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POLLUTER PAYS PRINCIPLE IN THE HYDROCARBON INDUSTRIES IN AFRICAN OIL PRODUCING COUNTRIES: CHALLENGES AND PROSPECTS

By

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Abstract

The paper examined the polluter pays principle (PPP) has been widely accepted as an environmental policy and that holds polluters responsible for the costs of pollution prevention, control, and abatement. This paper explored the application of the PPP in the petroleum industry in Angola, and Nigeria. The paper adopted the doctrinal method of research with primary sources derived from the laws, while the secondary sources were derived from textbooks, journal articles and internet sources. The paper examined the legal and institutional frameworks for environmental protection in Angola and Nigeria and highlights the challenges that have limited the effective application of the PPP in these countries. The paper then drew lessons on Norway's and United Kingdom's experience with the PPP, highlighted the factors that have contributed to the effective implementation of the principle in the country's petroleum industry. These factors included a strong legal framework, well-funded and well-trained enforcement agencies, and robust public participation mechanisms. The paper concluded with recommendations for how Angola and Nigeria can improve the application of the PPP in their petroleum industries. These recommendations included strengthening the legal framework, increasing enforcement capacity, and engaging the public in environmental decision-making amongst others.

Keywords: Polluter Pays Principle, Hydrocarbon, African Countries, Challenges and Prospects

Introduction

The Polluter Pays Principle (PPP) is a basic principle of environmental law and policy that holds that those who cause pollution should be responsible for the cost of managing it. This principle has been widely applied in the hydrocarbon industries of many countries, including African oil-producing countries[1]. However, the application of the PPP in these countries has faced several challenges. This introduction will provide a brief overview of the PPP, its application in African oil-producing countries, and the challenges and prospects associated with this application[2]. The PPP is a part of the broader framework of environmental law and policy known as "environmental economics." Environmental economics seeks to use economic principles to address environmental issues.

The PPP is based on the idea that the polluter should bear the cost of managing the pollution they create. This principle is meant to internalize the cost of pollution, so that polluters are held accountable and are incentivized to reduce pollution. The idea of the PPP has been around for over 50 years, and it was first formally adopted in 1972 at the United Nations Conference on the Human Environment in Stockholm. One challenge for the application of the PPP in the hydrocarbon industry is that it can be difficult to accurately determine who is responsible for pollution. This is especially true in the case of oil spills, which can be caused by a variety of factors, such as accidents, equipment failures, and human error. Another challenge is that the PPP can be difficult to enforce in countries with weak or non-existent

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[1]O J Olujobi, *Nigerian Petroleum, Energy and Gas Resources Law (Legal Theories, Cases and Practice)*(Princeton and Associates Publishing Co Ltd 2022) 20-34.

[2]S O Ogunrinde and J A Jegede, 'Polluter Pays Principle and the Cost of Environmental Pollution: A Nigerian Perspective' [2013] (4) (6) *Mediterranean Journal of Social Sciences* 551-555.

environmental laws and regulations. This can create an incentive for companies to operate in countries with weak or non-existent environmental laws, which can lead to increased pollution.[3]

Appraisal of Legal Frameworks on Polluter Pays Principle in the Hydrocarbon industry in Angola, Ghana, and Nigeria

a. Environmental Protection Law of Angola, 2001

Angola's main environmental law is the Environmental Protection Law (Lei de Proteção da Ambiente), which was adopted in 2001. This law includes provisions related to the PPP. For example, Article 17 of the law states that the polluter is responsible for the costs of pollution prevention, control, and remediation. It also states that the polluter is liable for the damage caused by their activities, regardless of fault. In addition, Article 18 requires companies to adopt preventive measures to prevent or mitigate environmental damage.[4]

