



## Rivers: Impact of Drilling and Flaring on Lagos Citizens Along Badagry Riverine Settlers and Corridors

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### ABSTRACT

The current flaring in Badagry has effectively increased gas flaring in Nigeria, pumping greenhouse gases into the atmosphere and assaulting the health of the people through the release of a cocktail of toxic elements. Globally, emissions released by gas flaring amounts to approximately 400 million tons of CO<sub>2</sub>. It is a harmful as well as wasteful practice through which natural gas worth trillions of Naira is wasted. However, several efforts have been made recently to contain gas flaring which includes the establishment of a liquified natural gas plant, a pipeline to transport gas to some neighbouring countries, and legislative measures to regulate the oil and gas industry but there have not been changes. There is no specific legal framework that prohibits gas flaring in Nigeria despite the environmental problems associated with it. There were no significant changes in the date set by the federal government of Nigeria to mitigate the devastating impact of gas flaring. This paper examines the impact of gas flaring on Lagos citizens along the badagry corridor, the history of gas flaring in badagry, the associated problem of gas flaring, the legal framework for gas flaring and strategies to mitigate gas flaring and make a useful recommendation.

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**Keywords:** Gas Flaring, Drilling, Badagry, Legal Framework for Gas flaring

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### 1 INTRODUCTION

According to OPEC (2016), Nigeria oil and gas sector accounts for about 35 per cent of Gross Domestic Product (GDP), and exports of petroleum revenue represent over 90 per cent of total exports revenue. As stated by OPEC (2016), Nigeria's other natural resources include natural gas, tin, iron ore, coal, limestone, niobium, lead, zinc and arable land. According to OPEC (2016), Nigeria has one of the ten largest natural gas reserves in the world and roughly 50% of the deposits are discovered in association with oil. It possesses the largest deposits of natural gas in Africa, most of which are located in and around the Niger Delta region. According to Aigbedion and Iyayi (2007), Nigeria gas supply comes in two streams which are gas in isolated wells and gas discovered together with oil. These two sources exist in roughly equal proportions. While gas in isolated wells can be left underground until needed, gas discovered together with oil is unavoidably lifted together with crude oil and must either be harvested or disposed of on-site as an unwanted by-product of oil. According to Ibitoye (2014), the common on-site disposal methods are by venting, if the volume is small enough, or flaring for larger volumes.

For many years after the discovery of oil in commercial quantities in Nigeria, most of the associated gas is flared, with its attendant environmental consequences on the health of the people. Nigeria flares 17.2 billion m<sup>3</sup> of natural gas per year in conjunction with the exploration of crude oil in the Niger Delta. This high level of gas flaring is equal to approximately one-quarter of the current power consumption of the African continent. According to Ajugwo (2013), he stated that more than 400 million tons of carbon dioxide are injected into the world's atmosphere yearly from the drilling of gas flares in Nigeria.

The current flaring in Badagry has effectively increased gas flaring in Nigeria, pumping greenhouse gases into the atmosphere and assaulting the health of the people through the release of a cocktail of toxic elements. Globally, emissions released by gas flaring amounts to approximately 400 million tons of CO<sub>2</sub>. It is a harmful as well as wasteful practice through which natural gas worth trillions of Naira is wasted. However, several efforts have been made recently to contain gas flaring which includes the establishment of a liquified natural gas plant, a pipeline to transport gas to some neighbouring countries, and legislative measures to regulate the oil and gas industry but there have not been changes (Ibitoye, 2014). This paper, therefore, looks at the history of gas flaring in the Badagry region of Lagos state, it will also examine those legislative measures put in

place to mitigate the harmful environmental consequences of gas flaring. It will also consider the environmental, health, and social problems associated with the flaring of gas in Nigeria and make recommendations to mitigate the effects of gas flaring in the region.

