AN OVERVIEW OF THE INTERNATIONAL LEGAL APPROACH TO GAS FLARE REDUCTION

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Abstract

Nigeria is a developing country and one of the largest gas flaring countries in the world. Over the years, the country has been gravely affected by the adverse effects of gas flaring. Flaring of associated gas has global environmental, economic, social and health implications. This realization, has led to a global reaction to reduce gas flaring volumes. The International community has sought to address the impact of gas flaring through some conventions and policies with the belief that this would reduce gas flaring. Despite being signatory to various international conventions and treaties with the aim of ameliorating the deficiencies in its environmental governance and energy sector, it is discouraging to know that gas is still being flared on a daily basis in Nigeria. This paper examines the international regimes on the reduction of gas flaring, the measures taken at the international level to mitigate the incidences of gas flaring and its attendant effects on our environment. It reviews the existing legal framework and policy direction in this regard and makes recommendations for improved and sustained gas utilization for electricity generation, industrial and domestic utilization of gas.

Keywords: gas flaring, environment, oil and gas exploration and production, energy.

1. Introduction

Throughout the ages, human societies have altered the ecosystem and modified the climate of the areas they have inhabited by their various activities. The increase in population in all the continents in the world has also had its global impact in nature. Human activities in agriculture and industry have led to high emissions of polyatomic molecules in the atmosphere and have adversely affected the earth's climate which is now an issue of great international concern.[1] The oil and gas sector through its activities contributes to the environmental hazards hence the global attention accorded to environmental protection in the world. These environmental hazards may be in the form of greenhouse gases, poisonous and carcinogenic chemicals produced as a result of gas flaring and other activities in the sector. These chemicals bring about destruction of the fauna, flora, clean water, soil and the environment generally through oil spills and other oil drilling activities amongst others.[2]

A major problem with oil and gas activities is the inability of governments and their regulatory agencies to control and prevent environmental pollutions and other associated problems. Gas

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[1] Okukpon, I. (2010). *Phasing-Out Gas Flaring In Nigeria: A Critical Assessment of the Regulatory Regime* (Doctoral dissertation, University of Cape Town).

[2] Ezeibe, K. K. (2011). The Legislative and Institutional Framework of Environmental Protection in the Oil and Gas Sector in Nigeria–A Review. *Nnamdi Azikiwe University Journal of International Law and Jurisprudence, 2*.

flaring is one of the top environmental issues facing the world and has persisted for decades[3].The potential impact of gas flaring on the environment has been recognized by the international community at large and certain international regimes put in place with the belief that the enactment of environmental and conservation laws together with independent enforcement framework will impact positively in changing the attitude of stakeholders towards environmental protection and reduction in gas flaring.[4] Thus, the major focus of this brief paper would be on the international legal approach to gas flare reduction and its effect to Nigeria as a country.

2. The concept of gas flaring and its impact on the environment

Gas flaring is the burning of natural gas that is associated with crude oil when it is pumped up from the ground. In petroleum-producing areas if insufficient investment was made in infrastructure to utilize natural gas, flaring is employed to dispose of this associated gas.[5] The gas is burned off because it is perceived as a by-product of the process of oil exploration and development. The commonly stated alternatives to gas flaring include: gathering and processing it for use, stock-piling or storing the gas until it can be sold off where transport networks and a viable market is available, re-inject it into the subsoil to sustain the pressure level of the oil reservoirs during production and lastly, gas can be utilized for powering micro-turbine generators for electricity production in an oil field.[6]

1.1 Reasons for gas flaring

Gas flaring is the controlled burning off of natural gas from an oil or gas well and this is done for a variety of reasons. Firstly, when a well is drilled, a temporary flare can be used for well production testing to determine pressure, flow and composition of the gas from the well. Again, flaring can be used as a safety mechanism in emergency situations to quickly lower pressure. Most companies who do so employ flaring because they lack the infrastructure (i.e., pipelines and processing plants) and the financial incentive to capture the natural gas. Oil wells may have the lower market value if gas is flared off rather than capturing when the infrastructure is not available to capture.

