

## **The Impact Of Air Pollution In Niger Delta Nigeria: The Church Response**

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### **Abstract**

Air pollution is the release of chemicals and particles into the atmosphere which are hazardous to lives and the entire environment. Air pollution in the Niger Delta region is occasioned by oil exploration and exploitation. Gas flaring, acid rain, illegal oil bunkering is the product of oil exploitation in the Region. Negative impact on shelters, drinking water, plants and health abounds. Church response and the implementation of the environment law Act in the region are seen as remedy to this problem. Historical method was used and books, journals and internet sources relevant to this research were used. Obviously, air pollution has increased the mortality rate in the region.

### **Introduction**

Since oil was discovered in commercial quantity on Oloibiri in Bayelsa State in 1956, oil has become a major source of problem to the people of the Niger Delta Region as pollution is on the increase daily. It has become a curse to the poor people of the region: they have been marginalized, enslaved and the youths in the region, in order to gain attention from the government and oil companies, indulge in kidnapping and militancy and all forms of social problems.

Air pollution is the release of chemicals and particles into the atmosphere. Common gaseous air pollutants include Carbon Monoxide (Co), Sulphur Dioxide (S<sub>02</sub>), Chlorofluorocarbons (CFCs) and Nitrogen Oxide (NO) produced by industries and motor vehicle. However, Niger Delta region is the part of Nigeria which has over 40 percent of the distinct ethnic nationalities in the political Nigerian nation, speaking about 25 dialects and occupying 5,000 communities covering over 70,000 square metres in space, the third largest Wetland in the world; that now includes the oily Niger Delta which emerged as a result of oil politics made up of nine political States and 185 Local Government Areas as stated by Niger Delta Development Commission (2006). The impact of air pollution in the region is so great as poverty grips the people every day. It went further to examine the church response on air pollution. Nnamani (2004) rightly states that industrial emissions, liquids effluents, spillages, solid waste and agricultural chemicals, including domestic sewage are the three main sources of pollution in Nigeria. Contamination by petroleum hydrocarbons is among the most serious pollution problem in Rivers, Delta, Edo, Akwa Ibom, Cross-Rivers, Bayelsa, Ondo, and so on.

Environment base of oil producing areas has been seriously depleted as a result of oil production activities. The church is seen as the hope of the poor masses in the region due to failure on the part of the government, oil companies and law

enforcement agencies to put an outright ban on gas flaring occasioned by oil exploration and exploitation.

### **Causes and Sources of Air Pollution in the Niger Delta Region**

The cause and sources of air pollution occasioned by oil exploration in the region are very enormous. Decades of oil exploitation, environmental degradation and state neglect as Oyeshola (2008:36) stated “have created an impoverished, marginalized and exploited citizenry which after more than two decades produced a resistance of which the youth has been a vanguard”. The causes and sources of air pollution in the region are tied to gas flaring and pollution from automobile as it relates to oil exploration.

#### **Gas Flaring**

Bolaji (2008) holds that gas flaring is a major environmental debacle in the Niger Delta. This phenomenon, which is totally unacceptable in several oil producing countries, has led to high mortality rate and the existence of all sorts of respiratory diseases in the Niger Delta. The postponement of the deadline for the end of gas flaring from January 2008 to January 2009 illustrates how highly the government treats environmental issues in the region. This is another way by which the air is polluted. Mackay, Buist, Mascarenhas and Paterson (cited in Bolaji, 2008) agreed that evaporation can be largest contribution to oil weather removal, and depends on the type of oil, spill area, oil slick thickness, vapour pressure and mass transport coefficient. These in turn are composition of the oil, wind speed and temperature.

