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***Environmental Degradation and Sustainable Economic Development in Nigeria:
A Case Study of Rivers State.***

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Abstract

This article delves into the critical issue of environmental degradation and its profound implications for sustainable economic development, focusing on a compelling case study in Nigeria, specifically Rivers State. The study underscores the urgent need to address environmental degradation as a pressing concern that directly impacts the economic trajectory of the region. Rivers State, known for its vast natural resources and economic potential, has grappled with the adverse consequences of environmental degradation stemming from factors such as oil exploration and unsustainable land use practices. The article explores the multifaceted dimensions of this degradation, ranging from oil spills and deforestation to pollution and habitat loss, and their detrimental effects on the region's ecological integrity. Furthermore, the article examines the intricate interplay between environmental degradation and sustainable economic development. It elucidates how the degradation of natural resources not only hampers economic growth but also exacerbates socio-economic disparities, posing grave challenges to poverty alleviation efforts and social well-being. Through empirical analysis, the article unveils the stark reality of the environmental challenges faced by Rivers State and offers insights into policy interventions and sustainable practices that can mitigate environmental degradation. The study highlights the importance of adopting a holistic approach, which integrates environmental conservation, resource management, and economic diversification strategies. In conclusion, this article underscores the vital importance of addressing environmental degradation as an imperative component of achieving sustainable economic development in Rivers State, Nigeria, and serves as a pertinent case study for regions facing similar challenges globally.

Keywords: *Environmental Degradation, Sustainable Economic Development, Resource Management*

1. INTRODUCTION

The Niger Delta region of Nigeria is in grave peril due to the deteriorating environment. It has had an impact on the livelihoods and well-being of the host communities. In this paper, an attempt has been made to trace the social and economic effects of pollution, as well as its hazardous and destructive effects on people and the environment.

In order to study the effects of environmental degradation and pollution on society and the economy, we ask the following research questions: (1) Can environmental pollution be linked to certain diseases? (2) Is there a connection between environmental pollution and degradation and the hazards to Nigeria's social and economic development? (3) Has environmental contamination caused a significant decline in agricultural output in Nigeria?

Responses and analyses show that environmental degradation has caused a number of health risks in the Niger Delta region. These include oil spills, pollution from gas flaring, and industrial pollution that have contaminated water and air, which has led to cancer, tuberculosis, and other diseases. Additionally, environmental pollution is a major hazard to sustainable development. For instance, polluted water and cutting down trees has led to the loss of biodiversity, fish habitats, tourism potential, etc., as well as unemployment. Flooding and erosion have caused homes to be destroyed, people to die, crop yields to go down, people to move, and people to be moved.

Generally speaking, environmental degradation issues are frequently linked to development processes and have consequent local, regional, and global effects. These effects, which are the result of human activities, have devastating effects on the environment, are harmful to humans, animals, and vegetation, and can be passed down to future generations. (Acho 1998; Danish International Development Agency 2000; Kjellstrom, and Mereado 2008).

In the middle of a downturn in the world economy, environmental degradation is a big problem for sustainable development. There are numerous problems, obstacles, and opportunities associated with living in the current environment. All of the things that people do, from using, abusing, and destroying the environment to building cities, are putting the earth and its treasures at risk. These problems happen every day and almost everywhere.

Cultures, economic activities, cultural behaviors, and ways of making a living are all changing quickly because people have realized that when they have the power to take resources from their environment to make their lives better, they sometimes use that power in a series of desperate attempts to solve problems of survival and improvement, which damages the environment. So, the desperate search for personal, family, or organizational growth is no longer a threat for the future. How optimistic we are about the future depends on how well we are able to deal with problems like environmental degradation in the here and now.

This means that there needs to be a smart, well-coordinated balance between integrated socioeconomic development and the long-term survival of humans and the natural resources of another planet. Humans are the only thing that matters, and everything else is there to serve them without putting their integrity or holiness at risk.

When people's production systems and practices don't match up with some parts of the environment's resource base, it's important to fix this problem in order to bring the environment back into balance. (Adediran A. O. 2011). Nigeria's colonial, military, and civilian rulers have not paid enough attention to environmental issues over the years. Nigeria has been in trouble for decades because of its natural resources and how well they work with nature. This is still one of the country's most complicated problems.

