Original Research Article

Resource based Conflict and Climate Change in the Niger Delta Region, Nigeria.

Abstract

The study examined the effects of climate change on the local economy occasioned by resource-based conflict in the Niger Delta region, Nigeria. The alteration in weather conditions in the Niger Delta region is associated with anthropogenic activities of the transnational oil companies for over five decades in the Niger Delta region, Nigeria. Despite the degree of oil exploration and exploitation, the Niger Delta region remained underdeveloped in social amenities. The inhabitants were deprived and alienated from the Petrodollar benefits. The launching of artisanal refining by the locals as a way of getting from PetroDollar business became inevitable. These activities have increased greenhouse gas emission leading to the alteration in weather conditions in the Region Sadly, the Joint Military Task Force deployed to monitor and arrest culprit bombard and burn down the artisanal refining equipment unprofessionally, thereby increasing greenhouse gas emission into the atmosphere. At present, the increase in temperature in the Niger Delta region. The study adopted Frustration/Aggression theoretical as its framework. The study relied on both primary and secondary data. The study unravelled that resource-based conflict occasioned deprivation and frustration increased greenhouse gas emission. The study recommends amongst others convening a climate change summit that will involve all the stakeholders in the oil activities in the Region.

Keywords: artisanal refining, climate change, conflict, Joint Military Task Force, militancy, oil resource

INTRODUCTION

The contestation over the ownership and control of oil deposit in the Niger Delta region, Nigeria has existed for decades. The discovery of significant crude oil deposit in the Niger Delta region did not only present an opportunity for important new development, but have also created a powerful dynamic of competition and conflict for resources among a variety of actors (Shariff, 2014). Crude oil was discovered in commercial quantity in the Niger Delta region at Oloibiri, community in Bayelsa State in 1957. The discovery was greeted with celebration. Azaiki (2009) recalled that:

> In 1956, the people of Oloibiri were aroused by an approaching helicopter which they misconstrued for a giant bird. They shrieked as the helicopter approached the town and landed finally at St Michael's Church field built many years ago by Corps of Irish Christians missionaries who entered the country by canoe from Port Harcourt. Another helicopter landed, and a team of white and black gentlemen

> came out of the helicopters. Each of the men wore a logo of the Shell D'Arcy Development Corporation. The natives rushed out in excitement with songs and applause, welcoming the strangers. These men moved straight to the house of the traditional Chief of Oloibiri, His Royal Highness, Chief G.I. Amangala and they discussed behind closed doors.

Some days later, "the white men came back to Chief Amangala's house screaming with joy "We've got oil! We've got oil! The natives who went to the river saw the river black and out of ignorance started pouring the water on their head and body and hailed the white men. The next stage was the clearing of a thick bush of about four hundred (400) square metres (seismic deforestation) between Oloibiri and Otuabagi" (Azaiki, 2009). Thereafter, the Niger Delta communities became hot-bed for aggressive exploration and plundering of crude oil resources, leading to the disarticulation of livelihood and the ecological degradation of the region emanating from gas flare, blowout, seismic and oil-spill deforestation.

Not long, agriculture that was the mainstay of Nigerian economy was abandoned for crude oil. Hence oil politics became state-centric in Nigeria, especially after the demise of the First Republic in 1965 and subsequent enthronement of military regimes. Watts (1992) in Adunbi (2018, p. 638) stated that "it is entwining Nigeria within global circuits of transnational capital and transforming of the class character of the Nigerian state from one of dependence on peasant surplus, into one of an entire-state where oil rents are redistributed through an expanded and highly centralized bureaucracy. As a transition community around which state bureaucratic process is centralized, oil is transformed into a national treasure that must be protected and fought for." This became the reason for the enactment of various laws, which placed a crude oil deposit on the Exclusive List of the Nigerian state. Adunbi (2015) and Apter (2005) in Adunibi (2018) noted that:

> Since Boro's death, new laws were enacted (Decrees 11 and 13 of 1970 and 1971 and the Petroleum Act of 1969) that transformed ownership of land, water, and resources as well as absolute control of the industry to the federal government of Nigeria. This transformation completely transformed the social landscape of the country from an economy that is dependent on a peasant agricultural production based on regional specialization-cocoa in the west, peanuts in the north, and palm oil in the east-to one dependent oil.

