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POLICY BRIEF

ADDRESSING GAS FLARING IN NIGERIA: STRENGTHENING REGULATORY FRAMEWORKS AND ENFORCEMENT

Policy Brief

Addressing Gas Flaring in Nigeria: Strengthening Regulatory Frameworks and Enforcement

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OVERVIEW/EXECUTIVE SUMMARY

Gas flaring remains a significant environmental, economic, and social challenge in Nigeria. Despite being one of the world's largest gas flarers, Nigeria has made limited progress in reducing flaring due to weak regulatory enforcement, inadequate infrastructure, and poor coordination between regulatory agencies. This policy brief examines the roles of the Nigerian Upstream Petroleum Regulatory Commission (NUPRC) and the Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA) in regulating gas flaring, identifies key issues, and provides actionable recommendations to strengthen Nigeria's efforts to reduce gas flaring.

Nigeria flares approximately 7 billion cubic meters (bcm) of gas annually, making it the 7th largest gas flarer globally[1]. Gas flaring contributes to environmental degradation, health problems, and economic losses. The Petroleum Industry Act (PIA) 2021 established the NUPRC and NMDPRA to regulate upstream and midstream/downstream petroleum operations, respectively[2]. Both agencies have roles in addressing gas flaring but operate with different mandates and approaches.

Despite the Petroleum Industry Act (PIA) 2021 and regulations by the Nigerian Upstream Petroleum Regulatory Commission (NUPRC) and NMDPRA, gas flaring persists. Available evidence suggests that weak penalties of $2/1,000 scf fine under the PIA are too low to deter flaring. Moreover, there has been poor enforcement by NUPRC and NMDPR, who lack real-time monitoring technology (e.g., satellite tech) to track violations. There are also seeming regulatory overlaps between NUPRC and NMDPRA, who share unclear mandates, causing enforcement gaps. Nevertheless, delay in gas utilization projects like the Nigeria Gas Flare Commercialization Programme (NGFCP) as a result of funding and bureaucratic bottlenecks has led to a lack of a clear effect of the PIA on gas administration in Nigeria. Because of the above reasons, Nigeria remains the world's second-largest gas flarer. However, it loses $2.5B/year[3] in wasted resources while harming health and the environment.[4]

This policy review therefore explored the gaps in the regulations, identified the implementation challenges, took a look at some countries that have positively managed gas flaring to draw helpful lessons for Nigeria, and offers recommendations for improved performance of gas policy administration in Nigeria.

INTRODUCTION

Nigeria's first commercial oil discovery was in Oloibiri (1956), and with it came routine gas flaring as oil companies treated associated gas as a waste product. No environmental regulations existed, and flaring became the default practice.

The first attempt at addressing gas flaring was the Associated Gas Re-Injection Act (1979). This act was the anti-flaring law, mandating the reinjection of associated gas or monetization (e.g., LNG, power generation). By virtue of this act, a flare-out deadline of 1984 was established. The time frame was later extended indefinitely due to non-compliance.

There was a growing environmental concern between 1980–2000. This period culminated in environmental movements and legal challenges of the 1990s. The Ogoni Crisis (1990–1995), where Ken Saro-Wiwa highlighted gas flaring's devastation in the Niger Delta, attracted global attention. In addition, there was a judicial ruling against flaring in the case of Gbenre v. Shell (2005),[5] where the Federal High Court declared flaring illegal and ordered an end to it. The ruling was not implemented. In addition, there was a regime of penalties on gas flaring. For instance, in 1984, the government introduced a meagre penalty of ₦0.50 per 1000 scf.

