Journal of Environmental and Tourism Education Vol. 8 No. 1 June 2025

Contextual Factors Influencing Environmental Impact Assessment in Nigeria

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Abstract

In the last few decades, Environmental Impact Assessment (EIA) has become a key process used to evaluate the environmental, social, and economic consequences of proposed projects, policies, and programs, even in developing countries, like Nigeria. Thus, this article examines various factors influencing the EIA process, including geographic, socio-economic, political, legal, and technological elements. It also examines the characteristics of the project location, such as ecological sensitivity and climate, which play significant roles, as do the socio-economic conditions of nearby communities. Engaging local stakeholders, particularly indigenous populations, is essential for identifying potential impacts and addressing social concerns effectively. The study emphasizes the role of political and regulatory frameworks, including government policies and the level of public involvement, in shaping the scope and quality of EIAs. Technological advancements, such as geographic information systems (GIS) and remote sensing, are also highlighted for their ability to improve the accuracy of assessments. In addition, the article shows that sustainability, particularly in the context of climate change and intergenerational equity, is increasingly important in the EIA process. A comprehensive understanding of these factors is critical to conducting thorough and effective EIAs, which supports sustainable development. It is thus, proposed, that by addressing these diverse considerations, decision-makers can better mitigate environmental and social impacts, enhance ecological sustainability, and ensure equitable outcomes for communities affected by development projects. This integrated approach will further help to promote balanced decision-making that aligns with long-term sustainability goals

Key Words: Environmental Impact Assessment, Contextual Factors, Socio-Economic Impact,
Stakeholder Engagement, Sustainability Considerations

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Introduction

The Environmental Impact Assessment (EIA), is a major tool devised to identify proactively, anticipate, and propose mitigation strategies to facilitate the elimination or reduction of any environmental, social, and economic repercussions before the execution of the project (including program, policy and legislation), has emerged as an very vital decision-making process for such proposed projects (Glasson, Therivel, & Chadwick , 2013).). Notably, EIA emerged and was first utilized in the United States of America in the nineteen seventies. However, it has since been accepted and utilized worldwide, necessitating its incorporation into countless international development programs, which includes regulatory frameworks (Sadler, 1996). The complexity of the world's environmental problems, especially as regards

resource depletion, biodiversity loss, and climate change, has increased the need for comprehensive, context-sensitive EIAs (Pope et al., 2004). In Nigeria, a developing nation grappling with complicated environmental issues, very rapid industrialization, as well as urbanization, EIAs, are unavoidably vital to the development process.

The EIA Act No. 86 of 1992, which stipulated the necessity for all significant development projects to undergo an environmental assessment as a requirement for approval, formally established the integration of Environmental Assessments into Nigeria's development planning (Federal Republic of Nigeria, 1992). This efforts at sustainable development became a wakeup call and driving force for subsequent theoretical guidelines on EIA worldwide (Loomis & Dziedzic (2018), Bond, Retief, Cave, Fundingsland, Duinker, Verheem & Brown, 2018, Morris, and Therivel, 2001 and Leknes, 2001) and empirical studies of various environmental problems, for instance in Cross River State, Nigeria. These include, but are not limited to those in Cross River state for instance such as Akintoye, Isip and Obase (2022), Akintoye, Essoka, Okibe, and Offiong, (2021), Igelle, Abua, Agbor, Esuabana, Akpanika, Arikpo, Onnoghen, Akintoye, Eneyo and Eneyo (2023), Inah, Eneyo. Odey, Ushie, Udonwa, Esuabana., Ekpo, Akintoye, Ajake (2022), Efiong, Efiong, Akintoye, Inah, Awan, and Ogban (2024), Akintoye, Onuoha, Digha., Eyong, Okibe, (2017), Akintoye, Inah, and Odunsin (2017), Akintoye, Digha and Egbe (2018), Utang, Andrew-Essien, Akintoye and Upla (2008), Utang, Akintoye, Enyogu, Etim (2007). However, a variety of contextual elements, including geographical, socioeconomic, political, legal, and cultural aspects, affect how effective EIAs are in Nigeria. These factors, discussed in this paper, can either help or impede the successful application of environmental assessments.

