



International Journal of Development and Sustainability

ISSN: 2186-8662 – www.isdsnet.com/ijds

Volume 6 Number 10 (2017): Pages 1293-1304

ISDS Article ID: IJDS17070902



Sustainable development in fragile Niger delta region: A task for environmentalist

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Abstract

Sustainable development is an economic development that meets the current needs of the people, without compromising the ability of future generation to meet their own needs. Niger Delta has a fragile environment as a result of its soil. However it supports huge human activities, without adequate care. The result includes pollution, soil degradation, poor harvest, hunger and diseases to mention but a few. Tonnes of waste are hull into the rivers, which are sources of drinkable water, emission of greenhouse gases is increasing by days; gas flaring in Niger Delta is the highest in the world. The unsustainable oil exploitation in the region has led to cultism, militancy and untold number of death mostly of youths. The paper among other things suggests that environmental impact assessment, environmental audit and monitoring should be taking serious, and that stakeholders should include environmentalists. Campaigns and collaborations with international organisations targeted to force government and firms to embark on sustainable development and to provide basic amenities for the people. Firms should be made to clean-up the areas polluted. Finally, it was suggested that legal action, even to international level should be pursued to remedy the problems in the study area.

Keywords: Environmental Degradation; Niger Delta; Resources Exploitation; Sustainable Development

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Cite this article as: Chinago, A.B. (2017), "Sustainable development in fragile Niger delta region: A task for environmentalist", *International Journal of Development and Sustainability*, Vol. 6 No. 10, pp. 1293-1304.

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1. Introduction

Human history is said to be largely written in terms of the struggle between man and nature over terms of man's existence (Barkley and Sackler, 1972). Furthermore for most of human history, the principal threats to man came from nature but today the principal threats to both man and nature come from man himself (Usoro, 1994). Based on the above issue, it has become a growing concern about the state of the environment, and human welfare has assumed a global dimension; the need for concerted and a more focused approach to the management of the environment has not only become imperative but urgent. Presently, there is the growing awareness that concerted socio-economic development that requires a compromise between material growth and environmental constraints (Arokoyu, 2004). This is borne out of the observation that the Earth, which is the only place in the universe known to sustain life, is progressively losing its life supporting capacity due largely to incompatible human activities (Brundtland, 1987).

It is either the Earth will burst or something done to save the Earth and mankind. This thinking led to the idea of sustainable development. Sustainable development in this paper is viewed as economic development that meets current needs of the people, without compromising the ability of future generation to meet their needs (Brundtland, 1987). In a fragile region like Niger Delta with an infant soil, still in soil formation stage, adequate attention and proper action must be taken to sustain the bio-diversity and to minimize wastage.

The relationships between or among environment, resources, and society is one of the most important challenges currently facing human on Earth. For many of Earth's human inhabitants, this relationship is an on-going reality as they try to meet their everyday needs for food, water, shelter and security. They do not need to be reminded of how important it is. It is life and future. For others, usually urban and city dwellers, especially in developed countries, the reality seems distant. Food comes from the supermarket, water is piped into homes, even work and home environments have controlled temperature through heating and air conditioning. It is not until disruptions occur in these delivery systems – caused by flood, tsunamis, drought, ice storm, earthquakes, tornadoes, hurricanes, insect infestations or similar forces of nature that many people realize that they too are dependent on the environment for survival as has been true since before the dawn of human civilization (Dearden and Mitchell, 2009).

A clear concept of sustainable development must be known before it can be implemented in any region of the world. Sustainable development entails three strategic aspects, which includes the philosophy- that deals with vision regarding the nature of future societies. Here attention is given to meeting basic human needs, achieving equity and justice for present and future generations, realizing self-empowerment, protecting the integrity of biophysical systems, integrating environmental and economic considerations, and keeping future options (Dearden and Mitchell, 2009).

It is also a process; sustainable development emphasizes a system of governance and management characterized by openness, transparency, decentralization, and accessibility. According to Dearden and Mitchell (2009) it accepts the legitimacy of local or indigenous knowledge and seeks to incorporate such understanding with science-based knowledge when developing strategies and plans. It also recognizes that conditions change and much uncertainty exists. Thus, it is necessary to be flexible and adaptable, thereby allowing for policies and practise to be modified as experience accumulates.

