

URBAN ENVIRONMENTAL PROBLEMS: A CHALLENGE TO SUSTAINABLE DEVELOPMENT IN NIGERIA

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Abstract

This paper examined the effects of environmental degradation on sustainable development in Nigeria. It addresses the causes of environmental problems and their effects on human and the surrounding ecological system. The paper identified increasing environmental deterioration as a result of rapidly growing urban population which includes pollution, deforestation, flooding, global warming, soil erosion and slim development. The paper made use of content analysis of different research findings in relation to environmental degradation. The paper recommends effective and timely strategies that will make positive impact on issues related to urbanization and environmental management, these include, the need to increase the level of green areas through annual tree planting exercise. Also through comprehensive rural infrastructure provision to reduce the number of immigrants to the urban areas and consequently cut down the rate of urban population growth. Environmental education, such as public enlightenment campaigns in the mass and print media, churches, mosques and community based organization is highly needed.

Introduction

Man interacts with the environment in order to satisfy his basic needs including food, shelter and clothing. At the beginning of human race, man's activities were limited by what the environment could offer, that is, environment was dictating what man can do. Later, the need arose from increasing population, such that, it pushed man to develop technologically enough to manipulate the environment to suit his needs. Consequently, according to Ajibade (2000), the rate of man-environment relationship depended on man's needs, mode of meeting the need and perhaps, the level of technological advancement. He further stressed that today, across the length and breadth of Nigeria, we are faced with the realities of the errors of our past developmental activities and indiscipline lifestyle

The reality of the present time is that, people by their activities and mission individually, or collectively have contributed to the environment negatively than being positively. According to Omofunwa and Ofa-Edo (2008), the unwise use of

the natural environment due to ignorance, poverty, over population and greed amongst others has led to degradation of the environment. This is because, in the process of man's consumption of natural resources in his natural environment, a number of stress is created which affects adversely the quality of the environment in which he lives. The problems, as identified by, (Aderamo 2000), includes rapid urbanization, urban sprawl, urban traffic congestion, urban decay, pollution, urban flooding and erosion.

Objectives of the Study

In view of the above, the main objectives of this paper are to:

1. examine the causes of urban environmental degradation in Nigeria;
2. examine the resultant impact of man's interaction on the environment; and
3. determine the implications of increasing environmental on sustainable development in Nigeria.

Methodology

The bulk of the data used in this paper are from secondary sources derived from content analysis of different research findings as used by (Okewole, 1999) and (Adedeji and Eziyi, 2010) in relation to environmental problems in Nigeria. Also a good proportion of primary source of data used were compiled through personal observations in the course of involvement in taking out students for field trips over the years.

Conceptual Issues

Concept of Environment

Environment has been viewed from diverse perspectives and defined in various ways. The variety of definitions and conceptions of environment is closely linked to the fact that, the study of environment is multi-disciplinary, and thus each discipline tended to develop and adopt definitions in line with its interest (Adedeji and Eziyi, 2010). For instance, Bain (1973), a sociologist defined environment as all external and non-personal conditions and influences that affect the welfare of a people in a given area. The Federal Environmental Protection Agency (FEPA) in Nigeria stated that the environment includes water, air, land, plants, animals and human beings living there in, and the inter-relationships that exist among them (FEPA, 1989).

Environment according to Ogidolu and Balogun (2005), offers opportunity as well as limitations to human existence and survival. If man has to continue to live on the earth, then the sustainability of the resources of the environment must be his priority. He needs to be aware of his environmental resources, how they can be wisely used and problems associated with its use and misuses. From these

definitions, environment can be viewed as all physical, non-physical, external, living and non-living situations surrounding an organism or group of organisms that determine the existence, development and survival of such organism(s) at a particular time. It encompasses constant interacting sets of physical (natural and man-made elements and non-physical, living and non-living e.g. social, cultural, religion, political, economic) system which determines the characteristics features, growth and sustainability of both the component elements of environment and environment itself.

