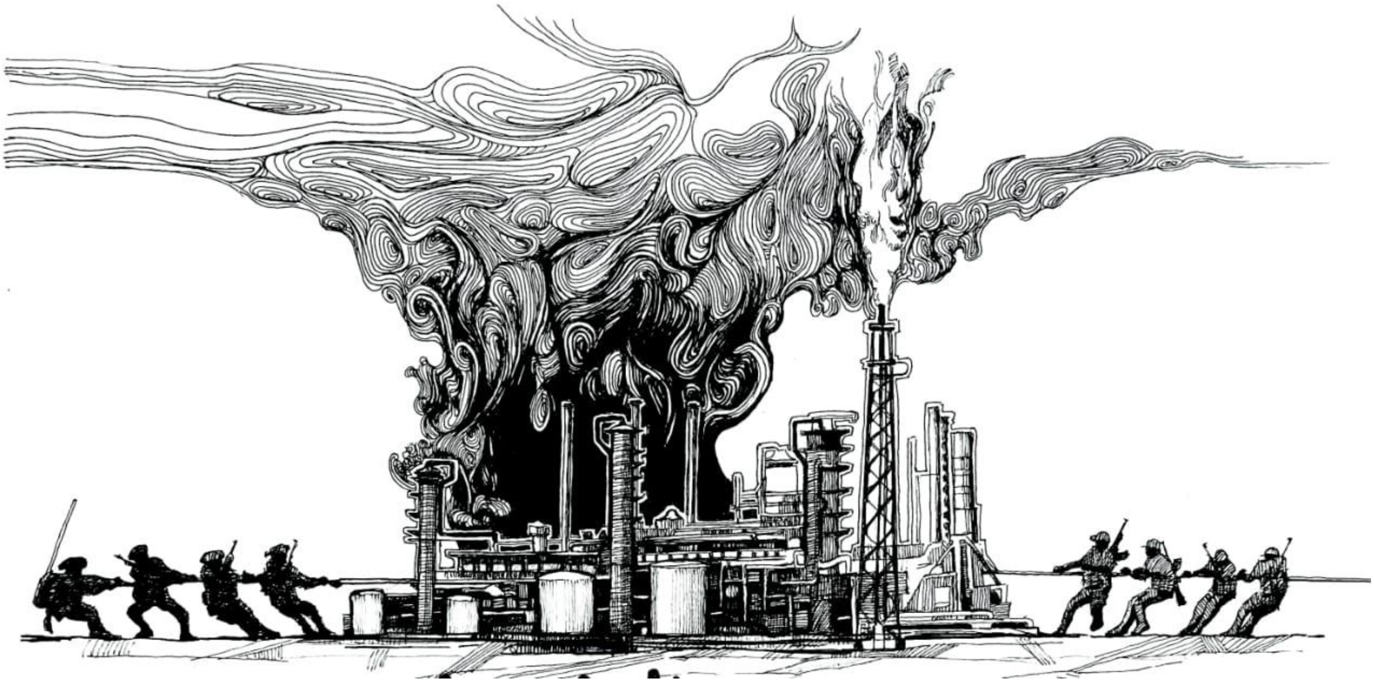
Fueling Sudan's War

How Oil Exports, Imports, and Smuggling are Prolonging the Conflict



Cover art by graphic artist Obada Gumaa Gabir

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SUDAN TRANSPARENCY AND POLICY TRACKER

Introduction

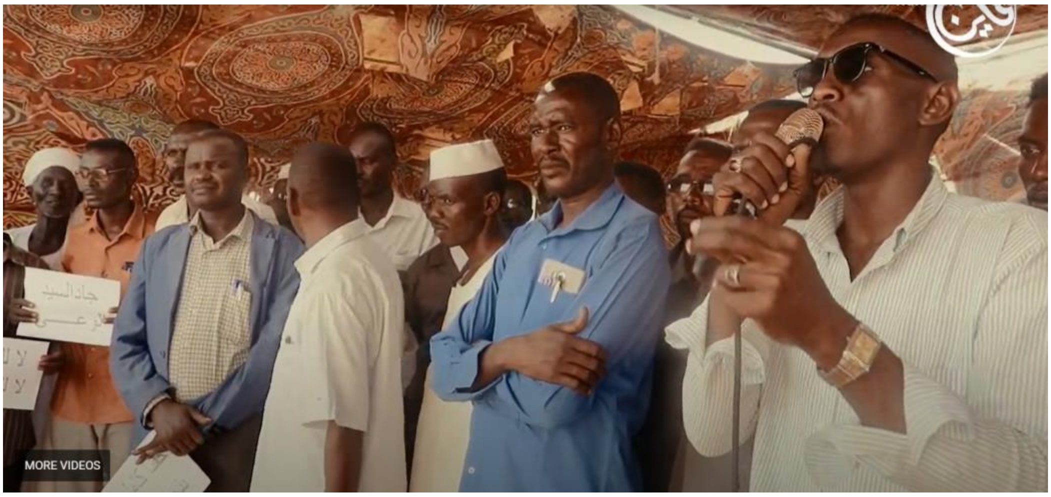
SAF and RSF began attacking each other's points of access to fuel to undermine the revenues and logistical advantage they could draw.