Igbo (2010) says that the flaring of associated gases in the courses of production and processing of oil has over the years left behind a balance sheet of environmental pollution. The flaring processes usually take place very close to the communities and their farmlands. Studies suggest that there are links between gas flaring and health problems in the communities on the one hand and between gas flaring and poor agricultural yields on the other. Nigeria has an estimated 180 billion cubic feet of proven natural gas, making it the ninth largest concentration of natural gas in the world. Due to unsustainable exploratory practices, coupled with the lack of gas utilization infrastructure in Nigeria, a great percentage of gas produced in the country is burned annually. According to Ugwuaren (cited in Bolaji, 2008:11), “a November 2007 report by the Department of Petroleum Resources (DPR), states that more than 70 percent (177 out of 139) of the oil fields in Nigeria still flare gas”. For Bassey (2001:2):

Most oil communities in the Niger Delta live with gas stacks that flare gas 24 hours a day at temperatures of 13-14,000 degrees Celsius. These gas flares produce 35 million tons of CO<sub>2</sub> and 12 million tons of methane, than the rest of the world.

It is obvious that since 1979 that the Nigerian government passed a law banning gas flaring, the extension of dates for phase-out of gas flaring has become a ritual. Following pressure from big oil companies in Nigeria, surprisingly the Federal Government shifted its deadline for ending gas flaring from December 31<sup>st</sup>, 2007 to December 31<sup>st</sup>, 2008. Right from then, they have continued the shifting till date. All

these emanates from the multinationals lobbying for a future which is not certain. Issues such as inadequate funding, dearth of gas gathering infrastructure, insecurity in the Niger Delta, and a host of other challenges are excuses being cited by the oil companies for indulging in the wholesome practice, which places Nigeria as second only to Russia in gas flaring in the world.

Hyne (cited in Bassey, 2001:80) states that:

Gas flaring is currently illegal in most countries of the world, where gas flaring may only occur in certain circumstances such as emergency shutdown, non-planned maintenance, or disruption to the processing system. The flaring of associated gas in the Niger Delta is a human rights environmental and economic monstrosity. Nowhere else in the world have communities been subjected to it on such a scale. Roughly 2.5 billion cubic feet of gas associated with crude oil is wasted in this way every day, while the annual loss to Nigeria is about \$2.5 billion. It should be noted however, that in recent years, oil companies in Nigeria have been charged a total of between 20 million and 50 million naira (or US \$150,000-370,000) annually for flaring associated gas.

Thus, Amanze (cited in Oyeshola, 2008:12) opines that “global gas flaring releases about 400 million tons of CO<sub>2</sub> per year into the atmosphere”. He further states that Nigeria must begin to enforce drastic reduction of gas flaring and look alternative sources of energy which could be in the long run adopted in industrialization process and also not having negative effects on environmental integrity. Onuoha (2008) opines that gas flaring poses a lot of environmental and health risk for the Niger Delta people, what has become particularly worrisome in Nigeria is the manner in which deadlines set to stop the practices of flaring has been continuously shifted. Amanye (2006:26) noted that:

There was four-gas flares station burning for twenty four hours a day over thirty-five years at very close proximity to human habitation. All over and within these oil field zones over one hundred oil wells in village backyards and a petrochemical complex, two oil refineries, a fertilizer plant and oil pipelines criss-crossing the landscape above ground have spelt death for human beings, flora and fauna. It is unacceptable.

DonPedro (2005) threw his weight behind the above view as he cries-out over the effect of gas flaring in the land of Ogoni and Niger Delta in general. Nwachukwu (2010) observed that gas flaring has been reduced and about 45% is now flared and the payments of fine continue. The World Bank (1995) observed that flaring of natural gas as percentage of gross production stood at 76% in 1991. Thus from 1991 to 1998, gas flaring decreased by only 1% point. The voice of the Central Bank of Nigeria (1999:141) is so bud that it speaks thus:

Rather than re-inject gas to the wells, the company’s preferred to pay the penalty, which they considered more economical. In other words, these decrees did not significantly change the attitude of oil prospecting companies until government decided to participate actively in the sub-

sectors activities. Resulting from this effort, about 13 percent of the gas is now being consumed locally, 12 percent re-injected to assist in crude production while the remaining 75 percent... is flared. At this level, the volume of the nation's flares ranks among the highest in the world.

Indeed gas flaring is a major source of environmental pollution in the oil producing areas and the oil producing companies are reluctant to comply with regulatory standards in Nigeria. Dimowo (2002:512) opines that air pollution "is the most difficult of the types of pollution, because air pollution spread fast, and is not easily noticeable until harm has been done".

