GAS FLARING IN NIGERIA: BURNING OUR FUTURE, ONE TORCH AT A TIME

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Abstract

Gas flaring is a significant contributor to greenhouse gas emissions and is accountable for climate change. Gas flaring in Nigeria is very notorious, as the nation consistently ranks among the top ten gas flaring countries in the world. The adverse effects can be gleaned from the ensuing health and environmental challenges and economic loss. This paper aimed to identify what gas flaring entails, the legal framework regulating the control of gas flaring in Nigeria, and the challenges, whilst highlighting necessary policy recommendations and proposals. The paper highlighted factors such as weak enforcement, lack of adequate infrastructure, among others, as some of the challenges to curbing gas flaring in Nigeria. In this light, the paper recommends alternatives to gas flaring and emphasizes a strict implementation framework to address these challenges. The research methodology employed for this paper is doctrinal.

Keywords: Nigeria, gas, gas flaring, petroleum, legal framework, environment, human rights.

1.0 INTRODUCTION

> *The actions of the 1st and 2nd Respondents in continuing to flare gas in the course of their oil exploration and production activities in the Applicant's Community is a gross violation of their fundamental right to life (including healthy environment) and dignity of human person as enshrined in the Constitution.*[2]

Nigeria, the biggest natural gas exporter in Africa, has flared its largest amount of natural gas in four years, which has not only made the country's already severe energy shortage worse but has also had a major impact on climate change. The nation flared 300.5 million standard cubic feet (mscf) of gas in 2024, surpassing the threshold for levels not observed since 2020

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[2] *Jonah Gbemre v. Shell Petroleum Development Company Nigeria Ltd & Ors.* (2005) AHRLR 151.

(353.5 million scf of gas).[3] About 16 million tonnes of carbon emissions were also discharged into the atmosphere. This could pose a health risk to locals living near the flaring sites.[4]

Gas flaring is the controlled combustion of natural gas associated with the extraction of oil. It is the process by which oil is extracted by carefully burning off natural gas.[5] Natural gas is typically captured, but when it is not possible, it is flared to reduce the risk of gas ignition or product unsuitability.[6] Gas flares, also known as flare stacks, are used to eliminate waste gas and lower non-waste gas pressures that can cause equipment failure. They act as safety systems by reducing gas pressures with pressure-relief valves.[7] Flare stacks also prevent gas processing equipment from becoming over-pressurized. When crude oil is extracted from oil wells, it brings raw natural gas to the surface, which is flared as a waste product to prevent accidents.[8] Flaring is used where infrastructure investment is insufficient for natural gas utilization, involving waste gases and non-waste gases to protect processing equipment from high pressure. Oil companies find it more economical to flare natural gas.[9]

Conversely, gas flaring has, from time immemorial, had and continues to have devastating effects on the environment, human life, and the national economy. How do we navigate this tightrope?

2.0 EFFECT OF GAS FLARING IN NIGERIA

The implications of the incident of gas flaring in Nigeria vary from environmental hazards, health risks, and economic losses, among others. This is plain as day particularly in the Niger Delta region of the country where oil exploration activities are prominent. These effects have been summarized as follows:

2.1 Health Challenges

[3] According to data from the National Oil Spill Detection and Response Agency (NOSDRA).
[4] Abubakar Ibrahim, 'Energy-Starved Nigeria Flares Most Gas in Four Years' (*Businessday NG*, 29 January 2025) <https://businessday.ng/energy/article/energy-starved-nigeria-flares-most-gas-in-four-years/> accessed 20 April 2025.
[5] Oyetola Atoyebi, 'Gas Flaring in Nigeria' (*Omaplex*, 11 July 2024) <https://omaplex.com.ng/gas-flaring-in-nigeria/> accessed 20 April 2025.
[6] ibid.
[7] Francis Elehinafe and others, 'Natural Gas Flaring in Nigeria, Its Effects and Potential Alternatives – A Review' (2022) 23(8) Journal of Ecological Engineering.
[8] National Oil Spill Detection and Response Agency, 'Nigerian Gas Flare Tracker' (*NOSDRA*) <https://nosdra.gasflaretracker.ng/about.html> accessed 20 April 2025.
[9] Anslem O Ajugwo, 'Negative Effects of Gas Flaring: The Nigerian Experience' (2013) 1(1) Journal of Environment Pollution and Human Health 6.