2.2 Impact of gas flaring on human lives

a) Health implications

The implications of gas flaring on human health are all related to human exposure to those hazardous air pollutants emitted during incomplete combustion of gas flare. These pollutants are associated with a variety of adverse health impacts including cancer, neurological, reproductive and developmental effects. Deformities in children, lung damage and skin problems have also been reported.[7] Hydrocarbon compounds are known to cause some adverse changes in

[3] http://www.academia.edu/3615407/GAS_FLARING_REGULATION_IN_THE_OIL_AND_GAS_INDUSTRY_A_Comparative_Analysis_of_Nigeria_and_Texas_Regulations (accessed 10th February,2020)

[4] ibid

[5] Oyewunmi, O. A., & Oyewunmi, A. E. (2016). Managing gas flaring and allied issues in the oil and gas industry: Reflections on Nigeria. *Mediterranean Journal of Social Sciences*, *7*(4), 643

[6] *Ibid.*

[7] Ovuakporaye, S. I., Aloamaka, C. P., Ojieh, A. E., Ejebe, D. E. and Mordi, J. C,. 'Effects of gas flaring on lung function among residents of ib Gas flaring community in Delta State, Nigeria,' Res. J. Env. Earth Sci. 4(5). 525-528. 2012.

hematological parameters. These changes affect blood and blood-forming cells negatively and could give rise to anemia, pancytopenia and leukemia.[8]

b) Environmental implications

i. Climate change

Gas flaring and venting contribute to climate change, which has serious implications for both Nigeria and the rest of the world. The burning of fossil fuel, mainly coal, oil and gas, emit greenhouse gases which have dissipated the earth's ozone layer leading to warming up of the world. This global warming is projected to get worse during the course of the 21st century according to the inter-governmental panel on climate change. The impact will be particularly severe for developing countries and Africa as a continent is regarded as highly vulnerable with limited ability to adapt.

ii. Acid rain

Acid rains have been linked to the activities of gas flaring. Corrugated roofs in the Delta region have been corroded by the composition of the rain that falls as a result of flaring. The primary causes of acid rain are emissions of sulphur-dioxide and nitrogen-oxide which combine with atmospheric moisture to form sulfuric acid and nitric acid respectively. Acid rain acidifies lakes and streams and damages vegetation. In addition, acid rain acceleratesthe decay of building materials, paints and also contributes to health decline.

iii. Agriculture

The flares associated with gas flaring give rise to atmospheric contaminants. These include oxides of nitrogen, carbon and culphur, particulate matter, hydrocarbons and ash, photochemical oxidants, and hydrogen-sulphide. These contaminants acidify the soil, hence depleting soil nutrients. The effects of change in temperature on crops include stunted growth, scorched plants and withered young crops.

c) Economic implications

Aside from the health and environmental consequences of gas flaring, the nation also loses billions of dollars-worth of gas which is literally burnt off daily in the atmosphere. Much of this can be converted for domestic use and for electricity generation. By so doing the level of electricity generation in the country could be raised to meet national demand. Nigeria has recorded huge revenue losses due to gas flaring and oil spillage.[9]

3. The International Regime on Gas Flare Reduction.

It has been argued that developing countries tend to deliberately relax their environmental regulations due to investment drive. The impact of inadequate regulation or governance on the environmental effects of exploration and exploitation activities in the energy sector outweighs

[8]Ajugwo, A. O. (2013). Negative effects of gas flaring: The Nigerian experience. *Journal of Environment Pollution and Human Health, 1*(1), 6-8.

[9]Alawode, A.J. & Omisakin, O.A. (2011). Monetizing Natural Gas Reserves: Global Trend Nigeria's Achievements and Future Possibilities. The Pacific Journal of Science and Technology 12 (1), 138-151.

the attraction - the notion that global environmentalism is part of the larger picture of globalism.[10]

The international community has sought to address the impact of gas flaring through some conventions and policies with the belief that this would reduce gas flaring.[11] Nigeria, a developing country, is one of the largest gas flaring countries in the world and has subscribed to these international environmental instruments (conventions and policies) with the sole aim of ameliorating the deficiencies in its environmental governance as well as the energy sector.