The guidelines, procedures, and outcomes of an Environmental Impact Assessment are largely influenced by the associated situations. For instance, Cashmore, Gwilliam, Morgan & Bond (2004), have pointed out that context is the larger collection of factors, which includes political, socioeconomic, geographical, and technological specifics, which dictates how an EIA is executed and the types of impacts which are accorded priority. Such variables tend to differ not only among project kinds (such as energy versus infrastructure projects), but also among geographic locations and for instance regulatory frameworks. An example can be that EIA may provide ecological conservation or social equality with more attention in areas with high levels of poverty or abundant biodiversity (Dove, 2016). However, regions that have experienced industrial development in the past years may place more emphasis on controlling cumulative effects or preventing the long-term environmental deterioration in the area (Aalst & Burton, 2002). In accordance to these observations, Sachs (2015) has stated that in order to guarantee that an Environmental Impact Assessment is adequately executed and with full actualization

of its objectives in reducing negative biophysical and social consequences, it is essential to comprehend the larger context in which the assessment is implemented.

Thus, this study of contextual factors in EIAs implementation in Nigeria aims to identify how the scope, methodology, and results of the EIA process are influenced by a variety of contextual elements. These ranges from the local topography to political governance. The study intends to provide a more nuanced knowledge of how EIAs can potentially contribute to sustainable development in the country, as it's observed in developed countries, and how they might be modified to better fulfil global environmental worries, through the integration of sustainability, intergenerational equity factors, and public health. Thus, it should be reiterated that by examining these elements, this discussion will aim to emphasize the intricacy of the EIA procedural processes. As well as the importance of inclusive, transparent, and context-sensitive evaluations, which should take into account the diverse interests and concerns of stakeholders at different levels and places (Reed, 2008). By accomplishing these, this discussion tends to showcase how vital it is to strategically combine local expertise, seek the participation of stakeholders, and also take into account the short-term and long-term effects in order to ensure that projects are both socially and environmentally sustainable. Without such efforts and accomplishments, EIA outcomes will be tainted with doubts, unacceptability, and ineffectiveness.

EIA as a systematic process

Considering EIA as a systematic process can shed suitable lights for improving its understanding and improvement. Thus, before planned projects, policies, legislatures or developments are implemented, their possible environmental effects should necessarily be assessed, with the aid of a statutory and methodical procedure referred to worldwide as Environmental Impact Assessment (EIA). There are varieties of conditions, external and internal situations, as well as political or institutional situations, which can influence the processes of the assessment, the results embedded in the Environmental Impact Statement (EIS) or Environmental Impact Report (EIR), and by implication the Environmental Management Plan (EMP) of the EIA. These are referred to as *contextual variables* in the EIA. It is important to reiterate that the Environmental Impact Assessment (EIA) as a methodical procedure intended to assess projects' possible environmental impacts prior to their execution. Although the fundamental goal of an EIA is still to evaluate and mitigate environmental impacts, the techniques, scope, and results of the process can be influenced by a variety of contextual circumstances. These aspects, which can fluctuate greatly throughout projects and regions, include geographical, social, economic, political, regulatory, and cultural components.

To conduct a thorough and significant EIA, it is imperative to comprehend these contextual factors. Depending on the project's nature, location, social and political climate, and stakeholders, these variables can differ significantly.

In Northern, Western, Eastern, and South-south Nigeria, there are cultural and religious laws and practices, governmental institutions, and peculiarities which dictate data collection and the general practices of EIA. These may hinder accessibility to worship areas, women under the Islamic household laws, and areas where conflicts and strife are notably present, including militancy and kidnapping. In some South–South areas of Nigeria, females are forbidden from entering certain forests, harvesting non-timber forest products (NTFPs) of fish in some rivers or ponds. In other communities in Northern Nigeria, due to religious and socio-cultural rules for married women, they may not be able to take part in Focused Group Discussions (FGDs, which is a vital participatory research technique for gathering necessary data and information.