Finally, sustainable development is a product. As a product it seeks to ensure that economic, environmental, and social aspects are considered together and that trade-offs is made in a way that is visible and transparent to those affected.

From the aforementioned one can ask, how well is Nigeria doing in sustainable development? And how in particular is Niger Delta coping in this direction? Planning is a recent phenomenon in Nigeria, there is generally a lack of skilled practitioners in urban and regional planning and the foreign trained ones often approached planning problems by using imported development planning models, which in some cases does not work. In Nigeria the first National Development Planning was introduced in 1970. India initiated her development plan in 1956, and when development plans were introduced they lack focus. The wide variety of goals adopted by regional agencies such as equalizing regional incomes, developing natural resources, building infrastructures, coordinating local government activities, clamping down political opposition, etc. may prove contradictory and will certainly make an evaluation of their efforts highly complex (Gilbert, 1974). Planners on many occasions have not been given freedom to advance their expertise rather they have been overwhelmed by politicians opinions. Often than not, there is rift between planners and politicians because of differences in perceptions. Given raise to frequent change in strategies in Nigeria.

It is worth noting that Nigeria as a nation is notorious for inconsistency in regional development and economic planning. A change in government, even ministers within the same regime, is associated with unreasonable change in policy (a kaleidoscopic, often abrupt series of changes and even reversal in policy) (Adeyemo, 2004). Discontinued policies abound in Nigeria, for instance the recent local telephone, cancellation of toll gate, shifting of gas flaring deadline date, education curriculum, etc. The situation is disturbing because if we cannot manage our present, it will be utterly difficult to think of the future. Therefore, it is imperative that we concern ourselves to effective management of our environment; economy, resources and governance to enable the future generation have a place call a country.

A scholar once said "We have a view of the environment that does not stop all forms of development but allows it to proceed in a way that respects the environment and ensures that it is protected for future generation...But to respect Mother Earth as a living entity is not easy, particularly when the preoccupation of economic development may well be to exploit natural resources rather than to preserve or sustain it. Such attitudes endangers our common survival and the survival of future generation, who are relying on us to preserve the planet for them" (Mercredi and Turpel, 1993).

2. The study area

Niger Delta is a major geomorphic feature in coastal zone of Nigeria. It stretches from the Benin river estuary for about 450km of twenty one estuaries open and discharges into Atlantic Ocean through the delta. It consists of major distinct ecological zones such as fresh water, swamp, mangrove, creeks, estuaries and barrier island (Ukpong, 2009). Niger Delta is situated on the Gulf of Guinea in Nigeria. It is typically considered to be located within nine coastal Southern Nigerian States, which include: all six States from the South-South geopolitical

zone, one state (Ondo) from South West geopolitical zone and two states (Abia and Imo) from South East geopolitical zone.

The temperature is generally high, about 28°C mean. The relative humidity is about 85% most of the months, but in July and September it is over 95%, and about 70% in December and January. The two dominant soil in Niger Delta are the alluvial and ferrasol (Agbola, 1979).



Figure1. Map of Niger Delta States of Nigeria

Niger Delta is a very densely populated region sometimes called the Oil Rivers because it was once a major producer of palm oil. The area was the British Oil Rivers Protectorate from 1885 until 1893, when it was expanded and became the Niger Coast Protectorate. The delta is a petroleum-rich region, and has been the centre of international controversy over pollution, corruption, marginalization, flood and degradation. (Wikipedia, 2017)

The Niger Delta, as defined officially by the Nigerian government, extends over about 70,000 km² and makes up 7.5% of Nigeria's land mass. Historically and cartographically, it consists of present-day Bayelsa, Delta, and Rivers States. In 2000, however, Obasanjo's regime included Abia, Akwa-Ibom, Cross River State, Edo, Imo and Ondo States in the region. Some 31 million people (www.wikipedia) of more than 40 ethnic groups including; Bini, Efik, Esan, Ibibio, Ikwerre, Ikpeye, Etche, Annang, Igbo, Yoruba, Oron, Ijaw, Itsekiri, Isoko,

Urhobo, Ukwuani, Kalabari, Okrika and Ogoni, are among the inhabitants of the Niger Delta, speaking about 250 different dialects.