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## 2. HISTORY OF GAS FLARING IN BADAGRY

Badagry is a coastal town and local government area in Lagos State. It is situated between Lagos State and the border with the Benin Republic at Seme. The local government can boast of a population of over 350,000. The major occupation of the people of Badagry is fishing and farming. Generally, it was learnt that the Egun and the Awori speaking people of badagry are peaceful and good to their visitors as many of them were willing to assist strangers in their community. The Badagry town is noted for being a one-time transit camp of slaves captured from the interior and transported to Europe. This settlement is one of the major tourists' centres in the state. It is noted as the museums of relics and artefacts relating to the trans-Atlantic slave trade in Lagos State.

Places like Badagry, Igbogbele, Rapoji, Agbojetho, Kweme, Aivoji, Iweseme towns and villages; Ajara, Ikoga and Ajido towns are today in the Badagry local government area and are a division of Lagos State. Beautiful and natural as the environment of these rural communities may be, they are presently facing the harsh effects of drilling such as gas flaring from their industrial neighbour, the West Africa Gas Pipeline Company (WAPCo). Though the effect of gas flaring is already being felt in the whole of Badagry Local Government area, Ajido, Imeke, Araromi and Agemuwo are worst hit by this new negative development.

Nigeria, like other oil-producing countries, benefits as well as suffers from the positive and negative effects of crude oil drilling such as gas flaring. After the initial separation of crude oil into gas, oil and water, the oil is sent to refineries for fractional distillation, the gas is usually flared while the water is discharged into the environment. Gas flaring is the controlled burning of natural gases associated with oil production. The consistent flaring has left a devastating effect on the surrounding environment of oil-producing communities. With a daily crude oil output above two million barrels per day, Nigeria has over 200 gas flaring sites, some of which have been on continuously for over 20 years. While about 22 billion standard cubic feet of natural gas is produced daily, about 75 per cent of this quantity is being flared.

Though the Federal Government has been under serious pressure to put an end to gas flaring due to its adverse effects on human health and the environment, the people in the communities around Badagry are currently nursing their pains from the gas being flared by WAPCo. Ajido, Imeke, Araromi and Agemuwo are rustic communities on the bank of the Atlantic Ocean, near Badagry. They are areas in dire need of development through the presence of modern infrastructure. Just about when their prayers were heard, the development has come with a huge cost in terms of pollution, heat, noise and vibration coming from gas being flared by the West African Gas Pipeline Company (WAPCo). Indeed, the travails of host communities in gas-flaring areas of the Niger Delta are now being replicated in this part of the country. About 170 million standard cubic feet of gas per day (MMscfd) is currently being flared in Ajido, Imeke, Araromi and Agemuwo areas of Badagry Local Council of Lagos State by WAPCo.

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## 3. NIGERIA LEGAL FRAMEWORK FOR GAS FLARING

The Petroleum Act 1969 remains the primary law regulating oil and gas exploration activities in Nigeria. The Petroleum (Drilling and Production) Act 1979, made according to the Petroleum Act, provides that the licensee or lessee of an Oil Mining Licence (OML) shall, not later than five years after the commencement of production, submit to the Minister of Petroleum Resources, a feasibility study, programme or proposals that it may have for the utilisation of any natural gas that has been discovered in the relevant area. (Otiotio, 2013). Unfortunately, the provision of the law which required oil companies to submit their strategies for gas utilisation was not seen to be mandatory and no penalty was provided for defaulters. Again, oil companies were permitted to flare gas for five years before submitting the feasibility report. Because of these lacunae, a concrete step to regulate gas flaring in Nigeria was reached in 1979 with the enactment of the Associated Gas Re-Injection Act.