The Niger Delta has the lowest life expectancy in Nigeria and a high under-five mortality rate. 10 Niger Delta currently has the lowest life expectancy in the country, which is undoubtedly caused by gas flare-ups in the region.[11] The Niger Delta has a 41-year life expectancy, which is 10 years less than the national average.[12] Port Harcourt, the capital of Rivers State, has been among the most adversely impacted states in Nigeria by this pollution. According to reports, the number of individuals experiencing breathing difficulties has increased, as corroborated by physicians in Port Harcourt.[13]

Nigeria's Niger Delta, with over 45 active gas flare sites, releases toxic chemicals into the environment, causing gastrointestinal issues, skin disorders, tumors, and developmental impacts.[14] Exposure to these pollutants can lead to cancer, neurological, reproductive, and developmental effects, deformities in children, lung damage, and skin problems.

2.2 Environmental Impact

The extraction of oil in Nigeria since the 1950s has led to the release of significant liquid pollutants into the Niger Delta, causing significant damage to the ecosystem.[15] Gas flares, caused by the burning of fossil fuels like coal, oil, and gas, contribute to climate change by releasing carbon dioxide and methane, which account for 80% of global warming. Acid rains, caused by gas flares, corrode corrugated roofs, damage lakes, streams, vegetation, accelerate building material decay, and contribute to public health issues. Agriculture is also affected by gas flaring, as flares produce atmospheric contaminants like nitrogen oxides, particulate matter, hydrocarbons, ash, photochemical oxidants, and hydrogen sulphide, which acidify soil, depleting nutrients and reducing crop nutritional value. This results in stunted growth, scotched plants, and withered young crops, affecting the fertility and capacity for sustainable agriculture in the area.[16]

2.3 Economic Loss

[10] Taiwo Hassan, 'Big Oil Gambit in Niger Delta' (*FairPlanet*, 19 March 2025) <https://www.fairplanet.org/story/big-oils-gambit-in-niger-delta/> accessed 20 April 2025.
[11] Elehinafe and others (n 7).
[12] Ekpali Saint, 'Timeline: Half a Century of Oil Spills in Nigeria's Ogoniland' (*Al Jazeera*) <https://www.aljazeera.com/features/2022/12/21/timeline-oil-spills-in-nigerias-ogoniland> accessed 20 April 2025.
[13] Atoyebi (n 5).
[14] Elehinafe and others (n 7).
[15] Ibid.
[16] Ajugwo (n 9).

The economic impact of gas flaring is measured by the amount of money that would have been made from utilizing the volume of gas that is flared. According to the World Bank, the cost of glaring is the lower of the cost of reducing or eliminating CO2 emissions and/or the economic cost of the damage to the physical and biological environment caused by the C02 emission.[17]

Consequently, in the year 2018, Nigeria reportedly lost N233 billion in revenue, which could have been used to finance several projects.[18] Another report reveals that in 2023, the loss of revenue had skyrocketed to N702 billion.[19]

3.0 LEGAL FRAMEWORKS REGULATING THE CONTROL OF GAS FLARING IN NIGERIA

The current legislative framework for gas flaring in Nigeria abolishes gas flaring and demands strict adherence to gas flaring laws and regulations. Nigeria's policy on the use of associated gas began in 1969 with the Petroleum Drilling and Production Regulations,[20] which was later supplanted by the Associated Gas Re-Injection Act of 1979, this time directly addressing gas flaring. The Nigeria Gas Master Plan in 2008 and the Flare Gas Regulation in 2018[21] postponed the deadline for ending gas flaring to 2020, while Nigeria aims to remove all flares by 2030.[22]