3. Niger Delta resources

3.1. Vegetation resources

Vegetation resources are vital things derived from the forest or farmland which are of immense value to man. These includes plants and animals (flora and fauna) and soil, their values can be enhanced in form of game reserve, fruits, firewood, latex, fibres, pulps to mention but a few.

Niger Delta is blessed with good climate and fertile soil; these give rise to robust forest and thick vegetation. Forest resources abound in the area, and with fresh and salt water within the region the air (Oxygen) supply is of best quality and the forest absorb carbon dioxide. Economic trees like Iroko, Obeche, Mahogany, Africa Walnut, Opepe, Iron wood (Okwanama) and other hard wood abound. Niger Delta provides lot of exports and income for Nigeria. The forest also serves as habitat for wildlife and protects the virgin soil. It is home of rich bio-diversity and rich source of African traditional medicines. It provide job to thousands of people and serves as research point for researchers. Its contribution for quality clean air cannot be underestimated. To say that it provides food is a fact that cannot be denied.

3.2. Water resources

Water Resources are essential things derived from water bodies and its shores. Water is vital in regulation and modification of weather and climate, as well as enhancement of seed germination and formation of new soil (land) by sedimentation process.

Niger Delta is also home to many Rivers and creeks which are habitat for many aquatic lives. The rivers also serve as means of transportation, job, recreation, food, medicine, and research. Important seaports and wharf are located in the region, among which includes Port Harcourt and Onne free zone port. (Alexander, 2012)

Nigeria makes billions of Naira from import and export duties from this region. The massive body of water produced quality oxygen which is vital for life all over the globe. The rivers also host naval bases and research institutions. Rivers provide water for industries and domestic uses, the importance of water in Nigeria and in Niger Delta in particular can never be over emphasize. Most of the salt waters in Niger Delta have large reserve of spring most are untapped.

3.3. Mineral resources

Mineral resources are in abundant in Niger Delta region, and their exploitation is already on the high side. Among these minerals are Crude oil, Natural gas, Bitumen, Lignite, Coal, Tin and Columbite, Iron ore, Limestone, Marble, Clay, and Kaolin. The mining of these resources create revenue for government, create jobs, and develop the areas of production. The exploitation of the mineral resources encourages research, education and

training, and tourism. Servicing companies and hospitable firm grows within the region as a result of mineral exploration from the region.

3.4. Atmospheric resources

Atmospheric resources are useful materials from the atmosphere that benefit man and enhance his life and environment. It includes several layers of wind, rainfall, gases, cloud and solar energy. Equally important to man is heat (temperature) which controls many chemical, physical and biological processes on earth (Alexander et al., 2015). It reduces the rate of ultra violet rays and increases the sources of power generation, it enables satellites to maintain its position in the space, it also provides vitamin D. Atmosphere is a medium of transport, and the only exit route from the Earth.

The atmospheric resources within the region enable and attract people to the region. For instance abundant rainfall supports thick forest and bio-diversity, moderate temperature guarantee germination of crops. Thunderstorm assures that important nitrogen is fixed in the soil. The atmospheric pressure in Niger Delta is always bearable and need to be sustained.

Based on geographical location of Niger Delta, the atmospheric condition is friendly; the effect of tropical maritime air-mass (South West Trade Wind) assures moisture presence in the air. The presence of thick forest and ocean are on its own natural air purifiers. Despite her closeness to the equator Niger Delta is an inhabitable place.

3.5. Human resources

Human resource is a resource that is looked down upon in Niger Delta especially by other Nigerians. It is generally believed that this aspect of resource is not well developed in the region. The region are been accused for laziness and illiteracy. The truth be told, Niger Delta is endowed with arrays of human resources in all endeavours of life (Azaiki, 2007).