The international environmental regimes on gas flaring is identified and discussed below are the United Nations Framework Convention on Climatic Change (UNFCCC), the Kyoto Protocol and the Global Gas Flaring Reduction (GGFR).

3.1 The United Nations Framework Convention on Climatic Change (UNFCCC)

The United Nations Framework Convention on Climate Change (UNFCCC) which was signed in 1992 at the United Nations Conference on Environment and Development constitutes the foundational climate agreement that has provided the platform for most subsequent international climate agreements. The objective of the treaty is to stabilize Green House Gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.[12]

The Convention on Climate Change sets an overall framework for inter-governmental efforts to tackle the challenges posed by climate change.[13] It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon-dioxide and other green-house gases.[14] The Convention enjoys near universal membership. Under the Convention, governments gather and share information on greenhouse gas emissions, national policies and best practices, launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries and co-operate in preparing for adaptation to the impacts of climate change.[15]

The treaty itself sets no binding limits on greenhouse gas emissions for individual countries and contains no enforcement mechanisms. In that sense, the treaty is considered legally non-binding. Instead, the treaty provides a framework for negotiating specific international treaties that may set binding limits on greenhouse gases.[16] The *Convention* entered into force on 21 March 1994.

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[10]Oke, Y. (2013, October). International Climate Law and Mining Regulation–Perspectives from Developing Countries. In *Climate Change: International Law and Global Governance* (pp. 899-932). Nomos Verlagsgesellschaft mbH & Co. KG.

[11] Stein, R. (2001). Jan Glazewski Environmental Law in South Africa. *SOUTH AFRICAN JOURNAL ON HUMAN RIGHTS*, *17*(2), 289-290.

[12]Malumfashi, G. I. (2007). Phase-out of gas flaring in Nigeria by 2008: The prospects of a multi-win project. *Centre for Energy Petroleum and Mineral Law and Policy (CEPMLP), University of Dundee, Scotland, United Kingdom*.

[13]Halvorssen, A. M. (2007). UNFCCC, the Kyoto protocol, and the WTO-brewing conflicts or are they mutually supportive. *Denv. J. Int'l L. & Pol'y*, *36*, 369.

[14]http://unfccc.int/essential_background/convention/items/2627.php (accessed on 10th February 2020).

[15] Schipper, E. L. F. (2006). Conceptual history of adaptation in the UNFCCC process. Review of European Community & International Environmental Law, 15(1), 82-92.

[16] UNFCC STATUS ON RATIFICATION available at https://unfccc.int/process-and-meetings/the-convention/status-of-ratification/status-of-ratification-of-the-convention (accessed 12th March 2020)

Parties to the *Convention* continue to meet regularly to take stock of progress in implementing their obligations under the treaty, and to consider further actions to address the climate change threat.[17] Some of the amendments that have been made to the convention since the convention came into force include:

i. Bali Action Plan (BAP)

The thirteenth session of the Conference of the Parties in Bali, December 2007 adopted the *Bali Action Plan*, a two-year process designed to finalize a binding agreement in Copenhagen in 2009. The *Bali Action Plan* identifies five key building blocks required for a strengthened future response to climate change and to enable the full, effective and sustained implementation of the convention.[18]

ii. National Adaptation Programmes of Action (NAPAs)

In 2001, the seventh Conference of Parties of the UNFCCC recognized that developing countries needed assistance in developing plans to address the adverse effects of climate change[19]. In particular, the Conference of the Parties (COP) decided that the Least Developed Countries (LDCs) should be assisted in preparing National Adaptation Programs of Action to address urgent and immediate needs and concerns related to adaptation to the adverse effects of climate change. 'NAPA' should be considered as a process and not as a single document. It is a means for LDCs to communicate and disseminate their proposed programmes to address their adaptation needs.[20]

iii. Nairobi Work Programme

The Nairobi Work Programme (NWP) strives to assist all parties, in particular developing countries, including the least developed countries and small island developing states, to improve their understanding and assessment of impacts, vulnerability and adaptation, and to make informed decisions on practical adaptation actions and measures to respond to climate change on a sound, scientific, technical and socioeconomic basis, taking into account current and future climate change and variability.[21]

iv. Kyoto Protocol

The *Kyoto Protocol* was signed in 1997 as a protocol to the *UNFCCC* and entered into force on February 14, 2005.[22]The *Kyoto Protocol* is an international agreement linked to the *United Nations Framework Convention on Climate Change*, which commits its parties by setting

[17]http://www.iisd.ca/process/climate_atm-fcccintro.htm (accessed 10th February, 2020)

[18] Report of the Conference of the Parties on its thirteenth session, held in Bali from 3 to 15 December 2007 available at: https://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf (accessed on 10th March, 2020).The key building blocks are shared vision, mitigation, adaptation, technology and financial resources.