### **Associated Gas Re-Injection Act**

The Associated Gas Re-Injection Act 1979 (as amended) became the first anti-gas flaring regulatory framework in Nigeria. The primary intent and purpose of the Act were to phase out gas flaring in Nigeria. The Associated Gas Re-Injection Act 1979 (as amended) was the statutory response to the environmental impacts of gas flare. In its recital, it is stated to be an Act to compel every company producing oil and gas in Nigeria to submit a preliminary programme for gas re-injections and detail plans for implementation of gas re-injection 20 Section 1 of the Act states thus; 'Notwithstanding the provisions of Regulation 42 of the Petroleum (Drilling and Production) Regulations made under the Petroleum Act, 21 every company producing oil and gas in Nigeria, shall not later than 1 April 1980 submit to the Minister a preliminary programme for (a) schemes for the viable utilisation of all associated gas produced from a field or groups of fields; (b) project or projects to re-inject all gas produced in association with oil but not utilised in an industrial project'. The Act placed a duty on oil companies to submit detailed programmes and plans for implementation of gas re-injection not later than 1 October 1980.

Section 3 of the Act is very important as it appears to outlaw gas flaring in Nigeria. It states as follows:

1. Subject to subsection (2) of this section, no company engaged in the production of oil or gas shall after 1st January 1984 flare gas produced in association with oil without the permission of in writing of the minister.

2. Where the minister is satisfied after 1st January 1984 that utilization or re-injection of the produced gas is not appropriate or feasible in a particular field or fields, he may issue a certificate in that respect in the production of oil or gas
  - a. Specifying such terms and conditions, as he may at his discretion choose to impose, for the continued flaring of gas in the particular field or fields.
  - b. Permitting the company to continue to flare gas in the particular field or fields if the company pays such sum as the Minister may from time to time prescribe for every 28.317 standard cubic metres (SCM) of gas flared

Under the same Act, no company engaged in the production of oil or gas shall, after 1 January 1984, flare gas produced in association with oil without the permission in writing to the Minister. The Minister is vested with the power to issue certificates to an oil company to continue to flare gas if such a company pays the sum prescribed by the Minister. According to Ekwere (2009), the law was provided for application for permits to be granted by the Minister provided the applicant pays the amount prescribed by the Minister, without providing for strict measures to ensure its effectiveness. Adejugbeand Onamade (2014) stated that the Associated Gas Re-Injection Act has been criticised for not paying attention to very salient issues on gas re-injection. Apart from making provision for a feasibility report by oil companies interested in natural gas production, the Act made no mention anywhere about related penalties for gas flaring. Indirectly, it may not be out of place to conclude that the law does not make gas flaring illegal. This position in itself has been identified as one of the major weaknesses of the said Act.

As noted by Oluduro and Oluduro (2015) close to the end of 1984, evidence reveals that no oil company had complied with the provisions of the Associated Gas Re-Injection Act and no evidence indicated that the Minister had insisted that the oil companies complied with it. The reason has been presumably attributed to adverse effects it could have on the nation's economy if its enforcement results in a halt to oil production operations. It has further been argued that the situation can be linked to national economic interest because if the gas flares are taken away the life wire of the nation's economy is extinguished and the nation cannot afford it. Rather than ensure the enforcement of the law, the Minister made the Associated Gas Re-Injection (Continued Flaring of Gas) Regulations 1984 which provides for exemptions to the earlier general ban on flaring. Unfortunately, the monetary penalty for continued flaring of gas by oil companies under the Act is grossly inadequate and is preferred by the oil companies as opposed to complying with the phase-out of gas flaring.

Another problem with the Associated Gas Re-Injection Act was its failure to regulate the party or parties who ought to bear responsibility for gas re-injection costs. Because the law is silent on this, there are uncertainties about what can be referred to as the 'responsibility sharing formula'. Should the responsibility fall on the oil companies or the Nigerian National Petroleum Corporation (NNPC), or the Nigerian government? This is indecisive. Until such a time when this is resolved, the lacuna in this law will continue to lead to many more unresolved dilemmas.