In politics, from the pre-colonial era the region have leaders like Anthony Enahoro, Festus Oketboh the first finance minister in Nigeria, Eta Eyo and Chief Margret Ekpo the founder of Aba market woman association. The legions of men that followed like Chief Ogbomudia, Chief Edwin Clark, Chief Dappa Briye, Chief Emmanuel Oriji, Dr Obi Wali, Mr Kenule Saro Wiwa to mention but a few. In the field of sports personality like Mr Stephen Kesh, Amadu Shaibu, Finidi George, Samson Siasia, Victor Ikpeba, Austin Okocha, Taribo West. In model world we have the likes of Agbani Derigo. In film industry talents like Hilda Dokubo, Genle Jack, Tonto Dike, etc. In academics the list of human resources from Niger Delta is unending.

4. Consequences of exploitation of resources in Niger Delta

4.1. Vegetation resources

The indiscriminate cutting down of trees and forest vegetation – lumbering, poaching, slashing and burning has reduced both the plants and animal population and arable land in the region. Presently, animals like

elephants, lions, gorillas have reduced significantly. Worst is the fact that the mangrove and fresh water forest are now fortress or hideout for kidnappers and dumping sites for dubious businessmen. (Alexander et al., 2015)

FAO (2007) says that about 3.5% of Niger Delta forest is being eliminated every year and that if the trend is not checked; the region would be completely deforested within fifteen year. Note, the delta is mainly made up of a vast mangrove and tropical rain forest that includes wetlands marshes, and swamps. It is not common terrain and because of this, oil operations tend to be highly disruptive of people's lives and vocations in Niger Delta society. The disturbances, disruptions, and devastations take various forms, affecting the socio cultural and economic lives of the people "present and most probably reserving nothing for future generation.

Alexander et al. (2015) pointed out that agriculture is vital for human existence; however, the types of agricultural practice, and technology applied could be inimical to both human and environment. The practice of cutting and burning destroys animals and their habitat, exposes the soil to direct sun and rainfall and this has caused loss of soil fertility and erosion.

The result is that most of the resources presently are scarce and other is not there at all. Similarly, the rate at which soil degradation, infertility and pollution is taking place, cultivatable lands will not only be scarce but unavailable in Niger Delta region. By implication it means that yield will reduce as is the case in the area presently, price of agricultural goods will sky rocketed. This we have seen in the area. The price of a basin of Garri in Port Harcourt a city in Niger Delta region is five thousand and three hundred naira, as against one thousand, five hundred naira in 2010. This fact shows that Garri could be unaffordable in near future. Garri is common food in Niger delta. Yam was once well cultivated within the region, but that is facing out due to impoverish soil and shift in climate.

4.2. Water resources

The two most important rivers in Nigeria, discharges its water into Atlantic Ocean through the Niger Delta. There were other rivers, creeks, tributaries, distributaries, streams, ponds and marshy points in the area. Some of the useful resources from rivers include, salt, fishes, shell food. Rivers are source of drinkable water, employment, transportation and recreation. The exploitation of oil and dredging of sand from the region has not just made the rivers unfit for drinking and for domestic uses but has rendered it harmful to man, aquatic lives and the environment which has been source of livelihood for majority of Niger Delta's to date. Waste products are channel and dumped into rivers or ocean, in some areas the rivers are the community waste bin. However, these rivers remain the source of drinking water, bathing and source of food and employment.

A 1995 World Bank assessment of industrial wastes in Nigeria, focusing on Niger Delta, asserts that in Rivers State, the petroleum industry is the largest source of pollution, generating most of the 5,500 tons of hazardous wastes produced annually. The bank notes that oil spills and leaks occur hundreds of times a year resulting in serious degradation of surface water and adjacent wetland and mangrove ecosystems.

Despite the bad state of Niger Delta Rivers, the natives are still managing it, but there is no hope for future generation, as the oil companies and greedy businessmen has made the rivers and its shores dumping site for

toxic waste. A good Example is the Koko saga in Delta State, where toxic waste was dumped. Increase in water temperature as a result of waste discharge into rivers led to increase in growth of water hyacinth, which impedes water transportation.

4.3. Atmospheric resources

Air is an important aspect of atmospheric resources, it refreshes human in ways word cannot explain, we feel it and it sustains us. Development devoid of sustainability has changed the situation. Refuse are dump indiscriminately on major walkways, near markets, and even around residential areas, thus causing untold hardship and sickness (Alexander et al., 2015).