At present, the Niger Delta ecosystem is one of the worst-hit of the adverse effects of global warming. The Niger Delta economy is mainly characterized by peasant agriculture, fishing, and forest resources, which have been their main sources of livelihood before the discovery of crude

oil (Ogele, 2020). The effect of climate change in the Niger Delta region has pushed greater percentage of her inhabitants into abject poverty. The government is rhetorical and adamant to attending to the socio-economic challenges occasioned by climate change.

The continuous neglect and deprivation of access to petrodollar benefits led to the antithesis between the Niger Delta inhabitants and the oil companies backed by the federal government in the Region. The aftermath of this struggle is the launching of the artisanal refining of crude oil, which became another source of greenhouse gas emission in the Niger Delta Region. The artisanal refining enterprise, however, received a morale-boost from the oil-bearing communities, but unbeknown to them of its environmental impact. Ikanone, Egbo, Fyneface, Oduma and Ebimondikonyo (2014) revealed that "during the refining process, the air around the operation usually turns dark with thick fumes. Carbon-based gases are consistently discharged into the atmosphere during the boiling process with all the consequences that this has for global warming and the phenomenon of climate change."

The Hydrocarbon Act of 1965 in Nigeria disallows any individual or group of individuals, other than the federal government to refine crude oil. In a bid to enforce the Hydrocarbon Act of 1965, more harm is caused to the environment arising from the unprofessional destruction of artisanal refining equipment by security agencies deployed to enforce oil-related laws. It is imperative to note that the protracted oil-related conflict between the Nigerian State (security agents) and the oil companies on one hand and the alternate violent groups (Niger Delta Militia) on the other hand have led to an increase in the greenhouse gas emissions resulting from the explosion of oil installations by the militant groups and the burning down of artisanal refineries by the Joint Military Task Force (JTF). Given the above, the study examined the effects of resource-based violence on climate change resulting in increase in temperature, sea rise level, among others, in the Niger Delta region, Nigeria.

Conceptual Review

Resource Conflict

Conflict is better understood from the point of interaction of interdependent individuals who perceive irreconcilable goals, scarce resources and interference from others in achieving their aims and at times. Conflicts grow, intensify, and widening by drawing in other interested parties

(Ogele, 2021).This also includes contestation over scarce resources. Ross (1999) argued that resource-based conflict can be understood as perceived divergence over access and control of the available natural limited resource as both parties believe that their aspirations can note be achieved concurrently. A natural resource is a natural wealth extracted from the earth as a raw material that is used to meet human needs. It occurs within the environment in their unique and natural form, untouched by humanity. The competition over natural resource ownership exposes countries to volatility, which adversely impact on the economic growth. The fight to have control over natural resources by Individuals and government could metamorphose to militarization (Dobbs, 2013). Armed conflicts have strong link to natural resources exploitation, which in many cases have led to intensify or sustainable violence. Mansoob (2004) suggests that "countries with weak institutions of conflict management as well as high income equality are less able to withstand economic shocks and experience growth failure as they are not are unable to contain the resulting social pressure and distributional conflict." This assertion was collaborated in Lulaja (2010) piece when he observes that "natural resources do play a vital role in violent conflict especially those that are easily extractable as they do not have a huge cost on the extracting party." Lulaja disclosed that one of the driving factors in how natural resources create conflict between the illegal miners and the government. He revealed that location of natural resources "close to communities and their easy accessibility in the geographical area make conflicts double their period of occurrence and prolong the conflict as the [resource] provide a source of funding in terms of mining equipment and transport facilities for easy access and selling."