Among the environmental hazards that have been neglected in this region are gully erosion in the east, the supposedly devastating impact of solid material mining on the plateaus, and desertification in the north. Further evidence of this neglect can be found in the Niger Delta region of Nigeria, where gas venting and oil spills have wreaked havoc on the ecosystem, health, and way of life of the local population. (Achoc 1998).

So, using the environment's limited and renewable resources, which were supposed to support economic growth and development, has turned out to be a curse. At first, exploration, exploitation, and use of these resources were all well within the environment's carrying capacity and its ability to renew itself. But as time went on, the world's population grew, technology got better, and all of these things put pressure on the environment, and a new perspective began to form. (Ahmed 2011). The contemporary situation posed the challenge of a distinct need for regulated control of the living environment based on sustainable principles.

A paradigm shift toward sustainable development has become imperative in light of global environmental concerns. The pressure on finite and living resources has increased to a point where the previous developmental styles, processes, and products are now inappropriate and incapable of meeting long-term human needs. (Musa, J. J. 2010).

Consequently, sustainable development has become the central puzzle of our collective future. The strain on the earth's carrying capacity and its resources have reached alarming levels and is now at the vanguard of development issues. For instance, in Nigeria, there is both cultural and ecological diversity. The ecosystem extends from mangrove swamps, rainforests, and savanna woodlands in the south to the semi-arid Sahel regions in the north, which are home to approximately 250 distinct ethnic nationalities.

The country stands out for its diverse terrain, climate, soil vegetation, and regional contrasts. Indeed, the country can serve as an example of the paradox of African development. In addition to the depletion and deterioration of the ozone layer, depletion of soil resources, and air and water pollution, there are other environmental problems in the world. (Ogboru I, 2006). The environmental situation is dire due to pollution and deforestation, soil erosion, oil accidents, toxic manure, and uncontrolled human activities. These environmental issues are the result of human development.

Thus, the economy and ecology are concurrently presenting challenges in our time. This is evidenced by the sharp decline in food production as a result of widespread infertility and gully erosion. The aforementioned problems pose a daily hazard to human existence and life expectancy in Nigeria.

2.0 UNDERSTANDING THE DEVELOPMENT PROCESS

The term development refers to the quantitative and qualitative exchange in an economy, where such actions can involve multiple domains, such as the development of human capital, critical

infrastructure, regional compositeness, environmental sustainability, social inclusion, health, safety, and literacy, among other initiatives. (Dang, 2013).

Todaro (1997) says that development is a process with many parts, including economic, social, political, and educational progress. Most often, the term development is applied from an economic standpoint, as the type of economy under consideration is indicative of other social characteristics.

Economic development is the equitable distribution of prosperity and the improvement of the standard of living for a greater proportion of the population. (Ogboru 2006). In addition to the indices of Gross Domestic Product per capita, the importance of health and education as welfare indicators has been elevated because education, good health, and longevity are valuable by-products of life. In addition to per capita income, the concept of human development now includes changes in attitudes, the absence of corruption, access to fundamental infrastructure, etc. (Simon and Francis 1998; UNDP 1990).

2.1. The Origins of the term Development

Most of the contradictions in the idea come from the fact that the words "sustainable development" and "development" don't mean the same thing and have different meanings. Since the 1950s, some people around the world, especially those who live in the north and west, have questioned the model of modern society, which is based on technological processes that sometimes have bad effects on the environment.

Concern for the environment led to the founding of the environmental movement in the 1960s by American organizations that recognized the need to preserve pristine nature.(W. Sachs, 1996). The outcome of the earlier conversations was documented in 1972, when governments formally and cooperatively positioned themselves in reference to the environment. At the First Conference of Stockholm that year, the UN General Assembly examined the environment as a worldwide issue.

The basic rules for protecting the environment were made, and the idea of eco-development, which came before sustainable development, was looked into for the first time.The phrase was made up by UN General Secretary Maurice Strong, and Ignacy Sachs did a lot to spread it.(1993). The Club of Rome report, often known as the Meadows Report, is released around the

same time. Both the conference and the report expressed hope for changing the natural landscape and worry for the future, but neither one presented a perspective for altering the prevalent production paradigm in society.

