GLOBAL EFFORTS AGAINST CLIMATE CHANGE IN THE OIL AND GAS SECTOR: A CASE STUDY OF CHINA AND NIGERIA`S LEGISLATIVE COMPLIANCE WITH SDG 13.

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Abstract

Economic development and social progress ought to rank hand in hand with a healthy environment. This, perhaps, is theobjective behind the conception of Sustainable Development Goal (SDG) by the United Nations` General Assembly in the year 2015. Goal 13 of the SDG, which is of paramount interest to this paper, is about sustaining the climate and prevent ugly occurrence of climate change for bad, and which UN member states, especially, oil producing member states are expected to use as guide to frame their dealings in petroleum resources with multinational companies. It is, however, disappointing that nations of the world, including Nigeria, have prioritised economy, technological, industrial and social developments over ecologically balanced environment as enunciated by goal 13 of SDG. For instance, there has been no emergence of new set of legislations or policies reflecting serious commitment to incorporate climate change prevention or mitigation into Nigeria's national life. This paper is interested in the extent of compliance of an oil producing nation like Nigeria with goal 13 of SDG especially in its oil and gas dealings with a country like China which is the second largest economy and one of the major importers of petroleum resources from Africa.

Key words: Sustainable Development Goal (SDG), Nationally Determined Contribution (NDC), United Nation Framework Convention and Climate Change (UNFCCC)

1. Introduction

The outbreak of various plagues and epidemics throughout historysuch as Asian flu,[1] Swine flu,[2] Polio,[3] Ebola,[4] and now, Covid19,[5]with which man has been afflicted as a result of bad management of human environment, has jolted him to the reality that one person`s environment is everybody`s environment since environment has no physical boarder or limit. Such disease outbreaks and spread have been aided by technological advancement, seamless international trade, globalization, industrialization and cross-border human relations all which have reduced the world to a sizable entity. There are

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[1] The Asian Flu pandemic was another global showing for influenza. With its roots in China, the disease claimed more than 1 million lives. The virus that caused the pandemic was a blend of avian flu viruses.

[2] It was caused by a new strain of H1N1 that originated in Mexico in the spring of 2009 before spreading to the rest of the world.

[3] N Strochlic and D Riley Champine, How some cities 'flattened the curve' during the 1918 flu pandemic, *National Geographic*, Washington D.C, 27th of March, 2020, p. 15.

[4] Ebola ravaged West Africa between 2014 and 2016, with 28,600 reported cases and 11,325 deaths. The first case to be reported was in Guinea in December 2013, then the disease quickly spread to Liberia and Sierra Leone. The bulk of the cases and deaths occurred in those three countries.

[5] S Oyekanmi, Covid-19 Update in Nigeria, *Nairametrics*, Nigeria, 31st of May, 2020, https://nairametrics.com/2020/05/31/covid-19-update-in-nigeria/

also threatening global environmental problems like ozone depletion, desertification, poverty, insecurity and, importantly, climate change, which are staring the world in the face. The world has realised that many of the most pressing environmental problems facing mankind today are global in nature and need be addressed together as members of the global family. For instance, global warming is global warming anywhere in the world and it is, therefore, a global issue since a tonne of carbon dioxide is a tonne of carbon dioxide, wherever it is emitted. Climate change, also known as global warming, refers to the rise in average surface temperatures on earth[6] and it is occurring atan increasingly fast rate due to steady rise in greenhouse gas emissions, air, water and land pollution especially by oil substances, deforestation and gas flaring.[7] All this is also affecting the global ecological balance.

This, no doubt, explains why the United Nations General Assembly, in the year 2015, through its UN Resolution70/1, came up with a broad based, interdependent, strategic and comprehensive policy to combat poverty, hunger and promote good health, well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation, and infrastructure, reduction in inequality, sustainable cities and communities, responsible consumption and production, improvement in life below water and on land, peace, justice, strong institutions, partnerships and, importantly, maintenance of good climate.[8] The goals of the SDG are seventeen in number with each goal having targets that are measurable with indicators to track and visualize their progress.[9] The UN member states are expected to use the said goals to frame and formulate their agendas, political policies and domestic legislations so as to put them on the path of attainment of the sustainable development goal before the year 2030.[10] Of all the SDG`s goals, goal number 13 is of utmost interest and very important because it is about rescuing the world from the debilitating impacts of climate change.

This paper is interested in how, in the face of global advancement in technology and industrialisation with attendant reliance on petroleum energy, the world can deal successfully with climate action.

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[6]*Mark Twain,*Overview: Weather, Global Warming and Climate Change, Site Editor: Holly Shaftel, Managing Editor:Randal Jackson, Science Editor: Susan Callery, Science Editor: Daniel Bailey, https://climate.nasa.gov/resources/global-warming-vs-climate-change/, Site last updated: May 19, 2020

[7] Bharat Raj Singh and Onkar Singh, Study of Impacts of Global Warming on Climate Change: Rise in Sea Level and Disaster Frequency, *Intech Open Compact*, London, submitted on 15th of November, 2011; Reviewed on 5th of June, 2012; Published on 19th of September, 2012, p.13.