Climate Change

The climate change emanates from greenhouse gas emission occasioned by the increase in anthropogenic activities. Harris, Roach and Anne-Marie (2017) disclosed that "the global greenhouse effect, in which the earth's atmosphere acts like the glass in a greenhouse… Clouds, water vapor, and the natural greenhouse gases, carbon dioxide (CO2), methane, nitrous oxide, and ozone allow inbound solar radiation to pass through but serve as a barrier to outgoing infrared heat. This creates the natural greenhouse effect, which makes the planet suitable for life. Without it, the average surface temperature of the planet would average around –18° C (0° F), instead of approximately 15°C (60° F)." Every country to an extent emits greenhouse gases into the atmosphere, which is considered as the root cause of climate change. However, some countries emit more than others predicated on the fact that they are technologically advanced. The IPCC

Report (2007, p. 37) revealed that “human activities result in emissions of four long-lived GHGs: CO_2, methane (CH_4), nitrous oxide (N_2O) and halocarbons (a group of gases containing fluorine, chlorine or bromine). Atmospheric concentrations of GHGs increase when emissions are larger than removal processes.” At present, climate change "is perhaps one of the most serious environmental issues that the present world's population is facing though the issue is not new" (Rahman, 2012). The United Nations Agency known as the United Nations Framework Convention on Climate Change (UNFCCC) refers to Climate Change as a change of climate emanating from anthropogenic activities (IPCC, 2007). Hulme (2009) argued that "the physical climate change is a change at all time - scale and we humans have become an active agent of change. But this alteration in perspective did not happen instantly, and it was not driven purely by science." According to Handerson, Reinert, Dekhtyar and Migdal (2018) revealed that:

> The Earth's average temperature has been increasing since the Industrial Revolution. Between 1880 and 2015, the average global surface temperature rose by 0.9oc (1.5off). In 2016, the Earth experienced its third conservative hottest year since record keeping began. There is a broad consensus in the scientific community that this warming has been largely driven by increases in the atmospheric GHGs, particularly carbon dioxide (CO2), methane (CH4), and nitrogen oxide (N2O). (Emission of GHGs [is] often measured in equivalent units of CO_2 emission, or CO2eq, by indexing the 100-year global warming potential of each gas to that of CO_2). GHG emissions have grown since the Industrial Revolution and were 60% higher in 2014 than they were in 1990.

Climate change has atmospheric values, periodic changes, and mid-annual changeability that is a likely frequency of weather. “Since 1880, atmospheric CO2eq concentration has risen from around 290 ppm to 430 ppm" (IPCC, 2014). The risk of global warming and the challenges of adaptation and mitigation cannot be continually viewed from natural science, especially the anthropogenic induced climate change. Hence, there have been several conferences to address climate change from the 1960s to date. They include the 1960s Environmental awakening, the 1972 Stockholm Conference on Environment, the greenhouse summer of 1988, the Paris Treaty of 2015, among others. Subsequently, the first major Intergovernmental Conference on climate change was held in Toronto with representatives from forty-eight nations. The Conference statement on ‘The Change Atmosphere: Implications for Global Security' called for a 20 percent reduction in carbon emission from 1988 levels among the industrialized nations by 2005. Still, in 1988, the World Meteorological Organization formally approved, at its 40th Executive Council, the establishment of a new international scientific assessment panel to be called the IPCC.

However, the IPCC Reports have proven that climate change exists. These reports have attributed the recent alteration in the weather conditions to anthropogenic practices on climate variability observed a period.

Theoretical Framework

The study adopted the frustration and aggression theory as its theoretical construct. The frustration and aggression theory were proposed by Dollard, Miller, Doob, Mowrer and Sears (1939), and further developed by Barker, Dembo and Lewin (1941) and Berkowitz, Lepinski and Angulo (1969). The frustration/aggression theory attempts to give reasons for the cause of violence in society. They buttressed that frustration appears when someone is denied from achieving certain goal, which brings out disturbed psychological balance and tension that can on exist through aggression directed towards the source of the frustration or an alternative target. The proponents argued that aggression is occasioned by frustration, but when the basis of frustration cannot be contested, then, the aggression is carried out on the vulnerable. Other proponents argued that frustration is a sufficient condition, but not a necessary one. They maintained that aggression is an aftermath of frustration, but may also occur otherwise. Frustration is necessary, but not adequate to be aggressive. Nevertheless, there can never be aggression if there was no frustration. Miller, Sears, Mowrer, Doob and Dollard (1941) noted that "aggression is one of several possible consequences of frustration."

