

Full Length Research

Sustainability of the Nigerian Environment: Interrogating the Drivers of Environmental Degradation

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Environmental degradation is one of the largest threats that are being looked at in the world today. It occurs when the earth's natural resources are depleted and the environment is compromised in the form of extinction of species, pollution in air, water and soil and rapid growth in population. This paper critically examined the theoretical framework for conceiving of environmental degradation, which is represented in the IPAT equation, meaning environmental impact of degradation is a function of population, human activity and technology. This paper further identified the drivers of environmental degradation, which has to do with globalization and climate change as well as high quality of exhaust gases, deforestation, pollution, unplanned agricultural policies and population explosion respectively. In what seen to be less popular in nature in causing environmental degradation, this paper was able to point out the fact that corruption is very fundamental in the deterioration of the environmental quality generally.

Keywords: Environment, Degradation, Sustainability, Drivers, Interrogate

INTRODUCTION

Environmental degradation is the total reduction in value or determination of the environment through the utilization of resources such as air, water and soil. It is characterized as any alteration or aggravation of nature's turf seen to be pernicious or unwanted. Environmental degradation is one of the most widely recognized phenomenon of all the environmental issues of our day. This fact no doubt underscores the relative importance of a sustainable environment. It has become fundamental that where the environment is the victim of serious degradation whether from deforestation as in the tropics, pollution from effluents of various types of chemicals, such as oil spillages and gas flaring, agriculture, urbanization, industrialization and conspicuous consumption etc. such an environment would scarcely be in a position to fulfil its expected function of sustainability in relation to supporting development that is sustainable.

The twin concepts of sustainability and sustainable development have received considerable attention in the specialized literature on the subject. For example, after a survey of the goals, indicators, values and practice of sustainable development, Kates et al (2005) had to

admit that the concrete challenges of sustainable development are at least as heterogeneous and complex as the diversity of human societies and natural ecosystems around the world. One obvious implication of the diversity and complexity of sustainable development is the fact that both the concepts of environmental sustainability and sustainable development itself would have variable goals, indicators, values and practices depending on the particular location. For our purpose, the treatment of the subject by Ivbijaro and Akintola (2012) in relation to Nigeria appears to us a useful synthesis of the two main issues, as they trace the growing global concern on the question of the environment to 1972 and capture the contributions of the various United Nations conferences on the environment from Rio de Janeiro in 1992 to later developments that emphasize the need for greater consciousness of and the need for greater care of the environment as part of the quest for development. The overriding goal is protecting the environment from further damage. In other words, the quest to exploit nature for the benefit of national development should not be carried out to the detriment of the environment which is

supposed to sustain national population presently and in the future.

It is obviously within the context of development proceeding in harmony with the natural environment and its carrying capacity that the concept of sustainable development was proposed by the World Commission on Environment and Development to the effect that; sustainable development is development which meets the needs of the present without compromising the ability of the future generations to meet their own needs (WCED 1987; quoted by Ibviaro and Akintola 2012; 13).

There are several ways that this apt definition can be approached. On the one hand, it encourages the present generation to exploit the environment to satisfy the needs of the members by using systems of production, distribution and empowerment equitable and fair; but at the same time admonishes us to ensure that future generations will be able to meet their own needs by being careful and mindful of how we exploit the environment or nature. Environmental practices that encourage waste, inefficiency, degradation, depletion or exhaustion of natural resources will invariably affect the capacity of future generations to meet their expectation of a good life. For a country like Nigeria whose population depends on the land in a significant proportion and whose national revenue comes mostly from export of crude petroleum and gas resources, the problem of environmental sustainability poses itself in several ways: how has the exploitation of the Nigerian environment for agricultural, oil and gas exploration and production impacted on the environment so far? What are the contemporary drivers of environmental degradation in the country? How can these drivers of environmental degradation be managed in order to enable the country meet the aspiration of future generations for a safe and sustainable environment. It is against this background that this paper tries to examine the interplay of the various factors that culminate into the environmental challenges we have in our society today.