The following are the established laws regulating gas flaring in Nigeria:

3.1 The Constitution of the Federal Republic of Nigeria 1999 (as amended)

> *"That this Court has the inherent jurisdiction to grant leave to the Applicants who are Bonafide citizens and residents of the Federal Republic of Nigeria, to apply for the enforcement of their fundamental rights to life and dignity of the human person as guaranteed by Sections 33 and 34 of the Constitution of the Federal Republic of Nigeria, 1999. That these constitutionally guaranteed*

[17] PricewaterhouseCoopers Limited, 'Assessing the Impact of Gas Flaring on the Nigerian Economy' (*PwC*, 2019) <https://www.pwc.com/ng/en/assets/pdf/gas-flaring-impact1.pdf> accessed 20 April 2025.
[18] Ibid.
[19] Urowayino Jeremiah, 'Gas Flaring: Nigeria Loses N702bn as Oil Firms Flare 241m Scf' (*Vanguard News*, 5 December 2023) <https://www.vanguardngr.com/2023/12/gas-flaring-nigeria-loses-n702bn-as-oil-firms-flare-241m-scf/> accessed 20 April 2025.
[20] Petroleum Drilling and Production Regulations 1969 Regulation 42
[21] Flare Gas (Prevention of Waste and Pollution) Regulations, 2018.
[22] Elehinafe and others (n 7).

> *rights inevitably include the right to clean, poison-free, pollution-free healthy environment."*[23]

The State shall protect and improve the environment and safeguard the water, air and land, forest, and wildlife of Nigeria.[24] However, being a Fundamental Objective and Directive Principle of State Policy set out in Chapter II of the Constitution, no action shall lie against the State for non-conformity with the said provision.[25]

Nevertheless, Sections 33 and 34 of the Constitution have a significant bearing on gas flaring. The right to life and the right to dignity of human person become a sham where there is no clean and healthy environment which facilitates life and guarantees the dignity of persons.[26]

3.2 The Petroleum Industry Act 2021

The Petroleum Industry Act (PIA) was enacted in 2021 to improve the Nigerian petroleum industry's administration and governance. It focuses on environmental management and financial contribution for the remediation of environmental damage. Sections 105 and 108 of the PIA specifically address gas flaring, prohibiting flaring and venting of natural gas. Section 105 allows the Nigerian Upstream Petroleum Regulatory Commission to take free natural gas destined for flaring at the flare stack, encouraging alternative uses. Section 104 provides gas flaring penalties, with licensees, lessees, and marginal field operators liable to a fine. Section 107 allows the Commission and the Nigerian Midstream and Downstream Petroleum Regulatory Authority to grant permits for flaring or venting for specific periods. Section 106 requires licensees to install metering equipment conforming to facility specifications before commencing petroleum production. Section 108 mandates a natural gas flare elimination plan, requiring licensees to submit a plan. However, the monetization of gas flares may be abused to generate income at the expense of the environment. The PIA's provisions aim to promote transparency and accountability in the oil and gas sector.[27]

3.3 The Gas Flaring, Venting, and Methane Emissions (Prevention of Waste and Methane Emissions) Regulations (The Upstream Regulations)

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[23] Jonah Gbemre v. Shell Petroleum Development Company Nigeria Ltd & Ors. (2005) AHRLR 151; Emphasis mine.
[24] Constitution of the Federal Republic of Nigeria, 1999 (as amended),s20
[25] CFRN 1999, s6(6)(c)
[26] James Uko Eze and Wigo Lilian Egobueze, 'Legal Appraisal of Gas Flaring Regimes in Nigeria' (2023) 7 African Journal of International Energy and Environmental Law 172.
[27] Ibid.