Geographical and Environmental Context

Nigeria's vast and varied geography, ranging from coastal zones in Bayelsa, Rivers and Ondo State, tropical rainforests in Cross River, Edo, Ondo and Ogun State, savannahs in Kwara, Benue, Kaduna and Kogi states, and semi-arid regions such as in Sokoto, Kano and Bauchi states, presents diverse environmental challenges that must be considered in EIAs. A case worth mentioning among others is in the, Niger Delta region, which is known for its exceedingly rich biodiversity and petroleum resources reserves, is highly impacted by environmental degradation as a result of the exploration, exploitation and development of petroleum resources development. This is compounded by the frequent incident of oil spills, gas flaring, and large scale deforestation (Omoweh, 2005). Such unique environments , which acts as vital large storage for fresh water and breeding areas for marine animals reproduction, has characteristics which necessitates specialized assessment methods which are sensitive to local ecological conditions.

Along with location-specific factors, it is notable that climate change poses an emerging challenge in the Nigeria state, most especially due to the increasing incidences of flooding, desertification, as well as coastal erosion. Such climatic risks must necessarily be well integrated into the EIA process in order to ensure that the various development projects nationwide, do not exacerbate these highly detrimental environmental hazards (Olaniyan, 2011). The implication of these hazards can be traumatic on the various communities, which have already been impacted by poverty and social insecurity. These factors have a strong dictatorial influence on EIA and its outcomes. They include:

a. Location-Specific Factors

Of importance are the physical characteristics of the project site. These also include its proximity to notably sensitive ecosystems, including water bodies, distinct biomes, wildlife sanctuaries/habitats, which singularly or combined can heavily influence the EIA's scope and outcomes. For instance locations which are near national parks, wetlands, or even biodiversity hotspots may necessarily require more rigorous assessments (Glasson et al., 2013).

b. Climate and Weather Conditions

Regional climate factors, including, but not limited to, temperature extremes, precipitation patterns, and seasonal variations associated with them, can influence the vulnerability of a project to environmental risks such as flooding, forest fire, defoliation, drought, and soil erosion (Morris & Therivel, 2001)

c. Ecosystems and Biodiversity

Also such areas characterised by high biodiversity or endangered species needs specific insights to examine the ecological impacts, because the disturbance of these areas can have long time implications (Sala et al., 2000).

Socio-Economic Context

In Nigeria, as well as all over the world, socio-economic context plays a great role in influencing EIA processes and outcomes. In view of the rapidly growing population of the country, which is estimated at over 200 million people, the high demand for various infrastructure, emerging industrial development, and highly expanding urbanization is high, which in turn places pressure on the environment (World Bank, 2020). The potential social impacts of development projects, including large scale population displacement due to insurgency, loss of livelihoods due to farm abandonment caused by Cattle rearers/farmers conflict, the now frequently occurring pandemics, and disruption of local communities, must be carefully considered in EIAs.

In particular, the oil and gas sector, which is widely noted for contributing significantly to Nigeria's economy, has experienced widespread criticism for its negative social-cultural and environmental consequences on local communities, especially in the Niger Delta region. This has resulted to conflicts between multinational petroleum resources developing firms, aggrieved local communities, and local/foreign environmental NGOs, who often indicate that that EIA processes have often been inadequate in addressing the concerns of affected host communities (Okonta & Douglas, 2001). Social equity, as well as the fair distribution of accrued benefits from the hosted development projects, are thus critical factors to consider in Nigeria’s EIA practice.

Moreover, the Nigeria state is characterized by a high level of poverty, which is complicated by adverse economic pressures, often resulting to a trade-off between specified development goals and environmental protection. There is a tendency for economic considerations to outweigh environmental concerns, especially in the context of large-scale infrastructure projects (Oke, Adeoye, & Babajide (2019).) such as the Dangote Refinery, Lagos-Abuja Super highways, mass tourism, and others. This development can result in weak enforcement of EIA findings or the overlooking of certain environmental impacts to achieve economic growth targets. The socio-cultural contexts include: -

(a) Community and Cultural Considerations

As a matter of necessity, EIA must address the social implications of projects and potential implications on human population losses on local host communities. Such concerns should include potential human population displacement, the resultant disruption of livelihoods, and threats to cultural heritage (Carroll & Turton, 2009). Very important are the concerns over indigenous populations, which are vital for making sure that cultural, as well as traditional practices, are revered (Dove, 2016).

