

## **Industrial Waste Management and Environmental Pollution in the Niger Delta Region of Nigeria: Issues and Realities**

**Abonyi Nichodemus Nnaemeka**

Department of Political Science

University of Maiduguri,

Borno State, Nigeria

ugonnenna@gmail.com

&

**Eleje Joy Ngozi**

Department of Political Science

Enugu State University of Science and Technology, Enugu

elejej@yahoo.com

### **Abstract**

*The discovery of huge crude oil deposits in Oloibiri present-day Bayelsa state in 1956, and the subsequent drilling and refining of this great natural resource since 1958 has no doubt brought immeasurable industrial revolution to Nigeria. However, the attendant consequence of waste generation came with it as an extra baggage which can never be deemed as unexpected. The challenge actually in the Niger Delta situation has over time become proper management of industrial wastes generated daily in huge tonnage. Nigeria's Niger Delta region over the years has been paying the huge price for this social malaise. This paper focuses on the fact that the improper management of industrial waste has been thriving and taking its disastrous toll on the people because of dysfunctional administrative systems, thus continuously exposing the environment— both land and sea habitats to avertable danger. The paper concludes that effective management strategies if and when deployed would sanitize the region and enhance the living standard of its people.*

**Keywords:** *Environmental pollution, Industry, Niger Delta, Refinery, Waste management*

### **Introduction**

Waste is simply defined as something that the producer no longer needs, and therefore discards. Nigeria's Niger Delta region, composed of nine states of the federation from three geopolitical zones – South-south, south-east and South-west – is unarguably the nation's industrial hub. Its constituent states are Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo and Rivers states. The region has over time been witnessing tremendous environmental pollution due to oil exploration, drilling and associated production activities. Oil refineries, petrochemical industries, allied production facilities, etc., generate a lot of industrial wastes, some of which are toxic and hazardous to both plant and animal (human of primary consideration) life. Many industrial economies only care to dispose waste in the cheapest means, actually just bothering to see the waste leave their premises and not caring where they end up. And many expatriate companies in the Niger Delta come from these economies. A lot of issues have been raised for decades due to the neglect of the region and

the monumental decay across all habitats which continuously adversely affect the regional people's existence. The struggle for survival has also led to various forms of crisis, agitations and general strife by the people. The reality on ground remains that the region requires in-depth focus and attention if its people will be salvaged. Hunger, destitution, flooding, oil spillage and poor road network are some of the prominent issues stemming from waste management malpractices in the region. Most painful is the fact that the Niger Delta supplies Nigeria with its economic mainstay. It is no news that every annual budget of the nation's federal government is based on an oil benchmark. And Nigeria's pride of place in the global scheme of events is as a result of this very important natural endowment and natural resource – crude oil. The Niger Delta has lost many lives to the economic disaster generated by environmental pollution. Notable among these people are foremost author and activist, Ken Saro-Wiwa who was murdered by the federal government, and the massacre of Odi people by the Olusegun Obasanjo regime. This paper is focused on discussing the issues and realities of bad industrial waste management and environmental pollution in the Niger Delta.

## **Conceptual Framework**

### **The Concept of Industrial Waste Management**

Industrial solid waste means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of RCRA (Resource Conservation and Recovery Act, 1976. This is the public law that creates the framework for the proper management of hazardous and non-hazardous solid waste. The law describes the waste management program mandated by Congress that gave EPA authority to develop the **RCRA** program.) Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and transportation equipment; and water treatment.

Designations of industrial waste are toxic waste, chemical waste, industrial solid waste and municipal solid waste. The concept of industrial waste management is the set of strategies used to handle industrial waste removal and disposal in a timely but cost-effective manner that is also in compliance with regulations. These can be radioactive wastes, harmful and toxic. Others can be consumer waste which may or may not be harmful. Nigeria is a party to some international and regional conventions, agreement and protocols concerning environmental management. Some other domestic statutes enacted by the Nigerian legislature have been documented to guide waste management in the nation. Some of these legislations include:

1. The 1988 Basel Convention which dealt with trans-boundary movement of toxic and hazardous waste.

2. A May 1988 resolution of the Organization of African Unity (OAU) now African Union (AU) proclaiming the dumping of nuclear and industrial waste in Africa to be a crime against Africa and its people.
3. The Federal Environmental Protection Agency (FEPA) Act of 1988. This was established by Decree 55 of December 30th 1988. The Act vested FEPA with the statutory responsibility for overall protection of the environment. It requires FEPA to issue environmental guidelines and standards for the abatement and control of all forms of pollution. In 1991, FEPA established an inspectorate and enforcement department with divisions for standard regulation, chemical tracking and compliance monitoring.
4. The Harmful Waste (Special Criminal Provision, Etc.) Act 1988. Essentially a penal legislation, this Act was enacted with the specific object of prohibiting the carrying, depositing and dumping of hazardous wastes on any land, territorial waters and matters relating thereto.
5. The Nigerian Minerals and Mining Act 2007.