[8]Kaysie Brown, How 2020 Can Be A Springboard Year for the Sustainable Development Goals, *United Nations Foundation*, 19th December, 2019, https://unfoundation.org/blog/post/how-2020-can-be-a-springboard-year-for-the-sustainable-development-goals/

[9]*Ibid.*

[10]*Ibid.*

2. Climate Action and the Business of Oil Production

Economic development and social progress ought to rank hand in hand with a healthy environment but the heavy reliance of man on manufactured goods for his life comfort as well as overbearing energy requirement to achieve and sustain industrial and technological development are too tempting for countries of the world to turn away from. Apart from that, many countries of the world, including Nigeria with monolithic economy, rely heavily on oil and gas production as a veritable source of foreign exchange earnings. Countries like Nigeria for whom oil and gas production is the primary industry will find it difficult to 'sacrifice' the gains of oil and gas on the altar of global environmental wellbeing. The country is the world's 11th largest producer of oil with a current output of 2.2 million barrels of quality crude per day.[11]Between the year 2000 and 2009 alone, the price of crude oil contributed about 80% of the country's GDP which rose from $13 per barrel to a high of $125 per barrel.[12] As at 2015, Nigeria was regarded as the world's 20th largest economy, with its worth more than $500 billion and $1 trillion in terms of nominal GDP and purchasing power parityrespectively.[13] All these feats were achieved through steady progress in oil exploration and production. However, with the big expectations and prospect of economic development, also come the challenges of environmental degradation through oil pollution and constant gas flaring.

The two fundamental environmental practices mostly contributing to the heating up of the climate include gas flaring and pollution of different kinds, especially oil pollution - both bi-products of oil exploration and production. Some even erroneously believe that gas flaring and oil pollution are necessary and unavoidable phenomena in an oil producing country.

2.1 Oil Pollution and Gas Flaring

Oil pollution is the corruption, defilement or the contamination of soil, air or water by oil substances. It is the consequence of oil exploration and production activities. For instance, in Nigeria, the discovery of oil in commercial quantity brought an influx of multinational oil companies into the country and through their explorative activities, pollution of the environment occurs, either through direct spillage, in the process of production, oil products' leakage from ship, storage vessels or production walls, disposal of used oil or by deliberate illicit oil dumping by the oil companies. In the year 2014 alone, Shell BP reported 204 Niger Delta oil spills while ENI, which operates in a smaller

[11]Okorodudu-Fubara, M.T. (2011), The environmental issues in the Nigerian Oil and Gas Industry: Pollution Control andManagement. Paper presented at a retreat in Calabar, Cross River State of Nigeria for Committees in the House of Representatives vested with oversight responsibilities in the oil and gas industry. p. 1.
[12]Obasesam Okoi, The paradox of Nigeria's oil dependency, *African Portal*, Nigeria, 21st of January, 2019, p.3.
[13]*Ibid*, no. 14.

area, reported a staggering 349 spills.[14] These oil companies, especially, Shell, have made no significant progress in tackling oil spills.[15]The human cost is horrific, because people are living with the pollution every day of their lives. In some more advanced climes, the rate at which oil spill is recorded in Nigeria would have become a national emergency. In Nigeria, it appears to be standard operating procedure for the oil industry.[16] The Nigerian National Petroleum Corporation (NNPC) estimated the quantity of oil spewed into the environment of some communities yearly to measure around 2,300 cubic metres with an average of 300 individual spills annually.[17]

Gas flaring, on its own, is a phenomenon that is wasteful in terms of natural resources as well as a contributor to global greenhouse emissions.[18] Flaring of Gas is globally known to be detrimental to the environment, as well as a significant waste of natural resources.[19] It involves burning of natural gas that is associated with crude oil in a place where there is no infrastructure to make use of it.[20] This is a common and usual practice in oil production process that occurs in oil fields, platforms, refineries and industrial plants.[21] Thus, associated gas produced in oil producing countries which lack a well-developed gas infrastructure is often released into the atmosphere, either ignited (flared) or vented.[22] Devastating environmental effects of this practice have led many other countries of the world to reduce gas flaring to a bare minimum.[23] Oil companies operating in Nigeria see