[19] Huq, N., & Hugé, J. (2010). National Adaptation Programme of Action (NAPA)–An Assessment of Workers' Rights. *Seminary "climate change, impacts on employment and the labour market–responses to the challenges"*.

[20] Bali Road Map. A united nationa publication on climate change available At: https : //unfccc.int /resource/docs/2007/cop13/eng/06a01.pdf (accessed 13th March 2020)

[21] Nairobi work programme on impacts, vulnerability and adaptation to climate change available at:https://unfccc.int/topics/adaptation-and-resilience/workstreams/nairobi-work-programme-on-impacts-vulnerability-and-adaptation-to-climate-change?p=333:104:3842292106596741::::P104_FID:179 (accessed 13th March 2020)

[22]Text of the Kyoto protocol to the united nations framework convention on climate change available at: http://unfccc.int/kyoto_protocol/items/2830.php (accessed 10th February, 2020)

internationally binding emission reduction target based on the premise that (a) global warming exists and (b) man-made carbon emissions have caused it.[23] The protocol derives its sustenance from Article 2 of the *UNFCCC* which states that the ultimate objective of the protocol is to stabilize the concentration of greenhouse gases in the atmosphere "at a level that would prevent dangerous anthropogenic (i.e., human) interference with the climate system." [24]Recognizing that developed countries are principally responsible for the current high levels of *GHG* emissions in the atmosphere as a result of more than 150 years of industrial activity, the protocol places a heavier burden on developed nations under the principle of common but differentiated responsibilities.[25]

Nigeria became a signatory to the *Kyoto Protocol* on the 23rd of October 1998, and ratified the *Kyoto Protocol* in 30th of September 2004. Nigeria, as a non-Annex I country, has the possibility and the potentials to benefit from the market-based mechanism created by the protocol. Nigeria has indeed collaborated with the *United Nations Industrial Development Organization (UNIDO)* and *CDM* Secretariat in accessing some projects targeted at reducing gas flaring such as the West African Gas Pipeline project and other gas utilization projects.[26]

One important element of the Kyoto Protocol is its flexibility mechanisms that enable nations to achieve their emission target by means other than reducing their domestic emission of greenhouse gases. Such mechanisms are the Clean Development, Joint Implementation, and Emission Trading Mechanisms.

International Emissions Trading: Under article 17 of the *Kyoto Protocol*, countries with commitments under the protocol can acquire emission units from other countries with commitments under the protocol and use them towards meeting a part of their targets. An international transaction log and a software-based accounting system ensure secure transfer of emission reduction units between countries.[27]

Joint Implementation (JI): Through the JI mechanism, a country with an emission reduction limitation commitment under the protocol may take part in an emission reduction or removal project in any other country with a commitment under the protocol, and count the resulting emission units towards meeting its *Kyoto* targets. This is provided for under article 6 of the Kyoto protocol.[28] Under this mechanism, there are two tracks by which projects can apply for approval: party-verification and international independent body verification. The mechanism is overseen by the *JI Supervisory Committee* that answers ultimately to the countries that have ratified the protocol.[29]

Clean Development Mechanism (CDM): The *CDM* is not defined in the protocol. However, its purpose is to: "assist parties not included in Annex I in achieving sustainable development and in