Furthermore, concerning environmental rights issues, is the failure on the part of the Associated Gas Re-injection Act not to prohibit gas flaring a violation of the fundamental human rights (the right to life as guaranteed in international, regional and national laws) and the environmental rights of Nigerian citizens especially those living in the flare locations, most of which are in the Niger Delta Region and Badagry axis. The answer is likely in the affirmative because, in effect, it is arguable that, presently, there is no law safeguarding the environment against the impacts of gas flaring except judicial pronouncement that sought to outlaw gas flaring in Nigeria. In the celebrated case of *Gbemre v Shell* (FHC Benin, 2005), the plaintiff Jonah Gbemre for himself and as representing the Iweherekan community in Niger Shell, sought to enforce their fundamental human right against Shell, Nigeria National Petroleum Corporation and the Attorney General of the Federation as defendants. In a declaratory claim, the plaintiffs alleged that the action of the 1st and 2nd respondents in continuing to flare gas in the course of their oil exploration and production activities is a violation of their right to life and dignity under the 1999 constitution and supported by Articles 4, 16, 24 of the African Charter on Human and people's rights. In addition, the plaintiff claimed a declaration that the provisions of sections 3(2) a,b of the Associated Gas Re-injection Act and section 1 of the Associated Gas Re- Injection (Continued flaring of gas) Regulations under which the continued flaring of gas in Nigeria may be allowed are inconsistent with the applicant's rights aforesaid. Consequently, the applicant prayed the court for an order of perpetual injunction restraining the respondents from further gas flaring in their community. In its judgment, the Federal High Court held that the actions of the 1st and 2nd Respondents in continuing to flare gas in the course of their oil expiration and production activities in the Applicant's community is a gross violation of the applicants' fundamental right to life including healthy environment and dignity of the human person as enshrined in the constitution. The court further held that section 3(2)a and (b) of the Associated Gas Re-injection Act and Section 1 of the Associated Gas Re-injection (Continuing Flaring of Gas) Regulation are null and void for being inconsistent with the applicants' rights to life and dignity of the human person as enshrined in the constitution. The court finally made an order restraining the Respondents from further flaring of gas and ordered them to take immediate steps to stop the further flaring of gas in the Applicants' community. It was further ordered by the court that the Attorney General of the Federation should initiate the process for an Act of the National Assembly for the speedy amendment of the relevant sections of the Associated Gas Re-injection Act Regulations.

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#### 4. INSTITUTIONS REGULATING GAS FLARING IN NIGERIA

The institutions given the responsibilities of regulating gas flaring, among others are, The Ministry of Petroleum Resources and Energy, which is headed by the Petroleum Minister who is statutorily empowered to formulate policies regulating the oil industry via the Department of Petroleum Resources (DPR) to enact regulations for oil exploration and production in Nigeria. To reduce gas flaring, the DPR must efficiently perform its

statutory function of regulating the oil sector by promoting transparent practices in the sector (Abisoye, 2017). There is a need for the Federal Government to approve and release the ministries' budgets or allocations on time to motivate them to perform their statutory mandates or oversight functions efficiently in the sector.

Another institution regulating the sector is the Nigeria Gas Company (NGC). It governs the mid-stream sector to commercialize gas through the development of a fully integrated gas supply system. It has not lived up to expectations by fully optimizing the economic potential of Nigerian gas for the economic benefits of Nigerians and potential foreign investors to end gas flaring and other environmental hazards in the sector (Ofuhie, 2006). The Nigerian National Petroleum Corporation (NNPC) exercises both the fiscal and regulatory functions in the industry; it has twelve subsidiaries, encompassing the whole oil industry operations. The corporation should be allowed to compete commercially with other oil companies in the sector via its upstream petroleum subsidiary, the Nigeria Petroleum Development Company. NNPC should be given full autonomy devoid of governmental interference to enhance its full operation capacities like other legal entities operating in the sector. There is a need to restructure the corporation by separating its commercial roles from its regulatory functions to enhance its efficacy in the industry (Olujobi and Olusola, 2020).