[14]*Amnesty International,* Nigeria: Hundreds of oil spills continue to blight Niger Delta, https://www.amnesty.org/en/latest/news/2015/03/hundreds-of-oil-spills-continue-to-blight-niger-delta/ 19 March 2015, p. 3, Accessed on 26th March, 2020..
[15]*Ibid*,no. 16,p. 3.
[16]*Ibid*, p. 5.
[17]J. Nriagu, E.A. Udofia, I. Ekong, G. Ubuk, Health Risks Associated with Oil Pollution in the Niger Delta, Nigeria, *International Journal of Environmental Research and Public Health,* Nigeria,2016, p. 15. See also S Oyadongha, N/Delta Twin Oil Spills: We are breathing contaminated , deadly air; down with different kind of ailments, *Vanguard*, July 29, 2018, 4:56 am,https://www.vanguardngr.com/2018/07/n-delta-twin-oil-spills-we-are-breathing-contaminated-deadly-air-down-with-different-kinds-of-ailments/, Retrieved on 3rd September, 2018; MJ Watts &I. S. Ibaba, Turbulent Oil: Conflict and Insecurity in the Niger Delta, p.1-19, Published online, 18th of March, 2017, Retrieved on 23rd of August, 2017.
[18]C Suykens, Gas Flaring in Developing Countries Need for Kyoto Mechanisms or Sectoral Crediting Mechanisms, <http://www.heinonline.org.ezproxy.rgu.ac.uk/HOL/Page?handle=hein.journals/cclr2010&div=8&start_page=42&collection=journals&set_as_cursor=2&men_tab=srchresults. Accessed on 20th, March 2020, p.42.
[19]*Ibid,* 42.
[20] P Carsten, Amnesty says Shell, Eni negligent on Nigeria oil spills, *Downstream Virtual, https://www.reuters.com/article/us-oil-nigeria/amnesty-says-shell-eni-negligent-on-nigeria-oil-spills-idUSKCN1GS00A,*16th March, 2018, Accessed on 22nd of May, 2020.
[21]*Ibid*
[22] VB Aghogin, 'Gas flaring, government policies and regulations in Nigeria: 2008, a myth or reality' (2008) 2 <http://dspace.nwu.ac.za/bitstream/handle/10394/3633/aghogin_victorb(1).pdf;sequence=1> accessed 20 March 2017.
[23]For instance, Alberta, the largest oil producing state in Canada, has recorded tremendous success in reducing gas flaring. In Alberta, the environmental regulations cut the amount of natural gas flared by 80.4 percent between 1996 and year 2010, reducing greenhouse gas emissions by more than eight million tonnes

gas flaring as a necessary and unavoidable phenomenon. As a matter of fact, gas flaring has been a standard practice in Nigeria since oil production began.[24] As a result of this, most of the oil wells in Nigeria are set on ranging flame that burn escaping gas twenty four hours a day, reaching hundreds of feet into the sky, and thereby killing the surrounding vegetation with soaring heat, smoke, soot and toxic chemicals into the air along with a potent mixture of greenhouse gases.[25] It has been estimated that Nigeria's gas flaring contributes more greenhouse gases to the atmosphere than all of sub-Sahara Africa combined.[26]

3. China's Oil and Gas Dealings in Nigeria

The oil and gas industry in Nigeria consists essentially of the downstream, the upstream and the servicing companies. The country`s downstream major players are: Shell Petroleum Development Company Ltd. (SPDC), Mobil Producing Nigeria Unlimited, Chevron Texaco, Agip Oil Company Nigeria Ltd, Elf Nigeria Ltd. Others are Dubril Oil (Nigeria), Conoil(Nigeria), Ashland (US), Pan Ocean (Switzerland), Statoil (Norway), Conoco (US), British Gas (Britain), Nigeria Liquefied Natural Gas (Nigeria).[27]

China is a relatively new entrant in the Nigerian oil and gas business. It has, however, captured the interest of this paper because of China`s status as the emerging technology arrowhead of the world and the fact that it is, currently, the world's second largest net importer of petroleum and other liquids from Africa.[28] China`s fast growing domestic demand for oil has become greater than its domestic oil production due to its economic growth which has exceeded the domestic oil capacity.[29] It has, therefore, resorted to importation of oil to compensate for the shortfall in its supply capacity. Through her National Oil Companies (NOCs), China is currently investing heavily in the exploration and production of oil and gas supplies in Africa, especially in Nigeria. As a matter of fact, Africa is currently the second largest region supplying oil and gas to China with

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of carbon dioxide equivalent. Eric Taylor and Ann McMillan, Air Quality Management: Canadian Perspectives on a Global Issue, *Springer*, Canada, 2014, p.22.

[24]*Ibid*, p. 8.

[25] R Boele, H Fabig, D Wheeler, A study in unsustainable development: The story of Shell, Nigeria and the Ogoni people – environment, economy, relationships: conflict and prospects for resolution,https://onlinelibrary.wiley.com/doi/abs/10.1002/sd.161, 24th of March, 2001, Accessed on 19th of May, 2020.

[26]*Ibid*, p. 17.

[27]Okorodudu-Fubara, M.T. (2011), The environmental issues in the Nigerian Oil and Gas Industry: Pollution Control and Management. Paper presentation at a retreat in Calabar, Cross River State of Nigeria for Committees in the House of Representatives vested with oversight responsibilities in the oil and gas industry. p. 1.

[28]Laura Silver, Kat Devlin and Christine Huang, China's Economic Growth Mostly Welcomed in Emerging Markets, but Neighbors Wary of Its Influence, Pew Research Center, USA, 5th of December, 2019, p. 2.

[29]Haijiang Wang, China's Impact on the World Crude-oil Market, *The Journal of Energy and Development*, International researchCenterforEnergyandEconomicDevelopment(ICEED),https://www.jstor.org/stable/24808017, Accessed on 22nd of May, 2020, p.16.

more than 25% of Africa's total oil and gas imported into China.[30] The three key players in the frontline of the Chinese oil dealings are its state owned oil companies, namely: China National Offshore Oil Corporation (CNOOC), China National Petroleum Corporation, China National Refinery Corp, and Sinopec with over US$15 billion development and production capital expenditure in Africa's upstream sector. The investment which is more than the US$10 billion China is putting into South America oil and gas and more than twice the estimated investment they are staking in oil and gas in North America. Around two-thirds of the spending is in Nigeria, Angola, Uganda and Mozambique. SINOPEC and CNOOC are well established in Nigeria and Angola, while CNPC has a stake in the Rovuma LNG project in Mozambique.[31] In 2009, the China Petroleum and Chemical Corporation acquired Addax of Canada[32] which had substantial Nigerian oil assets including offshore and one onshore oil operations.[33] China is, at present, hugely exposed to the Nigeria`s oil and gas sector with high investment in the purchase of oil reserves.

