

Worsening Pattern of Man-environment Interface in Nigeria: Poverty as Cause and Consequence

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KEYWORDS Environment. Survival-needs. Poverty. Policy-instruments. Nigeria

ABSTRACT There exists a system of complex interaction between the constituents of the environment. Within such interaction lies man-environment interaction. The humans have always interacted with nature in order to meet their needs. In a society where poverty grows with the human population; the environment is left at the mercy of human attitudes. Nigeria, with its enormous growth potentials, paradoxically wallows in poverty. Since independence till date, successive government has made efforts at addressing this poverty situation with several intervention instruments. However, studies have shown that these policy instruments failed to meet their objectives for several reasons. Consequently, because of the unfavourable conditions of living, the poor are compelled to over exploit-environmental resources for their daily survival needs. Ironically, this survival attitude towards the environment further impoverishes them, thus making their survival even more uncertain and difficult. Therefore, to have a sustainable environmental management requires a holistic approach that would address the issues of environmental awareness and poverty. Above all, government must gather enough political will to act in this direction.

INTRODUCTION

Conceptual Orientation

The laboring poor seem always to live from hand to mouth. Their present wants employ their whole attention and they seldom think of the future (Thomas Malthus 1798). This Malthusian classical argument still remains relevant, even till date, when the socio-economic and political conditions under which some people live on a global note are put into cognizance. An opinion leader in one of the In-depth Interview sessions (IDIs) conducted by Darkey and Alexander, among community members in the Tuli Hunting Safari Block (THSB) in Zimbabwe, for instance, argued that 'the major threat to the environment comes from local communities who due to poverty and survival needs poach and use the environment unsustainably. For many, day to day survival takes precedence over long term environmental concerns' (Darkey and Alexander 2014). In a related study conducted earlier, among dwellers of some rural communities in Uyo Nigeria, Ikhurekong and Atser (2013: 602) concluded that in this study area 'most rural dwellers can rarely get rich as their incomes in many cases are not commensurate with the tasks involved in production and extractive processes.' What this implies is that, the rural dwellers labour strenuously for a meager income that does not go beyond subsistence.

Generally, the human being is a need influencing organism whose behavior, most times, is determined by his/her need situation. In other words, human actions are to a great extent influenced by needs and drives. People do things that lead them to accomplish something. The human organism is equally a comfort seeking being who strives to reduce stress while increasing comfort. Consequently, he/she has always struggled with nature as he/she strives to realize his/her needs and hence live a relatively comfortable life.

This shows that there exist a system of complex interactions within and in-between the constituents of the environment. 'These interactions satisfy the needs of all living organisms such as food, shelter, water, oxygen to respire, mates to reproduce etc. essential for sustained life on this planet' (Asthana and Asthana 2010: 16). Within such complex interactions lies the human-environment interaction. The human organism has always interacted with his/her environment in order to meet his/her needs. This has been the history of mankind.

Throughout the entire span of the Old Stone Age, for instance, the human was a food-gatherer depending for his/her subsistence on hunting wild animals and birds and collecting wild fruits, nuts and berries. Within this era, human impact on the environment was very minimal for several reasons: population was small while

resources available were in abundance; human needs were limited to survival needs; humans did not grow crops but depended on fruit collection for survival; and the technology for dealing with nature was crude with less negative impact on the environment. However, as human population increased, which in turn increased human needs, without a corresponding increase in available resources within the environment, much pressure was put on the natural environment.

In other words, increase in population led to scarcity of available resources; and human's innovation of agriculture as the new mode of economic activity, with new instruments of production, impacted heavily on the environment (Dokpesi 2010). Even in this modern world, agriculture is still the mainstay of the economies of virtually all rural communities in Sub-Saharan Africa and beyond. In a study conducted in the villages surrounding the Suhelwa Wildlife Sanctuary (SWS) in Uttar Pradesh, India for instance, Jaiswal and Bhattacharya (2013: 181) reported that majority of the households (in those villages) survive on agriculture and allied activities. About 18.2% households were completely dependent upon agriculture while 61.7% were also engaged in labour and other activities along with agriculture. This implies that the total percentage of people in agriculture within this study area was 79.9%. More so, a different study conducted among rural communities in Uyo, Nigeria concluded that agricultural system in this region 'is dominated by subsistence where market exchange is only incidental and farm size fragmentation due to land tenure is the main practice' (Ikurekong and Atser 2013: 602).