The fiercest battles of the war that erupted in mid-April 2023 between Sudan Armed Forces (SAF) and its creation, the paramilitary Rapid Support Forces (RSF) have been fought in the tripartite capital of Khartoum, and in the western regions of Darfur and Kordofan. For decades ruling elites and economic entrepreneurs concentrated investments and infrastructural developments in the capital. So, when the war rocked the city, the industrial, commercial, banking, and telecommunications assets and infrastructure of the country were severely damaged. Heavy artillery shelling amid the densely populated capital and other major urban areas, SAF's ill-targeted air strikes on RSF positions, and the RSF's systematic looting and arson of factories, banks, and markets, as well as private residences, led to countless civilian casualties, the erasure of decades of family savings, and the obliteration of decades of investments in vital economic sectors. Sudan's oil fields, pumping stations, and parts of the pipeline sending oil from South Sudan fell into the hands of the RSF early in the conflict, while the SAF maintained control over the export terminal in Port Sudan and parts of the pipeline in areas it controls.

However, for months after the war began, the belligerents appeared keen to spare oil infrastructure, even as attacks on other sectors continued. Why? The war left vital parts of the oil infrastructure under the respective control of each party, meaning that both could only continue to profit if the system was left in place, and they minimized intentional damage to it. Another reason is that the government of South Sudan, which depends on pipelines in Sudan for the export of its oil production to international markets, reportedly incentivized and pressured the belligerents to safeguard the pipelines and pumping stations that maintain the flow of its oil to Port Sudan.

Nonetheless, this transactional arrangement did not last long and the SAF and RSF began attacking each other's points of access to fuel to undermine the revenues and logistical advantage they could draw. RSF attacked and destroyed large fuel depots in the capital and other cities with airports that could serve as alternate military airports. Fighting in RSF areas led to serious breaches in the pipeline, causing large spills visible in satellite imagery. Damage was probably exacerbated by compounded decades of neglect in the maintenance of the oil infrastructure. Technical teams lack access to fix breaches and repair damage to pumping units. The combination of these factors led to the gradual disruption of the flow of oil, further accelerating the collapse of the Sudanese economy and severely damaging South Sudan's as well. At the same time, it has created a new pillar of the war economy: the importation of oil. Controlled by a small group, this importation allows for vast profits in light of the need for oil while at the same time driving up prices with devastating consequences for other sectors, especially food.

Sudan's Oil: A Legacy of Violent Kleptocracy (1989-2019)



Activists protest against environmental damage (Ayin)

Sudan's offers an example of the "resource curse." From its discovery in 1982 to the first export shipments in 1999, oil fueled both deadly conflicts and violent kleptocracy in the country, thus propelling its violent political economy. Oil was discovered in Sudan by the U.S. giant Chevron and played a significant role in the two-decade civil war between Northern and Southern Sudan. A 1984 deadly attack on a field camp in the South led Chevron to halt its operations and leave the country.[1] After their takeover in 1989, the Islamists jumpstarted oil production and export by the late 1990s. Awad Ahmed Al-Jaz is a prominent Islamist cadre who served as Minister of Energy and Mining for 13 years, from 1995 to 2008, a period during which the Bashir government relied on joint ventures with companies from China, Malaysia, and India to extract the oil and build its infrastructure.

Oil development and exploitation exacerbated the North-South civil war by fueling competition for control over resources between the Bashir regime and the Southern Sudan People Liberation Movement and Army (SPLM-A), exacerbating ethnic and regional tensions, and providing financial resources to the regime to finance its vast patronage system. Oil money also enabled the Bashir regime to create multiple paramilitaries as proxies for the SAF in counterinsurgency campaigns from communities in historically marginalized areas. To exploit the resource unchallenged, the regime orchestrated vast ethnic cleansing campaigns in the oil production areas of Upper Nile and Bahr el-Ghazal states.

The inner circle of the Islamist movement and the ruling National Congress Party (NCP), —the real power behind the regime—, family members and business associates of senior officials, and the commanders of the army and national security agency defended the elaborate system of grand corruption that benefited them. Oil was hijacked for the benefit of these few to

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[1] Human Rights Watch, "Oil and human rights in Sudan, the Chevron period," 2003, available at: https://www.hrw.org/reports/2003/sudan1103/10.htm#:~:text=On%20February%202%2C%201984%2C%20Anyanya,The%20company%20suspended%20its%20operations

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the detriment of the national interests of providing essential services to citizens and developing the sustainable capacities of the national economy. '

Under the Bashir regime, the government deliberately shrouded its oil activities in impenetrable secrecy, even hiding real production and export figures from the SPLM when they became part of the regime after the signing of the Naivasha Peace Agreement.

Lack of transparency in the allocation of oil revenue led to growing discontent in communities which saw their wealth pumped away without any benefits in infrastructural improvements or expansion of essential social services. They only saw the damage the oil industry caused to their environment and livelihoods. These are the same communities in which the RSF found willing recruits against an ill-defined centralized state that stole the wealth of their region and brought them no benefits from it.