A further agency regulating the sector is the Federal Ministry of Environment, which was set up in 1992 to monitor the environment and to prevent environmental hazards in Nigeria, especially in the oil and gas sector. There is also the Niger Delta Development Commission (NDDC), which was created under the Niger-Delta Development Commission Act, 2000, as a result of the Federal Government's desire to end ecological problems in the oil-producing communities and to combat environmental and ecological problems associated with the petroleum sector's operations in the Niger Delta areas, as stated under sections 3, 7 of the Act. The agency is challenged by mismanagement, corruption, and poor funding due to the failure of some oil companies to comply with section 14(3) (b) of the Act, which requires payment of 3% of the oil companies' budgets to the agency. There is also the problem of the persistent refusal of the Federal Government to fulfil its legal obligations by paying a 15% subvention annually to the agency. This has hampered the efficiency of the agency in performing its statutory functions in the sector (Krane 2019).

The activities of the regulatory authorities in the sector regarding gas flaring over the years appear to be uncoordinated and insufficiently proactive to combat the menace in the sector; therefore, there is the need for a total overhaul of the legal framework establishing the agencies for efficiencies in the discharge of their statutory responsibilities against gas flaring and other environmental hazards in Nigeria.

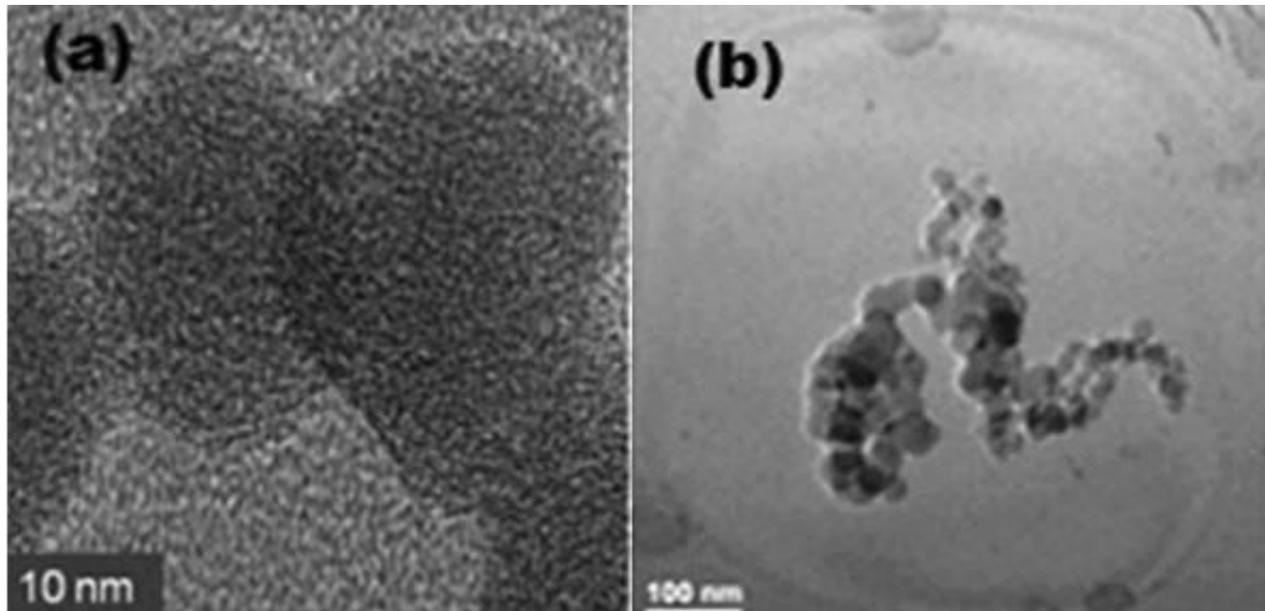
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## 5. ASSOCIATED PROBLEMS & EFFECTS OF GAS FLARING