THEORETICAL UNDER SPINNING

In order to be able to interrogate the drivers of environmental degradation, we must first of all ask and answer this question: what is environmental degradation and how does it manifest itself in concrete terms? While it is true that there are as many definitions of environmental degradation as there are authors who have written on the subject. We tend to take this one proposed by Cherton (2001) who conceptualised environmental degradation in terms of “the I PAT Equation and its variants as follows:

Only change or disturbance to the environment perceived to be deleterious or undeniable and indicated by the I = PAT equation;

Where

I = environmental impact of degradation,

P = Population

A = Human Activity, and

T = Technology.

Therefore, according to these authors environmental degradation is ensured by a combination of an already very large destruction of the environment and therefore needs either to be reclaimed, restored or reconstituted. Thus deforested lands need to be replanted and streams would need to be cleared, while polluted dumping sites would require chemical treatment to detoxify them. An important point to note about environmental degradation is that its impact is multifaceted affecting land, water, atmosphere and most aspect of human existence. One reason why environmental degradation manifests in so many facets of life is that it is driven by multiple agents both macro and micro. An increasing population, continually increasing growth (Per Capital Affluence PAT), and the application of resources depleting and polluting technology. On the other hand, the United Nations Strategy for Disaster Reduction (UNSDR) defines environmental degradation as “the reduction of the capacity of the environment to meet social and ecological objectives and needs”. Central to the concept of environmental degradation is the idea that a parcel of land, a body of water, a part of the atmosphere is no longer capable of performing the original function for which it was designed or meant to carry.

DRIVERS OF ENVIRONMENTAL DEGRADATION IN NIGERIA

As the title of our paper indicates, our interest is to interrogate the drivers of environmental degradation in Nigeria. Are they macro or micro processes? Are they global, regional or freely national faces that drive environmental degradation in Nigeria? The literature on this subject matter seems to be quite divided and so must be approached with some caution depending on one's disciplinary foundation. From the perspective of political science, it conceives globalization and climate change as the two most important drivers or environmental degradation as these two processes are universal in their impact and consequences on the environment. Baylid et al. (2008; 581) defines globalization as a historical process involving a fundamental shift or transformation in the spatial scale of human social organization that links distant communities.

This rather formal definition of globalization indicates to us the powerful processes that are associated with globalization environment in which all countries especially undeveloped ones such as Nigeria are netted in. For this reason, a definition of globalization which craves for greater production, greater exchange of goods and services and the need for higher incomes to promote greater consumption of foreign goods need to be considered. In this regard for an example, Exsiffittis

and Callaghan (2003) suggest that globalization” refers to the acceleration and intensification of mechanism, processes, and activities that promotes global interdependence and global economic integration. Among these mechanisms, processes and activities, we can identify new technologies of production, refined movement for capital and other financial floors, industrial relocation between the north and the south and international migrations. Conscious effort by developing countries to become integrated into the global economy or attract foreign direct movement after producing deleterious effect on the local environment becomes the order of the day. In essence, globalization is a major trend affecting contemporary Third World countries. It is reflected in diffusion of capital and technology, the evolution of new production systems and the spread of western life styles among elite and other groups. In the quest to meet the demands of globalization, Third World countries have to produce and export more of their primary products whether cash crops, timber, crude petroleum, all of which increase the pressure on the environment and the tendency towards environmental degradation.

Another macro driver of environmental degradation is climate change which Eze (2010: 8) described as “one of the greatest global challenges of this century”, or what Griffithes and Callaghan (2003: 129) refer to more restrictively as “global warming”. This they described as “Global climate change due to increasing atmospheric concentration of so called greenhouse gases (the much maligned CFCS)”. Now whether conceived broadly as climate change or global warming, this global development constitutes a powerful driver of environmental degradation, especially in the tropics where irregular torrential rain fall and thunder storms combine with the surges of the ocean to cover large stretches of coastal lands especially in Nigeria’s south-south zone (Odock 2010). As it is already well known, these two global drivers of environmental degradation are far beyond the technical, human and financial capabilities of individual Third World Countries including Nigeria. Adequate remedial measures for the challenges of environmental degradation emanating from the forces globalization and climate change will therefore depend on effective collaboration between Nigeria and relevant global stake holders.