Sudan's status as an oil nation dwindled significantly following the loss of 75% of its oil reserves to South Sudan when the latter seceded, along with the majority of its foreign currency earnings. Despite remaining a modest oil producer and exporter, a substantial portion of the remaining oil revenue was diverted by the regime's inner circles for their own benefit. The Global Financial Integrity think tank compared Sudan's official oil export figures with those declared by its trading partners from 2012 to 2018 and concluded that at least 50% of Sudan's oil exports were conducted off-the-books. During this period, Sudan reported exporting 62.3 million barrels of crude oil, while its trade partners reported importing 112.2 million barrels. This glaring disparity equates to a value of US$4.1 billion, representing 85.4% of Sudan's declared exports by value.[2]

This represented a considerable revenue loss for the state, but a net gain for the kleptocratic system. The rejection of the regime’s grand corruption and the hardships it inflicted on the population greatly contributed to the mass popular protests spearheaded by youth and women groups that began in late 2018 and ultimately brought it down. The tumultuous period that Sudan continues to go through is a direct outcome of the role of the regime’s inner circle and the security sector agencies protecting them in diverting the oil income for their private interests.

The fall of Bashir left the economic and financial empires of the SAF and the RSF unscathed, giving them and the entire security and defense establishment the necessary muscle to continue siphoning the resources of the state for their benefit and to impose themselves as partners in the transitional post-Bashir government.

[2] Global Financial Integrity, “Sudan and Trade Integrity,” May 2020, available at: https://secureservercdn.net/45.40.149.159/34n.8bd.myftpupload.com/wp-content/uploads/2020/05/Sudan-Report-2020_FINAL.pdf?time=1613502876

The Transition and the Oil Crisis (2019-2021)

Following the fall of Bashir in 2019, the civilian-led transitional government that took over had to concede to a tenuous partnership with the military and security agencies for a four-year transitional period in which the military held symbolic sovereignty. Like in other revenue-generating ministries and collection agencies, the management of the oil sector remained in the hands of former regime officials and covert agents of the intelligence who spared no effort to slow down or derail the reform efforts of the new leaders. For instance, despite extensive efforts, the civilian executive was unable to ascertain the real revenues from Sudan's oil exports. A former Undersecretary of the Ministry of Energy and Oil during the transitional period acknowledged that "employment in the oil sector was only granted with security approval from the Islamists" even at the local level.

There were no significant exports carried during the transitional government and for many years preceding it since Sudan has been a net importer a few years after the secession. During the transition and due to the planned shutdown of the refinery for periodic maintenance, there was an accumulation of crude that was exported, and its proceeds were well accounted for.

Import and distribution companies remained affiliated with the security services and owned by family members of senior regime officials. For example, shortly after his retirement from the SAF in 2015, Abdalla al-Bashir, the president's brother, established a company to export diesel to South Sudan.[3] Likewise, when Bashir abruptly ended the ten-year tenure of Gen. Salah Abdullah a.k.a. Gosh as director of the NISS in 2009, and terminated a soft landing security advisor position in 2011, the retired official established oil trading companies that imported refined products to Sudan. When he returned to his former position in 2018, Gosh candidly admitted in a discussion with newspaper editors, "I have practiced trading activities. Nowhere else in the world would businessmen make profits from importing an oil tanker as in Sudan. For instance, in neighboring Kenya and Ethiopia, the importer's profit would not exceed $200,000 per tanker. In Sudan, the profits are between $5 million to $7 million." He attributed the large difference to the fact that in other countries, oil imports are subject to open tenders, and traders deal with well-established international suppliers who own refineries and tanker fleets. In Sudan, he noted, anyone with the right connections could put on his turban and adorn his ceremonial walking stick and obtain multimillion-dollar contracts. "I did just that," Gosh admitted.[4]

At the beginning of the transition, the old guard continued to fully control the oil industry. To dismantle these deeply entrenched practices and interests, the transitional government introduced a policy in August 2020 of open international tenders for the timed supply of fuel products. The bidding process was transparent. The Ministry of Energy and Petroleum advertised calls for bidders in *the Financial Times*, among other specialized publications. Bids were opened before a panel of journalists and representatives from bidding companies. The

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[3] Alnilin news website, "Dr. Abdalla Hassan Ahmed al-Bashir, "I am proud of my brother Omer as a brother and a brilliant leading personality," in Arabic, March 2, 2015, available at: https://www.alnilin.com/12652567.htm

[4] Summaya Sayed, "Salah Gosh and the reengineering of the business sector," in Arabic, December 23, 2018, available at: https://www.facebook.com/alhdybh/posts/1961720953864542/

financing of the imports was managed through the Purse for Strategic Supplies (see below).[5] As the policy threatened the interests of existing cartels, who launched a covert economic war against the transitional government. Their most potent weapon was creating shortages in the supply of oil products, leading to disruptions in thermal power generation and the supply of electricity to the population, thereby fostering resentment against the civilian cabinet.

To address the challenges posed by shortages and unreliable supplies of vital commodities like petroleum products, agricultural inputs, medicines, and wheat, and the lack of transparency and obstruction practices in its own institutions, the transitional government introduced an innovative solution: the Purse for Strategic Commodities consortium. This private entity was established with the explicit goal of importing necessary goods, funded by the revenue generated through the official sale of gold exports managed by the consortium. With an initial capital injection of $85 million from shares held by gold traders and exporters, all commercial banks, associations of artisanal miners, and insurance companies, upon its inception in September 2020, the purse quickly demonstrated its effectiveness. By February 2022, it leveraged the collateral from exporting 40 tons of gold to secure rotating credit lines totaling $2.6 billion. This not only ensured a consistent supply of strategic commodities but also capitalized on the positive impacts of the transitional government's macroeconomic reforms, including the removal of subsidies and the adoption of a unified exchange rate.[6]

However, thanks to the decades-long concessions from the Bashir regime, both the SAF and RSF amassed significant assets and capital in return for their protective services. This accumulation allowed them to strategically leverage national mechanisms. According to STPT information, Al-Junaid Co. for Multi Activities Ltd—a holding company owned by Lt.-Gen. Abdelrahim Hamdan Dagalo, the second in command of the RSF—emerged as the largest shareholder in the purse, holding 56.47% of the shares.