Furthermore, there exists a relationship between human population and the environment. The more the number of people in a particular surrounding, the more the human impact on that environment. This is however tied to the nature of the society people live in. For instance, if you live in a society where poverty grows with the human population; and in which poverty of leadership affects "Political Will" the environment is left at the mercy of human attitudes. In the same study conducted by Darkey and Alexander, for instance, an opinion leader in one of the In-depth interview sessions (IDIs) opined that, 'the context of the Zimbabwean economy causes environmental problems especially in areas such as the Tuli hunting safari block (THSB), where rural people are marginalized by the economy and

are left with no choice but to exploit the natural resources available' (Darkey and Alexander 2014). More so, in the above study conducted by Jaiswal and Bhattacharya (2013), it was found that of the 55 villages used for the study, 47 were electrified. However, in these 47 electrified communities, 94.6% had no electricity in their households. Consequently, 98.8% of the 1,636 households involved in the research are compelled by the circumstances of their living to use fuel wood to cook their food. Fuel wood meets over 91% of the total fuel requirements of community members in the study area, with monthly consumption put at 462kg; hence showing the over dependence on the natural environment in meeting the livelihood needs of individuals.

Therefore, to understand the nature of the ecosystem requires, partly, an understanding of the relationship between the human organism and nature. This involves an understanding of the social component which reflects human perception, belief, and attitudes about the environment; which can be acquired 'through the lens of personal circumstance and cognitive understanding of the ecosystem' (Alassaf et al. 2014: 164). This knowledge is needed in order to assist in designing and implementing policies needed in mitigating the effect of human-nature interaction (see Alassaf et al. 2014).

LITERATURE REVIEW

The issue of man-environment interaction in Nigeria is understood within the framework of the existing conditions of life of individuals in Nigeria, how they perceived such conditions and how these conditions defined the nature of their behaviour towards the environment. The following sub-headings provide some insights.

Poverty Situation in Nigeria

Poverty exists in every known human society, whether developed, developing or undeveloped. However the difference between societies, with respect to this condition, lies in the nature and extent at which it affects the experiencing citizens. Poverty is a common characteristic of the 3rd world nations. Even within the 3rd world itself, there are variations among nations. The case of Nigeria can be likened to a man who lives by the river bank, yet washes his face with

his own spit every day. This picture is rightly captured in Obadan's (2001: 1) observation thus:

The description of Nigeria as a paradox by the World Bank (1996) has continued to be confirmed by events and official statistics in the country. The paradox is that the poverty level in Nigeria contradicts the country's immense wealth. Among other things, the country is enormously endowed with human, agricultural, petroleum, gas, and large untapped solid mineral resources. Particularly worrisome is that the country earned over US\$300 billion from one resource – petroleum – during the last three decades of the twentieth century. But rather than record remarkable progress in national socio-economic development, Nigeria retrogressed to become one of the 25 poorest countries at the threshold of twenty-first century whereas she was among the richest 50 in the early-1970s.

A human and natural resource rich country, with enormous growth potentials, Nigeria paradoxically still wallows in poverty and in 2005 was said to be counted among the 17th poorest countries (Iyoha 2005). Whereas in 1980, 17.1 million Nigerians were poor in a population of 65 million, representing 27.2% of the population; in 1985 the figure rose to 34.7 million, representing 46.3% of the total population of 75 million. Poverty further increased in 1996 to 67.1 million, representing 65.6% of the total population of 102.5 million. With the recent 2010 National Bureau of Statistics (NBS) report, the total population experiencing poverty in Nigeria is put at 112.47 million, representing 69.0% out of 163 million estimated populations in Nigeria. In terms of sectoral distribution, while 73.2% experience poverty in the rural areas of Nigeria, 61.8% urban dwellers experience conditions of poverty (see NBS 2012). The condition of poverty seems to go worse in Nigeria. On the 13th of April 2014, for instance, the World Bank president at the IMF/World Bank spring meetings informed the gathering that Nigeria is currently occupying the third position among nations with the highest population that experience poverty. Nigeria is said to contribute 7% to the world poor. Nigeria closely follows China and India which contribute 13% and 33% respectively to the world poor (Omoh 2014). More so, 2014 ranking in the Global Competitive Index (GCI) shows that Nigeria ranks amongst the world's poorest competitive countries. Based on indicators such as

weak institutions, entrenched corruption, insecurity, weakly protected property rights, undue influence, poor infrastructure and social services, mono-economic nature of the economy, poor penetration of ICT, and poor primary education, Nigeria drifted from its 115th position last year to 120th position among the 148 nations examined (Ibekwe 2014).