### **Improper Waste Management as a Cause of Environmental Pollution**

All industrial wastes generated wherever and discarded with reckless abandon constitute environmental pollution. The nature of these wastes includes:

1. Emissions from both the oil and non-oil related industries which dominate industrial activities in the Niger Delta. Such industries as refinery, petrochemical, liquefied natural gas (LNG), cement, paper, chemical fertilizer, aluminum smelter, battery, flour, wood, and textile industries, etc., emit various kinds of air pollutants which add to the burden of gaseous and particulate pollutants in the air.
2. Gas flaring from natural gas extracted in oil wells in the Niger Delta from which much of it is immediately flared into the environment at an approximate rate of 70 million /m<sup>3</sup> per day.
3. Open air burning of some industrial wastes which generates varieties of toxins and hazardous pollutants that include polycyclic aromatic hydrocarbons (PAHs), dioxins, Polychloro Biphenyls (PCBs) and heavy metals such as lead, nickel and mercury. Oftentimes, hydrocarbons, carbon dioxide (CO<sub>2</sub>), sulphur dioxide (SO<sub>2</sub>) and volatile organic compounds (VOCs) are also emitted into the air.
4. Exhaust fumes from chimneys and dumpsites.

It is noteworthy that some conventional pollutants such as biochemical oxygen demand (BOD) can be handled using sewage treatment plants. Other industrial wastes containing toxic pollutants require specialized treatment systems. The importance of industrial waste management is geared towards protecting human health and sustaining the environment.

### **The Effects of Improper Waste Management on the Niger River Delta People**

- 1. Health:** Exposure to most toxic waste and radioactive substances constitute grave health hazards to the people of the Niger Delta. A key case in point is the Koko toxic waste saga of 1988. After two Italian firms had arranged for the storage of 18,000 drums of hazardous waste disguised as building materials stored in “over 2,000 drums, sacks, and containers” with Koko residents, the leaking drums began emitting a very offensive odour. And the inhabitants of the area were already getting sick by the time the industrial waste was identified. A British environmental group analyzed the material and determined that 28 percent of the waste contained polychlorinated biphenyl (PCB), a combustible substance that could produce a highly toxic compound called dioxin. Online reports state that:

“Neighbors exposed to the toxic waste, which contained PCBs, dimethyl formaldehyde, and asbestos fibers, suffered nausea, paralysis, and premature births.”

- 2. Food Security (production):** Industrial wastes reduce soil fertility and either kill economic food crops or reduce their yield. This gives rise to food insufficiency and insecurity. In a survey of some affected communities in the Niger Delta, Ordinioha & Sawyer (2008) found that the food insecurity and deterioration of the quality of the staple food often leads to an increase in the prevalence of childhood malnutrition.
- 3. Rise in militancy and uprising in the region:** The Niger Delta region has witnessed many agitations and unrest as its people keep fighting for their survival. The situation is especially worrisome in Ogoni land, an ethnic minority in the Niger Delta which has been targeted for crude oil extraction since the 1950s. Ogoni land is an area which has been a major flash point in the struggle for resource control. Its people have suffered extreme environmental damage due to decades of indiscriminate petroleum waste dumping. Nigerian writer, television producer and environmental activist, Ken Saro-Wiwa (10 October 1941 – 10 November 1995) was an Ogoni man, initially the spokesperson, and later, the president of the Movement for the Survival of the Ogoni People (MOSOP). Saro-Wiwa was outspoken in criticizing the federal government of Nigeria’s reluctance to enforce environmental regulations on the foreign petroleum companies operating in his homeland. He led a non-violent campaign against environmental degradation of the land and waters of Ogoni land by the operations of the multinational petroleum industry; the Royal Dutch Shell company being at the lead. At the peak of his campaign, Saro-Wiwa was tried by a special military tribunal for allegedly masterminding the gruesome murder of Ogoni chiefs at a pro-

government meeting. In 1995, he was hanged by late military dictator General Sani Abacha.