### **Pollutions from Automobiles Conveying Crude Oil in Niger Delta**

The kind of gaseous emission from heavy duty vehicles conveying crude oil and petroleum is so disastrous that the entire environs of Niger Delta is now polluted. One cannot breathe in fresh and pure air due to the kind of carbons produced by automobiles (vehicles). The burning of fossil fuel and vehicular emissions contribute to atmospheric pollution. Today there are an increasing number of second-hand vehicles (Tokumbo) as old as 20 years and a parade of motorcycles (Okada) on the roads of the region used for bunkering. Vehicles and power plants derive their energies from the combustion of fossil fuel in their internal combustion chambers. The fossil fuel emissions include sulphur dioxide, nitrogen oxides, carbon monoxide, various volatile organic compounds, fly ash and other suspended particles; these are then emitted into the environment as exhaust gases. These gaseous emissions have harmful effects on humans, animals and the environment. With the pegging of the allowable age of second-hand cars imported into the country to eight years, there could be a sizeable reduction of emissions of carbon dioxide (CO<sub>2</sub>) and other pollutant into the atmosphere.

Humans now understand that carbon dioxide is essential ingredient in the cycle of life on earth. Plants directly use it in the process of photosynthesis. The environment also absorbs carbon dioxide from human and natural activities but carbon dioxide becomes a problem both to animals and humans if atmospheric concentrations of this gas reach toxic levels. Unfortunately, many of the trees that absorb this gas are being cut down. This of course increases the risk of atmospheric concentration of carbon dioxide and thus results in an increase in ambient temperature and consequent climatic changes and health hazards.

### **Effects of Air Pollution on the Region through Acid Rain**

Acid rain is a popular term referring to the deposition of wet (rain, snow, sleet, fog and cloud water, dew) and dry (acidifying particles and gases) acidic components. *Webster's New Encyclopaedic Dictionary* (2002:15) sees acid rain as "acid precipitation in the form of rain, rain or snow having increased acidity caused by environmental factors (as atmospheric pollutants)". The concept of acid rain has been recognized since 1850s. The following areas are affected by air pollution through acid rain effect on shelters in Niger Delta, effect on drinking water in the region, effect on plants in the region and effect on health.

### **Effect on Shelters in Niger Delta**

Acid rain can also cause damage on buildings and historical monuments. Hyacinth (2006) opines that in Iko, Eket, and Etagberi there are cases of where Zinc roofs which formerly lasted for a period of 7-10 years and where good alternative to labor-intensive thatched roofing are now destroyed within one or two years by acid rain. DonPedro (2005:59-60) opines thus:

In communities of Egiland, gas flaring by Elf Petroleum has rendered roofing sheets put in place useless within a few months. Nearby fresh water swamps and farmland are impacted negatively. Then the permanent glow of flames from the flares produces a permanent daylight effect with serious implication for humans and animals in these communities.

This situation is applicable to Ogoni, Andoni, Okirika, and so on. This has led many home owners to resort to asbestos roofing, which although is more resistant to acid rain, it is also more expensive and hazardous to health.

### **Effect on Drinking Water in the Region**

Hyacinth (2006) clearly stated that acid rain which is caused by pollution of the air, contaminates the water and deprives the people of drinkable rain water. Due to poverty in the region that most people cannot afford borehole water, they result to drinking the contaminated water which poses several illnesses on the health system. Example of such illness which is so common in the Niger Delta Region is Cholera.

### **Effect on Plants in the Region**

The cause of stuntedness of plants or crops in the region is acid rain. Hyacinth (2006:29) says that this can be found in "Eket and other communities in Akwa Ibom State". Kpergbeyi, Oyefia and Ogboi (2005) are right in stating that the high yield harvest was attributed to before the occurrence of oil spillage and gas flares pollution. In 1976 and 1998, it is evident that farmers started experiencing decrease in yield because of the occurrences of oil spillage and flares pollution, decrease in subsistence farming because of drift of farmers to be employed in Oil Company. In Ogoniland, all the crops planted are no longer doing well because of the effect of acid rain. Stunted growth, poor output (yield) is rampant all over the area occasioned by this natural disaster. Pyagbara (2005) is of the view that continuous gas flares of thirty years heat up the environment to temperatures beyond normal. This affected plant growth as it negatively impact on photosynthesis