Concept of Environmental Degradation (problems)

Degradation occurs when Earth's natural resources are depleted. The resources which are affected include, water, air and soil, the degradation also impact our wildlife, plants, animals and micro-organism. Environmental degradation occurs based on urbanization, population growth, economic activities or growth, agriculture, increase in energy use and increase in transportation, our land water and soil are compromised when people exhaust resources on release harmful chemicals into the air. Deforestation, wasting resources and pollution all add to the demise of an environmentally sound and safe planet. Examples when trees in forest are cut down in large quantities, so that more homes can built on the land, the birds and wildlife who lived in the forest must find a new place to live. Vegetation that once grew onj the lands is destroyed. Trees that absorbed carbon dioxide to help the biosphere are now unable to do so if the wood from the trees is used to make products and those product (such as paper) are inter recycled that is one of hopeful aspect for the planet. However, some times, trees just cut down and burned, this is what is known as slash and burn, that only destroys forests and all that live in them.

The impact of environmental degradation became manifested when factories produce harmful chemical and toxic waste into bodies of water, human suffers. Pesticides and fertilizers can also get into the environment, these make human to suffer and cause unhealthy.

Causes of Urban Environmental Problems

The problems and challenges posed by the rapid urban growth in Nigeria are immense. More easily observable and perhaps very frightening are the general human and environmental poverty, the declining quality of life and the underutilized as well as the untapped wealth of human resources. Housing and associated facilities (such as water, electricity, waste disposal) are grossly inadequate. Millions live in substandard environments called slums, plagued by squalor and grossly inadequate social amenities, such as, a shortage of schools, poor health facilities and lack of opportunities for recreation among others. Juvenile delinquency and crime have become endemic in urban areas as a result of

the gradual decline of traditional social values and the breakdown of family cohesiveness and community spirit. Moreover, the capacity of law enforcement institutions to prevent crime is increasingly hampered by technological and resource limitations.

Lack of infrastructure is one of the most pressing problems in Nigerian cities. Significant proportions of the houses in major towns and cities have no access to electricity, pipe-borne water or hygienic toilet facilities. The proportion of existing urban housing stock that is dilapidated or is in need of major repairs is estimated at 22.3 per cent nationwide, while about 3 million housing units are required to meet the backlog of housing needs and the replacement of substandard ones (Onibokun, 1987). In many Nigerian cities, the city centres are decaying without any programme of rehabilitation while new urban peripheries develop without planning or the necessary infrastructure.

Urbanization: Urbanization is caused by high population growth rate and rural-urban migration. Urbanization in Nigeria is characterized by city slums with serious environmental consequences. The problem has been described as acute and exemplifies the inability of development measures to keep pace with the rate of population growth. The problem of the disposal of refuse is quite serious because of the rapid rate of generation of non-biodegradable materials such as plastics.

Environmental conditions in cities have gradually deteriorated due to the rapid growth of the cities and the attendance inability of social services and infrastructures to keep pace with the rate of growth. Inadequate storm drains, dumping of refuse in drainage lines and construction of houses close to and even on the natural water channels have been shown to be responsible in that order for the increasing cases of flood in the urban centers. Environment problems associated with the increasing growth of urban slums including overcrowding in squalid housing conditions, poor quality or unavailability of basic infrastructures and social services, such as water and sewage facilities and even lack of access routes (NEST, 1992) ii.

Deforestation: Forest are large area of land with trees and are noticeable in area with subequatorial and monsoon types of climates. The importance of the forest to man cannot be over emphasize. They act as sanctuary for rare and/or endangered animals. Forests act as storm breaks, thereby protecting the towns and villages from destruction. They provide useful products such as wood and char-coal for fuel, fiber for paper and textiles, medicine from the bark and leaves of some plant, breeding ground for animals, check erosion, and supply of food and materials for building houses. In 1975, the total area of forest of all types in the country was estimated at about 360,000sq kilometers or about one third of the country total land

area. It was also estimated that the annual harvest of sawn timber from high forest was 1.5 million cubic meters which would take between 25 to 30 years to denude the forest of matured timbers. With rapid rise in domestic consumption of timber due to increased rate of building construction resulting from the rise in population and income, it would take less than 15 years to exhaust the forest of timber resources (NEST, 1992). Deforestation is a process whereby trees are felled for several purposes, but without replanting to replace the ones felled. Deforestation is dangerous to man, animals and properties. It leads to erosion of the soil and storm, which can cause destruction of properties, crops and Animals. When forest are cleared, the soil are exposed to erosion devastation, floods occur, and rivers and lakes, are filled up with silt. The water becomes dirty and impure for mankind. The remover of tree canopy (particularly the leaves)has effect on the rainfall of that area, as there is less leaf surface area for the transpiration of water, which in turn affect the relative humidity of the atmosphere.