Poverty is a condition in which people lack access and power. It has many dimensions and may include inadequate access to government utilities and services, environmental issues, poor infrastructure, illiteracy and ignorance, poor health, insecurity, social and political exclusion. A society can be adjudged to be a developed one if a significant proportion of its population lives in a clean environment; sleeps, eats and enjoys the good things of life from the womb to the grave.

Government Efforts at Breaking the Vicious Cycle of Poverty in Nigeria

Since independence till date, successive government in Nigeria has made efforts at addressing the poverty situation with several intervention instruments. In the pre-oil boom era, which began from 1960 up to the early 1970s, emphasis was on consolidating on the gains in the agricultural sector of the economy by engaging youths in productive economic activities that would reduce unemployment among them. Consequently, regional governments promoted the setting up of Farm Settlement Scheme (FSS), the essence of which was to productively engage the idle school leavers (Ekong 1991). Most of the post-oil boom government interventions were equally targeted at the revival of agricultural sector as well as tackling joblessness especially in the rural areas of Nigeria. Before the close of the 1970s, the federal government introduced the Operation Feed the Nation (OFN), in order to get people back to farm as a means of reducing poverty. This was closely followed by the introduction of the Rural Banking Scheme (RBS) in 1977 to bring banking services to the door steps of the rural dwellers. This foundation was built upon in the second republic in Nigeria with the introduction of the Green Revolution Programme designed to improve on farm products and rural living condition so as to forestall rural-urban migration. In order to provide a holistic framework for address-

ing rural poverty beyond food, the government, in 1986, introduced the Directorate of Food, Roads and Rural Infrastructure (DFFRI). Its establishment was meant to provide basic infrastructures and social services for the rural dwellers in Nigeria in order to solve the relative deprivation they feel when they compare their living conditions with their counterparts in the urban areas in Nigeria. More so, in order to address the issue of skill training and placement so as to reduce unemployment in both the rural and urban areas the government set up the National Directorate of Employment (NDE) in 1987. The following year, the government, through the office of the First Lady of the federation, once again, established the Better Life for Rural Women (BLRW) as a pet project designed to address the problems of women as vulnerable group in the poverty nexus (see Lewu 2007).

This proliferation of intervention programmes perhaps underscores government's desire and efforts at solving the problem of poverty in Nigeria. As Obadan (2001) noted, by the close of 1998 there were already 16 government established poverty alleviation intervention instruments in Nigeria. From independence up to 1993, all these efforts were of adhoc nature in the sense that they were not incorporated into the nation's overall development objectives; until the inauguration of the Poverty Alleviation Programme Development Committee (PADC) in 1994 (Obadan 2001).

Studies have shown that these policy instruments at redressing poverty situation in the country failed to meet their objectives for several reasons. Some of these reasons are: lack of consultation with the poor in designing and implementing such programmes, ethnic and personal interests of the implementation officers, political and policy interference as well as instability, official corruption, duplication of efforts and inefficient use of limited resources, over extended scope of activities of most of the programmes, resulting in resources being expended too thinly on too many activities, and starvation of statutory funds (Obadan 2001; Oyemoni 2003; Lewu 2007; Okoye and Onyekwu 2007; Ugoh and Ukpere 2009). The main problem here lies in the issue of lack of political will on the part of the government, to be judiciously committed to the success of any poverty alleviation programme and to fight corruption which is the main worm eating up any new plant cultivated to provide

remedy to the illness called poverty. As Ugoh and Ukpere (2009: 851) observed, 'both the Peoples Bank and the Community Bank recorded a huge loss of over 80% due to corruption and mismanagement.' More so, in 1997 the federal government allocated the sum of N4 billion on poverty alleviation in Nigeria. Even with the voting of this whooping amount of money poverty level in Nigeria still increased from 65.6% in 1996 to 69.0% in 2010.

