

Contemporary environmental impact assessment issues in Nigeria

Problematika ugotavljanja sedanjih obremenitev okolja v Nigeriji

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Abstract

For development to be sustainable it should meet the emerging needs of the present and succeeding generations. It must focus on growth without compromising the needs of the future. Environmental engineering requires that the impact and interaction of common engineered structures such as dams, highways, deep foundation buildings, among others are carried out with minimal environmental deterioration. Agricultural practices, oil exploitation activities, mining operations and industrial waste disposal which affect our environment tremendously, should be subjected to comprehensive and adequate assessment of the impacts they will have on our environment before the implementation of such activities. This will lead to adequate preparation for effective mitigation of future environmental hazards that might accompany these activities.

Key words: sustainable development, environment, projects, future, hazard mitigation

Izvleček

Če naj bo razvoj trajnosten, moramo upoštevati naraščajoče potrebe sedanje in prihodnjih generacij. Usmerjen mora biti v rast, ki ne bo ogrozila potreb prihodnosti. Okoljsko inženirstvo mora skrbeti za to, da sta obremenitev in vpliv gradbenih objektov, kot so pregrade, ceste, globoko temeljene zgradbe, čim manj škodljiva za okolje. Postopke v poljedelstvu, pridobivanje nafte, rudarjenje in odlaganje industrijskih odpadkov, kar drastično obremenjuje naše okolje, je treba ustrezno in izčrpno raziskati z vidika vplivov na okolje že pred začetkom razvoja teh dejavnosti. S takim ravnanjem se bo mogoče ustrezno pripraviti na učinkovito spopadanje s prihodnjimi okoljskimi tveganji, ki utegnejo spremljati te dejavnosti.

Ključne besede: trajnostni razvoj, okolje, projekti, prihodnost, grožnje okolju

Introduction

The consideration of the impact of engineered structures and developmental processes on the natural environment is important in any project. To achieve sustainable development in any activity in Nigeria, EIA is key tool for mainstreaming environmental concerns into development process. Nigeria is one of the few developing countries that have specific relevant legislation as enacted in the 1992 EIA act. This paper reviews some research works on the effects of some of the aforementioned activities on our environment and makes recommendations. There are points of differences between Nigerian systems and the more conventional EIA systems. Federal Environmental Protection Agency (FEPA) was also established in 1998 to control the Nigerian Environment, its resources exploitation and management. But field observation revealed that environmental degradation is growing at a rate worse than the pre FEPA period.^[1] FEPA and other relevant Departments in other Ministries were merged to form the Federal Ministry of Environment in 1999. The National Environmental Standards and Regulations Enforcement Agency (NESREA) was also established as a parastatal of the Federal Ministry of Environment, Housing and Urban Development in 2007. This paper examines the shortcomings in the Nigerian system and also discusses the present effects of these inadequacies.

The scenario

As the Nigerian population continues to increase, more people live in cities and towns. Agricultural land located near cities is being converted to suburban housing. As people populate areas that were once agricultural or rural, stores and industry follow. The development of urban areas has many environmental impacts. When towns and cities expand into rural areas, natural habitats are lost to roads, houses, and other buildings. Development leaves less land for agricultural use, which puts pressure on the remaining farmland for increased production. Other problems are created when concrete and asphalt cover large areas. Because there are fewer opportunities for rainwater to soak into the ground, groundwater supplies are not

recharged and flooding increases during heavy rains. This is evident in the increase in flood incidents in the Nigerian urban areas. Additional contamination occurs as a result of industrial processes. Heavy metals, such as lead and mercury, and poisonous chemicals, such as arsenic, are by-products of many industrial processes and can pollute the soil and groundwater. Some of this type of contamination has been caused by industries that operated without putting into consideration the possible environmental impacts potential dangers of improper waste disposal. In the United States, wetlands are now recognized as valuable ecosystems and are protected from development but in most of the Nigerian wetland resource especially in heavily populated urban areas are disappearing daily due to residential extensions and other construction operations.^[2] Modern landfills are carefully designed to minimize leakage of toxic liquids. Impermeable clay or plastic layers are placed beneath a landfill, but most of the Nigerian waste disposal sites including government established landfill sites are currently posing health treats to their immediate environments.