Desertification: Deserts are barren lands, waterless and treeless and often sand covered such as Sahara desert which spread across Africa continent. Desertification is therefore the encroachment of the desert on land that was once fertile. Desertification can be induced either by natural process or by the action of man. Natural hazards such as drought and sand deposit by winds are prime factors in the desertification process. Desertification is more pronounced in the northern part of the country where the Saharah desert has eaten deep into the once fertile land. The Lake Chad basin which is situated in the area is not left out of desertification.

Pollution: Environmental pollution can be categorized into three groups. These are air or atmospheric pollution, aquatic or water pollution and land or surface area pollution. The World Health Organization (WHO) (1990) defined air pollution as “limited to situation in which the outer ambient atmosphere contains materials in concentrations which are harmful to man and his environment”. Man's activities on the earth's surface have largely degraded the quality of the lower atmosphere. The growth and development of industries and Urbanization has contributed greatly to the excess carbon monoxide produced by combustion and other human activities. Carbon monoxide reacts with the blood vessel and prevent it from taking up oxygen and the people are suffocated. In Nigeria, several rural towns that had in the past enjoy fresh and dry air are currently experiencing air pollution problems

Concept of Sustainable Development

Sustainability relates to the ability of the environment to meet the basic requirements for sustenance of the living and non-living component of the ecological, economic and socio-cultural systems in a manner that does not limit the possibility of meeting the present and future needs of the various components and

aspects of the environment (Mba, 2004). It can also be viewed as the carrying capacity of the supporting ecosystems. Evidences suggested that the prevailing global environmental degradation poses serious threat to sustenance of carrying capacity of the ecosystem, hence, Aribigbola (2008) was of the opinion that, environmental sustainability have taken priority position in housing, infrastructure provision planning, land use and urban development, among others.

According to Kadir (2006), sustainable development is “the development that meets the need of the present without compromising the ability of future generation to meet their own needs development”. This suggests that, the principal goal of sustainable development is meeting present human needs in such a way that will not jeopardize the potential of posterity to meet their needs. It is therefore noted that sustainable development entails the attainment of equilibrium among the three contending sub-systems (economic, socio-cultural and environment).

The concept of sustainable development according to Baba (1994) is a fairly new formulation in development thought. He stressed that; the roots of its popularization may be traced to the Brundtland Commission Report titled *Our Common Future* which was launched in London in April 1987. The report clearly established the nexus between human economic activities and environmental quality.

The concept of sustainable development was an outgrowth of the report's projections, and is simply defined as: “Development which meets the needs of the present generation without compromising the ability of future generation to meet their own needs. In essence, therefore, this concept brings to bear on the present generation the responsibility of ensuring not only its own survival and well-being, but also the survival and well-being of generation yet unborn through processes of judicious and crisis-free resources utilization.

The Challenges of Urban Environment

The challenges posed by the rapid urban growth in Nigeria just like every other developing countries of the world are immense (Ayedun, Durodola and Akinjare 2011). The explosive rates of growth have not only progressively complicated and aggravated inter-related problems of human settlements and the environment, but have been responsible for the general problem of human and environmental poverty, the declining quality of life and the under-utilized as well as untapped wealth of human resources.

The demand for infrastructure, basic services and housing in expanding urban centres in the country is on the increase. Housing and associated facilities such as pipe borne water, electricity, waste disposal system among others are grossly inadequate, while some citizens live in substandard environment called slums which are plagued by squalor and lack basic amenities, such as schools, poor health facilities as well as recreational facilities among others (Alkali, 2005).

Moreover, there is a strong urban bias in the conceptualization, design and implementation of development programmes and agenda in the country at the detriment of the rural areas where there is no serious concerted and coordinated efforts towards their improvement which has in turn reflected inadequate access to markets for their goods and services and deplorable condition of the education, health, transportation water and sanitation facilities all of which are responsible for migration to the urban centres of the country by majority of the able bodied men and women who ordinarily are supposed to reside in the rural areas to develop the areas, thereby compounding the problems of the urban centres of the country. From all indications, various administration in Nigeria – colonial military and civilian placed very little importance on environmental issues. The essence of sustainable management of environmental resources and their harmonious relation with nature have not been given adequate attention for decades (Adedeji, and Eziyi, 2010). The lack of political will within the problems remain one of most intricate problems in the country.