### **Effect on Health**

It is obvious that suspended particles from oil refineries, cement and asbestos factories, industrial gases like flaring toxic gases (carbon monoxide (Co), Methane (CH<sub>4</sub>), Hydrogen Sulphide (H<sub>2</sub>S) and Chlorine (CL<sub>2</sub>)). In petrol chemical industries, petroleum wastes like sludge as pointed out by Asuquo (cited in Central Bank of Nigeria, 1998) are sources of air pollution. He further stated that the above have serious implications on the health of both human and animals. They are as follows: irritation of respiratory track, reduces visibilities, corrodes metals causes' asbestosis, and causes eye damages. Respiratory tract infection causes acid rain inhalation, headaches, dizziness, and mental retardation and so on. Heart failure, systematic poisoning, blindness, itching and so on are the resultant effects on health

occasioned by air pollution. The delegation has reason to suspect that serious respiratory problems witnessed in many Niger Delta communities can be linked to environmental pollution.

Hyacinth (2006:30) stated thus “Respiratory problems, coughing up blood, skin rashes, tumors, gastrointestinal problems, different forms of cancer, and malnourishment, were commonly reported ailments in many communities”. Igbo (2010) passionately expressed his view on the impact of air pollution on the region that in spite of huge financial loss owing to gas flaring, there are also the attendant environmental health problems which millions of Nigerians living in oil bearing communities are exposed to. These include exposure to intense heat, chemicals, toxic smoke and roaring noise and so on. The inhalation of these gases makes people susceptible to diseases like bronchitis and skin problems. The incineration of the gas produces sulphur oxides which are released into the atmosphere. The end result of these compounds when they combine with other atmospheric components namely oxygen and water is what is called acid rain which produces several negative effects on the environment.

#### **Application of the Law and Government Policies as Remedy to Oil Pollution**

Chukwuemerie (2005) says that Section 245 of the Criminal Code in *Laws of the Federation* 1990 holds that any person who corrupts or fouls the water of any spring, stream, well, tank, reservoir, or place, so as to render it less fit for the purpose for which it is ordinary used, is guilty of a misdemeanor, and is liable to imprisonment for six months. No doubt some incidences of petroleum pollution are triable under the provision, particularly when (as often happens) a stream that serves as the only source of water for drinking and or the only water in which the people conduct their fishing business which is often the only or major occupation in the riverine communities is involved. He went further to say that the prescribed punishment is so light in view of the gravity of the injuries that oil inflicts pollution should in fact be a felony punishable with several years of imprisonment. A six months sentence cannot and does not effectively act as a deterrent, nor can it be an effective retribution. Secondly, the section can only apply to individuals. Corporate persons (all operators in the oil and gas sector who are capable of causing pollution as such are corporation persons) are not covered. There is still wonder then that anybody has hardly ever been convicted or even tried under the section even though consistent fouling of waters and so on has taken place since oil and gas operations began in Nigeria in the 1950s. Currently, there is no standing law in Nigeria placing a specific amount on the pollution in the environment. It is obvious that pollution of the environment occasioned by oil exploration and exploitation in Nigeria is ‘pay the magnitude of the pollution demands’. Therefore, the compensations paid to the polluted areas are determined by the host communities in compromise with the oil companies.

Federal Environmental Protection Agency ACT (cited by Chukwuemerie, 2005) says that this Act was repealed by Executive fiat of the President in 2001 under Section 315 of the 1999 Constitution, that Section 20 (1) and (2) prohibits all form

of pollution upon land, water, air, which is hazardous. A maximum of sentence of 10 years imprisonment or ₦100, 000.00 fine or both was imposed. Subsection (3) imposed a maximum fine of N500.000.00 in the case of a company and an additional ₦1, 000.00 for every day that the offence subsisted. Where it use committed by a corporate (i.e. where the last mentioned set of punishment was obtainable) the body corporate and every person who was responsible to it for the conduct of its business (Managers and Directors) most probably at the time of commission of the offence were deemed to be guilty of the offence and were liable to be prosecuted and punished accordingly. Such a Manager (or Director) was not liable only if he proved (the burden of diligence to prevent the commission of the offence or that it was committed without his knowledge.