Temperature increase has been observed in Niger Delta region. Alexander (2011) Stated, that The sleepless night experienced by many in Niger Delta is as a result of slight increases in temperature. The increase is as a result of human activities within the region. The burning of tyre, gas flare, burning of crude oil by government Agencies, and Kpo-fire has increased and the temperature and deteriorated the quality of air. Atmospheric pollution is so great that it has led to untold death toll in the villages around Niger Delta. It is just recent that urban dwellers in Port Harcourt experienced black shoot, which has been there in rural area. The Adulteration of the air (pollution) is a silent killer in Niger Delta area. It is caused by gaseous emissions from various sources, but significantly from industrial emissions, gas flaring, sewage, solid waste, vehicle exhaust flames and illegal bunkers activities.(Daminabo, Aloni and Alexander, 2017)

The effect of slight increase in temperature in Niger Delta region has led to low agricultural output for heat sensitive crops like corn. It has also increased the incidences of pest like the one that eat up fresh leaves (vegetables, maize and okra). It also induces quick maturity for maize and yam; this affects yield and productivity.

It have been observed that rainfall duration has slightly decreased over the years but the intensity has increase resulting to soil erosion, sedimentation, Bio-diversity depletion breeding of pest and diseases.(Alexander, 2015)

4.4. Mineral resources

These are natural endowments found in the rocks within the Earth surface or underneath the water. The exploration of these mineral has created jobs, revenue and development IN Niger Delta region. This development is seen from only the economic angle. However, since it destroys the environment and the people leaving nothing for the future generation such is termed growth and not development.

The mining of petroleum from Niger Delta has depleted the region in many facets. The area has been polluted, forest destroyed, water and aquatic lives devastated, and greenhouse gases emitted – leaving the people with hunger, poverty, illness and hopelessness. The reckless wastage of resources does not suggest that the future generation is of any concern to the present. This can be seen in pipeline damages, illegal refineries, and illegal bunker and kpo-fire incidences in the region.

The Department of Petroleum Resources in 2007 stated that over 95% of the volume of oil spilled in the Niger Delta region is not recovered. This, of course, mean that marine lives, fishing waters and farming areas become polluted, which in turn adversely affected the economic resources of the region. Considering that the effects of land degradation will reel out inadequate waste management, oil spillage, bush burning, urban industrial pollution, erosion, and inappropriate agricultural practices.

4.5. Human resources

Here human resources are regarded as qualified human capable and willing to do specific task in the system. Human resources abound in all strata within the region, but unfortunately, indigenes of Niger Delta are marginalized even within the region by majority groups. The quest to curry favour has also made them partner with their oppressors instead of joining force with fellow Deltas.

Oil politics and political egotism has led to avarices and jealousy, which has cumulated to thugs, which has been elevated to militancy, cultism, kidnapping and communal clashes. Issues related to oil sector and politics accounted for over 85% of killings in Niger Delta region. (Enyi, 2016). The situation is so ugly that the guilty ones are now saddle with responsibility to judge the innocent. Since evil is rewarded, the tendency is that been evil is a sure way to be recognized in the society. This will adversely affect the regional man power in the future.

The elderly are more secured in Niger Delta than the youth. A personal study carried out by Alexander from 2014 – 2016 shows that in Emohua, Etche, Khana, Gokhana, Ekpeyeland all in Rivers State, that there are more of youths grave than elderly. Most of these deaths are violent related. The fear is that the rate at which the potential future man powers are destroying themselves the possibility of seeing the future is in doubt. The socio-cultural heritage of the people has gone into oblivion. The languages and cultures are fast fading away, and population dwindling. There is moral breakdown as respect is a thing of the past. A scholar once said “We have failed the nation, we have failed ourselves and we have also failed future generation. We met Nigeria that water was flowing in the pipe, with functional schools, electricity, but what are we hanging over to the youths today. What legacy are we leaving for future generation? That is the concern of this paper.

5. The way forward

Instead of lamenting, blaming, cursing and shifting blames, this is time for environmentalist to proffer solutions to developmental problems facing Niger Delta the life wire of Nigerian economy for the benefit of the present and future generation.