RANKING THE MICRODRIVERS OF ENVIRONMENTAL DEGRADATION

The subject of environmental degradation and its causative agents continues to attract a lively debate in the literature. In a paper presented by Nwagbara et al., (2012), they tried to identify three major facts in the debates on the interrelationship between poverty, environmental degradation and sustainable development. They distinguished those who attributed

environmental degradation mainly to the countries of the south due to the increase in population growth and poverty; of those who attributed the problem to the rich north as a consequences of their excessive or conspicuous consumption and a third strand of thought which visualizes poverty and environmental degradation as the product of the behaviour of both poor and rich countries. The truth of the matter according to the writer is that, both rich and poor countries contribute in different but unequal ways to the environmental degradation we suffer especially in developing countries like in Nigeria. While Udofia and Udom (2011) present Thirdly the effect on environmental degradation on socio-economic conditions in Nko community in the Niger Delta area where they advance surprising result that it is not poverty that leads to environmental degradation, but rather the reverse is the case. This finding though surprising at first glance, should not be considered abnormal in view of contemporary efforts to ranks the top 10 causes of environmental degradation by Rihin, (2012). In this the author cites the following as the most important contributions to environmental degradation World Wide.

1. “High Quantity of exhaust gases that is harmful to the environment”. The writer continues his presentation by noting that; “prime amongst these gases are SO₂ and NH₃. These are the main culprits for ozone holes and global warming.” Of the gases named above alongside with the “many more” not especially named by the author are spendable. For the greatest amount of environmental degradation, then our earlier reference to global warming a major contribution to environmental degradation is correct. Muklerjee further lists.

2. Deforestation is also the cause of environmental degradation. Humans are cutting down trees for firewood, timber, medicinal purposes and many more. Deforestation and the logging industries have destroyed many tropical rain forests around the world. This has destroyed many natural habitats, and the plants and animals native to the areas. As a result, biodiversity is being disturbed.

3. High number of industries such as mining which creates a lot of pollution. The major contribution of mining to environmental degradation comes in the form of what the writer described as respirable particulate matter (RPM), without attempting to go into the chemistry of the subject, a question that needs to be raised in relation to their cause of environmental degradation is whether current calls for a policy shift from oil to agriculture and mining of solid mineral will not aggravate the challenges of the sustainability of our environment for sustainable development. Will large scale mining not imperil the health of a large percentage of our population? After considering the top three drivers of environmental degradation above, we shall now look at the text seven in composite forms which include: Chemical effluents, transport, unprecedented construction, secondary pollutants, ruinous agricultural

policies, the population explosion and unplanned land use policies.

This final listing of the seven important causes of environmental degradation comes both as a surprise and a *dejavu*. For the surprise it is interesting that population explosion is placed near the bottom of the causes of environmental degradation, rather than among the top three or four. This supports the fact that the earth has already reached or is exceeding its carrying capacity in terms of population. On the contrary he who created the earth declared boldly in a revelation that is nearly two centuries years old that:

The earth is full, and there is enough and to spare, yea, I prepared all things, and have given unto the children of men to be agents unto themselves (D and C 104:17).

Consequently, scarcity, degradation and excessive wealth and poverty appear to arise more from men's incapacity to exercise his agency in an acceptable manner rather than from the finiteness of resources. However, there is the specific probability that in the case of Nigeria, especially in the southern parts of the country, population. Pressure might be an important consideration in environmental degradation, especially in provoking gully erosion. The greatest of chemical effluents or the dumping of toxic wastes, unprecedented construction, ruinous agricultural policies and unplanned land use policies are recurrent decimals as sources of environmental degradation in Nigeria. In fact, it was as part of the national effort to reduce the impacts of the above mentioned drivers of environmental degradation that the Federal Environmental Production Agency has been insisting on the execution of accurate environmental impact studies (EIS) before the implementation of any large scale industrial, agricultural or urban projects in the country.