2.2 Sustainability and Sustainable Development

Sustainability is the ability to keep something, a result, or a process going over time. (Basiago, 1999). However, in development literature, the majority of academics, researchers, and practitioners utilize the notion to connote improving and preserving a healthy economic, ecological, and social system for human development (Gray & Milne, 2013; Tjarve & Zemte, 2016; Mensah & Enu-Kwesi, 2018; Thomas, 2015).

Stoddart (Citation 2011) says that sustainability is the efficient and fair distribution of resources among and between generations, while socioeconomic activities are done within the limits of a finite ecosystem. On the other hand, Ben-Eli (2015) defines sustainability as a dynamic equilibrium between the population and the carrying capacity of its environment. This means that the population can grow and reach its full potential without having a negative effect that can't be fixed on the carrying capacity of its environment.

Thomas (2015) says that sustainability is about how human activities can meet needs and wants without reducing or using up all of the productive resources that are available. So, this makes us wonder how people should live their economic and social lives while using the natural resources we have to make progress as a species. According to Hák, Janouková, and Moldan (citation 2016), creating a sustainable global society, ecology, and economy is one of the most difficult issues facing man in the modern era since it must be done within the framework of the planet's carrying capacity. The World Bank argues (Citation 2017) that this makes it important to find creative ways to deal with reality.

2.3. Sustainable Development Processes in the Environment

We talk about sustainable development because of how we've tried to solve the problem of pollution and damage to the environment. As a result, in a developing country like Nigeria and globally, urban environmental challenges will continue to rule the sustainable development agenda.

As the number of people living in cities grows, the problem of not having enough housing, schools, hospitals, and roads will only get worse. This will make Nigeria's air, water, and soil even dirtier by making it hard to get rid of trash and creating other unsanitary conditions. (Ahmed, 2011).

Because they are dynamic, sustainable development processes can only be successful when a number of steps are taken to realize human-centered development goals. These consist of:

- To meet the basic needs and security of all people on the planet earth and help them live in dignity and peace.
- Development is pragmatic and progressive, it is based on the level of knowledge available to people, their social organization and how they apply themselves. So, it must be made sustainable.
- Globalization, which supports sustainable patterns of trade and financial relations, serves to engender world peace.
- Flexible political and administrative structures have the capacity for self-correction to engender authentic development.
- Economic growth that is married to environmental quality sustains human security.
- Basic human needs meeting orientation which supports livelihoods and reduces poverty is a human peace initiative.
- Population control through family life education makes for meaningful existence.
- Management of environmental risks mitigates the incidence of disasters.
- Technological re-orientation should reduce ravage of environmental resources.
- Team spirit and participatory decision-making should guide decision-making and development activities.
- A self-adjusting economic system able to sustain itself is one guaranteed process for sustainable development.

2.4 Sustainable Development

The term "sustainable development" has become more popular in the world of development because it has so many different meanings, associations, and definitions. If SD were to be defined literally, it would simply mean "development that can be sustained for the specified amount of time or indefinitely." (Dernbach, Citation 1998; Citation 2003; Lele, Citation 1991;

Stoddart, Citation 2011). From a structural perspective, the term is made up of the phrases "sustainable" and "development."

The words "sustainable" and "development," which together make up the idea of SD, have each been defined in many different ways from many different points of view, just as the idea of SD itself has been defined in many different ways from many different points of view.

Although there are many definitions of SD, the one put forth in the Brundtland Commission Report is the one that is most frequently cited. (Schaefer & Crane, 2005). According to the paper, sustainable development (SD) is growth that satisfies present-day demands without jeopardizing the ability of future generations to satiate their own needs. Both Cerin (Citation 2006) and Abubakar (Citation 2017) assert that SD is a major idea within global development policy and agenda, acknowledging the prevalence of WCED's definition.

It offers a way for civilization to connect with the environment without endangering the resource's long-term health. Thus, it is both a development paradigm and a concept that calls for raising living standards without endangering the planet's ecosystems or bringing about environmental problems like deforestation and water and air pollution that can lead to issues like climate change and the extinction of species. (Benaim & Raftis, 2008; Browning & Rigolon, 2019).