The measure could not yield any change because it was far below economic value. In 2008, the penalty was increased to $3.50 per 1000 scf, but enforcement remained weak. More so, Nigeria joined global programs for reducing gas flaring, such as the World Bank's Global Gas Flaring Reduction Partnership (GGFR) in 2002 and pledged to end routine flaring by 2030 under the Zero Routine Flaring (ZRF) Initiative of 2008. In 2008, Nigeria came up with a Gas Master Plan with the intention to develop gas infrastructure (pipelines, processing plants) and to encourage domestic gas use (power, industries). The strategy was partially successful as liquefied natural gas (LNG) exports grew, but flaring persisted in onshore fields.

Nigerian Gas Flare Commercialization Programme (NGFCP, 2016) was put in place and took the twin approach intended to auction flare gas to private investors for utilization (power, LPG, petrochemicals) and to introduce market-driven solutions instead of penalties.

LEGAL & REGULATORY GAPS AND CONFLICTS

The PIA 2021

The PIA is Nigeria's primary legislation governing gas flaring, but critical gaps in the act remain unresolved. One critical gap is the lack of clear provisions prohibiting gas flaring. Although Section 105 is titled prohibition of gas flaring or venting of natural gas,, it does not explicitly ban the act; instead, it outlines penalties for violations.

Weak Enforcement Mechanisms

The NUPRC and NMDPRA have shown they can't enforce the PIA's provisions or the rules they made under the PIA's powers. This issue is seen in the inability to independently collect The data on gas flares will be used to initiate clean-ups and disclose information about companies that have defaulted on their penalty payments. In effect, the PIA lacks stringent penalties and clear provisions on flaring prohibition.

Health Risk in Host Communities

Gas flaring has resulted in significant toxic emissions from harmful substances, including benzene, sulphur dioxide (SO_2), nitrogen oxides (NO_x), and particulate matter (PM2.5), which have led to severe health issues such as respiratory and cardiovascular diseases. A 2020 study by the University of Port Harcourt found that children in zones affected by gas flaring had 30% higher asthma rates than non-exposed groups.[6] Moreover, black soot in Rivers State has been linked to lung cancer, bronchitis, and heart disease.[7]

Additionally, acid rain and water contamination pose significant dangers. Flaring emits SO_2 and NO_x, which react with rainwater to form acid rain, damaging crops and freshwater sources. A 2019 UNDP report found pH levels as low as 4.2 (highly acidic) in water samples from Bayelsa flare zones.[8]

Also important is the challenge of increased cancer risks. Benzene exposure from flares is linked to leukaemia and lymphoma (WHO, 2018). A 2022 study in the Niger Delta found elevated benzene levels (5x above WHO limits) near flaring sites (Journal of Environmental Health)[9].

Social and Community Dimensions

Exclusion of gas-specific compensation: Section 104 of the PIA provides for an Environmental Remediation Fund (ERF) and requires companies to pay into an Environmental Remediation Fund for pollution clean-up but no direct compensation for health impacts. Consequently, unlike oil spills covered by NOSDRA, gas flaring victims have no structured compensation mechanism. The Niger Delta Gas Flare Victims Forum has documented cases where communities received no redress despite documented health damage.[10]

Lack of Awareness of Gas Flare Health Risks: It has been established that 65% of residents in flare zones are unaware of the link between flaring and diseases like cancer and asthma. More so, women and children (most vulnerable to respiratory illnesses) were least informed (CEHRD, 2021).[11]

This lack of awareness can be attributed to negligence by oil companies as well as responsible government bodies such as the Federal Ministry of Petroleum, NOSDRA, NNDC and in recent times NUPRC and NMDPRA. As a consequence, many flare-affected communities attribute illnesses to spiritual causes rather than pollution.[12]

Transparency and Accountability in Nigeria's Gas Flaring Policies

One of the central issues in the administration of gas flare laws and policies has to do with the question of the accuracy of reporting capacity for independent verification. Nigeria's gas flare data has long been criticized for underreporting and lack of independent verification. Evidence suggests that oil and gas companies underreport their data, leading to discrepancies in self-reported figures.[13] For instance, a study found that actual flare volumes in the Niger Delta were 40% higher than industry-reported figures. The Nigerian Extractive Industries Transparency Initiative (NEITI) has also flagged inconsistencies in flare data submitted by oil companies, further strengthening the suspicion of inaccurate data on gas flaring.[14]

Due to a lack of real-time monitoring, we currently estimate flare volumes using manual methods and sporadic inspections. This project has resulted in lost revenue, as underreported flaring leads to lower penalties for oil companies. Although the Federal Ministry of Environment has adopted the gas flare tracker, media outlets, civil society organisations, and community members have raised concerns about the tracker's effectiveness in collecting flared gas.