Identified shortcomings

- There is delay in the execution of EIA in Nigeria due to the inadequacies and misinterpretations of various regulatory statutes.
- There is duplication of functions and overlapping responsibilities in processes and procedures guiding the execution of the various impact assessment tasks due to too many regulatory bodies (FME NESREA, NOS-DRA, DPR, states EBP).
- Absence of effective Sanctions.
- A large percentage of Nigerian populace is unaware of EIA provisions and their rights of objection to environmentally unfriendly prospective projects during the 21 days public display of EIA drafts.
- Abuse of the exclusion clause in the EIA act.
- Lack of credibility and transparency.

Table 1: Comparative Review of EIA Systems

EIA in Developed Countries	EIA in Developing Countries	EIA in Nigeria
Well-framed EIA legislation in place.	Lack of formal EIA legislation in many Developing countries.	For legislation for EIA through the enactment of the EIA Act No. 86 (1992). Nigeria is the first African country to establish a national institutional mechanism for environmental protection.
In developed countries, active involvement of all participants including competent authority, government agencies and affected people at early Stages of the EIA. This makes the process more robust and gives a fair idea of issues, which need to be addressed in the initial Phase of EIA.	Limited involvement of public and government Agencies in the initial phases. This often results in poor representation of the issues and impacts in the report, adversely affecting the quality of the report.	Limited involvement of public and government agencies in the initial Phases.
The process of screening is well defined. For instance, in EU countries competent authorities decide whether EIA is required after seeking advice from developer, NGO and statutory consultees. In Japan, screening decision is made by the authorizing agency with respect to certain criteria.	In developing countries, screening practice in EIA is weak. In most cases, there is a list of activities that require EIA but without any threshold values.	Federal Ministry of environment does internal screening to determine the projects category under mandatory study activity list.
Scoping process is comprehensive and involves consultation with all the stakeholders. In many countries like US, Netherlands, Canada and Europe, the involvement of the public and their concern are addressed in the scoping exercise. Besides this, funding organizations such as World Bank, ADB and ERDB have provision for consultation with the affected people and NGOs during identification of issues in scoping exercise.	Scoping process in most developing countries is very poorly defined. In many countries including China, Pakistan, etc. there is no provision for scoping. In countries where it is undertaken, there is no public consultation during scoping. Moreover, in most developing countries, scoping is often directed towards meeting pollution control requirements, rather than addressing the full range of potential environmental impacts from a proposed development.	In Nigeria, a term of reference is followed for scoping. Proponent carry out EIA generally using consultants and drafts EIA copies is submitted to the responsible officer with an annex record of public form.
Most reports in local language.	Most reports in English and not in the local language.	All repots are in English.
Proper consideration of alternatives in EIA.	The consideration of alternatives in developing countries is more or less absent.	There consideration of alternatives is more or less absent.

A multi – disciplinary approach. Involvement of expertise in different areas.	Lack of trained EIA professionals often lead to the preparation of inadequate and irrelevant EIA reports.	EIA is carried out by consultants. Some have multidisciplinary teams while some do not. The level of expertise also vary widely within the system.
Two tier of EIA review. One conducted after the completion of EIA to check the effectiveness of EIA and the second done before decision making.	Poor review and monitoring.	There are three methods of review and public participation is not compulsory in all cases. Poor implementation and monitoring of EIA recommendations.

Modified after Govind^[3]

The effects of these inadequacies

Recurrent Failure of Earth Structures

Table 2: *Statistics of some collapsed buildings*

Source	Date of occurrence	Place of occurrence	Number of casualties
Nigerian Tribune	June 16, 1990	Private Secondary, School, Saque Comprehensive College Diobu Area.	28
Daily Trust	June 16, 1990	PortHarcourt, An extension of Boungalow 36, Obasiolu Street Mile 3, Diobu	54
Daily Tribune	July 6, 1990	Port Harcourt School Building, Diobu	100 students
National Concord	August 2, 1991	Lagos - Ipaja Ikotun - Isheri uncompleted building	10
Nigerian Tribune	Jan 5, 1995	Lagos - Maryland	1
Daily Trust	July 20, 2006	Minacity, Lagos	25 dead, 50 survivors
Daily Trust	July 21, 2006	Alagbado, Lagos	23 dead, 52 survivors
Daily Trust	July 21, 2006	Mushin Olosha, Lagos	36 dead, 1 rescued
The Daily Punch	March 27, 2007	Lagos three storey building construction	11
Daily Ttrust	April 17, 2009	Abuilding under construction at Auchi	6
The Gaudian	August 11, 2010	3 - Storey building Okoli Street Area 11, Garki Abuja	17

Adapted from The Crust^[4]

Incessant flooding

In Nigeria, flood affects and displaces more people than any other disaster; it also causes more damage to properties. At least 20 per cent of the population is at risk from one form of flooding or another.^[5] Series of photos released by the National Emergency Management Agency (NEMA) shows the seriousness of flooding that devastated various parts of Nigeria during this raining season. Some 2 million Nigerians have been displaced from their homes while some have died or gone missing as a result of the ravaging flood.