(b) Economic Factors

The socio-economic environment, including the regional dependence on natural resources, employment levels, and infrastructure development, plays a major role in how projects are perceived and what categories of implications are considered suitable or detrimental (Adger, Arnell, & Tompkins, 2005).

(c) Public Health and Well-Being

Projects, programs and policies which has drastic influence on air quality, water availability, and noise levels necessarily need to consider the potential implications on local public health and well-being. Any inability to articulate and manage health impacts, which includes respiratory diseases from air pollution, can result to significant host community resistance and rejection (Kjellström et al., 2007).

Legal and Regulatory Context

Nigeria has a legal framework for EIA known as the EIA Act of 1992 as amended by the EIA (Amendment) Act 2011. Nigeria's 1992 Environmental Impact Assessment (EIA) law mandates the conduct of an environmental assessment on all major public and privately owned specific projects such as infrastructure development, mining and energy projects before they can be established (Federal Republic of Nigeria, 1992). Also, the decree provided various environmental regulations, which exist to guide the implementation of the EIA processes, including the new National Environmental Standards and Regulations Enforcement Agency (NESREA), responsible for monitoring compliance (Mbah & Ekweozor, 2013). With NESREA, Directorate of Petroleum Resources and Federal ministry of Environment, the sustainability of the Nigerian environment became more ensured policy-wise.

Although these legal frameworks exist, the enforcement of the prescribed laws, guidelines and processes remains a significant challenge in Nigeria. Ineffective institutional capacity, empowered by large scale wanton corruption, and a non-existence of political will frequently culminate in inadequate implementation of EIA recommendations (Ogunlela & Mba, 2010). A notable case is, the frequent criticism of the Nigerian oil industry for its poor EIA enforcement, since regulatory bodies such as the Department of Petroleum Resources (DPR) have rated as being ineffective in ensuring that local and multi-national petroleum development outfits companies, adequately embrace the stipulated environmental standards (Adebayo, 2007).

The inefficiency in the interactions between federal, state, and local agencies further hinders the EIA process. This poor networking and lack of adequate cooperation can result in conflicting regulations or undue delays in the approval processes, thus undermining the overall utilization of EIAs (Nigerian Environmental Study/Action Team (NEST), 2004).

(a) National and Local Regulations

According to the European Commission (2017), the regulatory framework of any country or region where a (developmental) project is located dictates the EIA process. Since Environmental laws and associated stipulations and limits for impact assessments can influence how detailed and embracing of all required aspects, the study needs to be.

(b) International Agreements

Gareau (2015) has suggested that if a project encroaches on a trans-boundary area or depends on natural resources administered by international treaties, the existing international agreements must be included in the EIA documentation. The Convention on Biological Diversity (CBD), which has a significant influence on international ownership and usage of natural resources, stipulates how biodiversity impacts should be evaluated.

Political Context

Nigeria's political environment is another critical factor that must necessarily be considered, which notably affects the effectiveness of EIA. Given the high level of political instability, widespread corruption, and the massive dominance of vested interests, especially in the oil and gas sector, it is expected that it will potentially influence the level of compliance with environmental laws and regulations. Development projects, especially all those classified as components of the oil and mining sectors, are habitually perceived by the Nigerian political class mainly as sources of wealth and economic gains. This results to the avoidance of stipulated environmental regulations, resulting in the approval of negatively impacting projects without adequate environmental assessments (Omoweh, 2005).