Another gruesome episode in the Niger Delta, “The Odi Massacre” began on November 20, 1999, by the Nigerian military on the predominantly Ijaw town of Odi in Bayelsa State. The attack came in the context of an ongoing conflict in the Niger Delta over indigenous rights to oil resources and environmental protection. There is yet no accurate figure on the number of lives and financial value of properties destroyed by the military’s attack believed to have been ordered by then president Obasanjo.

- 4. The clamour for resource control:** The history of the Niger Delta is characterized by agitation for resource control. First, after the abolition of slave trade in 1807, local traders engaged in ‘resource control’ struggles to participate actively in the trade in oil palm. (Ako & Okonmah: 2009)] Similarly, resource control was one of the highlights of the Ijaws’ representation to the Willink Commission to Enquire into the Fears of the Minorities and the Means of Allaying Them in 1957. Ako (2011) wrote that resource control struggles in the post-crude oil era that began with the botched Boro-led attempt to create the Niger Delta Republic in 1966 has culminated in contemporary oil-related restiveness in the region. A Human Rights Watch (1999) report wrote that since the Ijaw representatives failed to achieve their desired results to be left out of independent Nigeria, or, alternatively have a state created, subsequent ‘resource control’ struggles have suffered a similar fate. In Okafor’s (1974) opinion, the Ijaws’ argument that the peculiar problems of those living in the creeks and the swamps of the delta were not understood and indeed were deliberately neglected by both the regional and federal governments remains true till date and feeds into the resource control struggle.

The contemporary notions of resource control have been characterized by both peaceful and violent activities. While the period when the Ogonis were at the forefront of the struggle was largely peaceful, the recent shift of focus to the Ijaws witnessed an escalation in militancy and violence. Many pipelines and other oil facilities were blown and the area witnessed high records of armed conflict and brigandage especially in 2016. The struggle has also generated a rise in abductions especially of oil expatriates. Ukeje (2011) states that the response of the federal government has typically included the creation of development boards, state creation, and more recently, the amnesty initiative. The relative peace in the region and consequent increase in oil production figures is touted as evidence of the success of the amnesty initiative by the federal government. The federal government seems to be focused on relishing the euphoria of its touted success with its amnesty programme. However, the underlying issues that instigated and/or exacerbated the agitation for resource control and resultant restiveness in the region are yet to be addressed. The

government has not actually invested any meaningful resources to remedy the root causes of the agitation for resource control. Its primary interest is in dissipating billions of dollars in assuaging heated tempers across the region through educational and vocational amnesty programmes for “ex-militants”. The agitation for resource control can be said to not have recorded any meaningful success.

5. **The climate:** On decomposing, some industrial wastes release greenhouse gases into the atmosphere. These gases may cause abnormality of weather condition and consequently cause unnecessary climate changes which are inimical to the people’s survival.
6. **Armed Banditry:** Civil unrest, abductions, cultism and general militancy have been on the rise in the region due to its peoples’ discontent with the federal government and oil companies’ approach to sanitizing the region.

### **Efforts aimed at addressing the Problem**

Some government intervention efforts over time targeted at improving the overall conditions of the Niger Delta people especially the ecological situation include the creation of the Niger Delta Development Commission (NDDC), Ministry of Niger Delta Affairs (MNDA) and the latest Clean-Up Ogoni land Initiative.

### **The Niger Delta Development Commission (NDDC)**

In the year 2000 former president Olusegun Obasanjo established the Niger Delta Development Commission (NDDC) with sole mandate of developing the oil-rich Niger Delta region of Nigeria. The vision of the NDDC is: *To offer a lasting solution to the socio-economic difficulties of the Niger Delta Region.* Its mission is: *To facilitate the rapid, even and sustainable development of the Niger Delta into a region that is economically prosperous, socially stable, ecologically regenerative and politically peaceful.*

### **The NDDC Mandate reads:**

- Formulation of policies and guidelines for the development of the Niger Delta area.
- Conception, planning and implementation, in accordance with set rules and regulations, of projects and programs for sustainable development of the Niger Delta area in the field of transportation including roads, jetties and waterways, health, employment, industrialization, agriculture and fisheries, housing and urban development, water supply, electricity and telecommunications.
- Surveying the Niger Delta in order to ascertain measures necessary to promote its physical and socio-economic development.
- Preparing master plans and schemes designed to promote the physical development of the Niger Delta region and the estimation of the member states of the Commission.