This information illustrates how various military and intelligence entities in Sudan have strategically positioned themselves to maximize their influence and financial gains, turning even reformist policies to their advantage. SAF-owned Omdurman National Bank (ONB), although it holds fewer shares, secured significant influence by gaining a board position in the purse, showcasing how the political and security clout of the SAF can sometimes outweigh financial stake. Meanwhile, the companies affiliated with the SAF and General Intelligence Services (GIS) together with a handful of their business associates and Islamist capitalists, dominated the downstream sectors like petroleum distribution, ensuring stable and profitable operations. Al-Junaid for Multiactivities Co. Ltd, SAF and GIS involvement in the oil business during the transition highlight a broader trend where military entities leverage long-standing relationships and concessions to entrench their economic power. This maneuvering underscores the complexity of Sudan's economic reforms, where entrenched interests

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[5] Reuters, "For the first time, Sudan holds a tender to import fuel," August 21, 2020, available at: https://www.reuters.com/article/idAFL8N2FN3XS/

[6] STPT phone interview with senior officials of the Purse for Strategic Commodities. April and May 2024.

often adapt to maintain and expand their control within the evolving political and economic environment under the transition.[7]

By introducing reforms aimed at bringing state-owned enterprises under the control of the government and its oversight agencies, the far-reaching macroeconomic reforms introduced by the transitional government represented direct threats to the financial interests of the SAF, intelligence agencies, and the RSF. Reforms such as subjecting large state-owned enterprises controlled by the SAF, GIS, and Ministry of Oil and Energy to independent audits and closing their off-budget accounts were anathema to the patrons of the Bashir regime and their business associates. Resistance to such reforms was a key driver of the SAF, RSF, and other security agencies' joint overthrow of the civilian-led government in October 2021.[8]

As tensions between the SAF and RSF escalated in late 2022 and early 2023, Abdelrahim Dagalo withdrew $48 million of his company's capital from the fund, leading to its collapse. This action can be seen as indicative of the RSF's efforts to protect its assets and investments in the period just before the outbreak of the war. On the other hand, the SAF-owned Omdurman National Bank attempted, but failed, to establish a parallel fund for the importation of strategic commodities. This severely impaired the SAF-controlled government's ability to finance its foreign transactions due to the resultant shortages in foreign currency reserves.[9]

The Damage to Sudan and South Sudan Oil Infrastructure and Economies

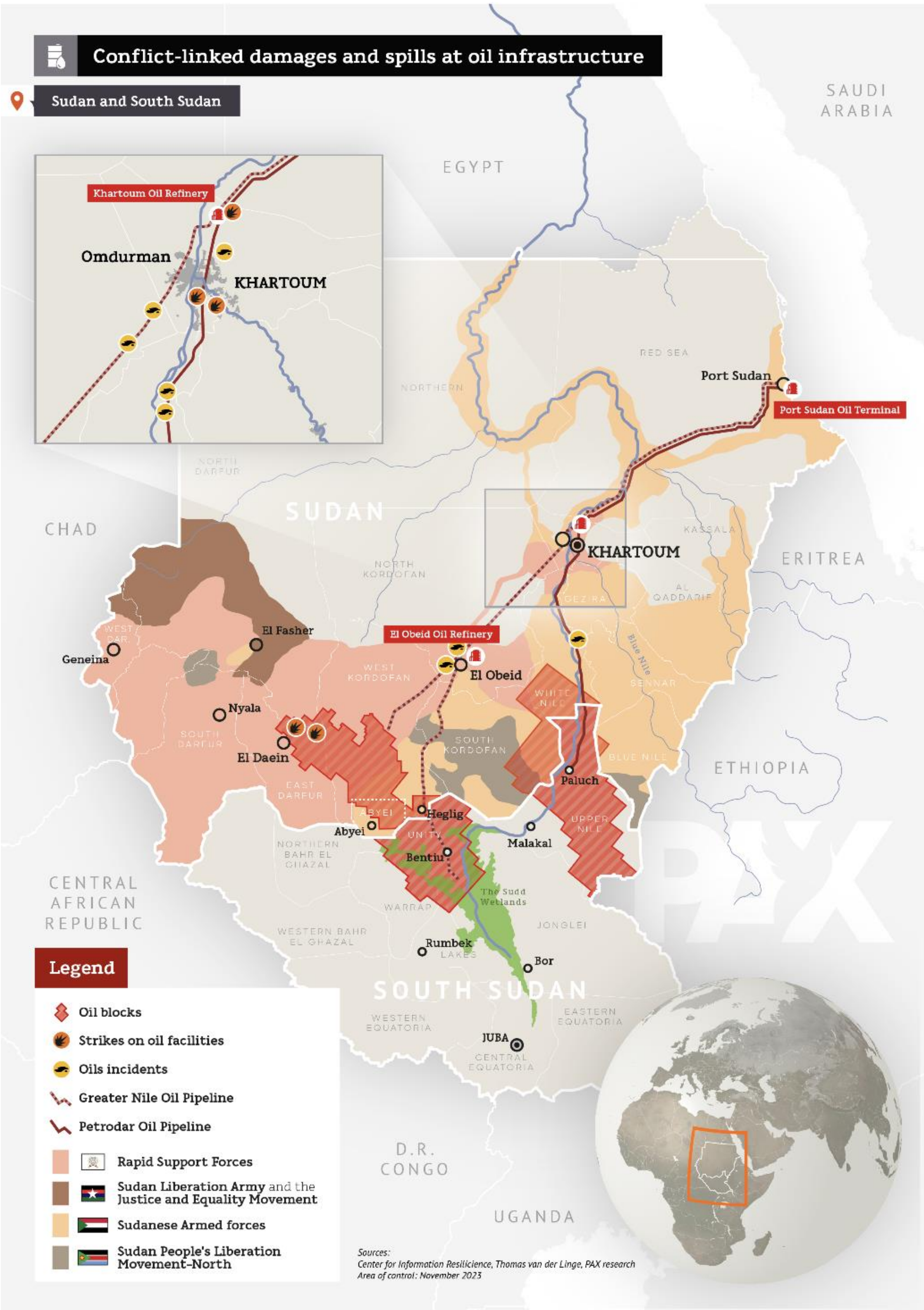
The independence of South Sudan in 2011 created two intertwined oil-driven kleptocracies in the Nile Valley. Although it lost 75% of its oil reserves to South Sudan, Sudan remained a small oil-producing country from oil fields in South and West Kordofan states. Its production varied over the years. Upon secession in 2011, Sudan still produced 115,000 barrels per day. In 2016, the production was down by almost half to 60,000 BPD due to the international oil price crash and issues with international partners. By the time of the 2018/19 revolution, it declined to 48,000 (2019). During the transitional government, production increased to 58,000 by 2021, only to fall again after the coup to 38,000. Today, the production is about 18,000. Sudan earned an average of $300 million annually from its oil exports and raised another $300 to 400 million from the transit fees collected from South Sudan.