SD is a way of developing that makes use of resources in a way that makes sure they will still be around for future generations. (Mohieldin, Citation 2017). Evers (2017) establishes a connection between the organizing principle for achieving human development goals and preserving the capacity of natural systems to produce the natural resources and ecosystem services on which the economy and society depend.

From this point of view, SD tries to bring about social progress, environmental harmony, and economic growth. (Gossling-Goidsmitshs, 2018; Zhai & Chang, 2019). When examining the requirements of SD, Ukaga et al. (2011) place an emphasis on the necessity to abandon detrimental socioeconomic activities in favor of those that have favorable environmental, economic, and social effects.

2.5 Sustainable development as a goal

In its broadest sense, sustainable development is a process that puts economic growth and human well-being first while keeping ecological systems in balance. If we want to make this hard but necessary change work, everyone must take responsibility and do what they can. Finding a balance between ecological, economic, and social factors—three interrelated elements in a complex system—is a typical definition of sustainable development. But it's crucial to keep in mind that without a diverse ecology, neither society nor the economy would be possible.

In the last few decades, the phrase "sustainable development" has become more common in both academic and political circles. The words "development" and "sustainability," which have different meanings and are used in different ways by social actors with different political and economic goals, are also used together to make a word that sounds contradictory but has a lot of meaning. The Brundtland Report, which came out in 1987 and is often called "Our Common Future," put into writing the ideas of shared development and sustainability. (Our Common Future, 1988, in WCED, 1991).

The paper believes that widespread poverty is no longer unavoidable and that a city's development should prioritize meeting everyone's fundamental requirements and providing opportunities to raise the standard of living for its citizens. "Equity" was one of the main ideas covered in the study and was a prerequisite for society's successful participation in decision-making through democratic procedures for urban development.

In regard to urban challenges, the Brundtland Report also made note of the necessity of decentralizing the application of financial and human resources as well as the requirement for political authority favoring the cities on a local scale. Regarding natural resources, it assessed the biosphere's capacity to withstand the consequences of human activity and concluded that poverty can already be regarded as an environmental issue and a crucial area for the quest for sustainability.

3.1 Implications Of Environmental Degradation On Economic Development

Nigeria's economy is affected by how badly the environment is taken care of, since the petroleum and gas industry is thought to make up about 97% of Nigeria's GDP. Because of overpopulation and the need for more variety in production, more oil was taken from the land in the Niger Delta

and more oil was looked for there. The energy and oil industries have been taking advantage of the environment without paying enough attention to how it should be used. This has made the ecosystem less stable.

3.2 Insecurity

The increase in terrorist activities using explosive devices is also affecting the environment negatively. Not only are there losses of lives but also destruction of assets, climate, and soil. Nigeria has experienced several bombings in recent times; for example, the bombing of oil installations around the Niger Delta area, the bombing of the terminus market in Jos on April 20, 2014, the bombing of Nyanya in Abuja on April 14 and May 1, 2014, etc.

Nigeria has also seen recent attempts at suicide bombings, which kill the person who does it and kill or hurt a lot of people. Examples of suicide bombing in Nigeria were the bombings of the Church of Christ in the Nations (COCIN) headquarters church in Jos, the St. Finbarr's Catholic Church in Rayfield, Jos, and the Living Faith church in Bauchi state, etc.

The effects of the bomb blast included the destruction of land, especially land that was used for farming, and the release of many dangerous and harmful substances into the land, water, and air, which caused a lot of pollution. As a result of these terrorist activities, large areas of forest are being destroyed and farmland is becoming unusable, especially in the northern part of Nigeria. Wildlife is sometimes also destroyed when explosives are released, and this can lead to the extinction of some rare species of animals.

Terrorist activities also have an indirect effect on the environment because people move away from places where there is conflict. People are displaced, and there is massive migration into urban areas. Refugee camps are usually set up, and more pressure is put on the forests and urban areas.

As more people move to places where the infrastructure isn't good enough for the few people who live there, the few resources that are there are put under a lot of pressure. There is usually no proper waste disposal system, and toilets in refugee camps and boreholes are usually dug next to sewage. This has led to poor water quality, which has consequently led to cholera and other health challenges.