Further to the powers of the Nigerian Upstream Petroleum Regulatory Commission, under the Petroleum Industry Act 2021,[28] the upstream regulations was published to regulate gas flaring in the upstream petroleum industry.[29] The Regulations cover key issues such as the Federal Government's right to take all flare gas, bid processes, reporting requirements, administrative fines, permits, flaring prohibition, work program implementation status, and potential penalties for failure to meet milestones.[30]

3.4 The Midstream Gas Flare Regulations 2023 (the Midstream Regulations)

The midstream regulation was issued under the Petroleum Industry Act 2021 to regulate gas flaring in the midstream petroleum industry, in furtherance of the powers of the Nigerian Midstream and Downstream Petroleum Regulatory Authority. [31] It provides, among others, the title to flare gas,[32] the permit to access flare gas,[33] the permit to flare gas,[34] reporting of flare gas data,[35] and assigning or transferring its interest or rights under the permit to access flare gas.[36] This regulation aims to eliminate gas flaring in the midstream petroleum industry.

3.5 Others

Other legislation with some bearing on the regulation of gas flaring in Nigeria are:

a. Environmental Impact Assessment Act 1992 Cap E12, LFN 2004.[37]

b. National Environmental Standards and Regulation Enforcement Agency (NESREA) Act 2007.[38]

c. The Niger Delta Development Commission Act 2000 CAP N86 LFN 2004.[39]

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[28] Section 10 Petroleum Industry Act 2021.

[29] Olaniwun Ajayi LP, 'An Overview of the Extant Gas Flare Regulations in the Nigerian Petroleum Industry' (*Olaniwun Ajayi*, 5 September 2023) <https://www.olaniwunajayi.net/blog/an-overview-of-the-extant-gas-flare-regulations-in-the-nigerian-petroleum-industry/> accessed 26 April 2025.

[30] Eze and Egobueze (n 27).

[31] Olaniwun Ajayi LP (n 30).

[32] Midstream Gas Flare Regulations 2023,Regulation 4(1)

[33] MGFR 2023,Regulation 4(3)

[34] MGFR 2023 ,Regulation 8

[35] MGFR 2023, Regulation 9

[36] MGFR 2023 ,Regulation 6

[37] The law regulates industrialization, prioritizing environmental protection through environmental impact assessments. However, enforcement is lacking, despite potential benefits in managing pollution and gas flaring.

[38] The Act annulled the 1988 Federal Environmental Protection Agency Act and established the National Environment Standards and Regulations Enforcement Agency in Nigeria. It enforces environmental laws, international agreements, and protocols. However, it lacks provisions for hazardous waste regulations in the oil and gas sector, preventing the agency from monitoring pollution in the oil and gas sector.

[39] The Niger Delta Development Commission (NDDC) was established to address youth agitation and resource control in the Niger Delta area. It formulates policies and guidelines for development and combats ecological degradation

d. Criminal Code Act CAP. C38 LFN 2004.[40]

e. Associated Gas Reinjection (Continued Flaring of Gas 1984) Regulation.[41]

f. The Environmental Guidelines and Standards for the Petroleum Industry in Nigeria 2002.[42]

g. Climate Change Act 2021.[43]

h. National Policies.[44]

i. International Laws.[45]

4.0 CHALLENGES TO THE ABOLITION OF GAS FLARING IN NIGERIA

Through the then Nigerian National Petroleum Commission (NNPC),[46] the Nigerian government intended to end gas flaring by 2020.[47] This in itself speaks to why many say that Nigerian law is a law without teeth. In recent times, there has been a robust regulatory framework for curbing gas flaring in Nigeria, however, weak implementation and enforcement of these laws have led oil companies to continue to flare gas.[48] The lack of adequate infrastructure to commercialize the abundant gas resource has also resulted in gas

from oil exploration and production. The federal government contributes 15% of monthly statutory allocations, oil firms contribute 3%, and member states contribute 50%. Challenges include inadequate funding, corruption, political control, and lack of accountability and transparency in development schemes. The Ministry of Niger Delta oversees the Niger Delta Development Commission as an agency.

[40] Pollution is a crime under the Criminal Code, with Sections 245 and 247 preventing actions that vitiate the atmosphere, resulting in a six-month prison sentence. However, this provision prioritizes human health over the environment, and there is no record of oil companies being charged for violating this law.