The oil industry in both countries relies on three main arteries, 3,700 kilometers of pipelines in all, that transport collected oil crudes from the oil fields in South Sudan and Sudan, through

[7] STPT phone interviews and messaging exchanges with former senior economic sector officials in the transitional government.

[8] For more details, see: Suliman Baldo, "Sudan Struggles to Control Its Parastatals," May 2021, *The Sentry*, available at: https://thesentry.org/wp-content/uploads/2021/05/SudanParastatals-TheSentry-May2021.pdf

[9] See leaked official correspondence related to this episode in the FaceBook page of anticorruption campaigner Toum Monim, December 12, 2023, available at: https://m.facebook.com/story.php?story_fbid=pfbid0yGnfdeSvjfBCV6F3x69X8bWtvrBx5rX5dnVYK18s7VJsCtU8XxUPUWuGuDcWQ2Phl&id=1446950975



Map of key oil infrastructure, Pax for Peace, reprinted with permission from "Oil in the Crosshairs," June 2024, available at https://tinyurl.com/3dtj9s2b

the Khartoum Refinery, to the export terminal in Port Sudan. Petrodar Pipeline (BAPCO) transports oil from Adar-Yale and Paloug oil fields. Dar blend has very low levels of sulfur but high levels of paraffine (wax) which makes it vulnerable to solidification under certain ambient conditions.

The first, Petrodar eastern line transports the Dar blend representing 60% to 70% of South Sudan's exports, from Adar-Yale and Paloug oil fields. Dar blend has very low levels of sulfur but high levels of paraffine (wax) which makes it vulnerable to solidification under certain ambient conditions, without special arrangements to lower its viscosity and keep it at the right temperature. The Petrodar pipeline is 1,500 km long and cost more than 1.5 billion dollars. Sudan derives a number of benefits from this line, including:

- providing fuel to operate the Kosti (Umm Dabaker) power station, whose capacity is 350 MW and constitutes about 45% of Sudan's total thermal generation.
- feeding the Khartoum Refinery (Unit 2), which is specially designed to process the Dar blend, which constitutes more than 40% of the refinery's gasoline, diesel, and gas production.
- contributing approximately one million dollars daily (in cash or in-kind) as transportation fees payable by South Sudan.

The Western Greater Nile Pipeline (PETCO) connects the Unity oil fields to Port Sudan. It transports about 85% of Sudan's and 40% of South Sudan's production of the Nile Blend. The line is 1,610 km long and cost more than 1.6 billion dollars to construct. The benefits derived from this line to Sudan include:

- transporting Sudanese crude to the Khartoum Refinery to produce petroleum products that supply the state treasury with approximately $7 million per day.
- providing fuel for Ghari thermal stations, which provide 30% of the thermal generation to the national power grid.
- making the state treasury approximately half a million dollars daily (in cash or in-kind) as transportation fees paid by South Sudan.