One of the most important factors in creating a conducive and a mutual positive interaction between the individual and his natural environment is education. Lewu (2007) however observed that, the federal government of Nigeria has expended large amount of funds on education, especially at secondary and tertiary levels at the expense of primary and adult education programmes that the poor mostly need. The National Poverty Eradication Programme (NAPEP), established by the federal government in 2001 to address absolute poverty in Nigeria seems to be walking on the footpath of failure already. According to Ugoh and Ukpere (2009), despite the fact that NAPEP took cognizance of the challenges of previous poverty intervention programmes, it lacks focus on community education which is capable of increasing adult education needed as important foci of education in alleviating poverty. This would have directly or indirectly increased the level of environmental awareness. Therefore the failures of these policy interventions to alleviate poverty further aggravate the interactions between the poor individuals and the natural environment as they struggle to meet their daily livelihoods.

Poverty, Livelihoods and Environmental Degradation in Nigeria

In many parts of the world, especially in the third world, many people are caught in a vicious poverty spiral. Because of their conditions of living, the poor are compelled to over exploit environmental resources for their daily survival needs. Ironically, this survival attitude towards the environment further impoverishes them, thus making their survival evermore uncertain and difficult (World Commission on Environment and Development (WCED) 1987).

In Nigeria, just like most third world nations, the bulk of the population resides and works in

the rural communities. Because of the high level of poverty in those communities biodiversity provides 90% of their needs; and this accounts for the depletion of native flora and fauna. For instance, 95% of the rural people in the several rural communities in Nigeria use fire wood as the major source of household energy (Nathaniel and Nathaniel 2001). The more the poverty rate grows in the rural areas the more the population using firewood will increase, and the more the environment will be depleted. A study conducted by Jaiswal and Bhattacharya (2013) in some villages in India, for instance, revealed that while 60% of the respondents reported that they have visited the forest for fire wood between 10 to 20 days monthly, 15% of them reported that they visit more than 20 days in every month. This shows over exploitation of the natural environment for survival which in turn underscores the level of poverty. Hence, in another study conducted by Okoti et al. (2014: 247) among the pastoral households in Garissa county, Kenya one of the FGD participants observed that, "the sale of charcoal and fire wood or wood fuel, was a livelihood activity mainly for poorer households." Nigerians, especially in the rural areas still depends greatly on fire wood and charcoal as the basic sources of energy for middle and lower income citizens. These are also drivers of deforestation. Apart from the devastating effect of this on the environment, the use of fire wood to cook indoors leads to air pollution which kills over a million of Nigerian women and children yearly according to the bureau of statistics (Abutu 2013).

Furthermore, because of the heavy concentration of rural communities, Nigeria can be said to be an agrarian society. Many of these rural dwellers are predominately into small scale or subsistence farming. As Nathaniel and Nathaniel, (2001) noted, the agricultural practices of peasant farmers in Nigeria further destroy biodiversity. The slash and burn or shifting cultivation they practice often leads to the depletion of nutrients and organic components of the soil.

On a general note, subsistence farming has accounted for over 60% of the clearing of the tropical forest annually in the third world, while shifting cultivation has accounted for about 70% of the wood land converted in West Africa in recent times (Food and Agricultural Organiza-

tion (FAO) 1982). Farmers in Nigeria, in a bid to realizing the survival needs of their household members 'shift from locations to locations in search of fertile land, thereby encroaching into virgin forests' (Ogboi 2011). 'Surprisingly while cultivated land is increasing, land productivity in West Africa is declining considerably due to decline in soil fertility (Ogboi 2011: 31).

Furthermore, deforestation is not all about wood collection for household use or cutting down trees and clearing for farming activities. It is also about income generation. As Nathaniel and Nathaniel (2001) observed, exploitation of the forest resources in order to generate income for household survival has resulted in the large scale hunting of wildlife. Rural dwellers are compelled by their circumstances to hunt and trap animals in order to generate income, as there are few or no economic alternatives left for them. This condition and its attendant attitude negatively affect the conservation of nature in Nigeria and the third world nations. 'Fuelled by poverty, low levels of education and a weak knowledge of conservation the rural poor cannot appreciate the need for preserving our environment' (Nathaniel and Nathaniel 2001). What results from this is poaching.