3.1 China's Legal Framework for the Oil and Gas Industry

China`s domestic oil and gas upstream is governed by so many domestic legislations including its Constitution. Others are the Mineral Resources Law, the Petroleum Administration Act, the Marine Environmental Protection Law, the Oil and Gas Pipeline Protection Law, the Atmospheric Pollution Prevention and Treatment Law, the Safety Production Law, the Implementation Rules for Mineral Resources Law, the Property Law, the Management Measures on the Transfer of Prospecting and Mining Rights, the Management Measures on the Registration of Mineral Resources Exploration Zones, the Management Measures on the Registration of Mineral Resources Mining, the Rules on Foreign Cooperation in Exploiting Offshore Oil Resources, the Rules on Foreign Cooperation in Exploiting Onshore Oil Resources, the Management Rules on the Environmental Protection in Offshore Oil Exploration and Exploitation.[34] It is, however, surprising that none of these statutes was made pursuant to the goal 13 of SDG.

The provisions of all the laws governing China`s oil industry reflect the philosophy behind China`s oil and gas dealings which are principally import driven. The major concern or priority of the laws is to promote sound development of the oil industry, to safeguard the production and sales of oil, to ensure the steady supply of oil, to enhance

[30] *Ibid.* p.18.
[31] *Ibid*, no. 46,18.
[32] Addax Petroleum was originally part of the Addax & Oryx Group of Companies (AOG) which was founded in 1987. In 1989 AOG embarked on an ambitious expansion programme with the aim of becoming a vertically integrated oil company focused on the African continent.
[33] *Ibid*, p.5.
[34] Zhong Lun Law Firm, Energy China, 2020, Gli Global Legal Insight, China, 18th of January, 2020, Accessed on 15th May, 2020, https://www.globallegalinsights.com/practice-areas/energy-laws-and-regulations/china

people's livelihoods, and to develop the national economy.[35] They are, however, not unmindful of the need to give consideration to environmental protection even in the face of obvious prioritised economic interest.[36] For instance, China`s Petroleum Administration Act contains sixty articles in all, none of the articles make any provision for environmental protection. The focus of the Act is strictly how to regulate business of oil importation, storage, refining and transportation under the most conducive business environment.

The Regulations of the People's Republic of China on the Prevention and Control of Marine Pollution from Ships is another Chinese oil industry legislation which came into effect on 1st of March, 2010. The intentions of the Regulations are to establish comprehensive rules governing oil pollution prevention, response and clean-up within the country`s waters.[37] The scope of the Regulations extends to any ship-sourced pollution and any ship-related operation that causes or may cause pollution damage in the internal waters, territorial waters and the contiguous zones, exclusive economic zone and continental shelf of China and all other sea areas under its jurisdiction.[38]

Wide range of issues are provided for by the Regulations. These include the discharge and reception of oil pollutants; dumping of waste and permissions for dumping;[39] oil pollution response planning; oil spill clean-up arrangements reporting and emergency handling of pollution incidents; investigation and compensation of pollution incidents;[40] supervision of the loading, lightening and discharging of polluting hazardous cargoes; and penalties for contravening any requirement of the Regulations.[41] Compulsory insurance regime for certain vessels also introduced. Importantly, provisions are made for domestic ship oil pollution compensation fund. The party causing the pollution to the marine environment is liable for the pollution damage. If the pollution was wholly caused by intentional act or fault of a third party, then that third party is liable.[42]Where the pollution damage was wholly caused by either war, natural disaster of an irresistible nature, or negligence/wrongful act of government authority in exercising its responsibility for the maintenance of lights or other navigational aids in the exercise of that function and if the pollution could not be prevented even though timely and proper measures were taken, a party will be exempted from liability.[43]

[35] Article 1, China`s Petroleum Administration Act
[36] *Ibid*, Article 1.
[37] Article 1.
[38] Article 2.
[39] Articles 4, 5 and 6.
[40] Article 12.
[41] Articles 36 and 37 of the Law of the People's Republic of China on Marine Environmental Protection.
[42] Article 50
[43] Article 51.