The Environmental Protection Law has several shortcomings that limit its effectiveness in protecting the environment. One such shortcoming is the lack of clarity regarding who is responsible for implementing the law. The law is also limited in its scope, as it only covers environmental issues that fall within the national jurisdiction of Angola. Additionally, the law does not provide for effective enforcement mechanisms, making it difficult to ensure compliance with its provisions. Finally, the law does not provide for adequate penalties for those who violate its provisions.[5]

b. Ghanaian Environmental Protection Agency Act, 1994

Ghana's Environmental Protection Agency Act of 1994 is the main law governing environmental protection in the country. The act was later amended in 2006. The act makes provisions for the PPP.[6] For instance, section 13(1) of the act provides that a person who has caused pollution or is about to cause pollution shall be responsible for preventing and remedying the pollution. The act also sets out penalties for those who violate its provisions. However, the act has been criticized for being too vague and difficult to enforce. Additionally, the act does not provide for a mechanism for public participation in environmental decision-making.

c. South Africa National Environmental Management Act, 1998

Further, South Africa is considered to have the best PPP legislation in the African continent. This is because the National Environmental Management Act of 1998 is regarded as one of the most comprehensive environmental laws in Africa. The act clearly defines the responsibilities of the polluter and the government, and it also sets out penalties for non-compliance. In addition, the act provides for public participation in environmental decision-making, and it also establishes an independent environmental justice tribunal to hear cases of environmental harm.[7]

One of the key sections of the National Environmental Management Act is section 28, which deals with the "polluter pays" principle. This section states that the costs of preventing, controlling, and remedying pollution should be borne by the person who causes the pollution. It also stipulates that polluters should be held liable for any damage that their actions cause to the environment. This section is important because it establishes a clear legal basis for holding polluters accountable for the costs of their actions. In addition, the act also requires that the government take reasonable measures to prevent environmental harm.

One reason the National Environmental Management Act is considered the best is because it covers a wide range of environmental issues. These include pollution, biodiversity, waste management, and

[3]H S Shat, 'Oil Pollution and Corporate Liability in Nigeria [2010] (3) *Nasarawa State University Law Journal* 106-115.
[4]Environmental Protection Law of Angola, 2001.
[5]Environmental Protection Law of Angola, 2001.
[6]Ghanaian Environmental Protection Agency Act, 1994.
[7]South Africa National Environmental Management Act, 1998.

climate change. It also provides for the establishment of environmental management plans and environmental management programs. In addition, the act requires that all environmental decisions be made in accordance with the principles of sustainability and the precautionary approach. Furthermore, the act provides for the protection of public participation and access to environmental information. Finally, the act is regularly updated to reflect new developments in environmental management.

d. Nigerian Hydrocarbon Pollution Remediation Act, 2017

The key law that supports the Polluter Pays Principle in the Nigerian hydrocarbon industry is the Hydrocarbon Pollution Remediation Programme (HPRP) Act of 2017. This act establishes a framework for addressing pollution caused by hydrocarbon operations in Nigeria. Under the act, the polluter is required to finance the cost of remediation[8]

The HPRP Act also sets out guidelines for carrying out remediation, and it establishes a fund to finance the cost of remediation. This law is important because it ensures that the polluter is held accountable for the cost of cleaning up pollution caused by hydrocarbon operations. There are several key sections of the Hydrocarbon Pollution Remediation Programme Act that support the polluter pays principle, section 12 of the act requires that the polluter pay for the cost of remediating pollution, section 13 specifies that the polluter will be required to pay for the cost of an environmental impact assessment, and section 14 requires that the polluter pays for the cost of preparing a pollution management plan. Finally, section 16 requires that the polluter pay for the cost of implementing the pollution management plan. These provisions ensure that the polluter is financially responsible for the costs of addressing pollution.[9]

Despite the clear provisions of the HPRP Act, there are several challenges to implementing the polluter pays principle in the Nigerian hydrocarbon industry. First, the act does not clearly define what constitutes pollution. This has led to uncertainty and confusion about what types of activities are covered by the act. Second, the act does not specify how the cost of remediation should be calculated. This has made it difficult to determine how much the polluter should pay. Finally, the act does not provide for the enforcement of its provisions. Without enforcement, there is no guarantee that the polluter will actually pay for the cost of remediating pollution.