On a global note, population increase and human activities have over the years reduced the size of global forest. Whereas in 1850 the global forest was estimated to be occupying 6 billion acres of land, today it ironically occupies 1.5 billion acres (Balee 1987, Rowe et al. 1992; Ogboi 2011). Whereas between 1850 and 1980, the rate of global forest reduction was estimated at between 15 to 26 million acres yearly, the current rate of depletion, put at 40 to 50 million acres yearly is almost thrice the rate in some previous decades (see Ogboi 2011). There are variations of the rate of forest depletion among the third world nations. Within the last three decades before the 1990s, Latin America lost 37% of its forest to human activities; Asia lost 42% while our dear African continent lost 52% (Lean et al. 1990).

In Nigeria, about 60% of the forests disappeared between 1850 and 1960 (Marakinyo 1991). The fundamental issue here lies in the fact that the rate of reforestation was not commensurate with the rate of deforestation. Within the periods of 1850 and 1960, Ogboi (2011) noted that there was a decrease rate of 0.4 million of hectares of forest annually, whereas the rate of re-

forestation was only 0.032 hectares annually. One of the consequences of this imbalance is that 'there is an estimated 484 plant species as well as certain wildlife being threatened with extinction (Oyeshola 2008). According to the International Institute of Tropical Agriculture (IITA), Nigeria has the worst record in the World in terms of deforestation. Over 90% of the Nigerian forest has been lost as a result of deforestation (Osagie 2014).

Furthermore, in terms of regional differences, the northern part of Nigeria is seriously faced with the problem of desertification. The level of poverty in this region is higher than what obtains in the south. For instance, poverty rates in the North-Central, North-East and North-West are put at 67.5%, 76.3% and 77.7% respectively; while that of South-East, South-South and South-West are put at 67%, 63.8% and 59.1% respectively (NBS 2012). Consequently, the activities of over 90% of its people who rely on fuel wood for domestic cooking coupled with the activities of herds men whose animals graze on the available vegetation compound the problem, leading to forest retreat and progressively low annual cropping. Critical states in this respect include Kebbi, Zamfara, Katsina, Yobe, Sokoto and Bauchi (Oyeshola 2008).

It is instructive to emphasize that poverty-environment interaction is not exclusive to the rural settings. The urban poor equally degrade the environment in several respects. Rapid urbanization intensifies the momentum of urban social problems as population increase over stretches the carrying capacity of urban infrastructures. What results from this are overcrowded settlements. The inability of government to provide efficient and effective housing scheme and the rising unemployment in Nigeria, have compounded the problem of the urban poor. While the cost of affording a decent accommodation goes up by year, the economic powerlessness of the urban poor has placed him in a disadvantaged position. Consequently, he is compelled by circumstances to live in slums, where he contributes to the conditions, while in return the conditions affect him negatively. In such urban poor settlements, 'major public health problems associated with poor environmental sanitation and exposure to communicable diseases and poor personal hygiene predominate and are compounded by malnutrition which reduces resistance to diseases especially among vulnerable groups that is, children, pregnant women and the aged (Akinola et al. 2012).

Case Study of the Oil Industry and the South-South Environment in Nigeria

By virtue of the fact that it is the only region (at least for now) that plays host to oil exploration and exploitation, the Niger Delta region presents a peculiar form of man-environment interaction in Nigeria. The main occupations of the Niger Delta people are farming and fishing. Apart from the environmental problems associated with small scale cultivation and fishing, the region had its own peculiar environmental and development challenges before the advent of the petroleum industry. The advent of the oil industry therefore aggravated the poverty conditions of the people. The subsidiary demands on the natural resources for urban development equally undermined the traditional livelihoods of the people. The emergence of oil heightened the pace of construction activities in the fast growing oil cities and thus exerted pressure on sand, clay and wood. The mining of river channels for quality sand created problems for the fishing communities on top of the destruction caused by the oil industry (United Nations Development Programme (UNDP 2006). The suffering is not just as a result of the despoliation of the river bodies, but also because of a shift of emphasis from agriculture to ventures that produce quick returns.

Studies have shown that Nigeria flares more gas than any other petroleum-producing nation. "About 1.7 Billion Cubic Feet (BCF) is flared daily; and from 1958 to 2000 over 5.7 Trillion Cubic Feet (TCF) of gas was associated with oil production in Nigeria and over 5.0 TCF (88%) was flared" (Chokor 2005). Currently, Nigeria is responsible for 13% of the total 168 billion cubic metres of gas flared annually across the globe (Bassey 2008). Gas flaring involves the emission of about 30% methane, with global warming potential 64 times more than is the case with carbon-dioxide (Van Dessel 1995): 400m/t of carbon dioxide into the air and a cocktail of 250 known toxins like benzene contaminating the soil, air and water resources. Consequently, there is 100% loss of crop yield cultivated within 200 metres, 45% loss (600 metres) and 10% loss (1000 metres) away from the gas flaring site. There is also a 20% to 30% reduction in bacterial species, and a loss of between 35 to 61% in fungi (Ukegbu and Okeke 1987).