The owner of any ships (except ships of less than 1,000 GT and not carrying oil cargo) navigating in China`s governed waters is required to maintain insurance for oil pollution liability or to have other appropriate financial security in place in accordance with the relevant subsidiary legislation to be promulgated by Chinese government.[44] This is so because China is a state party to the 1992 Compensation Liability Convention[45] and the International Convention on Civil Liability for Bunker Oil Pollution Damage (BUNKER).[46] The liability provisions in the Regulations largely mirror those contained in those Conventions, which provide for strict liability to a ship owner for pollution damage arising from the carriage of persistent oil by sea[47] and strict liability of the ship owner for pollution damage caused by spills of bunker oil.[48] These Conventions make insurance mandatory for certain vessels. The Chinese Maritime Safety Administration (MSA) will, however, determine and publish a list of competent insurance providers that will be qualified to provide the necessary insurance cover.[49]The Regulations also require that clean-up contracts be agreed in advance of entering a China`s port. The operator of any ship carrying polluting and hazardous liquid cargoes in bulk and any other vessel above 10,000 GT is required to have a pollution clean-up contract with an approved pollution response company.[50]

Another oil and gas industry legislation in China is the Mineral Resources Law of the Peoples Republic of China.[51] The Law was formulated in accordance with the Constitution of the People's Republic of China with a view to developing the mining industry, to promoting the exploration, development, utilization and protection of mineral resources and to ensuring the present and long-term requirements of the socialist modernization.[52] It applies in the exploration and exploitation of mineral resources within the territory of the People's Republic of China and in the sea areas under its jurisdiction.[53] Like other oil and gas industry legislations in China, the Mineral Resources Law is principally concerned with exploration and exploitation of mineral resources, registration for mineral exploration and examination and approval of mineral exploitation, collective

[44] Article 53.
[45] The 1992 Civil Liability Convention (1992 CLC) governs the liability of shipowners for oil pollution damage.
[46] The Convention was adopted to ensure that adequate, prompt, and effective compensation is available to persons who suffer damage caused by spills of oil, when carried as fuel in ships' bunkers.
[47] Articles 39, 40 and 41.
[48]2001 Bunker Convention
[49] Article vii (2) of 1992 Civil Liability Convention.
[50] Article 33.
[51]It was adopted at the 15th Meeting of the Standing Committee of the Sixth National People's Congress and promulgated by Order No. 36 of the President of China on March 19, 1986. It became effective from 1st day of October, 1986.
[52] Article 1.
[53] Article 2.

mining enterprises of villages and towns and mining by individuals,[54] and appropriate sanctions for violators of the provisions of the law.[55] It has insignificant concern for protection of the environment from pollution by oil. The greatest point of note regarding protection of the Chinese environment from oil pollution is the provisions on state adoption of policy requiring mineral resources to be mined with compensation by any oil mining licence holder to be paid to anyone who suffers damage as a result of a holder`s explorative activities in accordance with relevant state provisions.[56] The law encourages anyone wishing to explore mineral resources to register according to subsisting laws and to apply for the right of mining as only lawful rights of exploration and mining are protected by the state.[57] This is necessary in order to ensure order and safeguard mining industry from interference and disruption.

In line with the Chinese Constitution, the Mineral Resources Law vests ownership of mineral resources, either near the earth's surface or underground, in the state;[58] and that is prohibited from changing even with the ownership or right of any individual to the use of the land which such mineral resources are attached to.[59] The state is, therefore, to safeguard the rational development and utilization of mineral resources. Seizing or damaging mineral resources by any means and by any organization or individual is forbidden.

4. Nigeria's Legal Framework for Control of Oil Pollution

Several legal measures have been put in place by the successive Nigerian governments in form of enactment of statutes for the control of oil pollution which is a veritable cause of global warming. These include principal legislations such as the Petroleum Act, 1969, the Oil in Navigable Waters Act, 1968, Oil Pipelines Act, 1990, Associated Gas Re-Injection Act, 1979 and National Oil Spill Detection and Response Agency (Establishment) Act, 2006. There are subsidiary legislations like the Petroleum (Drilling and Production) Regulations, 1969, Petroleum Refining Regulations, 1977, and Oil Pipelines Regulations. There are also the guidelines known as the Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN), 1991 and revised in the year 2002. It is, however, disappointing that no statute has been enacted by the country since the adoption of goal 13 of the SDG in the year 2015 by the UN General Assembly. It was expected of the UN member states to frame their national life in such a way to integrate, incorporate measures which will strategically aid in combating climate change. Member states of UN are also expected to improve education, awareness and human and institutional capacities on climate change mitigation, impact reduction and promote mechanisms for raising

[54] Chapters III and V.
[55] Chapter VI.
[56] Article 5.
[57] Chapter II.
[58] Article 3.
[59] *Ibid*, 3.

capacity for effective climate change-related planning and management. None of the subsisting Nigerian oil industry legislations has any reflection of these expectations in its provisions, and it does not look like Nigeria is joining the UN to wage war against global warming. The available oil industry legislations in Nigeria are hereunder briefly discussed.

a. Petroleum Act, 1969 : The Nigeria`s comprehensive piece of legislation was enacted primarily to regulate the exploration, production and distribution of petroleum in Nigeria.[60] One important thing about it is its vesting in the Nigeria`s Federal Government the ownership of petroleum resources.[61] It merely has tangential provisions for the control of oil and gas pollution and contains no sanctions for pollution of the environment with oil and gas. It, however, empowers the Minister to make necessary regulations for prevention of oil pollution of Nigeria`s environment.[62] It is greatly surprising that since the adoption of goal 13 of the SDG, the Act has not been amended to accommodate the goal of sustaining a safe global climate.