The theory of frustration and aggression is relevant to this study because it defined the social relation between the federal government, oil companies on one hand, and the militants on the other hand. The two groups got frustrated to the point that they became aggressive in their actions that led to an increase in greenhouse gas emission in the Niger Delta region. For instance, the inhabitants of the Niger Delta are reacting out of frustration anchored oil exploration and exploitation in the region that have adversely impacted the eco-system leading to endemic poverty. The militants out of frustration vented the anger on several attacks on the oil wells/installations in the offshore and onshore within the Niger Delta region, which led to the increase in the circulation of carbon dioxide into the atmosphere. Besides, the explosion of oil well/installation, the overlords and others in the Niger Delta region established of artisanal refining camps where crude oil was locally refined and sold, which also contributed to the emission of greenhouse gas. On the other hand, the Special Task Force (JTF) unprofessionally

destroys the artisanal refining equipment, thereby increasing the circulation of carbon dioxide, methane, among others in the atmosphere, which have contributed to climate change in the Niger Delta region.

Methodology

The study adopted a descriptive research design. The study adopted triangulation method of data gathering techniques. The questionnaire was a structured and self-administered. The questionnaires were distributed in both Bayelsa and Delta State respectively. Four hundred structured questionnaires were randomly spread among gender. Three hundred and fifty-one questionnaires were retrieved. The questionnaire contained questions relating to peoples' perception on the impact of resource conflicts on the climatic conditions in the Niger Delta region. The study adopted the descriptive statistical technique using percentage and Pearson correlation coefficient to test the hypothesis.

Data presentation and analysis

The sampled respondents using the qualitative and quantitative research techniques as discussed in methodology managed to establish that most of the respondents were males and that gender difference had a role to play in resource conflict. Moreover, response rate was high among the males as compared to the females. Deprivation and degradation of ecosystem in the Niger Delta region were major issues that triggered the resource conflict in the Niger Delta region. The data from the questionnaire are analyzed below:

Table 1: Questionnaire Distribution based on Geographical Clusters

No	Geographical Cluster in the four States	Issued Questionnaire	Returned Questionnaire	Percentage
1	**Bayelsa State** Izon–Ere Dadiowei Obunagha community in Yenagoa and Imiringi community in Ogbia LGAs respectively	200	178	0.51
2	**Delta State** Ekpa in Effurun LGA, and Ugbokodo	200	173	0.49

communities in Okpe LGA

Total	**400**	**351**	**100**

Source: Field Survey, 2021

As seen in Table 1 above, 400 copies of the questionnaire were distributed to respondents in four of the Niger Delta States in Nigeria, three hundred and fifty-one copies were retrieved.

Table 2: Sex of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	206	58.7	58.7	58.7
	Female	145	41.3	41.3	100.0
	Total	**351**	**100.0**	**100.0**	

Source: Field Survey, 2021

As explicit in Table 2 above, which indicated that 206 representing 58.7% are male, while 145 representing 41.3% are female.

Table 3: Educational Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No formal education	13	3.7	3.7	3.7
	Primary School	13	3.7	3.7	7.4
	High School	189	53.8	53.8	61.3
	Tertiary institution	136	38.7	38.7	100.0
	Total	**351**	**100.0**	**100.0**	

Source: Field Survey, 2021

As shown in Table 3 above, showing the educational qualification of respondents, according to the analysis, 13 of the respondents representing 3.7% have no formal education. 13 of the respondents representing 3.7% have primary education. 189 of the respondents representing 53.8% have attended high school, while 13 of the respondents representing 3.7% have attended tertiary institutions.