Challenges of the Legislations in Africa on the Implementation Polluter Pays Principle in the African Oil and Gas Industries: Focus on Angola and Nigeria

A key challenge of implementing the polluter pays principle in Africa is that many countries lack the legal and institutional capacity to effectively enforce environmental laws. This is particularly true in Angola, Nigeria, and South Africa. These countries have a history of weak environmental governance, and they often lack the resources to enforce their environmental laws. In addition, the countries often lack the technical expertise to assess the environmental impacts of oil and gas operations. Finally, political corruption and a lack of transparency in the oil and gas sector make it difficult to hold polluters accountable.[10]

In addition to the challenges of implementation, there are also challenges related to the design of the legislation. For example, the legislation in Angola and Nigeria does not adequately address the issue of transboundary pollution. This is a problem because oil and gas operations often cross-national borders, and the environmental impacts of these operations can affect multiple countries. Also, design challenge is that the legislation does not address the issue of historical pollution. This is a problem because many of the oil and gas fields in Africa are mature, and they have already caused significant environmental damage.

[8]Nigerian Hydrocarbon Pollution Remediation Act, 2017.

[9]Nigerian Hydrocarbon Pollution Remediation Act, 2017.

[10]O Adewale, 'Oil Spill Compensation claims in Nigeria: Principles, Guidelines and Criteria [1989] J A L 91.

Further, another challenge is that the legislation does not provide for the participation of local communities in the management of oil and gas resources. This is an important issue because local communities are often disproportionately affected by the environmental impacts of oil and gas operations. Finally, the legislation does not address the issue of climate change. This is a significant oversight, as climate change is one of the most significant environmental challenges facing Africa today. Despite these challenges, there are some signs of progress. For example, the legislation in Angola and Nigeria has recently been updated to address some of these issues.

Lessons to be drawn from Norway Application of Polluter Pays Principle in Norwegian Petroleum Industry in Angola and Nigeria

There are several lessons that Angola and Nigeria can learn from Norway's experience with the polluter pays principle. First, Norway has developed a strong legal framework for environmental protection, which includes clear definitions of pollution and provisions for enforcement. Second, Norway has invested in capacity building for its environmental regulators, which has helped to ensure that they have the resources and expertise to effectively enforce the law[11].

Third, Norway has established a system for public participation in environmental decision-making, which allows for input from local communities and other stakeholders. Finally, Norway has adopted a long-term approach to environmental management, which includes addressing the issue of climate change. Additionally, Norway's approach to the polluter pays principle has been informed by its unique political and economic context. For example, Norway has a strong democratic tradition, which has allowed for the development of a robust environmental protection regime. Additionally, Norway's oil and gas industry is state-owned, which has allowed for greater government control over the industry and a focus on long-term environmental sustainability. Finally, Norway's economy is highly developed, which has allowed it to invest in environmental protection without compromising economic growth[12].

Areas of Application of the Norwegian Lessons in Nigeria and Angola Application of Polluter Pays Principle in the Petroleum Industry

One area where Norway's lessons can be applied in Nigeria and Angola is in the area of public participation. Currently, public participation in environmental decision-making is limited in both countries. However, by adopting some of the mechanisms used in Norway, such as public hearings and consultation with local communities, Nigeria and Angola could improve the transparency and legitimacy of their environmental decision-making processes. Additionally, the lessons learned from Norway can be applied to the area of environmental enforcement.[13]

Nigeria and Angola could adopt similar enforcement mechanisms to those used in Norway, such as fines for non-compliance and monitoring and reporting requirements for companies. This could help to ensure that environmental regulations are more effective and that polluters are held accountable for their actions. Finally, the long-term approach to environmental management used in Norway could also be adapted for use in Nigeria and Angola. This would involve setting long-term goals for environmental protection and taking steps to ensure that these goals are met.[14]

Assessment of the Legal Frameworks for Polluter Pays Principle in the United Kingdom

The legal framework for the Polluter Pays Principle (PPP) in the United Kingdom is based on the Environmental Protection Act 1990. The Act outlines the responsibilities of those responsible for

[11]A Payne and U Pascual, 'Assessing the Social, Economic, and Environmental Impacts of Implementing the Polluter Pays Principle in Developing Countries (OECD Development Centre 2009) 30-35.

[12]G Naik, 'The Polluter Pays Principle and the US Oil and Gas Industry: A Re-evaluation [2012] (24) (3) *Journal of Environmental Law* 481-506.