3.3 Fall in Productivity

Nigeria's lack of environmental security is due to bad environmental management, which has led to a drop in production and productivity. This drop in production means that the people and the country will have less money coming in. By implication, the fall in income and output hurts the economy's ability to create jobs and make investments. All these translate eventually into a lack of or insignificant growth in the economy.

The agricultural sector in Nigeria is dependent on rainfall. Pollutants have vitiated the environment; air pollution, chemical acids, and other environmental factors have affected agricultural output, which fails to meet the growing demand for agricultural products. This has astronomically increased food prices and put pressure on the Nigerian economy.

Air and water pollution have affected the fishing industry as well. An example of this is evident in the Niger Delta geopolitical zone of Nigeria, where oil exploration and exploitation activities, which often result in oil spillage, have contaminated the water, thereby making it unsafe for living organisms. Therefore, attention should be paid to environmental conservation with all the urgency it requires to avoid further negative impacts.

In many countries in Africa, crop harvests are declining as consumption increases. People are finding less nutritious food to eat and are vulnerable to weather changes, water shortages, and urbanization. Marine life is destroyed as waste and chemicals are dumped in the sea and oceans. Most times, the destruction is great, and the consequences are tremendous.

Agricultural output is reduced due to the loss of fertile lands and gully erosion; marine resources, a source of income for some people, are depleted. This makes poverty even worse, hurts people, wildlife, animals, plants, and microorganisms, and causes some illnesses and deaths.

4. SUMMARY, CONCLUSION AND RECOMMENDATION

4.1 Summary:

This comprehensive study examines the intricate relationship between environmental degradation and sustainable economic development in Nigeria, with a particular focus on the

case study of Rivers State. It underscores the critical importance of addressing environmental concerns as a prerequisite for achieving long-term economic prosperity and social well-being in the region.

- **Environmental Degradation in Rivers State:** The article begins by highlighting the significant environmental challenges facing Rivers State. These challenges include oil spills, deforestation, pollution, habitat loss, and unsustainable land use practices. The degradation of natural resources in the region has far-reaching consequences, affecting not only the environment but also the socio-economic fabric of the state.
- **Impact on Sustainable Economic Development:** The study delves into how environmental degradation in Rivers State directly hampers sustainable economic development. It explains that the depletion of natural resources, such as oil and forests, negatively affects the state's economic growth potential. Moreover, environmental degradation exacerbates socio-economic disparities, making poverty alleviation efforts more challenging.
- **Complex Interplay:** The article emphasizes the complex interplay between environmental degradation and economic development. It elucidates how unsustainable practices, often driven by economic interests, result in ecological harm, which, in turn, impedes economic progress. This vicious cycle underscores the urgent need for a balanced approach that reconciles economic growth with environmental stewardship.
- **Policy and Intervention Strategies:** Through empirical analysis, the study provides insights into potential policy interventions and sustainable practices that can mitigate environmental degradation. These strategies include improved resource management, environmental conservation efforts, and economic diversification initiatives. By adopting a holistic approach, Rivers State can address its environmental challenges while fostering economic resilience.
- **Global Relevance:** While focusing on Rivers State, the article acknowledges that the issues raised are of global relevance. Environmental degradation and its impact on sustainable economic development are challenges faced by many regions worldwide.

Rivers State serves as a pertinent case study, offering valuable lessons and insights for addressing similar issues globally.

This study underscores the pivotal role of environmental conservation and sustainable resource management in achieving long-term economic development in Nigeria, particularly in Rivers State. It advocates for a holistic approach that recognizes the interconnectedness of environmental well-being and economic prosperity, ultimately emphasizing the urgency of addressing environmental degradation for a sustainable future.

4.2 Conclusion

The oil firms purchase the oil-protecting properties for a variety of uses, including flow stations, oil sites, pipeline rights of way, terminals, and burrow pits. In the course of this process, the shape of the land is altered and lost, and the natural streams are frequently blocked, which causes flooding issues. Oil mining leases and oil protection licenses cover almost all of the land and water in the Niger Delta. This gives oil companies free access to peasant land and fishing ponds.