Given the Nigerian Political system, characterised by the decentralization process, resulting in states and local governments having varying levels of capacity and ability, or is it willingness to enforce enacted national environmental standards. Despite the centralized federal government mandating EIAs, it has been observed that local governments are often devoid of the technical skills and expertise, financial and human resources, or constitutionally enabled political power to ensure that these Environmental assessments are necessarily carried out adequately, with strict compliance to the guidelines in order to ensure best practice or that Environmental Management Plans (EMPs) and its associated mitigation measures are properly implemented (Mbah & Ekweozor, 2013). Stakeholder involvement is vital in EIA processes. Stakeholders may include the Proponents, Regulators, Host Communities, and Non-governmental organizations (NGOs). Particularly, the involvement of local communities is paramount. It is saddening that this participation is often significantly disregarded in political and procedural decision-making processes. Due to the inadequate participation in decision-making in EIA by host communities, particularly in EIA processes, the detrimental outcome is the exclusion of the very important "local" Indigenous knowledge (IK), which could have been a panacea for the pinpointing and suggestion of potential environmental and social impacts (Sulaimon, 2014).

Political parties in Nigeria, especially the ruling parties, tend to override stipulated positions, in the outcomes of environmental assessment. Several projects have been known to be located, or chosen, inappropriately. Several of the Nigerian paper mills, including the Nigerian Paper Mill (NPM), Jebba, Kwara State; Nigeria Newsprint Manufacturing Company (NNMC), Oku Iboku, Akwa Ibom State; and Nigeria Paper Manufacturing Company (NPMC), Iwopin, Ogun State, now non-functional, were probably sited, for political reasons, with inadequate consideration of the sources of suitable raw material, as well as poor managerial expertise, worsen by ethnicity, while machines and equipment purchased and installed were not suitable for the locally grown major raw major material.

(a) Government Policies

Strategic Impact Assessments (SIAs) are most suitable for and at policy formulation stages by governments and legislatures for the identification of alternatives, where necessary. As it is elsewhere, it's also the same in Nigeria, that National or regional political priorities, including the promotion of renewable energy or infrastructure development, can contribute to the shaping of the level of compliance, and best-practices associated with proposed projects (Hickling & Roth, 2005). Also, the ability of political will in expediting or undermining the EIA process should not be overlooked.

(b) Political Stability and Governance

The Nigerian political scene as dominated by the All-Peoples Congress (APC), Peoples Democratic Party (PDP), Labour Party (LP), and several others, can be very distracting due to

the machinations and distortion of facts among contestants. For instance, with the emergence of new governments fostered by different and antagonistic political parties, compared to the previous ones, some of the existing laws and projects are rubbished and changed in Nigeria. Consequently, in sovereign countries with notably weak governance structures or the existence of political instability, the quality of the outputs of EIA processes may be adulterated, resulting to incomplete or even biased environmental assessments of the impacts of the project (Aalst & Burton, 2002).

(c) Stakeholder Engagement:

The political environment in Nigeria is often determined by how inclusive the public consultation process is, to a certain level. State governments often come up with baffling projects, which must be executed. However, in democratic systems, more stakeholder involvement is typically stipulated and adhered. In the case of authoritarian contexts, the process may be more top-down (Sen, 2004).

Temporal and Development Context

a. Project Lifecycle

The exact timing of the EIA process relative to the framework of the project's development phase can influence its analytical comprehensiveness. A good strategy is to conduct an EIA early in the planning process. This allows for more fluidity in modifying the project to minimize impacts (Sadler, 1996). As mentioned earlier, the usage of Strategic Impact Assessment (SIA) at the formative stage of a policy by legislatures and government is highly important.

b. Cumulative Impacts

It's inevitable that EIAs must necessarily account for the cumulative effects of various projects over time. This may include repeated industrial developments that results in long-term ecological degradation in the host communities (Cashmore, Gwilliam, Morgan, & Bond, 2004). Notably, scientists believe that cumulative evaluation of project impacts can help identifying larger environmental patterns and trends. As such , Regional Impact Assessment (RIA) as well as Sectoral Impact Assessment (SIA) can be very useful in identifying cumulative Impacts. This is not the exact case with Project Specific Environmental Assessments (PSEAs)

c. Sustainability Considerations

Good enough, worldwide Environmental Assessments (EAs) are being carried out to be both comprehensive and composite, and to include Sustainability Assessments (SAs) that take note of the long-term impacts associated with and related to climate alteration trends, natural

resources depletion, and the unborn generations (Pope et al., 2004). It is expected that increasingly, this will be adopted as a new trend in Nigeria.