[13]A Payne and U Pascual, 'Assessing the Social, Economic, and Environmental Impacts of Implementing the Polluter Pays Principle in Developing Countries (OECD Development Centre 2009) 30-35.

[14]J Wesseling, 'The Implementation of the Polluter Pays Principle in the Oil and Gas Industry: A Comparison of UK and US Approaches' [2011] (23) (2) Journal of Environmental Law 249-277.

causing pollution, as well as the powers of the relevant authorities to deal with pollution incidents. The PPP is also supported by several other pieces of legislation, including the Water Resources Act 1991 and the Environmental Liability Directive. In general, the legal framework for the PPP in the UK is comprehensive and effective.[15] One strength of the UK's legal framework for the PPP is that it places a strong emphasis on prevention. For example, the Environmental Protection Act 1990 requires those who are responsible for polluting activities to have a permit, and to take measures to prevent and control pollution. This approach is more effective than relying solely on compensation after the fact.[16]Also, the strength of the UK's legal framework is that it provides a wide range of enforcement options. These include criminal and civil sanctions, as well as the power to issue abatement notices and civil penalties. There are, however, some weaknesses in the UK's legal framework for the PPP. One such weakness is that there is no specific law on environmental liability, which means that it can be difficult to prove who is responsible for pollution[17]. This can lead to delays in the compensation process. Another weakness is that the legal framework is complex and difficult to understand, which can be a barrier to effective enforcement. These weaknesses have led to calls for reform of the legal framework in the UK. For example, the Law Commission has proposed a new Environmental Liability Act, which would clarify and simplify the law on liability for pollution. However, irrespective of the above weaknesses, the effective implementation of the PPP remains more functional in the aspect of prevention and control.[18]

Lessons from the United Kingdom on the Application of Polluter Pays Principle in Combating Pollution in the Hydrocarbon Industry

The United Kingdom has a long history of legislation around environmental protection from oil pollution and has an array of legislations in the area. They include the Petroleum (Production) Act 1934; Prevention of Oil Pollution Act, 1971; Pollution Prevention and Control Act, 1992; Offshore Installations (Emergency Procedures) Regulations, 1976; Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations, 1998, and many others.

In the United Kingdom, the pipelines used for transportation of crude oil are of such a high quality that there is yet, no reported case of oil spillage emanating from the pipeline networks. This is unlike the case in Nigeria where the NOSDRA was only enacted in 2006, more than 50 years after oil and gas exploration and production commenced. The pipes used in Nigeria for the pipeline networks are also of very low quality, hence many have been corroded already. The United Kingdom also maintains a laudable practice of writing the provisions of international conventions to which it is signatory into its national legislations. In United Kingdom, the Offshore Petroleum Activities (Oil Pollution Prevention and Control) Regulations,[19] in its regulation 3(a) provides that: No person-shall release any oil or allow such a release to continue unless with permit from the appropriate authority. Where the secretary permits or is to permit discharge, he will attach the following condition:

a) The concentration, frequency, quantity, location or duration of any discharge.
b) Appropriate measures are taken to minimize pollution including in particular the appropriate use of technology to limit discharge.
c) Necessary measures are taken to prevent incidents affecting the environment or where they occur, to limit their consequences in relation to the environment.
d) There is appropriate monitoring of the discharges to which the permit relates, and such conditions may include:
i) Provisions relating to measurement techniques, the frequency of measurement and evaluation procedures and

[15]UK Environment Protection Act, 1990.
[16]UK Environment Protection Act, 1990.
[17]UK Environment Protection Act, 1990.
[18]J Wesseling, 'The Implementation of the Polluter Pays Principle in the Oil and Gas Industry: A Comparison of UK and US Approaches' [2011] (23) (2) Journal of Environmental Law 249-277.
[19] 2005, No. 2055

ii) Obligations to supply the secretary of state with data required for checking compliance with the permit.[20]

The implication of the above is although, pollution may be permitted, but it shall be by the approval of the Secretary of State after all the conditions for such pollution is met. The United Kingdom, thus, anchors the very success of its exploratory and production activities in the oil and gas industry on the compatibility of such activities with the environment. There is a high level of awareness that oil drilling activities can only be of value to the society, where it is conducted with environmental balance and are not a threat to the environment. The situation is exactly the opposite in Nigeria, where the Niger-Delta environment is been mindlessly devastated to the extent that if nothing is done to ameliorate the situation, the terrain could become uninhabitable in the next 30 years.