[23]Kyoto Protocol to the United Nations Framework Convention on Climate Change, 31 ILM 849 (1992)
[24] Article 2 of the UNFCCC
[25]http://unfccc.int/kyoto_protocol/items/2830.php (accessed 10th February, 2020)
[26]http://law.ucalgary.ca/files/law/2014-olayinka_legal-and-institutional-imperatives-for-designing-a-regional-emissions-trading-scheme.pdf (accessed 10th February,2020)
[27]http://unfccc.int/resource/docs/publications/mechanisms.pdf (accessed 12th March, 2020)
[28] ibid
[29] ibid

contributing to the ultimate objective of the convention, and to assist parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments under Article 3[30]. As provided by article 12 of the protocol, *CDM* allows emission reduction or removal projects in developing countries to earn certified emission reduction credits *(CER),* each equivalent to one ton of carbon and these certified emission credits can be traded and also used by industrialized countries to meet a part of their emission reduction targets.[31] This mechanism stimulates sustainable development and emission reductions while giving industrialized countries some flexibility in how they meet their emission reduction limitation targets. The mechanism is overseen by the *CDM Executive Board.*[32]Nigeria is one of the beneficiaries of this scheme.[33]

3.1 Global Gas Flaring Reduction (GFFR)

The *Global Gas Flaring Reduction Partnership (*GGFR), a public-private initiative comprising international and national oil companies, national and regional governments, and international institutions.[34] *GGFR* works to increase use of natural gas associated with oil production by helping remove technical and regulatory barriers to flaring reduction, conducting research, disseminating best practices, and developing country-specific gas flaring reduction programs.[35]*The World Bank Group*, in collaboration with the government of Norway initiated this global public–private partnership to facilitate gas flaring reduction with a view to reducing air pollution, save energy and money, and reduce associated poverty. Ending poverty and boosting shared prosperity is also an integral part of *GGFR's* strategy. [36]

Another initiative introduced by the World Bank was officially launched in 2015 by the United Nations, the World Bank, a coalition of governments, oil companies and development institutions known as the *Zero Routine Flaring by 2030.*[37] This Zero Routine Flaring by 2030 initiative introduced by the World Bank brings together governments, oil companies, and development institutions who recognize the flaring situation described above is unsustainable from a resource management and environmental perspective, and who agree to cooperate to eliminate routine flaring no later than 2030.[38] The initiative pertains to routine flaring and not to flaring for safety reasons or non-routine flaring, which nevertheless should be minimized. Routine flaring of gas is flaring during normal oil production operations in the absence of sufficient facilities or amenable geology to re-inject the produced gas, utilize it on-site, or dispatch it to a market. Venting is not an acceptable substitute for flaring.[39]

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[30] Article 12.2 of the Kyoto protocol available at http://unfccc.int/resource/docs/convkp/kpeng.pdf [Accessed 12 February 2020]

[31] Article 12.3(b)of the Kyoto protocol available at http://unfccc.int/resource/docs/convkp/kpeng.pdf [Accessed 12 February 2020]

[32] Ibid

[33] Article 12.5(b) (c) of the Kyoto protocol available at http://unfccc.int/resource/docs/convkp/kpeng.pdf [Accessed 12 February 2020]

[34]Gbite Adeniji, "Approaches to Gas Flare Reduction in Nigeria," Paper presented at GGFR Global Forum, London, (25, February 2020).

[35]http://www.worldbank.org/en/programs/gasflaringreduction (accessed 10th March,2020)

[36] *ibid*

[37]Cutler, J., Hamso, B., & Sucre, F. 'Zero Routine Flaring by 2030': a new global industry standard. *The APPEA Journal*, *58*(2), 533-537.

[38]Zero routine flaring by 2030, a publication of the world bank group. Available at: http://www.worldbank.org/en/programs/zero-routine-flaring-by-2030 (accessed 10th March, 2020)

[39] Ibid

Governments that endorse the initiative will provide a legal, regulatory, investment, and operating environment that is conducive to upstream investments and to the development of viable markets for utilization of the gas and the infrastructure necessary to deliver the gas to these markets. This will provide companies the confidence and incentive to invest in flare elimination solutions. Governments will require, and stipulate in their new prospect offers, that field development plans for new oil fields incorporate sustainable utilization or conservation of the field's associated gas without routine flaring. Furthermore, governments will make every effort to ensure that routine flaring at existing oil fields ends as soon as possible, and no later than 2030.[40]