b. *Petroleum (Drilling and Production) Regulations, 1969* **:** The Regulation was put together by the Minister pursuant to the power he derived from the provisions of the Petroleum Act.[63] The central interest of the Regulations was the control of the storage, transportation and marketing of petroleum products. However, the Regulations enjoins oil mining license holders to adopt all practicable precautions, including procurement of up to date equipment to prevent pollution of inland waters, rivers, water courses, the territorial waters of Nigeria or the high seas by oil, mud or other fluid or substances which might cause harm or destruction to fresh water or marine life and where any such pollution occurs or has occurred, shall take prompt steps to control, and, if possible, end it.[64] The Regulations[65] also enjoin the operators in the oil industry to carry out operations in accordance with good oil field practices and to take reasonable steps to control the flow and prevent the escape of waste from relevant areas. There is also provision for confinement of petroleum by using approved methods and practices acceptable to the Head of Petroleum Inspectorate for confining the petroleum obtained from the relevant areas in tanks, gas holders, pipes, pipelines or other receptacles constructed for that purpose.[66] Restrictions are also placed on oil mining license holders from using land

[60]Cap P 10 LFN, 2004.
[61]*Ibid*, section 1.
[62]*Ibid*, section 9 (1) (a) (b) (iii).
[63]*Ibid*, no. 80, section 9.
[64]Petroleum (Drilling and Production) Regulations 25.
[65] *Ibid*, Regulation 37.
[66]*Ibid*. Regulation 40

within fifty yards of any building, dam, reservoir, public road, etc;[67] and there is prohibition of cutting down of trees in forest reserves without lawful permission.[68]

c. *Oil in Navigable Waters Act, 1968* : Oil in Navigable Waters Act[69] was enacted in response to international conventions and other relevant international initiatives. Due to geographical separation of the regions of major production of crude oil and region of high consumption and utilization of same, crude oil has to be transported in ships, by rail and through extensive pipelines from producing to consuming areas. In the process of its transportation, spillage, in varying magnitude, does occur. The international governmental bodies and Nigeria seek to eliminate such spillage, hence the enactment of this Act which has now been codified as Cap O6 LFN, 2004.

The provisions of the Act[70] makes it an offence for any Nigerian ship to discharge oil, or any mixture mixed with oil, into the prohibited sea areas created under the International Convention for the Prevention of Pollution of the Sea by Ship of 1954 as amended in 1962. The prohibited sea areas are described, in detail, by the schedule to the Act. The Act also makes it an offence for any person to discharge oil or mixture containing oil from any vessel, or from any place on land, or from any apparatus used for transferring oil to or from any vessel (whether to or from a place on land, to or from another vessel). The Act, however, permits the discharge of oil and other mixture into the waters under some circumstances and that has been widely touted as one major low point for it. It also prohibits an action to be brought under the Act except with the consent of the Attorney-General of the Federation.[71] The provision is considered to have penchant to cause delays in prosecution of cases under the Act and dampen the enthusiasm of enforcement officers.

e. *Oil Pipelines Act, 1990* **:** Oil Pipelines Act[72] was primarily enacted to provide for a right of access for any licensee or an operator of an oil concession to construct and lay pipelines for the purpose of transporting crude oil and gas. The Act [73]creates a civil liability on the person who owns or is in charge of oil pipelines, as he will be liable to pay compensation to anyone who suffers physical or economic injury as a result of a break or leak in his pipelines.

f. *National Oil Spill Detection and Response Agency (Establishment) Act, 2006* **:** This Act, which came into force in the year 2006, is a specialized and principal legislation on environmental protection in the Nigeria`s oil and gas sector. It establishes the National

[67]*Ibid*, Regulation 17 (1) (b)
[68]*Ibid*. Regulation 23 and 27
[69] Now Cap O6 LFN, 2004.
[70] Oil in Navigable Waters Act, section 1 (1)
[71]*Ibid*, no. 92, section 12.
[72]Cap O7, LFN 2004.
[73]*Ibid*, section 11 (5).

Oil Spill Detection and Response Agency (NOSDRA) which has the responsibility to administer the Nigeria`s National Oil Spill Contingency Plan (NOSCP) in compliance with the International Conventions on Oil Pollution.[74] The Plan is a national system for responding promptly and effectively to all oil pollution incidents occurring in Nigeria. The plan is for use by all operators in the Oil and Gas sector of Nigeria including all organizations involved in exploration, exploitation, production, transportation, handling and storage of petroleum products. The Act also establishes the advisory, monitoring, evaluating, mediating and co-ordinating arm of NOSDRA known as the National Control and Response Centre (NCRC).[75]