The third pipeline is the Petroenergy pipeline, with a 716 km length.[10]

The belligerents' attempts to neutralize each other's mobility, and hence its capacity to wage war, by targeting its fuel supplies have led to serious damage to Sudan's oil infrastructure and threaten to inflict irreversible loss to South Sudan's oil export capacity. The SAF launched an airstrike on December 7, 2023, that destroyed the control room and the pipes that distribute refined products to the storage facilities of distribution companies within the Al Jaili refinery's enclosure. Firemen and technicians who continued to operate the refinery under the watchful eyes of the RSF were able to prevent the fire from spreading to the main

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[10] See PAX For Peace, Netherlands, "Oil in the Crosshairs: Environment, Peace, and Security Implications from the War in Sudan and Spillover Effects on South Sudan," June 4, 2024, available at: https://paxforpeace.nl/news/oil-in-the-crosshairs/

facilities of the refinery.[11] The fact that the Air Force did not bomb the main refinery installations, indicates a level of restraint that SAF's airstrikes don't seem to observe in bombing residential areas in towns and rural areas under RSF control across Sudan to limit civilian collateral casualties.

On July 4, 2024, the SAF bombed a large oil storage facility in the Gezira scheme.[12]

As a result of SAF and RSF fighting over control of the facility, and the disruption, and ultimately interruption, of crude feeding it from several oil fields under RSF control, such as Balila in West Kordofan, the Khartoum refinery witnessed a drastic reduction in its production capacity, before ceasing to function in October 2023. The refinery supplied fuel worth $5.8 million daily to the transport, agriculture, industry, electricity generation, and domestic energy use sectors.[13] Its stoppage represented a considerable loss to an economy already tattering on the brink of collapse. Both belligerents and their allied forces lost the tactical advantage that access to the refined products would have provided to the occupant of the refinery.

However, the situation could worsen further if the western line were disrupted. This would result in the total loss of the oil and gas industry, and nearly half a million dollars of transport fees per day. It would also create additional demand for about $200 million in foreign currency per month.

The government of South Sudan is more concerned about the disruption of the pipeline and called for an urgent meeting to develop solutions to protect it and address the damage that has occurred so far. The engineering department in the Ministry of Energy and Petroleum has been active in dealing with the crisis of the oil freezing by pumping by creating holes in the body of the pipeline and pumping gasoline to get rid of the frozen crude. Engineers and environmentalists criticized the environmental damage expected from the treatment method, but engineers from Petrodar argued that they could reduce the risks through scientific measures, even though crude is flowing into the ground.

In mid-February 2024, the war exacerbated the logistical problems in operating the pumping stations distributed along the pipeline, which led to the failure to deliver the fuel needed to heat the crude at the Al-Ailfoun station, causing the crude to harden and burst the pipeline between the Naima area in the White Nile and Al-Ailfoun east of the capital, Khartoum. What added to the problem was the low level of coordination between the pumping stations due to the interruption of communication networks. This

As a result, Sudan is spending huge sums, perhaps exceeding $100 million, to repair the pipeline, while both Sudan and South Sudan suffer a significant hit to their revenue (South Sudan is estimated to have lost 50% of its gross national product (GNP)) and power generation capacity.

[11] Radio Dabanga, "Partial damage to El-Geily Refinery following an airstrike," December 8, 2023, in Arabic, available at: https://shorturl.at/CHNQZ.

[12] The RSF's official Twitter account, at: https://twitter.com/rsflivesd/status/1809278815698334135?s=61&t=AZUMjZXG1iiBx68Trwspkw

[13] Alarabiya and Alhadath news channels, "The scene of the "mother of all battles,": what you don't know about El Geili Refinery," April 22, 2024, in Arabic, available at: https://www.alarabiya.net/arab-and-world/2024/04/22/تشهد-أم-المعارك-بالسودان-ما-لا-تعرفه-عن-مصفاة-الجيلي

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resulted in a complete disruption of operations between Al-Ailfoun and Jebel Umm Ali, which spread to cover the entire pipeline.

As a result, Sudan is spending huge sums, perhaps exceeding $100 million, to repair the pipeline, while both Sudan and South Sudan suffer a significant hit to their revenue (South Sudan is estimated to have lost 50% of its gross national product (GNP)) and power generation capacity. At the same time, significant environmental damage is being caused in areas of line damage as the burst pipeline is leaking oil into the environment over large areas of land and causing serious contamination of the natural habitat in the area. Unit 2 of the Khartoum Refinery stopped, causing the loss of about 35% of petroleum products, worth about $3 million per day. Other direct and indirect losses including employment in private and public companies and the resulting estimated tax loss and extremely negative social consequences.

Sources of Fuel for the SAF and the RSF

Under military pressure from the RSF's seizure or siege of several of its divisional headquarters in the capital, the SAF and civilian government institutions relocated their headquarters to Port Sudan. The *de facto* authority continued to receive regular payments of oil transit fees from South Sudan. These payments stemmed from a 2012 agreement in which South Sudan, to secure its hard-won independence, agreed to pay the government of Sudan a pipeline transit fee of $9.48 per barrel for the transport of its crude to international markets.

To compensate for its lack of access to the products of Khartoum Refinery, SAF began importing oil from the international oil spot market and the countries of the Gulf Cooperation Council. With the hundreds of companies operating under the SAF's Defense Industries System (DIS) coming under international scrutiny for their suspected roles in financing SAF's war efforts, and several of the DIS' leading enterprises and the DIS itself hit by sanction designations issued by the US Department of the Treasury, the UK, and the EU, the SAF is increasingly reliant on several private sector operators in the oil sector to supply both its needs and those of the half of the country that remains under its control.