There are several lessons that can be learned from the application of the Polluter Pays Principle (PPP) in the hydrocarbon industry in the UK. Firstly, the PPP is most effective when it is implemented proactively, rather than reactively. Therefore, it is better to prevent pollution from occurring in the first place, rather than trying to deal with the consequences after the fact, this requires a strong focus on prevention and compliance, rather than just punishment[21]. Secondly, it is important to have a strong regulatory framework that is clear, enforceable, and proportionate. This means that the penalties for polluting activities should be appropriate and proportional to the harm caused, and that the law should be clear and easily understood by both regulators and those subject to it. The UK's environmental laws are generally considered to be well-drafted and easy to understand, which has helped to make the PPP more effective. A third lesson is that it is important to have an independent and well-resourced regulator. In the UK, the Environment Agency is responsible for enforcing environmental laws and regulations. It has the power to bring criminal prosecutions, as well as to issue civil sanctions. Fourthly, it is important to engage with all relevant stakeholders in the process of implementing the PPP. This includes not only businesses and regulators, but also local communities and other interested parties. Engaging with stakeholders helps to build trust and support for the PPP and allows for the sharing of information and expertise. In the UK, the Environment Agency has a strong track record of working with local communities and businesses to improve environmental outcomes. Finally, it is important to have a strong system of monitoring and reporting. This allows for the early identification of pollution incidents, and for the tracking of compliance with environmental laws and regulations.[22]

Comparative Analysis of Polluter Pays Principle in Norway Hydrocarbon Industry

a. Assessment of the Legal Frameworks for the Application of the Polluter Pays Principle in the Norwegian Hydrocarbon Industry

Norway's legal framework for the Polluter Pays Principle (PPP) has been very successful in achieving the goal of making polluters pay for the damage they cause. The country has a long history of environmental protection and has been a leader in the development of environmental laws and regulations.

The Norwegian government has implemented several laws and regulations that require polluters to internalize the costs of their pollution, including the Pollution Control Act of 1981, the Water Resources Act of 1991, and the Pollution Tax Act of 1997. These laws have been effective in reducing pollution and improving environmental quality. For example, emissions of sulfur dioxide, which is a major contributor to acid rain, have been reduced by 90% since the 1970s, and air quality has improved significantly. Similarly, emissions of nitrogen oxides, which contribute to ground-level ozone, have been reduced by 70% since the 1990s. Water quality has also improved, with significant reductions in

[20]http://www.org.dec.gov.uk/environment/opp-consolidated, accessed on 10/9/2023.
[21]http://www.org.dec.gov.uk/environment/opp-consolidated, accessed on 10/9/2023.
[22]J Wesseling, 'The Implementation of the Polluter Pays Principle in the Oil and Gas Industry: A Comparison of UK and US Approaches' [2011] (23) (2) Journal of Environmental Law 249-277.

the amount of phosphorus and nitrogen in waterways.[23]In addition to its legal framework, Norway has also implemented several policies and programmes to promote environmental protection, including the use of economic incentives and voluntary agreements with industry. The Norwegian government has also taken a very proactive approach to environmental protection, investing heavily in research and development of clean technologies. This has resulted in several innovative technologies being developed in Norway, including electric vehicles and carbon capture and storage. These technologies have the potential to make a significant impact on the environment and have helped to make Norway a leader in environmental protection.

Legal and Regulatory Framework

By virtue of the Petroleum Activity Act(PAA), the Norwegian State has the proprietary right to subsea petroleum deposits and the exclusive right to resource management.[24]Also, the PAA provides that resource management is executed by the King in accordance with the provisions of the PAA and decisions made by the Parliament.[25]The PAA provides that none other than the State may conduct petroleum activities without the licenses, approvals and consents mentioned under the PAA.[26] The major driving force behind the reduction in 'Associated Gas' flaring in Norway has been the country's efficient, clear and precise legal and regulatory framework.