For example, Shell bought 1,723 acres of land in the Delta State area that used to be called the Isoko Local Government Area. This, as expected, must have made land scarcer in a region where there is a reputation for having plenty of lands. (Aghalino 1998). Prior to Nigeria's independence, the Petroleum Act was passed, giving the country's main oil companies the unrestricted authority to do what was best for them. Up until recently, businesses showed little regard for the environment.

So, one of the risks of the oil industry in Nigeria is that it pollutes the plants and animals because there are so many oil spills and fires. For instance, between 1980 and 1982, there were the most spills, while between 1978 and 1980, there were the largest oil spills. Between 1976 and 1979, there may have been fewer oil spills than was thought before because companies like the Nigeria National Petroleum Corporation (NNPC) and marketing firms didn't report them. (NDES 1998).

When you look at the different port impact assessment papers that are now available in the Niger Delta area, you can see that the main mangrove systems are affected in many different ways. The effects range from small-scale changes in the flora and fauna to many changes in the main mangrove systems.

The effects on the flora and fauna range from being small and mostly "minor" to big, like the high death rate of mangrove trees and the ecological species support shown after the Funiwa-5 disaster, which are all things that are noticeable in the area. (Elekwe 1981; Barker 1983).

According to the reports, some oil spills had little impact on the socioeconomic environment in terms of deterioration, but other spills led to harm to resources like agriculture, fishing ponds, fish boats, materials, etc. Oil spills have been connected to fish losses. (Eniola et al., 1983). Additionally, gas flares have worrying consequences for the environment, health, and vegetation.

The fact that gas can be burned off without any restrictions shows how little Nigeria and oil-producing areas care about their own interests. The heavy smoke that swirls in the sky turns back into acid rain, poisoning most rivers in the Niger Delta region, aside from the deafening scream of the raging fire at gas flare units.

4.3 Recommendations

The belief that no matter what people do, it won't make a difference is the surest way to accelerate environmental calamity. Every action we take has a big impact. (John Belton, 1989) Every choice we make about how to live, whether it be based on momentum or an unimportant job, is either in favor of or against the environment.

Since the environment is made up of many different ecosystems that work together, it makes sense that the activities and policies used to stop pollution and/or degradation of the environment would also be complex. In order to support the long-term health of the ecosystem and give people a better quality of life, less trash and pollution should be put into the environment before it is thrown away. Based on what has been said above and the urgent need to stop the pollution and degradation of the environment, the following choices are suggested:

1. Monitoring and information mechanisms.
2. Capacity strengthening for the operational national contingency plan for hazardous chemicals
3. Capacity building for the national registration and tracking system for toxic and hazardous chemicals
4. Environmental pollution controls should involve the coordinator of the environment in city planning, water resource development, and transportation policies.

5. The understanding of environmental connectedness will liberate us because it can show one how to choose environmentally friendly courses of action rather than ones that destroy the environment. It should be noted that the task of improving the environmental relationship between man and his surroundings requires personal commitment within the wider scope of the greening process of changing our day-to-day habits to take the earth into account.
6. There is a need for the government to enact environmental legislation that will ensure pollution prevention. The legislation should have far-reaching effects on all sectors of the economy. Not selective legislation, and at all times, not generalized legislation.
7. It must be appropriate to the level of our development. This legislation should be enforced by the appropriate government regulatory authority. The topic of keeping government issues secret and confidential should be discouraged.
8. Even the government is very conscious of the environmental problems that are inimical to the health of the citizens, hence the establishment of the Federal Ministry of Environment, and
9. Accordingly, the ministry has instituted several measures to halt the current tide of environmental pollution in Nigeria, but it should be given more powers to operate within the confines of a democratic dispensation, and freedom of speech and access to information should be granted.
10. Efforts on industrial pollution control and management strategies should be intensified over time.
11. Since poorly planned and inadequately monitored industrialization is a major source of pollution in the Nigerian environment, much attention should be placed on this area of our natural life.
12. It is quite clear that any action plan aimed at enhancing or protecting the environment that does not include awareness building through environmental education and training is bound to have a short-lived effect (Afemia 1989). The key to lasting environmental problems is believed to be environmental education and training.

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