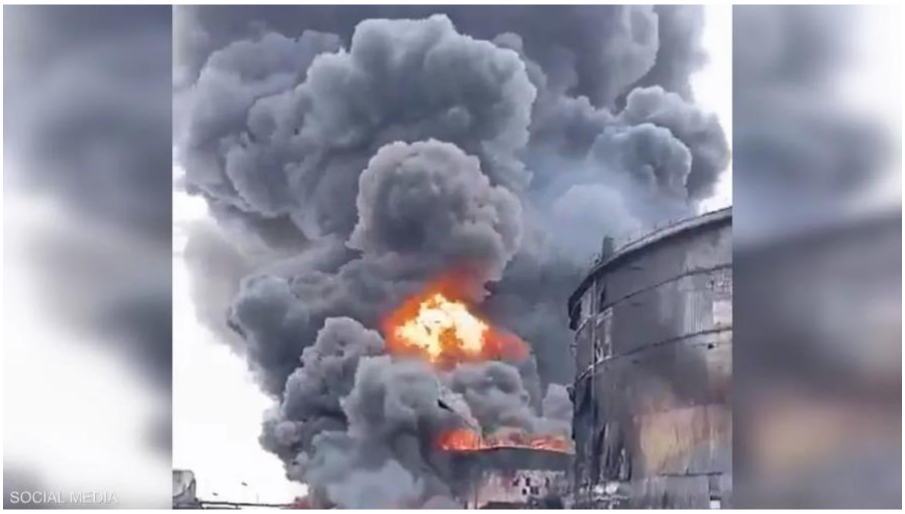
A handful of large, specialized private companies that had prior close relations with military authorities were able to leverage these relationships to dominate the lion's share of the oil trade in Sudan during the war. Several smaller players operating in their orbit added to their monopoly of the market. The larger operators have expanded from petroleum to meet other urgent needs of Port Sudan authorities. These reportedly included importing weapons and other military necessities for the SAF. Given the strategic role they are playing in providing for the needs of the SAF, these companies are able to avoid oversight from the relevant government departments and circumvent the requirements stipulated in local legislation governing public procurement.

This collaboration between businessmen and investors in the oil and fuel trade with the army generals enabled these businessmen to make huge profits from the war. Port Sudan authorities waived the application of the legal provision mandating that public sector procurement be done through transparent competitive bidding for these oil importers. Authorities also stopped fixing the prices for imported fuels. The importers are thus free to determine the prices that secure them the largest profit margins. A percentage of the exorbitant profits is shared with the *de facto* authority.

As to the sources of fuel for the RSF, few weeks into the war, the RSF routed the SAF from large swaths of land in Darfur and West and North Kordofan. This left the RSF in control of what remained of Sudan's oil fields after the South's independence, and of large stretches of the more than 3,700 kilometers of pipelines through which the new nation's oil is pumped to the Bashaier export terminal in Port Sudan.[14]

In the first few days of the war, the RSF occupied Khartoum Refinery, in the locality of Al Jaili, 70 kilometers north of Khartoum on the eastern side of the Atbara-Khartoum Road. The Al Jaili facility contributed more than half of the country's processing capacity prior to the war.[15] According to 2022 figures, Khartoum Refinery filled 60% of Sudan's gasoline needs, 48% of its diesel needs, and 50% of its cooking gas needs. Sudan supplemented the shortfall through imports.[16] By occupying the refinery, the RSF secured a continuous fuel supply for its forces, while denying the SAF access to the same.

The continuous flow of South Sudan payments to Port Sudan for the transit of its oil to international markets reportedly led the RSF commander Lt.-Gen. Hemedti to demand that Juba pay the RSF directly as it controlled and protected critical parts of the oil infrastructure. Juba was not able, nor did it have the resources, to make such payments to the RSF. Juba is also concerned about alienating the authorities in Port Sudan. However, the Final Report of the UN Panel of Experts on Sudan released on January 15, 2024, found that refined oil products continued to be smuggled through Western Bahr al-Ghazal to RSF-held areas in Darfur with the involvement of some South Sudanese army commanders, although the report indicated that it found no evidence of the involvement of the



Fire at Al Jaili Refinery (Social Media)

[14] Reuters, "Sudan War Causes Stoppages on South Sudan Oil Pipeline, Officials Say," May 25, 2024, https://www.usnews.com/news/world/articles/2024-03-25/sudan-war-causes-stoppages-on-south-sudan-oil-pipeline-officials-say#:~:text=The%20Petrodar%20pipeline%2C%20set%20up,on%20Sudan's%20Red%20Sea%20coast.

[15] US Energy Administration, "Country Analysis Brief: Sudan and South Sudan," March 20, 2024.

[16] Radio Dabanga, "Destruction of El Jeili Oil Refinery in Sudan 'may lead to acid rain'", May 25, 2024, available at: https://www.dabangasudan.org/en/all-news/article/sudan-war-destruction-of-el-jeili-refinery-may-lead-to-acid-rain

Juba government in the smuggling operation. The panel report also indicates that maintaining the flow of fuel was the top priority of the South Sudanese government, which persuaded the SAF to deploy additional security to guard oil infrastructure and obtained assurances from RSF that they would not target oil infrastructure.[17]

Another source for the fuel supplies benefiting the RSF remains the refined oil products smuggled from southern Libya to Darfur by militias affiliated with General Khalifa Haftar's Libyan Arab Armed Forces. The smuggling of fuel along the route from Al Kufra in Southern Libya to Melit in Northern Darfur, and its distribution from there to the rest of Greater Darfur, and beyond it to Kordofan states and the rest of the country must have generated considerable income for the commanders of the RSF over the years this traffic occurred. The smuggling began before the war and continued after it, according to the findings of the Global Initiative on Transnational Crime[18] and corroborated by a recent brief published by the Sudan Transparency and Policy Tracker.[19]