Are Penalties for Revenue Generation or for Deterrent and Remediation?

The existing gas flare policies seem to have conflicting goals, which complicate coordination and enforcement. For instance, a cursory look at the Upstream Gas Flare Regulation shows that it points toward discouraging gas flaring. The rules governing midstream gas flaring, however, appear to have a revenue-driven goal with the intention of purchasing gas infrastructure. The drive of this policy aligns also with the Nigeria Gas Commercialization policy. The final conflicting goal appears to be addressing the environmental damage caused by gas flare emissions. Despite the conflicting goals of these policies, one thing is certain: there is no record of where these funds have been invested according to the PIA and current regulations. Despite the underreported flares, there is no clear data on how much has been collected, from which oil and gas companies, and for what period.

Where are the funds domiciled, what have they been used for, and where are they? Questions also arise regarding exemptions: which companies receive exemptions, and why? And what is the total cost of penalties forgone in these exemptions?

Accountability lab Nigeria's FOI requests for this information were unsuccessful, so NUPRC and NMDPRA have not answered these questions.There is also growing dissatisfaction over the adequacy of the current penalty system. $2 per 1,000 standard cubic feet (scf) of gas flared (PIA 2021)[15] is considered grossly inadequate when compared with Norway's $6 per 1,000 scf and Kuwait's $10 per every 1,000 scf. This funding level raises the question of whether it serves as a revenue drive or a deterrent. Also, if there is no proof of remediation after three years of the PIA, it is doubtful how soon this could be achieved.

Factors Limiting Host Community Participation in Nigeria's Gas Policy and Regulation

Host communities in Nigeria's oil and gas-producing regions face significant barriers to meaningful participation in gas policy legislation and regulatory implementation. Below is a detailed analysis of these constraints, supported by evidence and references.

Legal and Structural Barriers: The Petroleum Industry Act (PIA) 2021 mandates Host Community Development Trusts (HCDTs) where there is community participation but does not grant communities decision-making power in gas flaring policies. There is no legal requirement for community consultations in allocating gas flare penalties or in environmental remediation plans.[16] A 2023 NEITI report found that only 12% of Niger Delta communities were consulted in gas flare policy discussions.[17] Overlapping Agency Mandates and No Effective Grievance Mechanism: NUPRC, NOSDRA, and state EPAs have conflicting roles, leading to confusion in grievance redress (SDN, 2022).[18] Communities don't know which agency to approach for flare-related complaints. The PIA's Host Communities Grievance Board is not yet operational, while judicial delays make legal action against flaring impractical (ERA, 2023).[19]

Security and Repression Concerns: Activists demanding accountability face intimidation, arrests, or violence (Amnesty International, 2022)[20]. One clear example is the Ogoni Nine executions (1995) and ongoing crackdowns on protesters. Again, military operations such as Operation Delta Safe often target activists instead of addressing environmental harms (HRW, 2021).[21]

GAS FLARE ADMINISTRATION IN SELECT JURISDICTIONS

Kuwait: Gas Flaring Penalty System

Kuwait has emerged as a global leader in reducing gas flaring through a strict penalty regime and strategic reinvestment of fines. The base fine for every 1,000 scf flares is $10. This penalty has served as a serious deterrent to flaring.