5. Regulatory Framework for Gas Flaring In Nigeria

Nigeria has made several efforts in regulating gas flaring through enactment of legislations. These include the 1979 Associated Gas Re-Injection Act, the 1983 Associated Gas Re-injection (Amendment) Act, the 1985 Associated Gas Re-injection (Amendment) Decree and the 2004 Associated Gas Re-injection (Amendment) Act.[76] The courts, on their part, have also confirmed the illegality of gas flaring as seen in the case of *Gbemre v. Shell Petroleum Development Co.*[77]wherein the court 'ordered the respondents and their servants or workers to desist from further flaring of gas in the applicant's community (Niger Delta) and to take immediate steps to stop the further flaring of gas. Nigeria is a signatory to several international conventions, for example, the United Nation Framework Convention and Climate Change (UNFCCC) and Kyoto protocol aimed to reduce gas flaring.[78] However, these efforts have been unsuccessful as gas flaring continues unabated and accepted by oil multinational companies, either because the laws are defective or that they are not properly implemented or enforced.[79]Some of the legislations enacted to check gas flaring practice in Nigeria are, hereunder, discussed:

a. *Associated Gas Re-Injection Act:* This Act was enacted due to the high incidents of flaring of gas and it was the first legislation to deal with gas flaring in Nigeria. The Act requires oil companies to submit detailed plans for the viable utilisation of all associated gas and re-injection programmes of re-injecting the associated gas into the earth crust.[80]

[74] Section 5 of the NOSDRA Act, The complete document can be down loaded from the NOSDRA website; http://www.nosdra.org/tech_info.html, Retrieved on 30th of August, 2017.
[75]*Ibid*, section 18.
[76]Oyewunmi, Olabode, Managing gas flaring and allied issues in the oil and gas industry: Reflections on Nigeria,
(2016)646<http://webcache.googleusercontent.com/search?q=cache:/journal/index.php/mjss/article/download/9366/9045+&cd=4&hl=en&ct=clnk&gl=uk. Accessed 6th March, 2020.
[77] (2005) AHRLR 151
[78]Frank Maes, 'Biodiversity and Climate Change' (2013) 18
[79]*Ibid.*
[80]Section 2 (1) (a-b)

The oil companies were also required to stop the flaring of gas by 1st of January, 1984, unless with special permission from the minister of petroleum.[81] In addition, a drastic penalty of forfeiture of concession[82] and repair or restoration of any reservoir in the field in accordance with good oilfield practice was imposed on any violator after that date above mentioned.[83]Although at first glance, it seemed like the Act would put an end to gas flaring in Nigeria, it, has not lived up to expectation as gas is still being flared for twenty four hours in every passing day in Nigeria. The failure of the Act may be traceable to two factors which include lack of requirement for payment of fines as a deterrent by the defaulters and the provisions which allow oil companies to flare gas with the permission of the Minister of Petroleum.[84]

When it became obvious that the given deadline provided by the Act to end gas flaring was not realisable, the Associated Gas Re-injection Regulations of 1985 were enacted which generally prohibits flaring except with the issuance of authorised certificate by the Minister of Petroleum on the continuation of gas flaring.[85] It is however, unclear whether such certificate is issued in Nigeria as the issuance and non-issuance of the certificate is not made public and cannot be challenged by a private individual. Also, the discharge of hazardous substance into the air or upon land without the permission of the Minister is a criminal offence[86]. However, the use of the Phrase 'lawful Permission' gives the government the discretion to permit flaring of gas by companies.[87]

b. *The Environmental Impact Assessment Act, 1992 (EIAA):* The Act is geared towards regulating the operational activities of the oil companies which may have an impact on the environment either directly or indirectly except where exempted by law.[88] Under the Act, it is mandatory for companies to undertake an Environmental Impact Assessment (EIA) on the location or field before embarking on any operational activities, to have an idea of the likely effect of the activities on the environment.[89] The Act also provides an opportunity for members of the public to make comments on the EIA before the approval by the government[90] and notification is also given to the affected states of the potential effects of the project where the impact of the study will have such effect.[91] There is no doubt that the EIAA presents a significant improvement in the Nigeria Regulations. It is, however, significantly weakened by exceptions it provides in which the President of

[81]*Ibid*, 3 (1).
[82]*Ibid*, 4 (1)
[83]*Ibid*,no. 102,4 (2).
[84]Dorceta E. Taylor, 'Environment and Social Justice: An International Perspective' (2010) 333
[85]Dorceta E. Taylor, 'Environment and Social Justice: An International Perspective' (2010) 333
[86] **S**ection 21 (1) and (2) of the Federal Environmental Petroleum Act
[87]*Ibid*, 139.
[88]Section 2 (1) and (2).
[89]*Ibid*, no. 110,section 2 (1) and (2).
[90]*Ibid*, section 7.
[91]*Ibid*, section 11.

Nigeria or the Federal Environmental Council determines, by discretion, that the environmental impact of a project is likely to be minimal.[92] Thus, companies with political connection with the president or council can easily bypass the EIA requirement.

6. Conclusion

It is alarming that Nigeria`s oil industry is yet to come up with nationally determined contributions (NDC) to show strategic efforts to be made and steps to be taken over a stretch of time to combat the menace of climate change. All the subsisting oil industry legislations in Nigeria precede year 2015 adoption of SDG goals. The said legislations have been criticised to have mirage of short comings. For instance, they are said to contain very scanty provisions which were either adopted from a foreign country`s legislations or were products of international conventions on protection of the environment. This explains why many of the legislations are having problems of implementation since they did not emerge as a result of the actual environmental need of the Nigerian societies; the provisions for oil pollution management are found scattered in numerous statute books.