The Impact on Civilians

As both RSF and SAF prioritize securing their own access to fuel, civilians are struggling to meet their own needs. All fuel products are sold to the public through black market profiteers, contributing to the rise in the prices of fuel. The increase in fuel prices raises the costs of other products that need to be transported, including food, adding to food insecurity. Increased fuel costs and fuel shortages also jeopardize water supplies as they are provided through the operation of pumps in water reservoirs and wells. These are essential for providing drinking water for people and livestock, and lack of fuel is causing deficits in drinking water across large swaths of Darfur and Kordofan.

Lack of fuel also affects the transport sector, limiting the mobility of people, including those who are trying to flee conflict-affected areas. It limits the ability of health institutions to run generators that can provide power, forcing surgeons to operate using the light of their mobile phones.[20] RSF theft of oil necessary for operating generators led to the stoppage of a kidney dialysis clinic in al-Kadaro. RSF denial of access to fuel for generators of cellular network operators was a major reason for the disruption of the telecommunication and internet services across all contested areas.

As both RSF and SAF prioritize securing their own access to fuel, civilians are struggling to meet their own needs. All fuel products are sold to the public through black market profiteers, contributing to the rise in the prices of fuel.

[17] The UN Panel of Experts on Sudan, "Final report of the Panel of Experts on the Sudan," S/2024/65, January 15, 2024, available at: https://documents.un.org/doc/undoc/gen/n24/005/64/pdf/n2400564.pdf?token=HRXvWAozvzGYr6m442&fe=true

[18] Global Initiative Against Organized Crime, "Illicit Economies and Peace and Security in Libya," 2023, available at: https://globalinitiative.net/wp-content/uploads/2023/04/Matt-Herbert-et-al-Illicit-economies-and-peace-and-security-in-Libya-GI-TOC-July-2023-1.pdf

[19] Sudan Transparency and Policy Tracker, "The military, economic and humanitarian consequences of the RSF's control of Mellit, North Darfur," April 14, 2024, available at: https://sudantransparency.org/wp-content/uploads/2024/05/MellitEN.pdf

[20] Declan Walsh, "A War on the Nile Pushes Sudan Toward the Abyss," New York Times, June 5, 2023, available at https://www.nytimes.com/2024/06/05/world/africa/sudan-khartoum-darfur-war.html

Serious environmental pollution continues to occur from oil spills along large stretches of the pipelines resulting from the belligerents' attacks on each other's positions and the lack of maintenance. A group of Sudanese oil engineers have come together to raise the alarm about the high environmental pollution and public health risks unleashed by the war. Of particular concern are plans by the BAPCO, the company operating the eastern pipeline, to heat the frozen oil in sections of the pipeline and empty the spill in large crude oil pits to restart the pumping and export of southern oil. These risks include the irrecoverable contamination of the soil in the area and damage to humans, livestock, wildlife, underground water. Contamination is likely to increase during the rainy season.[21]

The serious decline of the energy supply caused by the war encouraged the reliance of the population in the areas most affected by prolonged interruptions of electricity supply to resort to solar power as an alternate source of energy. Such is the case in Nyala and elsewhere in Darfur where demand for solar panels and batteries for domestic and commercial use dramatically increased after the war as reported by Sudan War Monitor.[22]

The Role of the International Community

The most expeditious way of addressing the oil crisis would be to end the war, which would allow for a comprehensive approach to repairing the pipeline across both RSF and SAF-held areas. However, in the meantime, actors with influence could offer expert advice on damage mitigation strategies. In addition, they could intervene with the UAE to try to secure RSF cooperation with repair efforts. Diplomatic efforts should also focus on trying to limit the fallout from the crisis in South Sudan, which without funds is extremely vulnerable to descending into violence of its own. To achieve these goals in the short, medium, and long terms, the international community should:

- Redouble the efforts towards a negotiated end to the conflict.
- Increase the diplomatic pressures on the belligerents to prevent further attacks on the oil infrastructure.
- Demand that the belligerents provide protection and safe passage to the teams of technicians tasked with repairing damage to the oil infrastructure and offer technical advice and expertise to these teams.
- Strengthen environmental preservation and protection by increasing international environmental monitoring of the risks to the environment and public health triggered by the war in Sudan, particularly those risks related to the oil sector.
- Include provisions for securing oil infrastructure in any potential ceasefire deal between the warring parties to prevent further attacks.
- Encourage transparency in the management of the oil sector in Sudan and South Sudan to ensure that oil revenue is not directed to fueling the war.

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[21] STPT messaging with a concerned oil engineer, May 14, 2024.

[22] Sudan War Monitor, "The war pushes the city of Nyala to solar energy after a year of power outage," May 3, 2024, in Arabic, available at: https://sudanwarmonitor.com/p/bc6

- Support independent transparency groups' monitoring activities of the diversion of oil revenues for conflict purposes.
- Provide capacity-building opportunities to engineers and environmental specialists and activists to improve their abilities to monitor and address damages to the oil infrastructure where possible.
- Support the development of renewable energy sources in the post-conflict reconstruction phase.