Stakeholder and Public Engagement

(a) Local Community Input

The active inclusion of all affected communities is vital in ensuring that their concerns are adequately considered during the EIA process, in project selection, scoping, data collection, and reviewing. There is also a dire need for a comprehensive listing of host communities. The case of the Nigeria Liquefied Natural Gas (NLNG) project is a good example. It did not only consider the major host communities, such as residents displaced from Old Finima (now in New Finima), Bonny Town, and Others, but included the Gas Transmission Communities (GTC) since Crude Oli is not Drilled in Bonny Local Government Area (LGA), but harvested gases in other areas have to be transported across vulnerable riverine and coastal communities (Akintoye, 2014 and Akintoye, Eyong, Agada, Digha, Okibe (2016). Failure to consider local input can lead to public opposition and even project delays (Reed, 2008). Despite efforts to include all stakeholders and application of enviable strategies, the complications in stakeholder management, as it is worldwide, appear to be evident in the NLNG project scenario. The same appears to be true for multinationals such as Mobil Producing Nigeria and Shell Petroleum Development Company operating in the area. This may be due to the politicisation of community demands, widespread poverty, unemployment, and the inability of local and higher governments to solve socio-economic problems in the area.

(b) Indigenous Knowledge: Incorporating traditional ecological knowledge from

Indigenous groups offer valuable insights into local ecosystems and potential project risks that may not be captured through scientific methods alone (Berkes, 2012).

(c) NGO and Civil Society Influence: Non-governmental organizations (NGOs) and civil society groups can play an essential role in advocating for more robust environmental protections and ensuring that the assessment process is thorough and transparent (Fisher, 2016).

Technological Context

(a) Innovation and Technical Capacity

Though still in the developmental stages of adoption in some states in Nigeria, while others have adequately adopted it, the availability of new technologies, applications and methods, such as Geographic Information Systems (GIS) or Remote sensing, have the proven abilities not only to improve the accuracy of environmental assessments, but also to assist in monitoring potential adverse impacts more effectively, than it was possible in the past (O'Faircheallaigh, 2015). The higher the level of adoption of the EIA aiding facilities, the better the outcomes in Nigeria**.**

(b) Technological Risks

In the Western countries, it has been a hard lesson that some technologies inevitably involve higher environmental risks. These include nuclear power or Genetically Modified Organisms (GMOs). These risks need to be carefully evaluated in the EIA process, often requiring specialized expertise **(**Zhang, Wohlhueter & Zhang, 2016. In Recent years, Nigeria has been attracted by the solutions posed by nuclear reactors as a source of electricity, while dwindling food reserves have encouraged a hopeful glance at Genetically Modified Crops (GMC). The adoption of these solutions to human perplexities in Nigeria will heighten the need to better scrutinize EIA practices in Nigeria.

Market and Industry Context

a. Industry Norms and Practices

In Nigeria the Federal Ministry of Environment, Federal Environmental Protection Agency (FEPA), the Department of Petroleum Resources, some notable State Environmental Protection Agencies (SEPAs), including the World Bank, have played major roles in institutional development, guidelines, and regulation of the EIA process. Also regulators of industries have established standards for environmental management, which can guide the EIA process. These norms are usually the sources of methodologies used to evaluate impacts and the aspects of proposed mitigation strategies (Sahu, 2012).

b. Global Trends

Contemporary issues, such as climate change and sustainable development initiatives, have a strong influence on EIA-related priorities. Such developmental projects are aligned with global environmental goals. These include reduction of carbon emissions or conserving biodiversity, and may face fewer challenges in the assessment process (Sachs, 2015).