- Implementation of all the measures approved for the development of the Niger Delta region by the Federal Government and the states of the Commission.
- Identify factors inhibiting the development of the Niger Delta region and assisting the member states in the formulation and implementation of policies to ensure sound and efficient management of the resources of the Niger Delta region.
- Assessing and reporting on any project being funded or carried out in the region by oil and gas companies and any other company, including non-governmental organizations, as well as ensuring that funds released for such projects are properly utilized.
- Tackling ecological and environmental problems that arise from the exploration of oil mineral in the Niger Delta region and advising the Federal Government and the member states on the prevention and control of oil spillages, gas flaring and environmental pollution.
- Liaising with the various oil mineral and gas prospecting and producing companies on all matters of pollution, prevention and control.

This also includes executing such other works and performing such other functions, which in the option of the Commission are required for the sustainable development of the Niger Delta region and its people.

It is noteworthy that much as the Agency has tried since its establishment, the region still suffers untold penury even with the subject of discourse being maximally captured in its mandate.

### **Ministry of Niger Delta Affairs**

Late President Umaru Musa Yar'adua created this ministry on September 10, 2008 to promote and coordinate policies for the development, peace and security of the Niger Delta Region. This came as a direct response to the series of agitations by the people of the Region on the perceived sense of exclusion, environmental degradation, poverty and unemployment facing the region. The Vision Statement of the Ministry is *to serve as the primary vehicle for the execution of Government's plans and programmes for rapid socio-economic development of the Region*. While the Mission Statement is *to formulate and execute plans, programmes and other initiatives as well as to coordinate the activities of Agencies, Communities, Donors and other relevant Stakeholders involved in the development of the Region*.

Functions of the Ministry are to:

1. Oversee the implementation of Government policies on the development and security of the Niger Delta Region;

2. Coordinate the formulation of the Development Plan for the Region;
3. Formulate policies and programmes for youth mobilization and empowerment in the Niger Delta Region;
4. Advise Government on security issues concerning the Region;
5. Liaise with relevant Government, Non-Government and private organizations;
6. Formulate and coordinate policies for environmental management in the Region;
7. Liaise with host communities for the enhancement of the welfare of the people and the development of the Region;
8. Facilitate private sector involvement in the development of the Region;
9. Plan and supervise public education/enlightenment programmes;
10. Liaise with oil companies operating in the Region to ensure environmental protection and pollution control;
11. Organize human capacity development as well as Skills Acquisition Programmes for youths; and
12. Take adequate measures to ensure peace, stability and security with a view to enhancing the economic potentials for the Region.

This paper notes that the subject of discourse is specifically spelt out in function No. 10. However, though the MNDA in its official website adjudges itself to have been performing creditably over the years, industrial waste management and challenges arising from environmental pollution have not been adequately addressed.

Prior to the creation of the MNDA, the federal government had tried a few intervention schemes aimed at addressing the problems of the region. These include the establishment of Niger Delta Development Board of 1960, the Presidential Task Force on 1.5% Derivation which was set up between 1979 and 1983, and the Oil Minerals Areas Producing Development Commission (OMPADEC) of 1992. Unfortunately, these Agencies could not fully deliver the expected results.

### **Clean-Up Ogoniland Initiative**

In a *Vanguard* newspaper report entitled *FG fixes August for commencement of Ogoniland clean-up remediation*, Ochayi (2018) wrote that the Federal Government set August (2018) ending for the clean-up of Ogoni land in Rivers State remediation exercise. This initiative was inaugurated in 2016 by Vice president Yemi Osinbajo. In another *Vanguard* newspaper report on June 11, 2018 entitled *FG Engages 400 Companies on Ogoni Clean-up*, Agbakwuru (2018) wrote that about 400 local and international companies have been engaged for the clean-up exercise of oil pollution in Ogoni land. He further quoted the Minister of Environment, Ibrahim Jibrin to have said that contractors will be mobilized to site



by August or September (2018). The minister the report disclosed lamented that oil pollution in Ogoni land has led to the destruction of mangrove and aquatic lives in the area.

In a 2011 *Vanguard* report entitled *UN report on Ogoni oil pollution: FG to sanction Shell if ...*, Amaize (2011) disclosed that the federal government may sanction shell Petroleum Development Company (SPDC) if it heeds calls by the Ogoni people of Rivers State, Niger Delta. The sanction if it had been evoked would have seen the revocation of the oil exploration license granted the company revoked. This followed a revelation by the United Nations Environment Programme (UNEP) which clearly established that the company polluted Ogoni land and caused life-threatening health hazards. This report is believed to have justified slain MOSOP leader, Ken Saro-Wiwa and other Ogoni leaders executed alongside him in 1995. Former MOSOP president, Ledun Mitee called for the immediate commencement without delay, of a remediation exercise in the area. Unfortunately, the federal government's reaction to the report was that it would study it before knowing the next step to take. Ogoni land is believed to have yielded up to \$30 billion from oil operations up to that time.