In the face of increasing urban population, there is inadequate supply of housing and infrastructure for the teeming population, as a result, the existing infrastructure and housing are overstressed. While unsanitary living conditions characterized by filthy environment, unclean ambient air, stinky and garbage filled streets and sub-standard houses continue to dominate the urban landscape in Nigeria. The concentration of more people in urban areas of the country according to Adedeji and Eziyi (2010) has brought more pressure on the landscape for the production of food, infrastructure, housing and industrialization. This affects the carrying capacity of the environment as each additional person increases the demand on the infrastructure and natural system and as a result creating ecological imbalance which comes with adverse environmental consequences such as hazards and disaster. In this circumstance, attempts to address the situation are difficult and capital intensive, became rapidly growing population does not provide ample room for the introduction of new and innovative approaches to tackling the problems. Hence growing population in Nigeria is associated with negative economic growth and this requires special attention (Olotuah, 2010).

Another environment problems in achieving sustainable development in Nigeria is in the social context, and this pose serious threats to the social wellbeing of a majority of urban residents in Nigeria. According to Ayedun, Durodola and Akinjare (2011), apart from general health implications of environmental problems, there are tendencies of the problems affecting the psyche of the people. Furthermore, environmental problems are inimical to social equity and welfare with respect to accessibility to social infrastructural and job opportunities. It is also observed, that urban poverty in Nigeria has strong links with underdevelopment and environmental degradation. The inability of Nigerian cities to cope with increasing environmental challenges has also shown manifestation in poor

economic growth and development. Rapid growth of cities due to urbanization has led to the emergence of low-income informal settlements both in the inner-city and on the outskirts (Adedeji and Eziyi (2010). Consequently, Nigeria's major development challenges which have to do with acceleration of economic growth, reduction of the level of poverty and improvement of environmental quality continue to grow unabated, and thus achieving the sustainable development and Millennium Development Goals (MDGs) by 2015 and beyond in the country is a mirage.

Conclusion

This paper examines urban environmental problems and the challenges on sustainable development in Nigeria. It noted the incidence of rapid urbanization occurring in Nigeria, which has been the major factor responsible for population explosion in urban centres and the resultant environmental degradation. It discussed the need for sustainable management of environmental resources to ensure a sustainable urban growth and development in the country

Recommendations

Strategies of various forms have been put up by various government to address the issues of environmental problems in order to attain sustainable development in the country such as, National Economic Empowerment and Development Strategies (NEEDS) and Vision 2020. For these initiatives to produce the desired result on problems and issues related to urbanization and institutional frameworks in environmental management, this paper therefore, offers the following suggestions as a way forward in addressing these issues of environmental problems in Nigeria:

- * There is need to increase the level of the green areas and open spaces in urban areas by encouraging the preservation of green areas and open spaces through annual tree planting exercise, agro forestry and people should be encouraged to plant trees, ornamental plants and establish horticulture gardens around their buildings. While the use of hard landscaping element around buildings, bush burning and illegal mining activities should be discouraged to prevent deforestation and exposure of land to agents of denudation, such as, soil erosion among others.
- * There is need for effective monitoring by the relevant authorities of every construction activity to make sure that such does not have adverse effects of erosion and flooding on the environment within, around or distance from the construction site.

- * Also, infrastructural development gap between the urban and rural areas has to be bridged through comprehensive rural infrastructure provision. This will eventually reduce the number of immigrants to the urban areas and consequently cut down the rate of urban population growth.
- * Restructuring of urban transport system from automobile based to pedestrian, bicycle and mass transit system is a necessary idea that will reduce the level of dependence on automobiles and consequently reduce the problems of air pollution, traffic congestion and high energy consumption.
- * There is need for environmental management awareness. Thus environmental education such as public enlightenment campaigns in the mass and print media, churches, mosques and community based organization is highly needed.
- * Finally, despite the establishment of waste management agencies, the problem of solid waste management still persists in urban areas in the country. Therefore, public-private partnership or outright privatization of urban waste management activities should be explored, who should be involved in house-to-house collection and disposal of refuse at the expense of the households.

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