Oil companies that endorse the initiative will develop new oil fields they operate according to plans that incorporate sustainable utilization or conservation of the field's associated gas without routine flaring. Oil companies with routine flaring at existing oil fields they operate will seek to implement economically viable solutions to eliminate this legacy flaring as soon as possible, and no later than 2030.[41]

Development institutions that endorse the Initiative will facilitate cooperation and implementation, and consider the use of financial instruments and other measures, particularly in their client countries. They will endeavor to do so also in client countries that have not endorsed the Initiative.[42] Governments and oil companies that endorse the Initiative will publicly report their flaring and progress towards the initiative on an annual basis. They also agree to the World Bank aggregating and reporting the same.

4. Impact of the International Regimes on Nigeria

Nigeria is a signatory to numerous international instruments dealing with the environment. At the national level, a significant legislative effort has been made by the Nigerian Government to combat the menace of gas flaring in the provisions incorporated into *the Petroleum Industry Bill, 2012*. This bill seeks to consolidate all the existing oil and gas laws in the country into one piece of legislation. The fundamental objectives of the bill included amongst others, the prudent management and allocation of petroleum resources and their derivatives in accordance with the principles of good governance, transparency and the sustainable development of Nigeria.[43]

The bill provides that natural gas shall not be flared or vented in any oil and gas production operation, block or field after the flare-out date to be prescribed by the Minister in regulations to be made pursuant to the *Act*.[44] The bill further provides that any licensee or lessee who flares or vents gas without a permit from the Minister shall pay a fine, which shall not be less than the value of the gas flared.[45] The bill prohibits the issuance of a license or lease for the production of

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[40] ibid
[41] Aniche, E.T. International Oil Corporations (IOCs), Associated Gas Utilization Technologies and Gas Flare Elimination Strategies: Implication for Zero-Gas Flaring Regime in Nigeria. Journal of Asian and African Social Science and Humanities, 1(1): 48-64, 2015
[42] ibid
[43] See section 8 – 9 of the petroleum industry bill 2012
[44] See s.275
[45] See s.277(3).

oil and gas to any applicant without an acceptable comprehensive program for the utilization or reinjection of natural gas.[46] It mandates all operators to install metering equipment within three months of the *Act* coming into force to measure the volume of gas flared,[47] makes gas flaring without a permit a criminal offence[48] and mandates any person, group of persons or community to lodge a documented report of gas flaring or venting with the nearest office of the Inspectorate.[49]

The Nigerian Government on its part attempted to address the challenges posed by gas flaring by drew up a *Climatic Change Commission Bill in 2011* which was aimed at institutionalizing climatic change governance in Nigeria, this was done in addition to the national policy frame work on climatic change which was already in existence.[50]To the best of our knowledge this bill was never passed into law though it can still be counted as one of the steps taken by the *National Assembly* to deal with the problem of climatic change which poses grave danger to Nigeria.

Under the Kyoto protocol, the *Clean Development Mechanism (CDM)* holds the most potential for the African nations especially Nigeria. In this regime, the prime purpose of the CDM is to encourage the flow of capital from developed to developing countries and Nigeria can benefit from all these if it takes due advantage of this mechanisms.[51] The few *CDM* projects in place have been creating jobs to the people from the hosting communities and other Nigerians at large. This job creation has reduced rate of restiveness by the Nigerian youths who were offered job via *CDM* projects. The total amount of *CERs* generated when sold can generate huge amounts of money for the Nigerian government to offset its debts and provide some infrastructural facilities to the citizens.

The *CDM* projects implementation has reduced the cost of maintaining and cleaning the Nigerian environment (post remediation clean-up of oil spill and vented gas) by the government. For example, the municipal solid waste facility in Lagos state can compost the generated solid wastes into fertilizer thereby preventing the venting of methane gas. The *CDM* is reducing the amount of gas flared in Nigeria by capturing and reusing the natural gas that would otherwise be flared. Some of the projects like the '*Afam Gas Turbine'*, a natural gas-based power project of Tower Power Utility Limited (TPUL) can supply gas to generate electricity which is dispatched to the national electricity grid or consumed locally. This is a boost to solving electricity problem in Nigeria. The villagers who depend on woods as fuel source will limit the rate of cutting down trees for energy.