Cultural and Ethical Considerations

In Nigeria, cultural (and invariably religious and historical) factors affect how EIA processes are considered and executed. Nigeria is a very gigantic country, which is inhabited by over 250 ethnic groups. Almost every one of these has their own traditions, values, norms, and attachment to the land. Indigenous and local communities tend to have strong sense attachment to their environments as indigenous people, also their source of income depend on the natural resources which include the different types of forests, water, and land. AS such, the EIA process has often been described as a process that does not adequately value and utilize traditional knowledge or rather adequately embrace the cultural values of local communities (Akinyemi, 2014). The Hausas, Fulanis, Efiks, Ibibios, Yorubas, Kanuris, Ijaws, Benins, Tivis and so on have distinctly identifiable cultures. EIA consultants need to have insights into these

during data scoping, on-field data collection and report review, as well as in working and interacting with the host communities and their leaders.

As a result of these, where it exists, cultural differences tend to result to conflicts between project proponents, who naturally are concerned with high economic growth and profit, and local communities, who are dedicated the conservation of their cultural heritage, as well as the environment in their indigenous land. In the volatile and highly polluted areas in the Niger Delta, indigenous people, have been known to frequently raised concerns over the the wanton destruction and degradation of their mother land. This level of environmental degradation has often been caused by petroleum resources exploration and extraction activities. It is thus, widely believed that EIA processes have inadequately addressed and itemized their lawful rights and concerns (Okonta & Douglas, 2001).

As such, the dynamics in Nigeria's evolving environmental consciousness have resulted in heightened needs for ethical considerations in development, with an increasing agitation for sustainable development and environmental ethics adoption. This has been reflected over the years in the massive increase in the number of civil society organizations as well as environmental Non-Governmental Organizations, whose major aim is the advocacy for improved EIA practices, especially as regarding corporate social responsibility in the petroleum resources and mining industries (Fisher, 2016).

Also, allowing proponents to select and pay the remuneration of consultants, as practiced in the Nigerian EIA industry, could have ethical implications, since the income earned now and loyalty built could dictate the outcome of the Environmental Impact Report/Environmental Impact Statement (EIR/EIS). A non-positive report could mean no future invitation to carry out another study.

a. Values and Priorities

With reference to Turner, Morse-Jones, & Fisher (2008) lots of projects are carried out without due consideration of the host communities, who feel the full force of the various negative implications of the projects. The adequate inclusion of different tiers of governments, immediate host communities, and the industries has been known to affect what is seen as important in the EIA process. There are instances when economic development may be more valued than environmental conservation. This may even be in reverse in some other cases. There is a dire need for a balance in the values attached to both.

b. Intergenerational Equity

It's becoming more necessary these days that EIAs must strategically address the long-term sustainability of development projects, programs, and policies. It must also adequately consider the rights of unborn generations. To achieve this, there is a need for incorporating the

principles of "intergenerational equity" into the decision-making process (Molder & Reijnders, 2002). Government policies in Nigeria are often overriding and inconsiderate of existing traditional landmarks and indigenous rights. Even at that, there are often no efforts to protect the future generation, since very massive international loans are collected, and nothing tangible is on the ground to show, except the draining of the economic dividends in paying debts for decades. It's like mortgaging the future of the unborn generation. EIA should be allowed to do cost cost-effectiveness analysis before approvals

Challenges of Environmental Impact Assessment in Nigeria

Although there exists very comprehensive and formal legal framework, guidelines and legislatures for Environmental Impact Assessment (EIA) execution in Nigeria, there exists numerous several factors which limits the application and as such the effective implementation and outcomes of this vital process. Such limitations include, but are not limited to institutional and regulatory weaknesses, socio-political dynamics, and corruption, low level of transparency, political machinations, institutional compromise and cultural factors. Eradicating these limitations is very vital and non-negotiable for improving the quality of EIA and promoting sustainable development in the country. Thus, this can result in improving what practitioners of EIA refers to as "Best Practice".

a. Weak Enforcement and Institutional Capacity

Inadequate level of enforcement of environmental laws and regulations enforcement, is a major problem bedevilling EIA processes in Nigeria. It's one of the most significant challenges being encountered in EIA execution in Nigeria. Despite the fact that the EIA Act of 1992 stipulates that all major projects and programs should undergo an EIA, unfortunately, compliance to this law has often been deemed as low and grossly inadequate. This is largely due to the limited institutional capacity of the characterizing the enforcers of such laws and regulations in Nigeria. In fact, the National Environmental Standards and Regulations Enforcement Agency (NESREA) and the Department of Petroleum Resources (DPR) have limited enforcement capabilities (Mbah & Ekweozor, 2013). Court injunctions and appeals can be very disruptive in the functioning of these Proponents.