Univariate Analysis of the Study

Table 4: Effects of climate change in Niger Delta

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Increase in temperature	351	1.00	5.00	2.7977	1.14971
Health challenges	351	1.00	5.00	2.6325	1.02203
Flooding and erosion	351	1.00	5.00	2.6895	1.04081
Local economy	351	1.00	4.00	2.0769	.80874
Sea level rise	351	1.00	5.00	2.7009	.85789
Heavy rainfall	351	1.00	4.00	2.4359	.65095
Valid N (listwise)	351				

Source: Field Survey, 2021

The frequency above indicated 351 circumstances of missing case in all the matters in regards to alteration in weather conditions in the region. The mean scores were that characterized the central tendency were confirmed. The data represent the response pattern of the statement posed to the respondents. First item ascended on a five-point Likert scale indicated respondents were affirmative that the adverse impact of weather alteration can manifest in the form of increased in temperature based on the modest mark of 2.798. Second item ascended on a five-point Likert scale indicates respondents were affirmative that the effect of climate change can be manifest as health challenges is based on the modest mark of 2.633. Third item ascended on a five-point Likert scale indicates respondents were affirmative that the effect of climate change can be manifest as flooding and erosion is above the modest mark of 2.690. Fourth item ascended on a

five-point Likert scale indicates respondents were affirmative that the effect of climate change can affect the local economy is based on the upshot of the low mark of 2.077. Fifth item ascended on a five-point Likert scale indicates respondents were affirmative that the effect of climate change can be manifest in sea level rising is based on the outcome of the modest mark of 2.701. Sixth item scaled on a five-point Likert scale indicates respondents were affirmative that the adverse impact of climate change could manifest in the form of heavy rainfall is based on the low mark of 2.436.

Test of Hypothesis

Table 5. Indicating protracted oil-related conflicts and increased in the degree of greenhouse gas emissions

		Protracted Oil-Related Conflicts	Increased the Degree of Greenhouse Gas Emissions
Protracted oil-related conflicts	Pearson Correlation	1	.240**
	Sig. (2-tailed)		.000
	N	351	351
Increased degree of greenhouse gas emissions	Pearson Correlation	.240**	1
	Sig. (2-tailed)	.000	
	N	351	351

**. Connection is vital at the 0.01 level (2-tailed).

Source: Field Study, 2021

The outcome of the table expressions that protracted oil-related conflicts correlate with increased the degree of greenhouse gas emissions ($r = 0.351$, $p = 0.000<0.001$). This indicates a bigger connection showing usual connections. The connection that happens within protracted oil-related conflicts and increased the degree of greenhouse gas emissions is revealed to be 0.01 at momentous levels. Concerning the yardstick detailed by Irving (2005) for accommodating either the null or alternative hypothesis, hence, we discard the null hypothesis as the figured output is

bigger than 0.20, to be exact, r.351 is bigger than 0.20. Therefore, the alternative hypothesis is established. Therefore, it is empirically established that the Niger Delta inhabitants acknowledged that conflicts emanating from the anthropogenic activities have contributed to greenhouse emission leading to climate change in the Region.

Discussion

The result of the test of hypothesis revealed a higher relationship showing the normal connection. The connection that occurs within protracted oil-related conflicts and increased the degree of greenhouse gas emissions is revealed to be momentous at 0.01. Our findings revealed that climate change occasioned by oil exploration and exploitation has woefully impacted on the livelihood of the Niger Delta inhabitants, yet the oil-bearing communities lacked amenities such as schools, electricity, accessible roads, hospitals, drinkable water, among others. Hutchful (1985, p.115) noted that:

> The oil wealth which has fueled development elsewhere in Nigeria has had a little transformational effect on the Rivers peasant and his rigorous environment. Transportation and communications are a major problem in the riverine areas. Owing to the topography and soft soils, the state has relatively few roads, and many communities are remote from the nearest all seasoned roads. The large creeks in the Delta constitute the main transport arteries, with both traditional dug-out canoes and motorized craft in use. Long distance journeys are slow and hazardous, often involving switches from the road to the creek and back to road transport. Good drinking water is also a major problem. In salt water areas where the water table is deep and expensive to tap, there is dependence on rainwater tables are deep and expensive to tap, there is dependence on rain and shallow well, which because of silt and clay soils tend to yield muddy water. Gastroenteritis (caused by poor drinking water) is pervasive in the riverine areas.