We need not assume however that Mukherjee's list of 10 top causes of environmental degradation is the subject of unanimity. It appears that different environmental scientists have different lists of causes of environmental degradation. For example, Skye (2007) declared that "The primary cause of environmental degradation is human disturbance." He assess further that "the degree of environmental impact varies with the cause, the habitat, and the plants and animals that in habitat it." But when it came to identifying specific causes of environmental degradation, he produced a list that is quite a surprise. Among the causes enumerated by him are mostly nature causes such as habitat fragmentation, which could be caused by human agency or natural causes such as earthquakes, landslides and volume earphones.

Water and air pollution through the introduction of contaminants that damage plant and animal life in the environment. Acid rain and agricultural runoff are two related sources of environmental degradation associated with human activity. He equally noted particularly that;

"Urban development is one of the primary causes of environmental degradation. This position agrees with Mukherjee (2002) listing of unplanned land use policies, unprecedented construction and population explosion. With specific reference to Nigeria, the study by Essien and Akintoye (2012) although carried out specially in Calabar, Cross River State, can be generalized to the whole country without much fear of contradiction because the special combination of factors identified by the authors as responsible for environmental degradation are not unique to Calabar, but can be found in almost every rapidly growing urban centre in Nigeria. According to the authors the problems associated with rapid urban growth in Calabar include "population growth, unsustainable use of resources, rapid industrialization, unemployment, income inadequacies' as well as inefficient or non-existing waste management strategies." In Calabar and other urban centres in Nigeria policies dealing with construction, town planning as well as waste management will need to be acquired and acquired in order to stem the tide of environmental degradation in the country.

IS CORRUPTION A CAUSE OF ENVIRONMENTAL DEGRADATION?

The answer to this question depends largely on how we define corruption, a concept that can easily be classified as a contested concept. If we look at the top 10 causes of environmental degradation put forth by Mukherjee (2012), there is no explicit listing of corruption as a direct cause of environmental degradation. However, it may be obvious that references to ruinous agricultural policies and unplanned land use policies might actually constitute euphemisms for corruption. And for a country like Nigeria where allocation of land, the location of public projects are largely influenced by political influence clientelism and other non-rational factors, the role of corruption in aggravating environmental degradation cannot be lightly discounted. It is in this regard that we need to give due consideration to Ehwarene's (2011) paper linking corruption and environmental degradation in Nigeria's Niger Delta Region. If we recall that the Niger Delta is home to the country's oil and gas industry whose activities and operations are acquired to be governed by the country's environmental laws as shown by Obaboai et al., (2009), it is most surprising that compromises that allow gas flaring to continue longer than necessary, frequent oil spillages into the surrounding land and waters despite huge sums of money budgeted for bunkering, as well as repeated cases of oil remediation that represent various forms of direct or indirect corruption in a sector that is crucial to the nation's major sources of revenue is highly indicative of the fact that corruption play a very significant role in environmental degradation.

CONCLUSION

This paper contributed globally to the debates on the sustainability of the Nigerian environment for sustainable development by interrogating the drivers as causes of environmental degradation in the country. The major contribution which the paper brought to the debates is the distinction between the two macro drivers of environmental degradation; which are universal, general and beyond the full control of any particular phenomenon namely globalization and climate change or global warming. While globalization has been with us since the end of the 1980s, climate change seems to be a new monster that appears a more considerable challenge to development managers worldwide. In its 2010 World Development report the World Bank emphasized that unmitigated climate change is incompatible with sustainable development, simply because it threatens to reverse development gains. The potential of climate change to reverse development gains makes it a major driver of environmental degradation that cannot be treated lightly. With regards to micro-drivers of environmental degradation, the paper exposed the fallacy that rapid population growth is the key driver of environmental degradation generally.

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