### **Suggestions and Recommendations**

In the light of the foregoing, this paper recommends as follows:

- Exporting waste products back to the generating expatriate firm's home country.
- Total insistence on the exercising of Production Company's corporate social responsibility.
- Introducing and sustaining waste recycling culture in the sector.
- Overhaul of the waste management sector especially in the Ministry of Environment and affiliate Agencies and Departments.
- Promulgating more stringent waste management regulations and upholding all existing waste management policies (if any).
- Revisiting all unfulfilled promises and abandoned projects by oil companies especially expatriate firms and multinationals.
- Strictly addressing all forms of disregard for the environment and deliberate exposure of the people to health hazards according to the statutes.
- Greater awareness and continuous enlightenment of the populace on the dangers of health hazards emanating from environmental neglect and industrial waste management malpractice.
- Reducing, reusing and recycling waste.

## **Conclusion**

This paper concludes that the reality remains that the Niger Delta region is bedeviled with many unhealthy environmental and industrial waste management practices. However, effective management strategies if and when deployed would sanitize the region and enhance the living standard of its people. In sum, the federal government seems to have been insincere and unapologetic in its lackadaisical approach to tackling the environmental pollution challenges in the Niger Delta region. But holistic adoption of the recommendations above (and maybe more) would surely yield better results and grant the Niger Delta people the much needed succour and respite they have been yearning for for decades, and actually deserve.

## **References**

- Agbakwuru, J. (2018). FG Engages 400 Companies on Ogoni Clean-up, Vanguard June 11. <https://www.vanguardngr.com/2018/06/fg-engages-400-companies-ogoni-clean/>
- Ako, R. & Okonmah, P. (2009). Minority Rights Issues in Nigeria: A Theoretical Analysis of Historical and Contemporary Conflicts in the Oil-Rich Niger Delta Region. *International Journal on Minority and group Rights* 1, 53-65.
- Ako, R. (2011). 'The Struggle for Resource Control and Violence in the Niger Delta', in C. Obi and S. Rustad, (eds.) *Oil and Insurgency in the Niger Delta: Managing the Complex Politics and Complex* (London: Zed Books, 2011), 42.
- Amaize, E. (2011). UN report on Ogoni oil pollution: FG to sanction Shell if ....., Vanguard August 4, 2011 <https://www.vanguardngr.com/2011/08/un-report-on-ogoni-oil-pollution-fg-to-sanction-shell-if-%E2%80%A6-2/>
- MNDA official website (2013)
- Ochayi, C. (2018). FG fixes August for commencement of Ogoniland clean-up remediation Vanguard June 4, 2018 <https://www.vanguardngr.com/.../fg-fixes-august-commencement-ogoniland-clean-re...>
- Okafor, S. (1974). Ideal and reality in British administrative policy in Eastern Nigeria. 73 *African Affairs* 293, 459.
- Ordinioha, B. & Sawyer W., (2008). Food insecurity, malnutrition and crude oil spillage in a rural community in Bayelsa State, south-south Nigeria. *Niger J Med.* 17, 304–9.[PubMed]
- Ukeje, C.; (2011). Changing the Paradigm of Pacification: Oil and Militarization in Nigeria's Niger Delta in C. Obi and S. Rustad, (eds.) *Oil and Insurgency in the Niger Delta: Managing the Complex Politics and Complex* (London: Zed Books, 2011), 83.

[www.johnsrefuse.com/blog/bid/.../The-Importance-of-Industrial-Waste-Management](http://www.johnsrefuse.com/blog/bid/.../The-Importance-of-Industrial-Waste-Management) posted 2012

<https://www.change.org/.../waste-management-improper-waste-disposal-and-littering-35...>  
Petition · Waste Management: improper waste disposal and littering ...

<https://www.nddc.gov.ng/>

<https://www.sciencedirect.com/science/article/pii/S0301479700904134>

Human Rights Watch, (1999), *The Price of Oil: Corporate Responsibility and Human Rights Violations in Nigeria's Oil Producing Communities* (Washington DC: Human Rights Watch Africa, 1999), 92.