In the same vein, the former Governor of Rivers State, Chief Rufus Ada-George in a meeting with between the secretary of the Federal Government and oil-bearing communities in 1993 noted that:

> The oil company workers on site live in comparative luxury, leisure and affluence, with the provision of electricity, potable drinking water and communication facilities, in well-laid camps or site-villages. In contrast, natives of the host communities remain in conditions that are strikingly deplorable (The Guardian, 1993).

The study revealed that the relationship between the multinational oil firms and oil bearing communities in the Niger Delta inhabitants became hostile leading to restiveness in the region. In the 1990s, there was an increase in environmental consciousness among the Niger Delta

inhabitants leading to various protests and emergence of ethnic based non-governmental organizations such as the Movement for the Survival of Ogoni People (MOSOP) which was at inception led by late Dr Garrick B. Leton and later Kenule Saro-Wiwa under whom the movement became far more renowned and internationalized, the Movement for the Survival of the Izon (Ijaw), Movement for Reparation to Ogbia (MORETO), Movement for Ethnic Nationality in the Niger Delta (MOSIEND), Council for Ikwerre Nationality Forum (CIN), Ijaw Ethnic National Rights Protection Organization of Nigeria (IENRPON), Ekpeye Ethnic Nationality Forum (EENF), Kokori Progressive Union (KPU) among others.

Given the above, ethnic minority resistance movements began to emerge in the region. The first was the formation of the Movement for the Emancipation of the Niger Delta (MEND). The MEND was formed by the Niger Delta inhabitants as a militia organization to protest against ecosystem degradation. Since the inception of MEND, several attacks on oil installations were carried out by them. For instance, after the April 2008 attack on oil installations in the region, and MEND put out statement claiming that they were behind the attacks (Bøås, 2011). MEND also attacked Warri-Escravos pipeline in the region. After the Amnesty Proclamation and subsequent Amnesty Programme organized for the militants, the Niger Delta region enjoyed the relative calmness. However, after the defeat of President Goodluck Jonathan during the 2015 presidential election in Nigeria, another group known as the Avengers commenced heavy bombardments on oil installations, which arguably contributes to greenhouse gas emission. These includes the blowing of the Bonny Soku Gas Line, which carries natural gas to the Nigeria Liquefied Natural Gas plant, and an independent power plant at Gbaran the devastating attacks on the Trans Forcados Pipeline (TFP), the blowing up the Chevron Valve Platform situated in Warri, Delta state; the attack on the Chevron Well D25 in Abiteye feeding the Warri and Kaduna refineries (Onuoha,2016). Adunbi (2018) argued that:

> Reclaiming land and control of resources located in these enclaves is central to the overall struggle of many of the groups that claim to represent the Niger Delta people. The long history of contestation has enabled the emergence of a form resource politics that continues to define and redefine the relationship of the local people to land, oil and political configurations within and outside Nigeria, since the time of Isaac Adaka Boro, continuing through the time of Ken Saro Wiwa and now to the period of armed rebellion by MEND and NDA.

Beside the attacks on oil installation, one significant feature in the actions of MEND during the period of the struggle was that it accelerated greenhouse gas emission into the atmosphere in the Niger Delta region through artisanal refining. The struggle gave rise to the emergence of the artisanal refining of crude oil syphoned from the NNPC oil pipelines, especially in where the militants had a relative dominance and unfettered access to oil facilities in the region. *Ab initio,* MEND had strategized to indulge in artisanal refined as a source of funds to sustain the struggle against the Nigerian state. The artisanal refining is an illegal cooking of crude oil through the use of local resources and skills to get various petroleum products. The artisanal refiners met the local needs of the communities cut off from commercial supplies of petroleum products in the region. The enterprise became an opportunity to raise funds to sustain the struggle against the Nigerian state. These include cheap diesel, fuel and kerosene.