Some of the oil pollution control legislations such as contained in the Oil in Navigable Waters Act giving oil tankers some conditions under which oil spill may be allowed,[93] has been strnuoulsy criticised. Another weak point for the Act is its requirement that an action to be brought under the Act must be with the consent of the Attorney-General of the Federation.[94] The provision is considered to cause delays in prosecution of cases under the Act and dampen the enthusiasm of enforcement officers. Moreover, placing the responsibility for the control and management of oil and gas pollution on the shoulders of so many bodies created by different statutes such as NOSDRA, NIMASA, NPA and some ministries whic have interwoven and overlapping functions is calamitous. The UNEP Report[95] revealed that one of the big problems leading to continuous contamination of the environment with oil pollution in Ogoni land is that the Department of Petroleum Resources (DPR) and the National Oil Spill Detection and Response Agency (NOSDRA) have differing interpretations for the provisions of the Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN). This is enabling the oil industry to close down remediation process well before contamination has been eliminated and soil quality has been restored to achieve functionality for human, animal and plant life.

[92] *Ibid*, section 59.
[93] Section 4 (2) (a).
[94] *Ibid*. no. 110, section 12.
[95] *Op cit*, p. 32, fn 256.

China also has Petroleum Industry legislations that are not tailored towards sustainability.[96] The country is battling with pollution problems which are largely as a result of the country's rapid development and increase in primary energy consumption, and that constitutes great stress on its environment. Although China is making some efforts, such are obviously not enough. For instance, on 3rd of September, 2016, China ratified the Paris Agreement[97]and submitted its nationally determined contributions (NDC)[98] to the United Nation Framework Convention and Climate Change (UNFCCC) as part of measures to implement enhanced actions on climate change. The contents of the NDC, which was expected to be updated by year 2020, include a number of elements such as:[99]

a. Reaching the peak of carbon dioxide emission by the year 2030 or earlier period if possible.
b. Increase the share of non-fossil energy sources in the total primary energy supply to around 20% by 2030
c. Lower the carbon intensity of GDP by 60% to 65% by 2030.
d. Increase the forest stock volume by around 4.5 billion cubic metres, compared to 2005 levels.
e. Increase in the share of natural gas in the total primary energy supply to around 10% by 2020.
f. Proposed reductions in the production of HCFC22 (35% below 2010 levels by 2020 and 67.5% by 2025) and controlling HFC23 production by 2020.

China also pledged overall reduction of carbon dioxide emissions per unit of GDP by 40–45%; increase in the share of non-fossil fuels in primary energy consumption to around 15%; and increase in forest coverage by 40 million hectares and forest stock volume by 1.3 billion cubic metres.[100]In addition to its domestic actions, China is also embarking on strategic actions abroad with the aim of impacting on future global greenhouse gas emissions. It is financing and buildingboth fossil-fuel and renewable infrastructure worldwide. Of all coal plants under development outside of China, one quarter, or 102

[96] Gar Alperovitz, Ecological Sustainability, *Environment and Energy*, The Next System Project, USA, 27th of May, 2020, Accessed on May 31st, 2020, https://thenextsystem.org/learn.
[97] Most countries across the globe adopted an international climate agreement at the U.N Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP21) in Paris in December 2015.
[98] To hold the increase in global average temperature to well below 2°C and to pursue efforts to limit the increase to 1.5°C, and to achieve net zero emissions in the second half of this century, countries publicly outlined what post-2020 climate actions they intended to take under the new international agreement, known as their Nationally Determined Contributions (NDCs). The Paris Agreement commits countries to undertake "nationally determined contributions" and establishes mechanisms to hold them accountable and to strengthen ambition in the years ahead.
[99] Brian Spegele, China's Legislature Ratifies Paris Agreement on Climate Ahead of G-20 Meeting, The Wall Street Journal, 2nd of September, 2016, Accessed on 9th of June, 2020, Beijing, China, p.6.
[100]Ilario D'Amato, China to cut emissions intensity by 60-65% from 2005 level by 2030: INDC, The Climate Group, London, United Kingdom, 30th of June, 2015, Accessed on 9th June, 2020, p.2.

GW of capacity, have committed to or proposed funding from Chinese financial institutions and companies.[101]

As the world's largest greenhouse gas emitter which accounts for about 27% of global green house gas emissions, China's actions both at home and abroad have enormous impact on global greenhouse gas emissions. It, therefore, can do much more for ecological balance. It 2030 Paris Agreement ratification, wherein it made undertaking as to its Nationally Determined Contributions (NDC), is rated highly insufficient. Paradoxically, the country started construction of 28 GW of new coal-fired power capacity in 2018 after lifting a previous construction ban, bringing its total coal capacity under construction to 245 GW. The development is inconsistent with the Paris Agreement, under which 1.5˚C compatible pathways for coal power generationoutside of the Organization for Economic Cooperation and Development (Non-OECD Asia) would need to be reduced 63% by 2030, leading to a phase-out by 2037.

If China, as a country, finds it difficult to overcome pollution and can, therefore, not fully integrate goal of sustainable climate for as envisioned by SDG, it will be a waste of time for a country like Nigeria whose oil Chinese corporations explore, to expect China to adopt a sustainable environmental practice except Nigeria employs the use of strict and stringent legislative weapons.

[101] *Ibid*, no. 124, p. 2.