



# Upstream Oil and Gas in Africa

Consulting Editors  
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# Security of oil and gas projects: risk allocation strategies

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## 1. Introduction

As nations around the world scramble to lay their hands on new sources of energy to replace their heavy dependence on Russian oil and gas, attention is turning back to Africa's resource-rich nations. Set back by years of underinvestment, these countries could unlock the door to energy security for many. However, security threats continue to pose a major impediment to the success of oil and gas projects in many countries across the continent.

The causes of these threats are numerous and diverse. Political instability, lack of governance, wars, local discontent, and uneven distribution of wealth are often blamed. While we remain far from solving all of these causes, their effects have the potential to trap national economies in a vicious cycle as the political and country risk deters investment and spurs underdevelopment.

Investment levels into African oil- and gas-rich nations will need to increase significantly and at a rapid rate in order to keep pace with growing international demand. However, investors and governments will need to find ways to overcome the looming and evolving threats posed by security risks. In this chapter we examine some legal structures that may enable investors to mitigate certain of these problems.

### 1.1 African oil and gas projects: back in the spotlight

#### (a) Nigeria

The International Energy Agency (IEA) reported that in August 2022 Nigeria missed its OPEC+ quota by 850,000 barrels per day, and during that month production fell below 1 million barrels per day to lows not seen since July 1985. The IEA has reported that these shortfalls were caused, in large part, by pipeline theft and sabotage affecting the country's core crude oil export streams, the Forcados, Bonny Light and Brass River blends.<sup>1</sup> This is far from a new problem in this region; in September 2015 Shell Petroleum Development Company of Nigeria Limited (SPDC) announced the lifting of the *force majeure* it had declared on Bonny Light exports after the completion of repairs to the two main pipelines feeding into the export terminal: the Trans Niger

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1 International Energy Agency, *Oil Market Report* (14 September 2022), [https://iea.blob.core.windows.net/assets/13271b8f-6940-4da8-99cc-e9f4a77b07b3/-14-09-2022\\_OilMarketReport.pdf](https://iea.blob.core.windows.net/assets/13271b8f-6940-4da8-99cc-e9f4a77b07b3/-14-09-2022_OilMarketReport.pdf).

Pipeline, where a leak caused by an illegal connection had been discovered and the Nembe Creek Trunkline, where a number of crude theft points had been identified.<sup>2</sup> In November 2021, SPDC again announced the lifting of a month-long *force majeure* on loadings of Bonny Light after the Nembe Creek Trunk Line faced another security situation.<sup>3</sup> Operators in the affected areas may have grown accustomed to setbacks due to theft and vandalism on their infrastructure and may even be forced to routinely budget for heavy costs of remediation, but the government and regulators have recently announced tougher security measures on theft and vandalism, including crackdowns and arrests and the engagement of private security agencies to help tackle the problem, possibly a sign that the issue is worse than usual. Normally Africa's largest crude oil producer, in August 2022 Nigeria fell behind Angola, Libya and Algeria, with security concerns among the causes of the reduced output.<sup>4</sup> In the meantime, these insecurity issues are far from being stamped out.

**(b) Mozambique**

Widely regarded as having the potential to become a major exporter of liquefied natural gas (LNG) after significant deposits were found along its Indian Ocean coast in 2010, Mozambique is battling militancy in the northern province of Cabo Delgado. The four-year insurgency has left more than 3,000 people dead and 800,000 displaced, and has forced developers to down tools on major energy projects.<sup>5</sup> The impact of the insurgency has also impacted investors and financiers as well as the personnel of the affected LNG projects under development in the area.

**(c) Libya**

Another economy that has been heavily dependent on its oil industry, in April 2022, Libya's minister of oil and gas reported that oil output had fallen by around 600,000 barrels per day from levels of nearly double that. At the then-current oil prices, this reduction was reportedly costing the country at least US\$60 million per day.<sup>6</sup> Political division and instability has marred the country since the 2011 overthrow of the former dictator, Muammar Gaddafi, as rival factions lay claim to national leadership. The instability has led to repeated and lengthy closures of major oil and gas infrastructure, including strategic oil fields and terminals, as a means by one political faction of putting pressure on the other.<sup>7</sup>

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2 Shell Petroleum Development Company of Nigeria Ltd, "SPDC JV Lifts Force Majeure on Bonny Light" (2 September 2015), [www.shell.com.ng/media/production-updates/spdc-jv-lifts-force-majeure-on-bonny-light.html](http://www.shell.com.ng/media/production-updates/spdc-jv-lifts-force-majeure-on-bonny-light.html).