From our findings, the process of the cooking of the oil produces carbon dioxide, which circulates into the atmosphere in the creek. Besides, the process also leads to mass deforestation because mangroves and other trees were cut down and used as firewood - providing energy for the cooking of the crude. They also clear the mangrove forest where the cooking and the local fractional distillation of crude oil into the various products takes place. At present, there are over 217 local refineries located within the coastal community's south of Port Harcourt; whose concentration of crude oil produces huge smoke and particulate matter in the atmosphere (Giadon, 2018). The artisanal refining of crude oil increases greenhouse gas emission, thereby increasing the level of temperature leading to variation in the climatic condition.

The artisanal refining of crude oil is contrary to the Hydrocarbon Act of 1965. The Hydrocarbon Act of 1965 disallowed any individual to refine crude oil. Hence, the Federal Government deployed security agents that monitor the activities artisanal refining. However, findings revealed that the security agents rather that arrest the culprit resort to handling the situation unprofessionally through consistent bombardments and indiscriminate burning of the artisanal refining camps leading to increase in greenhouse gas emission in the region.

Some of the respondents interviewed disclosed that each time the bombardment was carried out by the agents of the Nigerian State, there was thick smoke and fire that lasted for hours, possibly few days, except the fire was quickly extinguished by the oil companies. Some of the bombardments

were carried out with helicopters or other means. Bøås (2011) asserted that “all social relations between groups and interests in the Delta region revolve around oil and oil revenue."

From the findings, the aftermath of anthropogenic conflicts is the increase of greenhouse gas emission into the atmosphere leading to the depletion of ozone layer which protect the earth from direct sun-ray. The depletion of ozone layer has resulted in increase in temperature in the Niger Delta region. The region has also experienced increase in poverty, death rate, sea-level rise, and scarcity of water, and heavy rainfall, occasioned by alteration in the weather conditions.

Concluding Remarks

The study explored the relationship between the multinational oil firms and oil-bearing communities in the Niger Delta inhabitants. This relationship became hostile leading to protracted conflict between the multinational companies back by Nigerian State and the agitators in oil bearing communities. These groups (MEND and AVENGERS) carried out several attacks on oil installations, which undisputedly contributed to the increase in greenhouse gas emission into the atmosphere. To sustained the struggle against the Nigerian State, MEND launched an artisanal refining of siphoned crude oil from NNPC pipeline. However, the security agents deployed by the federal government to monitor the activities artisanal refining resorted to handling the situation unprofessionally through consistent bombardments and indiscriminate destruction of the artisanal refining camps leading to an increase in greenhouse gas emission and depletion of ozone layer that protects the earth from direct sunray. The aftermath of the depletion of the ozone layer is the change in weather variation resulting in an increase in temperature, erosion and flood, health challenges, and poor agricultural harvest.

Recommendations

i. The State should ensure equitable distribution of petrodollar, which is considered as the major reason for the emergence of social conflict in the Region. Towards addressing the above, the Federal Government should implement fiscal federalism as was enshrined in the 1960 and 1963 Constitutions of the Federal Republic of Nigeria.
ii. The federal government should award modular refining operational licenses to qualified Niger Delta inhabitants that would reduce the degree of greenhouse gas emission emanating from the artisanal refining of crude oil in creeks.

iii. The federal government should ensure that security agents deployed to Niger Delta region to monitor artisanal refining undergo various trainings on how destroy artisanal refining equipment.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

Reference

Adunbi, O. (2018). Oil Extraction and the Construction of a National Treasure. In A. Carl LeVan and Patrick Ukata: The Oxford Handbook of Nigerian Politics. United Kingdom. Oxford University Press.

Azaiki, S. S. (2009). *The Evil of Oil.* Ibadan, Nigeria. Y-Books

Barker, R, G., Dembo, T. & Lewin, R. (1941). *Studies in topological and vector psychology. Experiments on regression and frustration.* No. 2. New series. Iowa City: Iowa Univ. Pub.