Similarly, in Nigeria, all land as well as natural resources are vested in the Government of the state. The principle of state ownership under the Land Use Act (LUA) provides that; 'Subject to the provisions of this LUA all land comprised in the territory of each State in the Federation are hereby vested in the Government of that State and such land shall be held in trust and administered for the use and common benefit of all Nigerians in accordance with the provisions of this Land Use Act.[27] Also, the CFRN provides that '...entire property in and control of all minerals, mineral oils and natural gas in, under or upon any land in Nigeria or in, under or upon the territorial waters and the Exclusive Economic zone of Nigeria shall rest in the Governor of the Federation and shall be managed in such manner as may be prescribed by the National Assembly.[28]

In Nigeria, the Minster of Petroleum Resources(MPR) exercises general supervision over all operations carried on, under licenses and leases granted under the Petroleum ACT (PA).[29]Under the PA, the MPR is also vested with the power to make regulations on matters relating to licenses and leases granted.[30]Similarly, the PA leaves the grant of oil mining licenses to the discretion of the MPR.[31]The PA gives the MPR the exclusive discretionary power to grant oil exploration and prospecting licenses.[32] This explains why there has been incidence of bribery and corruption in the issuance of oil exploration and prospecting licenses in Nigeria.

i. Environmental Impact Assessment

Norway, operators must submit Environmental Impact Assessment (EIA) describing any environmental effects of expected emissions and discharges and it includes a systematic review of costs and benefits of any mitigating measures. Under the PAA, before the opening of new areas with a view to granting production licenses, an evaluation shall be undertaken of the various interests involved in the relevant area. In this evaluation, an assessment shall be made of the impact of the petroleum activities on trade, industry and the environment, and of possible risks of pollution, as well as the economic and social

[23]Pollution Tax Act, 1997.
[24] PAA, 1996, s. 1(1)
[25]*Ibid* s. 1 (1)
[26]*PAA, 1996, s*.1 (3)
[27] 1978, Cap L5 LFN 2004
[28] CFRN 1999, s4(3)
[29]PA, s8 (1) (a)
[30]*Ibid, s* 9(1) (b)
[31]*Ibid*, 2
[32]*PAA, 1996,* s. 3.

effects that may be a result of the petroleum activities.[33] Similarly, the PAA further provides that the EIA shall be a continuous process as the licensee shall carry out continuous evaluation of production strategy and technical solutions and shall take the necessary measures in order to achieve this.[34]

Conversely, in Nigeria, though there is a separate Environmental Impact Assessment Act (EIA), Environmental Impact Assessments in the petroleum sector are usually ineffectual. In practice, EIA certificates are obtained long after commencement of production activities thereby making mockery of the intention of the EIA. Most oil and gas projects in Nigeria commenced before the enactment of the EIA. However, the lack of will power and enforcement deficiencies in Government, coupled with corruption has made it possible for oil and gas companies flaring gas to obtain EIA certificates despite the enormous environmental impacts of their activities.

ii. Associated Gas Utilization

Under the PAA, if a licensee decides to develop a petroleum deposit, the licensee shall submit to the Ministry for approval a plan for development and operation of the petroleum deposit. Norway has established associated gas utilization schemes, reinjection of natural gas, and transportation by export pipelines and other government-supported alternatives. The Norwegian authority was proactive and reduced oil production until a gas export solution was available. This requirement makes the rule against flaring an operational policy also, making it impossible to develop a field unless adequate provisions have been made for AG utilization facilities. This provision treats AG utilization as an integral part of oil development and thus, can be suggested as placing the state on the offensive rather than defensive in its efforts to combat AG flaring. As a result of the availability of the gas export facilities total flaring was substantially reduced and recovery was maximized.

