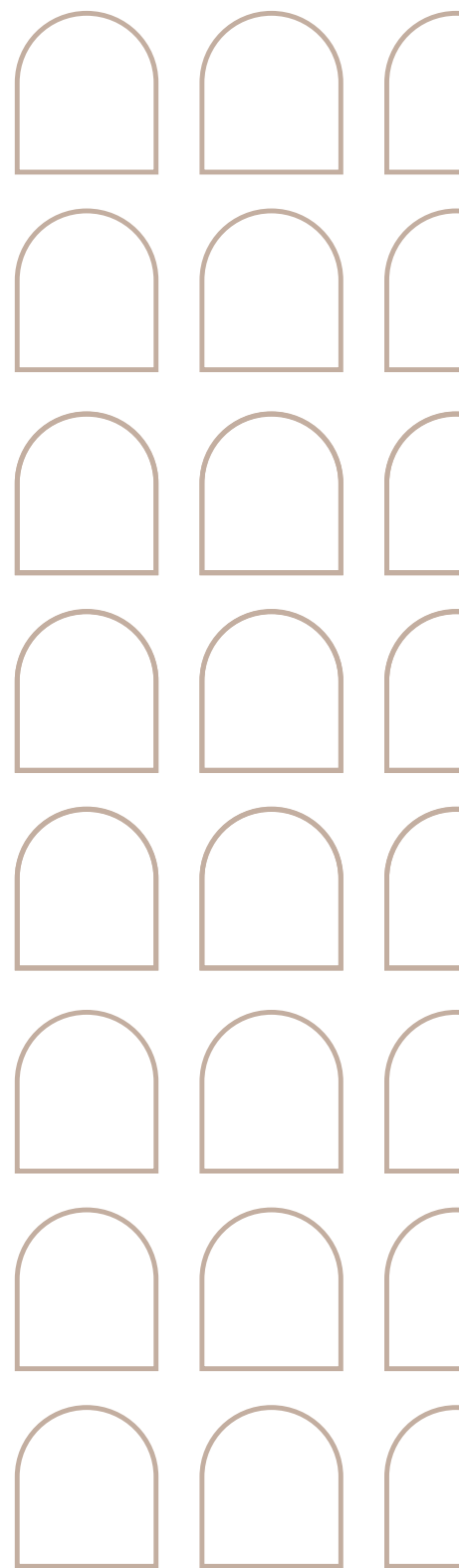
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