Gas flaring has been ongoing in the Niger delta since oil production started in the 1960s before it started in the Badagry area of Lagos State (Edino et al., 2010). Nigeria is one of the top countries in the world in terms of flaring of natural gas as part of its petroleum production (second to only Russia). Gas flaring is discouraged by the international community because it has a significantly negative impact on the environment. However, due to inadequate pipeline infrastructure and gas processing facilities, this is still a popular practice in Nigeria. Some of the problems associated with gas flaring in Nigeria especially in the Badagry axis of Lagos State are listed below:

### **Air Pollution**

According to Ologunorisa (2001), the flaring of natural gas leads to the release of toxic greenhouse gases (as combustion products) into the environment. According to Fawole et al. (2016), they mentioned in their research that the gases include CO<sub>2</sub>, CO, SO<sub>2</sub>, NO<sub>x</sub>, Polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds and particulate matter (PM) in the form of black carbon. Also, Ite and Ibok (2013) stated that the extent and nature of toxic pollutants released depend on the design of the flare system, the velocity of the gas stream and the composition of the gas. Anomohanran (2012) conducted an evaluation study on the extent of greenhouse emissions from gas-flaring activities in Nigeria. The study revealed that the amount of gas flared in Nigeria declined at a yearly rate of 10.5%. However, the emissions from flaring far exceed those from the use of the other petroleum products combined. According to Giwa et al. (2014), the emissions of black carbon particulates into the air have been pinpointed as a major challenge due to the excessively large amount of black soot produced from the combustion process. According to Fawole et al. (2016), they stated that seeming non-soothing flames still produce a significant amount of soot as the particle size lies between 10 to 200 nm.



**Figure 1:** TEM micrograph of soot (a) microstructure (b) agglomerates. **Source:**Fawoleet al. (2016)

Figure 1 above shows a transmission electron microscope (TEM) image of soot revealing the microstructure and agglomerates. Besides the CO<sub>2</sub> released from the combustion reaction, the methane itself might escape the combustion zone and be released into the atmosphere. Methane has a far greater global warming potential than CO<sub>2</sub>.

#### **Waste of Valuable Energy Resource**

According to Iteand Ibok (2013), there are over 100 associated natural gas flaring sites in Nigeria which lead to a significant waste of valuable resources. Unfortunately, Nigeria loses an estimated revenue of 2.5 billion dollars to gas flaring annually. In the long run, the decision to flare gas is a bad one as global fossil fuel reserves are in continual decline. This is a key reason why the government is putting motion about the gas master plan and the commercialisation initiative to see how these resources can be harnessed.

#### **Soil and Groundwater pollution**

The flare systems release a lot of pollutants which include toluene, ethylbenzene, benzene, xylenes, aliphatic and polycyclic aromatic hydrocarbons (PAHs) Iteand Ibok (2013). Some of these compounds are mutagens and carcinogens that can bio-accumulate in organic tissues due to their electrochemical stability and lipophilic character. Soil temperature, pH and moisture content is negatively affected by gas flaring too Ubaniand Onyejekwe (2013). Studies have revealed that there are poor water qualities in several parts of the Niger delta, and these are due to not only oil spills but gas flaring too (Nwankwo and Ogagarue, 2013). The physicochemical characterisation of such ground waters shows that it contains higher concentrations of harmful metals such as selenium, cadmium, barium, cyanide, chromium, iron, manganese and copper (Nwankwo and Ogagarue, 2013). There is also an increased conductivity, colour change as well as presence of taste in the water from the gas flaring environment when compared to areas having minimal gas flaring activities. The presence of pollutants such as oil, grease, hydrocarbons and heavy metals have been established in surface and groundwater in some cities in Nigeria such as Ibadan (Adewuyi and Olowu, 2012), Benin (Owamah, 2013), and a host of other southern cities.