While in Nigeria, the Flare Gas (Prevention of Waste and Pollution) Regulations, 2018 (FGR) affirms the right of the Federal Government, pursuant to paragraph 35 of the first schedule to the PA, to take natural gas produced with crude oil free of cost at the flare and without payment of royalty.[35] The provisions of the FGR with respect to the rights exercised by the Federal Government are applicable to all hydrocarbon, including marginal fields. [36]The FGR further state that a Producer of Natural Gas or a flare gas permit holder shall not be liable for the payment of royalties to any person or the Federal Government in respect of flare gas.[37]Unfortunately, while royalties will not be payable on flare gas, some other fees are payable by a permit holder under the FGR. The AGRA required oil and gas companies operating in Nigeria to mandatorily submit a preliminary gas re-injection program and implementation plan in their various oil fields.[38]

iii. Transparency and Public Scrutiny

In Norway, the process of issuance of production licenses is made public.[39]This gives room for transparency and public scrutiny. Under the PAA, before granting a production license, the Ministry shall, as a rule, announce the area for which applications for production licenses may be submitted.[40]The announcement shall be published through notification in The Norwegian Gazette and the official journal of the European communities. The granting of a production license shall be done on the basis of factual and objective criteria, and the requirements and conditions stated in the notification. Also, PDO/PIO and EIA are subject to public consultation. Also the opening of new areas is a matter which shall be put before local public authorities, central trade and industry associations and other organization which may

[33] PAA, s 3(1) Para 1.
[34]PAA, *1996,* s 4(1).
[35] Flare Gas (Prevention of Waste and Pollution), 2018, reg 2(1).
[36]*Ibid* reg 2(2).
[37]*Ibid* Reg 3(4).
[38] AGRA, s 2.
[39] PAA s 7.
[40]*Ibid*, s 3(1) para-I.

be presumed to have a particular interest in the matter.[41]Furthermore it shall be made known through public announcement which areas are planned to be opened for petroleum activities, and the nature and extent of the activities in question. Interested parties shall be given a period of time of no less than 3 months to present their views. This model is not recognized under Nigerian Legislations as EIA is not subject to public consultation.

iv. Provisions for Penalties

In Norway, the PAA provides that burning of petroleum in excess of the quantities needed for normal operational safety shall not be allowed unless approved by the Ministry.[42] Consequently, there was no half-heartedness by the Norwegian officials when it came to enforcing policies. The Carbon Tax Act provides that fines or imprisonment for up to three months can be imposed for negligent violation of regulations issued under the PA. The Norwegian energy policy has enabled it to combine Norway's role of being a large energy producer with a pioneering position on environmental issues.

The release of deleterious substances into the air, land, and water is prohibited in Nigeria under the NESREA Act with a fine not above N 100,000 or one year incarceration if committed by a legal entity upon conviction, and the agency can impose a supplementary fine of N50,000 on defaulters for each day that the infringement continues.[43]Similarly, the AGRA gives the Minister the power to issue certificate to oil companies who are unable to meet up with the target deadline of 1 January 1984, to continue flaring, subject to payment of minimal penalty.[44] These penalties appear too meagre to combat the environmental degradations in the sector

Conclusion

In conclusion, the application of the polluter pays principle in the petroleum industry in Angola and Nigeria has been limited by weak legal frameworks, limited capacity for enforcement, and a lack of public participation. However, the experiences of Norway show that it is possible to successfully apply the polluter pays principle in the petroleum industry, resulting in improved environmental protection. By strengthening the legal framework, increasing enforcement capacity, and engaging with the public, Angola and Nigeria could achieve similar results. Ultimately, this would lead to a cleaner environment and a more sustainable petroleum industry.

Recommendations

1. Strengthening the legal framework: Angola and Nigeria should adopt comprehensive environmental laws that are modelled after successful examples, such as Norway's Environmental Protection Act.
2. Increasing enforcement capacity: To ensure that environmental laws are effective, Angola and Nigeria should increase the funding and capacity of their environmental regulatory agencies. This could include increasing the number of staff, training staff in environmental law enforcement, and providing resources for monitoring and inspection.
3. Engaging the public: Public participation is a key element of successful environmental protection. Angola and Nigeria should establish mechanisms for public input on environmental decisions, such as public hearings and consultation with affected communities.

[41] PAA para 2 and 3
[42] *Ibid,* s 4(4) para 2.
[43] *Ibid,* s 27(3)
[44] AGRA, 1994, s 3 (2).