- Environmental Impact Assessment on areas where exploitable resources occur should be carried out in conjunction with stakeholders before exploitation proper. It has been observed that companies conduct EIA without stakeholders, which implies that the wish of their employer is what matters and not the environment or the people. That must be discouraged. EIAs that failed to be inclusive tended to have less influence over planning and implementation, and will consequently result to higher social and environmental costs.

- Environmental Auditing and Monitoring of mining facilities should be conducted unannounced and regularly. Environmental Audit is the assessment of the compliance of environmental administration and performance of an operating business with environmental protection requirements, with sound environmental practice in general, and with the principles of sustainable development. The auditing team should include professional environmentalist that will not compromise the companies' inducement. Environmental monitoring enhances the correction of an identified environmental problem for a better environment. It encourages optimal use of resources and avoidance of waste in order to reserve the same resources for future generation (Alexander et al., 2015)
- International laws, Treaties, Policies, and Multilateral agreements on environment and sustainable development should be honoured and implemented.

6. Role of environmentalist

Environmentalists should see to it that the aforementioned steps were taken regularly in the region. This can be achieved through research and training of workers and students. Sensitization and campaigns should be carried out on environmental issues as concerned the region and against defaulters. Publication of such issues in international journals, conferences and even at United Nations level will force erring companies to conform to international level. However, the motive should be devoid of any personal gain.

International organisations like Centre for Marine Conservation, Centre for Plant Conservation, Conservation International, Earth Council, Earth Kind, Earth Watch, Environmental Action Foundation, Friends of Animals, Green Peace International, etc. can be contacted and partnered with, to comply both Government and firms to abide by international rules in resources exploitation. Such campaign can force sensitive government around the world to buy Nigerian oil until when she abided to international rule on crude oil production.

Legal case can also be instituted against government and non-cooperating firms. Ogoni case against Shell is a pointer to the possibility of using legal means to checkmate the nefarious activities of egocentric multinational companies in Niger Delta. Environmentalists are among the few persons that are aware of the situation, interestingly they also have all it takes to confront the anti-sustainable development groups.

7. Recommendations

Professionals and Environmentalists in particular should take the lead in protecting the fragile Niger Delta environment. Any Environmentalist who knowingly compromise standard, should be sanctioned and the certificate should be withdrawn.

Amenities and infrastructures should be provided not only for hosting communities, but to communities around the area connected in one way or the other. The idea of destroying product pipeline for whatever reason should be discontinued, since its side effect to the region is by far what the central government is losing.

Crude oil is non-renewable mineral resource; it is obvious that it must be exhausted one day. So a robust agricultural system and servicing institution should be put in place for relevance of the region in Nigeria, and for future generation to have something to fall back on. Wastage must be discouraged.

This planning is vital since it is the only hope of a region that is marginalized in midst of plenty, what will happen when there is nothing left? Old Mali Empire, Egypt, Dahomey, Songhai, Carthage etc. are some of civilization that wasted their resources or that developed marginally. Neglect for sustainable development has caused them an enviable position “developed countries” of the world; some like Babylon are no longer in existence. Such mistake is what we must endeavour to avoid in Niger delta.

8. Conclusion

Nigerian type of development is obviously not environment friendly, the UNDP/World Bank in 2004 estimated Nigeria flaring at close to 2.5 billion cubic feet daily (over 70 million cubic meters daily), amounting to about 70 million tonnes of carbon dioxide (UNDP/World Bank, 2004). Niger Delta environment is badly damaged and the people vocation has been switched off. Something has to be done and it must be urgent.

The idea of petroleum product been government’s own and therefore must be destroyed as a means of venting anger on negligence should be stopped. The impact of such action is more on the people than the government.

Environmental Impact Assessments, Environmental Auditing and Monitoring should be taken seriously, and stakeholders must be involved. Environmentalists should brace to the challenge of championing remediation of environmental degradation and sustainable development through meaningful research, campaigns and sensitization.

The negative impact of human activities on the fragile Niger Delta environment is inimical to sustainable development; the pressure has aggravated poverty, hunger, thugs, cultism, militancy and unreasonable killing and destructions of property and even the environment. Government’s policies, treaties, and international laws bordering on environment should be enforced and defaulters punished appropriately.

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