Nigeria is yet to forbid certain acts that are likely to affect the quality of air as against public health. The Criminal Code, Cap C38 *Laws of the Federation* section 247 (cited by Oyeshola, 2008:217-218) posits:

Any person who violates the atmosphere in any place so as to make it noxious to the health of persons in general dwelling or carrying out business in the neighbourhood, or passing along a public way or does any act which is, and which he knows or has reason to believe to be likely to spread the infection of any disease dangerous to life, whether human or animal; is guilty of a misdemeanor, and is liable to imprisonment for six months.

The Nigerian government has not demonstrated the political will to promulgate an unequivocal outright ban on gas flaring for obvious reasons. Civil Liberty Organization (1998:407) states that “there remained the categorical imperative that gives primacy to maximum technical and economic recovery of crude oil. As a result, all gas flaring can continue without any interruption”. Chukwuemerie (2005) observed that it is an open secret that where Nigerian authorities sufficiently committed to save the environment, the multinational oil companies would have been compelled to cease gas flaring as they have done in their home countries and some other petroleum yielding countries where they operate.

### **The Church Response to Air Pollution and Climate Change in Niger Delta Environment**

Today, nature and the environment are receiving steadily increasing attention in biblical scholarship, but in general, they remain marginal concern. However, church intervention via preaching, church intervention via social teachings and publications, church intervention via education and church intervention via prayers are ways solution can be proffered to this environmental debacle.

#### **Church Intervention via Preaching**

The ministers of the gospel should use the pulpit to preach against air pollution and environmental degradation. Paul II (1990) in a World Day of Peace said that air pollution is often due to lack of farsighted official policies or to the pursuit of myopic economic interests. The solution is, economic activity needs to consider the fact that every economic decision has a moral consequence, and thus show increased respect for the environment. In making use of natural resources concern

should be for their protection and cost entailed – environmentally and socially – as an essential part of the overall expense incurred.

Benedict XVI (cited in Gbenda, 2010) said that emphasis on climate change and protection of creation is on greater sense of international solidarity. This is a responsibility that present generations have towards those of the future, a responsibility that also concerns individual states and the international community. Natural resources should be used in such a way that the immediate benefits do not have a negative impact on living creatures and humans both present and future. The church should fight against environmental degradation and promote integral human development. Apart from global warming, greenhouse gases are also responsible for the ozone layer depletion. Benedict XVI (2009) called for a global solidarity in tackling the problem of climate change, deforestation, environmental degradation and pollution and the loss of biodiversity. Sadly, as reflected in the outcomes of Copenhagen, a global consensus on a united way forward in caring for the earth was not arrived at. But humans cannot afford to be indifferent to the signs of the times such as climate change without risking their survival and wellbeing.

Moltmann (1985:224) understood the human lordship over the earth as a “lordship exercised by a tenant on God’s behalf”. Pawlikowski (1994:44-45) added that “it is a caring role model on God’s ultimate dominion, a God-life responsibility for the natural world”. Igbo (2010) opines that humans, therefore, would be over stepping their limits were they exploit the world’s resources to the detriment of the land, plants life, animals, rivers and sea. Paul VI insists that any ill-considered exploitation of nature by humans put humans in the risk of destroying nature and becoming in their turn the victim of this degradation. Material exploitation of nature brings along not only adverse consequences of pollution and illness but also creates an environment for tomorrow which may well be intolerable.

Paul II (cited in Igbo, 2010:50) said that “humans are empowered that they should communicate with nature as guardians and stewards and not as heedless exploiters and destroyers”. Nwachukwu (2010) said that the created world exist as a network of lives woven from threads of dependence and interdependence. In their governance of created nature, human beings need wisdom to understand the interconnections that make up the integrity of the ecosystem and which enhances its generative potentials. Therefore, an attitude of domination and triumphalism over nature and nature’s exploitation for humanity’s immediate need is an environmental injustice against God’s ‘Shalom’, against nature and against future generations. The consequence of this act of injustice is environmental disaster. With this idea, he exposes the impact of natural oil exploration on the socio-environment of the oil producing communities of the Niger Delta of Nigeria.