Furthermore, “the rate of oil spill has risen with increasing tempo of petroleum production” (Okaba 2005: 15). From the one spill incident of 1970, involving 150 barrels of crude oil, spillages have risen to 8,581 cases in 2002, involving almost 28 million barrels of oil (Okaba 2005). Between 1976 and 1990, 38% of oil spills were attributed to equipment mal-functioning, 21% to equipment corrosion and 3% to sabotage (Civil Liberties Organization 1996). Oil spills create an undesirable change in the physical, chemical and biological characteristics of air, water and land, hence affecting farmland, navigational activities and fishing as well as disrupting the eco-balance (Imevbore 1979; Fagade 1990).

Over the years policies have been put in place by successive government in Nigeria to address the environmental burden associated with the oil industry. The Petroleum Regulations 1967, for instance, was designed to address the downstream problems of the petroleum industry. These are regulations against oil leakage. The penalties for violation are revocation and a fine of N100 with the option of imprisonment. Regulation 25 of the Petroleum Regulations (1969) are directed to preventing pollution of inland waters, rivers, water courses, the territorial waters of Nigeria or the high seas by oil. More so, regulation 43 of the Petroleum Refinery Regulations (1974) was made to regulate effluent and drainage disposal in line with good refining practices. The penalties for offenders are a fine of N100 or imprisonment. Some scholars feel concerned about the fact that these associated penalties are too vague without stringent measures to genuinely regulate the harmful operational attitudes of the operators of the oil industry (See Omorogbe 2003). This seems to suggest Connivance Thesis between the government and oil firms in the relations between the State and the oil bearing communities. The manner in which the Nigeria State protects this interest at the expense of environmental and social justice underscores how partisan the State is on issues that relate to profit maximization as a stakeholder.

Furthermore, perhaps because of their hegemonic control of the oil industry and the mononature of the Nigeria economy, government seems very feeble in enforcing gas flaring policies. In 1979, the Association Gas Re-injection Act was enacted to control air pollution and conserve natural gas. While section 2 set the

deadline for gas flaring as 1984, section 4 stipulated the penalties for violation. Informed by the protest from the oil firms given the short time limit, the deadline was extended to 1985. However, Decree No 7 of 1985 provided an amendment to this Act which allows oil firms to flare gas upon the payment of certain levies. “Sadly, fines on flare are seen as income by government and are not used for environmental protection” (Chokor 2005: 360). This explains why there is foot – dragging in terms of gas flaring deadline (Agbose 1999, 2000; Okaba 2008). This lack of political will on the part of government shows the degree to which government is powerless in terms of crucial environmental issues. Such powerlessness underscores poverty of leadership.

The actions of the Multinational Oil Firms in alliance with the partisan posture of the Nigerian State have generated tremendous environmental despoliation and the undermining of traditional occupations which in turn intensified poverty and underdevelopment for the people of this region. This has thus turned the region to a zone of “frustrated expectations, dashed ambitions and unprecedented restiveness” (Okaba 2008: 14). In other words, the occupational disorientation and dislocation which the people of these oil bearing communities have experienced over the years have worsened the rate of poverty and underdevelopment in the region. In spite of the wealth potentials of the oil industry, the region is still one of the poorest and most underdeveloped parts of Nigeria with absence of social services as electricity, pipe – borne water, hospitals, proper housing and access roads, as well as high incidence of malnutrition and diseases (Okonta and Douglas 2001; Onyeonoru and Aborishade 2001). While the petrodollar oil economy undermined interests in traditional occupations and created a dependent and monetized individuals; the depletion of the environment through oil related activities and the subsequent neglect of these communities, in human and infrastructure terms, have created an impoverished people with an impoverished environment. Because most of the rural dwellers in the oil bearing communities in the region do not have other means other than their traditional occupation, they are compelled to fall back on this impoverished environment for livelihood and survival. As the youth are discouraged from these traditional occupations, owing to lack of incentives occasioned by the environmental degrada-

tion from the oil industry, they fight for survival by innovating deviant method(s) of livelihoods.