[41] The Associated Gas Reinjection Act 1979 was amended to reinject all gas produced in connection with oil and not used in industrial projects. Defaulters forfeit concessions and must repair and restore the reservoir. The regulation allows gas flaring if 75% of the gas is effectively used, 15% contains impurities, equipment failures last three months, or the gas-to-oil ratio is less than 3500 SCF/bbl.

[42] The Environmental Guidelines and Standards, enacted under the Petroleum Act 1969, govern health and safety issues in Nigeria's oil industry. They aim to respond to oil spills, regulate gas flaring, and set environmental permits for effluent discharge and air quality. It is important to note that Acts, regulations, guidelines, and other subsidiary laws made in pursuance of any primary legislation that the Petroleum Industry Act repeals or amends are nonetheless enforceable as long as they don't conflict with the Act, as if the NUPRC or NMDPRA issued them.

[43] The Climate Change Act in Nigeria aims to achieve low greenhouse gas emissions (of which gas flaring is a major contributor), inclusive green growth, and sustainable economic development by setting a net-zero emissions target for 2050-2070. The Federal Ministry of Environment sets carbon budgets for Nigeria, with each budget circle submitted to the Federal Executive Council for approval. Section 20 mandates an action plan to ensure Nigeria's emissions align with carbon budgets and review levels and trends of greenhouse gas emissions.

[44] Such as the Nigeria Gas Flare Commercialization Programme 2017 and The Nigeria Gas Master Plan 2008.

[45] Such as African Charter on Human and Peoples' Rights 1981, The United Nations Framework Convention on Climate Change (UNFCCC), The Vienna Convention on the Protection of the Ozone Layer 1988, Kyoto Protocol 1997, Global Gas Flaring Reduction Partnership, etc.

[46] Now Nigerian National Petroleum Company Limited (NNPCL).

[47] PricewaterhouseCoopers Limited (n 18).

[48] Olusola Joshua Olujobi and others, 'The Legal Framework for Combating Gas Flaring in Nigeria's Oil and Gas Industry: Can It Promote Sustainable Energy Security?' (2022) 14(13) Sustainability 7626.

being flagrantly flared.[49] The development of the infrastructure required to capture and process associated gas that would otherwise be vented is frequently a challenge.

Other challenges include the non-enforcement of environmental legislation, economic reliance on one-source energy,[50] and a lack of political will to counteract gas flaring and other environmental degradation in the sector.[51]

5.0 CONCLUSION

Ensuring access to affordable, clean energy, reliable, sustainable, and modern energy for all is one of the United Nations Sustainable Development Goals. The State has to ensure, protect, and improve these rights. Gas flaring has had a devastating effect on our dear nation. While oil companies may prefer going for the low-hanging fruit, among others, the difficulties faced by local communities from gas flares are a sufficient justification for ending the gas flaring practice. There are several alternatives to gas flaring, such as electricity generation, Liquefied Natural Gas (LNG), and Compressed Natural Gas (CNG), which can be leveraged. Further, the identified challenges must be addressed by the relevant stakeholders. This would include strict implementation policies, continuous monitoring by regulatory authorities, infrastructure development, comparative analysis with other compliant regions, such as Norway, etc. By embracing sustainable practices, we can extinguish the flames of waste and ignite a brighter, healthier future for Nigeria.

[49] Eze and Egobueze (n 27).

[50] Wodi Stephanie, 'The Legal Framework for the Prevention of Gas Flaring in Nigeria's Oil and Gas Industry' (LLB Dissertation, Rivers State University 2022) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4297183> accessed 29 April 2025.

[51] Olusola Joshua Olujobi and Olusola-Olujobi Temilola, 'The Appraisal of Legal Framework Regulating Gas Flaring in Nigeria's Upstream Petroleum Sector: How Efficient?' (2019) 10 (3) International Journal of Advanced Research in Engineering & Technology 234.