#### **Church Intervention via Social Teachings and Publications**

Nwachukwu (2010) plainly states that the church has contributed immensely to the ongoing discussions and search for understanding, interpretation and provision of solution to the environmental crisis. Being a matter of great importance to Christian faith, the Church Magisterium, through her social teachings has given several teachings that articulate valid Christian response and contribution to the environmental discourse. The Popes lamented against human exploitation of the earth, the negative effects of scientific discoveries in the areas of industry,

agriculture and medicine. They highlight especially the painful fact that where nature is violated, environmental crisis are sure to erupt. In Nigeria for example, while the Federal Government and all the institutions and organs involved in climate change campaign are doing their very best to educate and change of attitude, religious leaders seem to be lagging behind. Theological scholars in Nigeria are doing their very best to bring out the values of care for the earth embedded in the holy writings of Christianity; the practical aspect of Christian life seems to be neglected. Here is call to churches to voice out against oil spillage, oil exploitation, militancy and insecurity, pollution and environmental degradation of the ecosystem and environs of the Niger Delta region to enhance peace and stability.

#### **Church Intervention via Education**

This is simply a reflection which authorizes an eco-theological reversal of Jesus' expression in Matt 16:26: what then will a man gain if he wins heaven and losses the world? It then means that the journey towards heaven rightly understood as salvation involves taking care of the earth and environment. Nwachukwu (2010:26) says "if you do not love trees, you cannot love God". Definitely, we are going to be judged on the tenderness and respect we manifest towards nature as expression of the glory of God. The care for the earth has to be done through urgent practical and concrete actions. Ukwuije (2010:26-27) well articulated the impact of religion on the environment thus:

To make the earth habitable beyond the present generation and to guarantee sustainable and responsible care of the earth, we call upon the particular churches to: - Promote environmental education and awareness, - Persuade their local and national governments to adapt policies and binding legal regulations for the protection of the environment and promote alternative and renewable sources of energy; and - Encourage all to plant trees and treat nature and its resources; respecting the common good and the integrity of nature, with transparency and respect for human dignity.

Since the problem requires major changes in values, behaviour and way of life; science, technology, economy and government are necessary components for the conservation of the environment but they are insufficient. Gbenda (2010) states that religious scholars and theologians are taking up the common theme that environmental crisis are merely a symptom of a deeper spiritual crisis. The implication in the words of Fohz (2003:9) is that "whatever may occur within the realms of technology and politics, the environmental crisis cannot and will not be resolved unless its spiritual dimensions are addressed".

#### **Church intervention via prayers**

Consistent and persistent prayer is what one of the weapon for divine intervention in the Niger Delta region. Obviously, prayers have been said by churches due to environmental pollution and neglect. However, the church need to intensify effort in seeking God's face for solution since environmental pollution is on the increase and mortality rate in the region is at the apex.

#### **Recommendations**

1. Gas flaring should be stopped by the church through campaign

2. The church should use the pulpit efficiently to preach against air pollution and cause change of attitude to using natural resources properly.
3. The church should sponsor bills to the National Assembly to combat air Pollution.

### Conclusion

There is a strong opinion that the effect of oil exploration and exploitation in the Niger Delta region poses a far reaching devastation on the ecosystem, animals and human beings. It jeopardizes the future of the unborn generation. The Nigerian Government however, has tried to combat the pollution and degradation in the environs but finds it difficult to implement their policies in the area because; the multinational companies operating in the region have been bribing their way through. Even the elites in the region have been taking bribe for selfish reasons. The people have been consigned to slavery and extinction via marginalization, neglect, and conflict. Poverty is the order of the day. However, religion has a fundamental role to play in proffering solution to the situation in the Niger Delta region but it appears that they are not speaking to correct the ugly situation.

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