The most striking aspect of the flooding happened on the ever-busy Abuja-Lokoja highway where the key highway linking northern Nigeria to the rest of the south, generally the Southwest was submerged under water for weeks, causing traffic delays that lasted days. Several residential buildings, schools, churches and hotels were submerged by the flood. Oye Ibidapo-Obe in a press briefing said "If a proper risk assessment was done the Lokoja flood disaster would have been mitigated even before the road from Lokoja to Abuja that was cut off was built". Lack of adequate

Environmental impact assessment makes us unprepared for mitigation of natural disasters such as this.

Environmental Degradation

Despite the legal backing and funding, which established institutions in charge of the environment enjoys from the federal government, their level of success in environmental protection and hazard mitigation is low. Omofonmwan and Osa-Edoh ^[1] attributed the situation to the fact that concepts and ideas this institutions operate with did not evolve from the people's tradition or way of life. They also predicted that if appropriate techniques and technology of environmental protection and management are not put in place, Nigeria may become a difficult country to live in the next 15 years.

In 1999, the United Nations declared the delta the most threatened in the world due to degradation from crude oil pollution.^[6] Oil spillages have also caused depletion of the vegetation cover and the mangrove Ecosystem in this re-

Table 3: *Some Episodes of Flood disasters and associated hazards in Nigeria*

S/No	Location	Associated hazard	Affected number of people	Date
1.	Adamawa State	Flood Houses & Farmlands destroyed	500	April 2001
2.	Akwa - Ibom State	367 houses washed away	4 000	March 2001
3.	Kano State	434 houses destroyed, one dead and 20 corpses unearthed	Not available	August 2013
4.	Lagos State	Buildings collapsed, markets submerged, properties destroyed.	Over 300 000 affected	Early 1970's Till Date
5.	Taraba State	80 Houses totally swept off. 410 Houses extensively destroyed	More than 50 000 displaced	August 2005
6.	Sokoto State	Houses, food stores and farm lands were destroyed	49 dead, 130 000 displaced	September 2010
7.	Zamfara State	Building submerged, Farmlands destroyed, Properties damaged	12 398 affected	July 2001

Adapted from Etuonovbe^[5]

gion. Ezeaku^[7] conducted a study on soils of selected mining areas in Nasarawa State, North Central Nigeria to assess the environmental impact of open cast mining of coal and Baryte minerals. The study revealed that the soils have been degraded, while the water resources were polluted. This is just a case study out of many mining activities going on in the country. Most of these mining activities are illegal and unethical therefore constituting great environmental hazards. Theoretically, the long-term result of environmental degradation is the inability to sustain human life. Such degradation on a global scale could imply extinction for humanity.

Health Risks

Most Nigerian fertilizer production is from phosphate rocks which may contain significant quantities of naturally occurring radioactive materials. At certain concentrations this becomes hazardous to health. Each year, industrial facilities discharge into the environment large amounts of chemicals leading to respiratory, neurological, developmental and reproductive disorders, and cancers. Yet, communities living within and around such industrial facilities seldom know the extent to which these discharges may be affecting their health.

Conclusion

There is Need for fair play and sense of responsibility by the government and all stake holders in other to effectively implement EIA procures. Periodic environmental audits (EA) are recommended for all projects of possible environment impact. For the Federal Ministry of Environment to succeed in the task of environmental protection, certain basic ideas that can enlighten the people and enhance better public participation have to be conceptualized.

She should develop means of making the system more indigenous without compromising the effectiveness. The agencies involved should also invest more on ground breaking scientific research that can bring innovation to our environmental protection strategies. The ultimate aim of EIA is to promote sustainable development by ensuring that development proposals do not undermine critical resource and ecological functions, lifestyle and livelihood of the communities and peoples who depend on them. Therefore, it is important to put in every effort that will enhance its effectiveness.

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