Therefore, the relationship between the oil installations and the host communities underscores a relationship between poverty and the environment in the region. In a study conducted by Dokpesi and Aikpokpo (2005), among 4 oil bearing communities in Delta state Nigeria, for instance, youths were asked to bare their minds on why people vandalize oil pipelines in the Niger Delta region. The findings reveal that, of the total number of times, put at 445 in which respondents across the four communities listed reasons why people vandalize oil installations, joblessness was listed the highest number of times that is, 212 times; the desire to make quick money was listed second (93 times); poverty was listed third that is, 60 times while neglect and anger on the part of community members was listed fourth among the primary reasons. In sum, this shows that joblessness and poverty are the major reasons why youth get involved in oil pipelines vandalism. Even among the IDIs participants, across the four (4) target communities, in Dokpesi and Aikpokpo (2005) study, there was a unanimous belief that joblessness and poverty are the main factors inducing the disposition to oil pipelines vandalism. The views of an opinion leader from Oporoza community summarized this common assertion thus:

In the Niger Delta, the major cause of oil pipeline vandalism is wretchedness. We are poor in this area; so those who have the knowledge about how to vandalize see it as an avenue to make money. We are poor, both in terms of income and food because there are no jobs. Even the oil companies that are around do not employ people from this area.

There is a link between these factors in the explanation relating to the vandalistic attitudes of some community members, which explains part of the sources of oil spillage in the Niger Delta region of Nigeria due to sabotage. The environment they live in and the conditions under which they live are to some extent major determinants of their vandalistic attitudes. The levels of unemployment and poverty in the region are a common knowledge and a sort of concern to scholars of human development, who have been interested in the socio-economic conditions of the region. Joblessness creates a condition of poverty to the extent that it systematically de-em-

powers an individual in virtually all facets of human endeavours that is, socially, politically, economically etc. Apart from these conditions under which they live, they believe that they live in an environment endowed with material resources. Put differently, they experience poverty and joblessness in the midst of plenty. The manifestation of the wealth generated, through oil exploration and exploitation, finds expression in the affluent lifestyles of oil workers who are co-participants in the social systems in which these jobless and poor youths equally participate. Such environment creates realization problem for the poverty experiencing youths who in a bid to making quick money in order to run away from joblessness and poverty, with their negative consequences; and to measure up in socio-economic terms with the affluent oil workers, indulge in vandalistic action towards oil installations.

As contained in the Niger Delta Regional Development Master Plan, the development challenges of the region include: wide spread poverty; severe dearth of infrastructure and amenities in the rural areas; being the world's third largest wetland with fragile ecosystems; high unemployment, rural-urban migration, urban decay as well as environmental degradation and pollution (NDDC 2006: 3).

The UNDP (2006) has identified some of the underdevelopment indicators of this region in comparison with national and international estimates. Some of these are presented below – The average crude birth rate for the Niger Delta region is put at 45.8 per 1,000 people based on 2004 data. The average natural growth rate of 3.1 per cent per year in the Delta region is far higher than the rate of 2.5 per cent which government often uses for the estimation of rural population growth rate in Nigeria. The implication of this is that the region has a high population rate which requires adequate infrastructure in order to be able to contain its demands. A high population that is predominately improvised generates poverty and social problems for a social environment.

In terms of life expectancy, the 2000 national estimates show that the region has an average life expectancy of 46.88 years. However, this figure may have gone down to about 43 years because of the stress and strain imposed by the economic deprivations and neglect over the years and the cumulative impact of HIV/AIDS in

the region. Whereas the life expectancy index of the oil producing states like Indonesia and Saudi Arabia are put at 0.70 and 0.78 respectively (UNDP 2005), the oil bearing local areas of Bakassi, Burutu, Brass and Bonny have life expectancy index of 0.392, 0.433, 0.458 and 0.471 respectively.

More so, the UNDP has equally observed that maternal and infant mortality rates in this region are high. The crude death rate for the region in 2003 was put at 14.7 per 1,000 people. This implies that there are inadequate health care systems to cater for the health needs of the growing population. Furthermore, the region has low local economic activities, since the advent of oil, as the traditional occupations, that is, fishing and farming which made the local economy vibrant, have been undermined by oil related activities. Even though they are experiencing declining fortune in agriculture, fishing and forestry still account for about 44 percent of employment, despite the persistent negative impact oil related activities have on them. However, trading accounts for 17.4 percent, services 9.8 percent while miscellaneous activities account for 11.1 percent of the important areas of employment.