#### **Effects on Humans**

According to Edinoet al. (2010), the flaring of gas also has negative effects on humans as it is closely associated with some respiratory diseases. Proximity is a key factor as an estimated number of Nigerians live within 4 kilometres of a gas flare sites such as asthma, bronchitis, breathing difficulty, cough, eye irritation and skin irritation (Iteand Ibok, 2013). This is what the citizens of Badagry are experiencing. The solubilisation of oxides in the air into incoming precipitation from poisonous acid rain is more intense around gas flaring sites and can lead to pollution of water sources which in turn affects the health of the natives in these flaring areas. In general, the air, soil and water (key parts of the ecosystems) are polluted which inadvertently bio-magnifies into the system of the locals.

### Other Effects

The flaring of natural gas has been shown to harm the crops cultivated in areas around the site of flaring. These manifest in the form of deformations, decreased dimensions of leaf length and width Dung (2008). The micro-climate formed around flaring systems can lead to a negative impact on the plants and even on aquatic animals too (Iteand Ibok, 2013). The toxic gases released into the environment also have numerous other secondary negative impacts that do not appear under any of the above-mentioned categories. A good example is an acid rain which is formed from the sulphur and nitrogen oxides present in the air (Ologunorisa, 2001). Studies have shown that noise pollution is also of concern in areas of gas flaring (Ubani and Onyejekwe, 2013).

## 6. PREVIOUS DATE SET BY THE FEDERAL GOVERNMENT OF NIGERIA TO END GAS FLARING

Several efforts have been made by various several administrations in Nigeria to end gas flaring but lack of political will and poor enforcement of the anti-flaring laws have been the challenge against successful combat of gas flaring in Nigeria. Some selected dates previously set to end gas flaring in Nigeria by the Federal Government are listed in Table 2: (Olushola, 2020).

**Table 2:** The Previous Date Fixed to End Gas flaring in Nigeria by FG. **Source:** Olushola (2020)

S/N	Dates	Government in Power	Reasons are given for non-compliance by oil companies	Remarks
1.	1969	Yakubu Gowon	The federal government could not finance the construction of a gas re-injection plant (technologies) within the stipulated time.	The Federal Government set new deadlines annually due to lack of political will and commitment to enact its anti-flaring laws
2.	1983	Muhammadu Buhari	There was a high cost of re-injecting gas in Nigeria	There was no commitment and absence of the political will of the Federal Government to enforce its anti-flaring laws stringently.
3	1984	Muhammadu Buhari	Due to the flaw in the Act which requires a license to flare from the Minister for a fee.	Weak enforcement of Nigeria's anti-flaring laws by the regulatory authorities in the sector
4.	2003	Olusegun Obasanjo	The alleged failure of the government to engage the oil companies before fixing the deadline date.	The non-compliance with the deadline exhibits a lack of commitment and absence of the political will of the Federal Government to enforce its anti-flaring laws.
5.	2004	Olusegun Obasanjo	The claim that the deadline date was not expressly spelt out in the legislation or regulation	The non-compliance with the deadline exhibits a lack of commitment and absence of the political will of the Federal Government to enforce its anti-flaring laws.
6	2008	Umaru Musa Yar'Adua	The claim that the deadline date was not expressly spelt out in the legislation or regulation	The non-compliance with the deadline exhibits a lack of commitment and absence of the political will of the Federal Government to enforce its anti-flaring laws.
7.	2009	Umaru Musa Yar'Adua	The claim that the deadline date was not expressly spelt out in the legislation or regulation	The non-compliance with the deadline exhibits a lack of commitment and absence of the political will of the Federal Government to enforce its anti-flaring laws.
8.	2011	Goodluck Jonathan	Lack of finance to install gas infrastructure to end gas flaring.	Absence of commitment and political will of the Federal Government to enforce its anti-flaring and other environmental laws in the sector.
9.	2012	Goodluck Jonathan	Lack of finance to install gas infrastructure to end gas flaring.	The excuses given by oil companies are not tenable. The government must wake up to its responsibility of preserving the environment, health and well-being of its citizens
10.	2020	Muhammadu Buhari	It is anticipated that they will comply in 2020.	Gas flaring will be a thing of the past through stringent enforcement of Nigeria's anti-flaring laws and regulations with incentives for gas utilization in the sector through the