3 S&P Global Commodity Insights, "Shell lifts *force majeure* on Bonny Light crude exports after key pipeline restarts" (24 November 2021), [www.spglobal.com/commodityinsights/en/market-insights/latest-news/oil/112421-shell-lifts-force-majeure-on-bonny-light-crude-exports-after-key-pipeline-restarts](http://www.spglobal.com/commodityinsights/en/market-insights/latest-news/oil/112421-shell-lifts-force-majeure-on-bonny-light-crude-exports-after-key-pipeline-restarts).

4 International Energy Agency, Oil Market Report (14 September 2022), [https://iea.blob.core.windows.net/assets/13271b8f-6940-4da8-99cc-e9f4a77b07b3/-14-09-2022\\_OilMarketReport.pdf](https://iea.blob.core.windows.net/assets/13271b8f-6940-4da8-99cc-e9f4a77b07b3/-14-09-2022_OilMarketReport.pdf).

5 Joseph Hanlon, "Mozambique insurgency: Rwanda leads the fightback", BBC News (6 August 2021), [www.bbc.co.uk/news/world-africa-58079510](http://www.bbc.co.uk/news/world-africa-58079510).

6 Al Jazeera, "Libya is losing \$60m a day in oil shutdown: Oil minister" (29 April 2022), [www.aljazeera.com/economy/2022/4/29/libya-is-losing-60m-a-day-in-oil-shutdown-oil-minister](http://www.aljazeera.com/economy/2022/4/29/libya-is-losing-60m-a-day-in-oil-shutdown-oil-minister).

7 Sam Hamdi, "Libya misses out on oil price boom as political divide continues", Al Jazeera (26 April 2022), [www.aljazeera.com/news/2022/4/26/libya-misses-out-oil-price-boom-political-divide-continues?traffic\\_source=KeepReading](http://www.aljazeera.com/news/2022/4/26/libya-misses-out-oil-price-boom-political-divide-continues?traffic_source=KeepReading).

**(d) Cyber-attacks – a new front?**

Cyber-attacks represent a new, invisible threat in the battle to secure oil and gas projects across Africa. Strategic infrastructure on the continent has already been preyed on by malicious hackers. In May 2022, Ethiopia's Information Security Agency (INSA) was able to block a planned cyber-attack targeting the Grand Ethiopian Renaissance Dam (GERD) and other financial institutions, but INSA's director general warned that national institutions should put defensive measures in place to safeguard against the growing threat of cyber-attacks.<sup>8</sup> Ethiopia had previously reported 2,800 cyber-attacks during 2021 alone aimed at stopping the second filling of the GERD, while the first filling operation in June 2020 faced another major cyber-attack that had also been thwarted.<sup>9</sup> In 2018, journalists also reported a major hack and theft of data from the African Union headquarters' IT systems over a five-year period by Chinese state actors, which China has reportedly denied.<sup>10</sup>

As oil field equipment and functions are increasingly digitalised and integrated with operators' wider corporate networks, the threat increases exponentially and future cyber-attacks on oil and gas infrastructure have the potential to be global.

**(e) Global trends – key energy infrastructure as socio-political arenas**

Security threats in the oil and gas industry are not unique to Africa. The damage to the Nordstream 1 and 2 gas pipelines sent shockwaves across Europe in October 2022. The damage to these pipelines has been blamed on deliberate sabotage aimed at exacerbating tensions between Western nations and Russia.<sup>11</sup> In 2021, one of the largest oil pipelines in the United States, Colonial Pipeline, was shut down by a largescale ransomware attack by DarkSide, a ransomware criminal gang. This attack immobilised the distribution of fuel across the East Coast of the United States.<sup>12</sup>

These incidents, as well as many others in recent history, illustrate how energy infrastructure continues to be a prime target for criminal activity and terrorist groups looking to exert pressure on local or international governments and an Achilles heel for those governments. In an age where achieving secure, dependable energy supplies are at the top of most government's priority lists, oil and gas fields, pipelines and refineries are viewed as national lifelines.

**1.2 Risk appetite of investors in the face of security threats**

Foreign direct investment into Africa has been experiencing something of a recovery of late following the stagnation caused by the COVID-19 pandemic. In Nigeria, inbound investment doubled to US\$4.8 billion in 2021, driven largely by the

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8 *Al-Monitor*, "Ethiopia faces new cyberattacks on its Nile dam" (17 May 2022), [www.al-monitor.com/originals/2022/05/ethiopia-faces-new-cyberattacks-its-nile-dam](http://www.al-monitor.com/originals/2022/05/ethiopia-faces-new-cyberattacks-its-nile-dam).

9 *Ibid.*

10 John Aglionby, Emily Feng and Yuan Yang, "African Union accuses China of hacking headquarters" (29 January 2018), [www.ft.com/content/c26a9214-04f2-11e8-9650-9c0ad2d7c5b5](http://www.ft.com/content/c26a9214-04f2-11e8-9650-9c0ad2d7c5b5).