Berkowitz, L., Lepinski, J. P., & Angulo, E. J. (1969). Awareness of own anger level and subsequent aggression. Journal of Personality and Social Psychology, 11(3), 293-300. Retrieved on 2019/06/17 from: http://dx.doi.org/10.1037/h0027037

Breuer, J. & Elson, M. (2017). Frustration-aggression theory. In Sturmey, P. (ed) *The Wiley Handbook of Violence and Aggression.* Chichester, West Sussex, UK: John Wiley & Sons Pub. Retrieved on 2019/06/17 from: https://www.researchgate.net/publication/321776001_Frustration-aggression_theory

Bøås, M. (2011). 'Mend Me': The Movement for the Emancipation of the Niger Delta and the empowerment of violence. Cyril Obi and Siri Aas Rustad (eds), Oil and insurgency in the Niger Delta Managing the complex politics of petro-violence. London. Zed Books

Dollard, J. Doob, L. W. Miller, N. E. Mowrer, O. H. & Sears, R. R. (1939). Frustration and aggression. New Haven: Yale University Freer Pub.

Dobbs, R. (2013). The Economics and Geo-Politics of Natural Rresources. Colombia. Colombia University Press.

Giadom, F.D. (2018). *The Port Harcourt 'Black Soot' Phenomenon: Causes and Effects on Public Health and Environment.* Department of Geology, University of Port Harcourt. A paper presented at the Port Harcourt Clean Summit, Elkan Terrace Hotels, 27th June.

Harris, J.M., Roach, B. & Anne-Marie, C. (2017). The Economics of Global Climate Change. *Global Development and Environment Institute Tufts University*. Medford. Retrieved from: on 2018/12/14 http://www.ase.tufts.edu/gdae/education materials/modules. htm.

Henderson, R.M., Reinert, S.A., Dekhtyar, P. & Migdal, A. (2018) Climate Change in 2018: Implications for Business. *Harvard Business School Background Note 317-032,* October. Retrieved on 2018/12/14

Hulme, M. (2009). *Why we disagree about climate change: Understanding controversy, inaction and opportunity*. Cambridge. Cambridge University Press.

Hutchful, E. (1985). Oil Companies and Environmental Pollution in Nigeria. In C. Ake (Eds) *Political Economy of Nigeria*. London. Longman Pub.

Ikanone, G. Egbo, M. Fyneface, D. F. Oduma, I. & Ebimondikonyo, E. (2014).*CRUDE BUSINESS: Oil Theft, Communities and Poverty in Nigeria.* Port Harcourt, Nigeria. Social Development Integrated Centre (Social Action) Pub.

IPCC (2007). Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland.

IPCC (2014). Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. Geneva, Switzerland. IPCC Pub.

Irving, S. (2005). Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences, 3rd Edition. USA. Teachers College Press.

Lulaja, P. (2010). The Spoils of Nature: Armed Conflict and Rebel Acees to Natural Resources. Peace in Africa , 18-47

Mansoob, M. (2004). When does Natural Resource Abundance lead to a Resource Curse. Philadelphia: W.B Saunders Company

Ogele, E.P.(2020). Climate Change and Human Security in Rivers State, Nigeria. *IJARIIE* Vol-6 Issue-2. Retrieved from: www.ijariie.com

Ogele, E.P. (2021). Identity Conflict and Development Challenge in Nigeria‘s Fourth Republic, 2011-2020. *Saudi J. Humanities Soc Sci*, 6(3): 96-108

Onuoha,F.C.(2016). The Resurgence of Militancy in Nigeria’s Oil Rich Niger Delta and the Danger of Militarization. Al Jazeera Centre for Studies. Retrieved from: http://studies.aljazeera.net/en/

Rahman, M. (2012). Climate Change: A Theoretical Review. *Interdisciplinary Description of Complex Systems,* Australia, 11(1). Retrieved on 2018/12/14 from: http// www. indecs.eu/2013/indecs2013-pp1-13.pdf

Ross, G. (1999). Conflict Diamonds, Possibilities for the Identification, Certification and Control over Diamonds. Hague: Vikas Publishing Company

Sharrif, G. (2014). Resource Based Conflicts and Political Instability in Africa, Major Trends, Prospects and Challenges. Abuja: Abuja Press.

.