On the other hand, there are escalating penalties for repeat offenders. For instance, the first violation attracts $10/1,000 scf. The second violation attracts $15/1,000 scf plus a production quota cut. In case the violation happens the third time, there would be a lease suspension of 30–90 days.[22]

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Kuwait has also aggressively invested in its gas utilization. Jurassic Gas Project (2023) saw the investment of $4 billion to process previously flared gas for domestic power.This program is funded partly by flaring penalties, according to IEA (2023). Besides, Kuwait's Flare-to-Power Program has converted 500 MMscf/day of flare gas into electricity.

In terms of accountability for flared gas data, Kuwait has a public flare tracker (KOC website) that shows real-time violations. Such data helps with independent assessment/collection of gas flares as well as accurate determination of penalties. Furthermore, annual reports disclose fines to the public. Currently, Kuwait has registered a 75% reduction in gas flaring.

Norway: A Model of Near-Zero Flaring

Norway has eliminated routine gas flaring since the 1970s through strict regulations, carbon pricing, and gas monetization. The Norwegian legal & regulatory framework has a strong aversion to gas flaring. To this end, the Norwegian government issued a ban on routine flaring in 1971. Under which no flaring is allowed without special permits (which are rarely granted). This regime also places strict fines for violations of up to $100,000/day.[23]

Moreover, there has been a carbon tax since 1991, which amounts to $65 per tonne of CO_2 emitted (covering flaring/venting). This expense makes flaring more expensive than gas capture. In Norway, technology and infrastructure development have played an important role in gas transformation. For instance, Norway reinjects 98% of associated gas into oil fields through gas reinjection and power generation.

90% of Norway's platforms run on hydropower from shore (cutting flaring needs). In terms of monitoring gas flaring and venting, there is real-time monitoring through satellites (ESA) and drones, which help detect even small flares. Besides, Norway has a public emissions database domiciled in the Norwegian Environmental Agency. Norway treats gas as a valuable commodity, not waste.[24]

Saudi Arabia: Fines, and Gas Utilization Strategies

Saudi Arabia, the world's second-largest oil producer, has made significant strides in reducing gas flaring through a multi-pronged approach combining strict penalties, massive investments in gas utilization, and progressive legislation. Saudi Arabia committed to the World Bank's ZRF Initiative, aiming to eliminate routine flaring by 2030 and enforce mandatory gas capture targets for oil operators.[25]

The Presidency of Meteorology and Environment (PME) imposes flaring permits required for non-routine flaring (e.g., emergencies) and places annual flaring limits per each oilfield. Regarding carbon pricing and fines, Saudi Arabia has a minimal pricing structure. It charged 0.50–1.00 per 1,000 scf (lower than Nigeria but strictly enforced). There are also escalating fines for repeat violators, thereby serving as a deterrent.

In addition, Saudi Arabia treats associated gas as a resource rather than as waste, investing over $150 billion to capture 98% of this gas. Its strategic investments include:

A

Gas-to-Industrialization Strategy: Makes Cheap Gas Feedstock for (i) Petrochemicals (e.g., Al-Bayroni Investment Company's ethylene plants). (ii) Power Generation 50% of Saudi electricity is gas-fired. (iii) Blue Hydrogen Projects (e.g., NEOM Green Hydrogen).

B

Flare Gas-to-Power (FGTP) Projects: Where small-scale turbines convert flare gas to electricity for remote oilfields.[25]

Saudi Arabia uses NASA's Visible Infrared Imaging Radiometer Suite (VIIRS) & Greenhouse Gas Satellite (GHGSat) to detect flaring in real time. These tech-based devices facilitate accurate capturing of gas flares and gives rise to appropriate actions such as penalties, and escalated.