11 Anna Ringstorm and Terje Solsvik, "Nord Stream leaks confirmed as sabotage, Sweden says", *Reuters* (18 November 2022), [www.reuters.com/world/europe/traces-explosives-found-nord-stream-pipelines-sweden-says-2022-11-18/](http://www.reuters.com/world/europe/traces-explosives-found-nord-stream-pipelines-sweden-says-2022-11-18/).

12 David E. Sanger and Nicole Perlroth, "Pipeline Attack Yields Urgent Lessons about U.S. Cybersecurity", *The New York Times* (8 June 2021), [www.nytimes.com/2021/05/14/us/politics/pipeline-hack.html](http://www.nytimes.com/2021/05/14/us/politics/pipeline-hack.html).

resurgence in investments into oil and expansion of gas projects, as well as an increased interest in project finance transactions, including the US\$2.9 billion Escravos Seaport project. Similarly, Ghana saw a 39% rise in foreign direct investment (FDI) to US\$2.6 billion, while East Africa saw a 35% rise in FDI to US\$8.2 billion, a large portion of which was driven by Chinese Belt and Road Initiative investments into Ethiopia, which tripled in 2021.<sup>13</sup>

Since August 2022, Libya has also showed some signs of improvement, with the National Oil Corp reopening fields and terminals and the country experiencing a sharp rebound in oil production.<sup>14</sup> International governments have also remained committed to Mozambique: in September 2022 the European Union approved a €15 million package of additional military aid to support the Southern African Development Community mission, an increase on the previously agreed €89 million in assistance that the bloc had previously assigned in aid to the Mozambican military. Neighbouring countries, including Rwanda and South Africa, have also sent military aid and forces to help quell the insurgency.

## **2. Allocation of risk among contractual parties**

### **2.1 Operating agreements: allocation among operator and non-operators**

Parties involved in the exploration, development and production of oil and gas resources across Africa will utilise a range of types of contracts and instruments, but it is common for these to include a joint operating agreement (JOA) to form an unincorporated joint venture, a structure widely utilised in the international upstream industry. The JOA will designate one party as the 'operator' to undertake operations on behalf of the joint venture.

Parties negotiating a JOA are likely to consider their positions depending on whether they will perform the role of the operator or participate in the joint venture as a non-operator. Where the project is located in a risk-prone area, a non-operator will be motivated to ensure that the operator is under a strong contractual obligation in the JOA to maintain a high standard of security in the conduct of operations. By contrast, the operator will want to ensure that the obligations that it takes are limited to matters that it expects to have reasonable control over, and that, in any event, the operator's liability is limited in an acceptable manner.

JOAs are typically negotiated on the basis of an industry standard form, which sets out the positions commonly adopted by parties operating in the industry and contains options and alternatives in relation to matters that are commonly the subject of negotiation. The Model International JOA published by the Association of International Energy Negotiators (AIEN) is among the most widely used and respected model form JOAs in the international upstream oil and gas industry, and certain of its features have been considered in this section.

Model forms, by their nature, are designed to be utilised in a range of different

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13 UNCTAD, *World Investment Report 2022*, p12.

14 International Energy Agency, *Oil Market Report* (14 September 2022), [https://iea.blob.core.windows.net/assets/13271b8f-6940-4da8-99cc-e9f4a77b07b3/-14-09-2022\\_OilMarketReport.pdf](https://iea.blob.core.windows.net/assets/13271b8f-6940-4da8-99cc-e9f4a77b07b3/-14-09-2022_OilMarketReport.pdf).



jurisdictions and circumstances and are unlikely to cater for the specific security needs of a particularly risk-prone area or project. Therefore, parties concerned about a specific security threat should take careful operational advice on the safety and security risks at play and the systems and measures best suited to safeguard their operations and ensure those are translated into the JOA provisions.

**(a) Operator's general duties**

The standard language in the current AIEN Model International JOA (the AIEN Model JOA) requires the operator to conduct joint operations “in a diligent, safe and efficient manner in accordance with good and prudent petroleum industry practices and field conservation principles generally followed by the international petroleum industry under similar circumstances ...”.<sup>15</sup> Because joint operations encompass virtually all operations and activities within the scope of JOA, this is a very broad but also vague obligation, and one which does not lay down the steps that the operator is required to follow to achieve safe and efficient operations. The standard text may therefore be inadequate for a project facing unusual or serious security concerns and parties should consider adopting a bespoke solution.