The *CDM* has presented a potential opportunity for foreign investors to invest in Nigeria thereby improving the Nigerian economy as a result of capital flow into the nation's economy. This mechanism can make Nigeria become a potential carbon trading market. Another benefit of

[46] See s. 278.
[47] See s.279.
[48] See s.281.
[49] See s.280(1)

[50] https://unfccc.int/files/meetings/durban_nov_2011/statements/application/pdf/111207_cop17_hls_nigeria.pdf (accessed 11th march, 2020)
[51] Okafor, O. (2011). Environmental Laws and Factors Affecting Them in Nigeria: Case Study of Gas Flaring Laws in Niger Delta.

CDM in Nigeria is the opportunity for technology and knowledge transfer in the power, oil and gas sector. This technology transfer is a window of opportunity for Nigeria to improve technologically and develop its gas and power sector.

Finally, Nigeria as a member of the partnership in the *Global Gas Reduction Initiative (GGFR*) has also benefitted from the implementation of demonstration projects for associated gas utilization and also assistance rendered to seven countries which include Nigeria, Equatorial Guinea, Cameron, Algeria, Kazakhstan and Qatar in meeting flaring out targets. The work in Nigeria has specifically continued to focus on supporting the ongoing dialogue between the Nigerian Government, the international oil companies and all other relevant stakeholders in developing a feasible approach to flare reduction through the *Nigerian Flare Reduction Committee (NFRC).*[52]

5. Conclusion

The focus of this research work is on gas flaring and the international commitments made towards the reduction of gas flaring. This paper has attempted to look at the various international environmental regimes for gas flaring i.e The United Nations Convention on Climatic Change (UNFCCC) as the Major Convention, the Kyoto Protocol which derives its sustenance from the UNFCCC and the Global Gas Flaring Reduction Initiative (GGFR) of the World Bank that has also given birth to the Zero Routine Flaring by 2030 initiative.

Furthermore, we have in examining these regimes tried to link it up with our own country Nigeria by analyzing how this international legal regime has affected our country, especially the Clean Development Mechanism under the Kyoto Protocol. In conclusion, despite all the measures being put in place by the international community and notwithstanding the fact that Nigeria is a party and signatory to most of these policies if not all, the truth remains that Nigeria has not done much in terms of gas flaring as she is still the second largest gas flaring nation in the world after Russia.

It is not enough for Nigeria to keep ratifying international agreements and policies, she has her own role to play as a country. We therefore recommend that existing legislations on gas flaring be revised and realistic sanctions should be placed on the multinational companies to further deter them from flaring gas. Regulatory agencies should be set up or if they already exist be resurrected and made more efficient. Nigeria ought to borrow a leaf from Canada who has succeeded in reducing its gas flaring activities to the barest minimum.

Many of the Annex 1 countries have pledged to support Nigeria but have not done so. The Nigerian government should not relent but maintain constant diplomacy to the *United Nations* who would ensure that these pledges are fulfilled.

It is also suggested that the *Gas Flaring Prohibition* and *Punishment Bill 2020*, be signed into law. This *Bill* will help Nigeria to reduce gas flaring in line with international best practices. It will bring gas flare penalty in line with current economic realities; and ensure the achievement of

[52] Otiotio, D. (2013). Gas Flaring Regulation in the Oil and Gas Industry: A Comparative Analysis of Nigeria and Texas Regulations. *GAS*.

the *National Flare-out* target of January 1, 2030 is achieved. The Bill which also seeks to increase the gas flaring penalty to an appropriate and commensurate level sufficient to de-incentivize the practice of gas flaring, whilst introducing other market measures to encourage efficient gas utilization is what the country needs at this point to phase out the problem of gas flaring.

To achieve the *Zero Routine Flaring* by 2030 initiative of the World Bank, it is recommended that the president gives his assent to the National *Climate Change Commission Bill.* Nigeria can learn from the progressive legislation of the other developing countries. Not having a climate law pays lip service to the climate fight. Inability of the country to have a comprehensive legal and institutional framework to address climate change is a hindrance to the efforts on reduction of gas flaring.