RECOMMENDATIONS FOR EFFECTIVE GAS FLARE GOVERNANCE IN NIGERIA

Effective governance of gas flaring in Nigeria has been a major challenge hampering the achievement of intended goals and outcomes of the laws and regulations in the oil and gas sector. The following recommendations are offered to government and civil society organizations:

Government

Effective governance of gas flaring in Nigeria has been a major challenge hampering the achievement of intended goals and outcomes of the laws and regulations in the oil and gas sector. The following recommendations are offered to government and civil society organizations:

- ***Amendment of Section 104 (2 and 33):*** *There is* urgent need to review the PIA in section 104 (2), which places a fine of $2 per 1000 scf. The National Assembly should, as true representatives of the people, initiate an amendment as a matter of urgency to address this gap. This will not only serve as a satisfying penalty but will also be an effective deterrent. Nigeria should increase its penalty on gas flaring to $7 per 1000 scf. $7 for every standard cubic foot will be ideal for discouraging the flare, as companies will find it more profitable to invest in gas utilization rather than flaring for fines. Besides, it will align the penalty with other countries such as Canada, Kuwait and Norway, which, through higher fines, have reduced gas flaring to its barest minimum. Moreover, section 104(3) should be amended to provide for a specific gas flare end date instead of deferring it to the minister of petroleum. It is important to fix this date by law, given that Nigeria has fixed many of these administrative dates (1984, 2008, 2010, 2020) and none was met. There is even no clear indication that the 2030 target will be met. We hereby recommend that the amendment should fix 2040 as the net zero gas flare date;
- ***Inclusion of Health Compensation in the PIA and Gas Flare Regulations:*** The PIA made provisions for HCDTF environmental remediation but is completely silent about the health impact of gas flares on the host communities. To address this grave oversight and large injustice, the PIA amendment should make provisions for compensation for people adversely affected by gas flare emissions, resulting in cancer, miscarriages, and respiratory diseases for children, among others. Such goals can be achieved by providing for a Health Compensation Fund from which victims can be treated.

This should be correspondingly reflected in the gas flare regulations of the Commission and the Authority;

- ***Improve Gas Flare Tracking:*** One of the effective and responsible ways to monitor gas flares independently satisfactorily is through the adoption of satellite technology. Nigeria is a member of Global Gas Flare Reduction and should be able to demonstrate huge and satisfactory capacity in flare data collection;
- ***Launch a Public Flare Penalty Dashboard:*** To deal with the challenge of transparency in the collection of gas flare fines, both the Commission and Authority should come up with a function and accessible dashboard where fines collected will be published. The dashboard will show which company paid what, for what period, and how much gas was flared or vented. This will also show companies defaulting and those exempted and for what reasons;
- ***Improve Coordination between NUPRC and NMDPRA:*** At the administrative level, there should be an established joint task force between NUPRC and NMDPRA to align upstream reduction targets with midstream and downstream gas utilization efforts. This joint task force should develop a cohesive strategy for reducing gas flaring that covers the entire value chain;
- ***Accelerate Gas Utilization and Commercialization:*** The Ministry of Petroleum, working in synergy with the Commission and Authority as well as the Council on Gas commercialization should increase efforts to speed up the use of flared gas for power generation, industrial use, and export. There should also be support for the development of modular gas processing plants in flaring hotspots to harness gas for local use;
- ***Enhance Community Engagement and Access to Remedy:*** Involve affected communities in monitoring and reporting gas flaring activities. Ensure that communities have access to remedy and compensation for the impacts of flaring.

Civil Society Organizations (CSOs)

- ***Legal Advocacy:*** Civil society organizations are citizens in a sense and should therefore be willing to file lawsuits to compel NUPRC and NMDPRA to enforce flare penalties as provided in the PIA and their respective gas flare regulations. This will help in providing precedents that would help build up jurisprudence around gas flare issues in Nigeria;
- ***Community Empowerment:*** Continue to train the Niger Delta youth on environmental monitoring and reporting. This training will assist them in tracking the impacts of gas flares on both the environment and public health. Data coming from the host communities through trained youth will be helpful

in amplifying the dangers of gas flaring on host communities and as evidence for seeking redress;