In the areas of infrastructure and social services, Okonta and Douglas (2001: 33) have noted that in spite of its enormous contributions to national wealth, the region is still one of the poorest and most underdeveloped parts of Nigeria characterized by absence of electricity, pipe-borne water, hospitals, proper housing and motor able roads, malnutrition and disease. In majority of the Niger Delta communities, there is condition of unsafe supply of water through rivers, lakes, unprotected wells and boreholes and creeks. It has been reported that only 20 percent to 24 percent of rural communities have access to safe drinking water (UNDP 2006). This situation has terrible implications for the general health, environment, economic activities and indeed sustainable livelihoods in the region.

In terms of the availability and utilization of energy, studies show that in this region, on the average, only 34 percent of people has access to electrical lighting; while 61 percent use lantern. The major sources of domestic fuel are firewood, charcoal, kerosene, gas, crop residues, animal waste etc.

There is equally the problem of waste disposal system. Environmental waste is mainly

generated by oil and gas industries. The densely populated issues in semi-urban and urban settlements equally create environmental problems. These have serious negative effects on both the environment and the individuals themselves in terms of health implications.

Although there is growing enthusiasm to send children to school, apart from the fact that there are inadequate schools across the region, virtually all schools are in dire need of rehabilitation at the primary level; while secondary school system experiences inadequate quality manpower and the problem of infrastructure. In this respect an NDES report on infrastructure observed that:

In the Niger Delta States, covering some 30,000 square kilometers and with over 3,800 settlements and an estimated eight million people, there were only 2,169 primary schools and 545 secondary schools. For primary schools, this implied one school per 3,700 people serving an area of 14 square kilometer, and one school for every two settlements. For secondary schools, the ratio is one school per 14,679 people serving an area of 55 square kilometer, one school for every seven settlements (NDES 2000).

Finally, in terms of the quality of health care delivery system in the Niger Delta region, there is grossly inadequate capacity to handle health care issues at various levels of service delivery. Isolated communities like those in the river side areas experience worst situation in terms of lack of basic modern medical care, including first aid (UNDP 2006).

With this gloomy picture of infrastructural inadequacies and decay, coupled with severe unemployment and underdevelopment situations, it is therefore not surprising that there is a high level of poverty and social instability in the Delta region. According to Brown (2003: 29), "poverty in terms of lack of minimally adequate income, food security, basic health care, basic education, employment opportunities and/or safe environment, is a major threat to human security and social stability. It is also a threat to the promotion of environmental sustainability. All these combined create the situation of underdevelopment.

CONCLUDING REMARKS

The more poverty leads individuals to degrade their own environment the more they get

entangled in the vicious cycle of poverty. The destruction of the environment and poverty are mutually related or intertwined. The consequence of this linkage is the vicious cycle in which poverty causes the degradation of the environment; and such degradation in turn perpetuates poverty.

When the poor impact heavily on the environment on the basis of how they feel the survival needs, the possibility that they may not have look beyond the horizon in terms of the futuristic effect of their action is high. This is so because, the present wants of the poor employ their whole attention. They are so involved in meeting their present survival needs that they seldom think of the future effect of their present action.

Conclusively therefore, to have a sustainable environmental management requires a holistic approach that would address the issues of environmental awareness, poverty and political will on the part of the government.

RECOMMENDATIONS

Environmental awareness is a necessary condition that must exist if we must promote environmental friendliness and sustainable livelihood. Access to environmental information is therefore needed to fill the knowledge vacuum with respect to knowing the spiral effect of having a negative interaction with the environment. It is necessary for government to step up enlightenment campaign by finding out ways by which it can reach out to the rural poor who may not have access to modern media.

However, the success of this is very much tied to how well government is willing to create the enabling environment for poverty reduction in the country. This is necessary because since poverty is the main cause of environmental degradation in Africa, policies, programmes and legal provisions designed to protect the environment in the region will be unsuccessful without a significant improvement in the living standards, wellbeing and livelihoods of the poor.

When people are empowered with income and equipped in terms of environmental information, they tend to be mindful of their interactions with the environment.

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