**(b) The HSE plan**

The standard text of the AIEN Model JOA requires the operator to establish and implement an HSE plan, which is intended to encompass health, safety and environmental matters and should be designed to comply with “the Contract, Laws relating to HSE, this Agreement, generally accepted practices of the international petroleum industry and decisions of the Operating Committee”. The operator must, in the conduct of such Joint Operations, carry out the HSE plan “in a manner consistent with the standards and procedures generally followed in the international petroleum industry under similar circumstances”.<sup>16</sup> The standard of ‘good and prudent petroleum industry practices’ (and similar expressions) is often not defined in JOAs and its meaning is therefore likely to depend on the relevant facts of the particular case.<sup>17</sup> Parties may take some comfort from the fact that these obligations would be expected to require the operator to follow standards that the international industry would adopt in similar, high-risk situations. However, where parties are aiming to safeguard the project and operations against a serious and unusual security risk, there is usually merit in specifying the operator’s security obligations in detail rather than relying on this broad wording. This could involve requiring the operator to create a carefully crafted HSE plan that details these security obligations and is in a form that all joint venture parties are comfortable with, or by establishing a standalone security plan. Industry standard JOAs often contain mechanisms for joint venture partners to exert greater scrutiny over HSE plans and systems, for instance requiring the operator to conduct periodic reviews and assessments of the

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15 Association of International Energy Negotiators, *2023 Model International Joint Operating Agreement*, Article 4.2.B.2.

16 *Ibid*, Article 6.6.A.2.

17 Reg Fowler, Peter Roberts and Eduardo G Pereira, *The AIPN Joint Operating Agreement: A Practical Guide*, (Globe Law and Business, 2019), p39.

effectiveness of its HSE system or to engage independent auditors to do so. Parties concerned about security threats may benefit from adopting similar requirements in their JOAs in order to ensure that the operator's security procedures are regularly reviewed and tested by specialists.<sup>18</sup>

If a security breach occurs, well-defined JOA obligations in relation to security matters could help the non-operators determine whether the operator has fallen short of its duties and, if so, bring a claim against the operator. If a severe security breach occurs, the operator may find that it is easier to demonstrate to its partners that it had in fact fulfilled those specific obligations and the incident was simply beyond its reasonable control.

Under most industry standard JOAs, non-operators have limited recourse to the operator. It is common for the operator's liability for damages and losses flowing from its actions to either be excluded entirely or limited, for example, to cases where senior personnel of the operator committed gross negligence or wilful misconduct that caused the loss or damage or by a low financial cap.<sup>19</sup> Even if non-operators cannot pursue the operator for financial damages, if the JOA contains bespoke security obligations that the operator failed to comply with, the non-operators could have the chance to either remove the operator from its role, or to threaten to do so, on grounds that it is in material breach of the JOA. The threat of removal could motivate the operator to take its duties more seriously.

This is an extract from the chapter 'Security of oil and gas projects: risk allocation strategies' by Nadine Amr and Nonkululeko Zondo in *Upstream Oil and Gas in Africa*, published by Globe Law and Business.

<https://www.globelawandbusiness.com/books/upstream-oil-and-gas-in-africa>

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18 See, eg, Article 6.6.C of the *2023 Model International Joint Operating Agreement*.

19 See, eg, Article 4.6 of the *2023 Model International Joint Operating Agreement*.

# Upstream Oil and Gas in Africa

## Upstream Oil and Gas in Africa

This edition combines two previous publications – *Oil and Gas in Africa: A Legal and Commercial Analysis of the Upstream Industry* and *African Upstream Oil and Gas: A Practical Guide to the Law and Regulation*, both published by Globe Law and Business in 2015 – and has two central elements.

First, it discusses the opportunities and challenges found in a variety of topical issues. For example, chapters describe the production sharing contract (PSC) and economic terms governing regional exploration and production activity; and although PSCs are not an exclusive host government instrument, they are of growing importance for countries looking for greater control over and societal benefits from petroleum production. The book also covers OHADA, financing, M&A, security and decommissioning issues in an African context, and new chapters explore natural gas and ESG.

Secondly, the book features a country-by-country analysis of African oil and gas, detailing the oil and gas frameworks and key issues in Algeria, Republic of the Congo, Egypt, Equatorial Guinea, Gabon, Ghana, Kenya, Libya, Mauritania, Mozambique, Nigeria, Senegal, South Africa, Tanzania and Tunisia. Jurisdiction-focused chapters examine the petroleum laws, the types of legal arrangement in place, the fiscal terms, the acquisition of acreage, governing law, dispute resolution mechanisms and governmental control.

This comprehensive edition features contributions from leading experts from across the industry, including from ministries of petroleum, national oil companies, international oil companies, law firms and consultancies. It will be of benefit to all industry participants and advisers pursuing oil and gas opportunities across the continent.