- ***Galvanize Advocacy for the Amendment of the PIA:*** The civil societies, especially those working on environmental justice, human rights, and different aspects of life in the Niger Delta region, should advocate for the amendment of the PIA to include protective provisions for the host communities. These advocacies should focus on the inclusion of health compensation, the participation of host communities in gas flare decisions and caveats for employment and participation in gas flare remediation contracts;
- ***Amplify Dangers of Gas Flaring on Host Communities:*** CSOs should undertake evidence-based research to unravel dangers of gas flaring on the health and environment of the host communities. These research findings should be shared with relevant stakeholders, including the media, with a view to drawing attention and attracting remedial actions to the challenges faced by the host communities as a result of gas flare/venting;
- ***Undertake Transparency Campaigns on Gas Flare Administration:*** The CSOs should also be bold enough to either name and fame or name and shame oil and gas companies as well as government agencies that are either responding responsibly or irresponsibly to gas flare challenges, respectively. Such efforts will help in both encouraging positive responses and reducing negative responses for both oil and gas companies and concerned government agencies.

CONCLUSION

Nigeria has the potential to significantly reduce gas flaring and harness its gas resources for economic development. However, the effort requires stronger regulatory enforcement, better coordination between NUPRC and NMDPRA, and increased investment in gas infrastructure. By implementing the recommendations outlined in this policy brief, Nigeria can address the environmental, social, and economic impacts of gas flaring while unlocking the economic potential of its gas resources.

There is a need, therefore, for a deliberate action, backed by a strong political will to undertake the needed reforms and necessary enforcement to achieve the needed results.

REFERENCES

World Bank. (2023). Global Gas Flaring Reduction Partnership (GGFR). https://www.worldbank.org/en/programs/gasflaringreduction#:~:text=GGFR%20evolves%20into%20the%20Global,the%20oil%20and%20gas%20industry

Petroleum Industry Act (PIA) 2021; World Bank (2023) Op cit

Amnesty International. (2023). Environmental and Human Rights Impacts of Gas Flaring in the Niger Delta.

Environmental Rights Action (ERA) Report (2006) "Gas Flaring in Nigeria: A Human Rights Analysis" https://erafoundation.org

Nwachukwu, A. et al. (2020). Gas Flaring and Child Respiratory Health in the Niger

Delta.: https://www.researchgate.net/publication/344541123

Journal of Health & Pollution -Flaring & Disease (2020) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7233325/

UNDP (2019). Environmental Degradation and Health in the Niger Delta: https://www.undp.org/nigeria/publications

Journal of Health & Pollution-Flaring & Disease (2020):https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7233325/

Niger Delta Gas Flare Victims Forum (NDGFVF)-Testimonies (2022):[Contact: ndgasflarevictims@gmail.com

Journal of Health & Pollution – -Flaring & Disease (2020) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7233325/

Stakeholder Democracy Network (SDN, 2022). Niger Delta Flaring Survey: https://www.stakeholderdemocracy.org

NEITI Oil & Gas Report (2022): https://neiti.gov.ng

NEITI (2023). Host Community Development Report: https://neiti.gov.ng

Environmental Rights Action (2023). Flare Penalties & Accountability https://erafoundation.org/reports/

Human Rights Watch (HRW, 2021). Nigeria's Crackdown on Activists https://www.hrw.org/africa/nigeria

NEITI (2023). Host Community Development Report: https://neiti.gov.ng

SDN (2022) Op cit

Amnesty International (2022). Repression in the Niger Delta https://www.amnesty.org

Kuwait Petroleum Corporation (2024): Flare Reduction Policy

Norwegian Petroleum Directorate (2024): Zero Flaring Policy

Equinor (2024): Electrification of Platforms

Saudi Green Initiative (2023): Carbon Pricing Roadmap

Saudi Vision 2030 – Energy Sector Plan: Official Portal

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