				implementation of the Nigeria Gas Flare Commercialisation Programme (NGFCP) to monetize flared gas fields. Except where oil companies are issued with a Certificate of Continue Flaring by the Petroleum Minister following the provisions of the Associated Gas Re-injection (Continued Gas Flaring) Act.
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## 7. STRATEGIES TO MITIGATE GAS FLARING IN NIGERIA'S OIL AND GAS SECTOR PARTICULARLY IN BADAGRY REGION

In other to ensure the safety of the citizens of Badagry local government, there is a need to enhance gas network equipment in other reduce gas flaring. The following strategies are to be employed by the federal government of Nigeria to mitigate gas flaring Badagry local government.

1. The Federal Government must encourage the domestic usage of cooking gas and other industrial gases in Nigeria. This will promote the commercial utilization of gas, and it will reduce gas flaring.
2. Since gas flaring is not a threat to Badagry local government along but to the whole citizens of Lagos, there is a need for the Federal government to initiate robust regulatory and financial incentives for gas utilization.
3. Federal government should provide mechanisms for tracking flared gas by oil and gas companies with consistent flare monitoring and evaluation schemes
4. The laws regulating petroleum activities and the contractual agreements between the Federal Government and the oil companies should be detailed on the management and elimination of gas flaring. Licenses should be issued to new oil companies, and license renewals, production sharing arrangements

## 8. CONCLUSION

The issue of gas flaring in Nigeria has become a topical one because of the devastating impact it has on the socio-economic lives of the people in the Badagry area of Lagos State. Historically, it is said that gas flaring is as old as oil production in Nigeria. Oil exploratory activities of oil companies in Nigeria have caused gas flaring resulting in loss of lives and properties in the affected communities where gas is flared. Though the Federal Government has been under serious pressure to put an end to gas flaring due to its adverse effects on human health and the environment, the people in the communities around Badagry are currently nursing their pains from the gas being flared by WAPCo. Ajido, Imeke, Araromi and Agemuwo are rustic communities on the bank of the Atlantic Ocean, near Badagry. On checking on the institution that regulates gas flaring, it was discovered that there has been a failure from the Federal government in the release of the fund to oversee efficiency in the sector. Also, the previous date that was set by the federal government to end gas flaring has a significant effect on the mitigation of gas flaring. The strategies put in place in this paper would help the Federal government to mitigate the devastating impact of gas flaring in Nigeria particularly in Badagry

## 9. RECOMMENDATION

Based on this research, we recommend the following:

1. The National Environmental Standard Regulation Enforcement Agency (Establishment) Act (NESREA), 2007, should be amended to have adequate provisions for fighting oil and gas pollution, degradation, and gas flaring.
2. Section 20 of the 1999 Constitution on the enforcement of environmental objectives should be overhauled and move to the Fundamental Human Rights in chapter four of the 1999 Constitution, thereby making environmental infringements justifiable. This would thus protect and guarantee a healthy and sustainable environment. The right to a healthy environment would deter gas flaring by oil companies through the payment of monetary damages to the Federal Government and the victims of their environmental degradation, thereby promoting stringent compliance with the anti-flaring policies and other enabling environmental laws in the sector.
3. Oil companies should update their drilling tools in conformity with international standards to end gas flaring through the utilization of modern technologies. This would guarantee environmental safeguard and natural resources management. Regulatory policies should be transparent, with

incentives for gas development.

4. There is a need for oil companies to implement environmental management systems that will determine the possible environmental impacts of their activities and to put in place appropriate measures to combat gas flaring.
5. There is a need for more gas pipeline network to be created to enhance the domestic usage of gas and to reduce its flaring.

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