The aforementioned Proponents, most time, are not equipped with the technical expertise, financial means, and political support necessary for executing and overseeing rigorous EIA assessments. They are also not often able to enforce adequate compliance with mitigation measures. The fact is that corruption, as well as political machinations, complicates the associated problems. It's not uncommon that political elites prefer economic development or

political interests over environmental protection (Fisher, 2016). It has been observed over the years that, powerful individuals and groups, especially concerning in the Oil and Gas industry, bypass without consideration of the resultant disasters, the EIA process entirely, thus limiting the law's independence and level of integrity (Adebayo, 2007).

b. Lack of Public Participation and Stakeholder Engagement

The necessity of Stakeholders participation during scoping, on site data collection, review of different drafts of EIA reports and compilation of Environmental Management Plans (EMPs) can never be overemphasized. Thus, a good and highly usable EIA needs the respect of Stakeholders and their participation from all relevant stakeholders. But this is not the case in Nigeria, where public participation in EIA processes is traditionally inadequate, particularly in the rural and marginalized communities within the study area. Sulaimon (2014) has indicated that, its common knowledge that local communities are not significantly identified and consulted. This results in a situation where their concerns are not adequately included in Environmental Impact Reports, and as such, in the final decisions.

The neglect of local people, especially the indigenous people who suffer the most of the environmental Impacts and are often displaced in the Niger Delta Area of n Nigeria, is particularly problematic, due to challenges associated with Petroleum resources exploration and Exploitation has caused severe environmental degradation (Okonta & Douglas, 2001; Mbah & Ekweozor, 2013). The real consequences of gas flaring on human health, Cut and fill areas, entire communities' relocation, and natural water pollution may never be adequately documented. The deprivation of these people from democratic processes, self-determination, especially of youths and women, is most despicable.

c. Corruption and Political Interference

Allowing Proponents to select and pay Consultants is a major problem in the EIA process in Nigeria. Corruption, which is a universal issue in Nigeria, has largely eroded the purity of the EIA process. Where the preference for short-term economic gains outweighs biophysical and socio-cultural considerations, there will inevitably be shoddily conducted EIAs. In such a scenario as this, its not impossible for the outright approval of projects without adequate evaluation of impacts. This situation is compounded by Political interference, which goes a long way to complicate problems. It has been observed that projects are approved merely on political or economic selfishness, instead of rigorous and methodological assessments (Omoweh, 2005). The absence of transparency characterising the EIA approval process for development results in the execution of environmental assessments, which are either manipulated by powerful political and business interest moguls (Adebayo, 2007). The outcomes of these are the reduction of public acceptance of the integrity level in the EIA

system, and also the resultant long-term environmental degradation, which compounds the lives of vulnerable communities in the project areas**.**

d. Inadequate Legal and Regulatory Frameworks

The inadequacy of the Nigeria legal framework for conducting EIA, has been frequently pointed out to be characterised by notable gaps. There are significant gaps affecting its usability as a regulatory document. The EIA Act of 1992 is believed by stakeholders as being outdated and not properly drafted to address the rapidly transitioning scenario, as well as the complexity of environment impacting activities, especially since its devoid of the inclusion of emerging environmental issues which includes climate change and the cumulative impacts of multiple projects, among several others (Oke et al., 2019).

Also, there exists noticeable lack of adequate guidelines for the execution of EIA in various operational sectors, or in some cases regions. The outcome of these is that environmental assessments have no clearly stated guidelines. Particularly in the oil and gas sector, there are observable different regulatory frameworks, which deviate and are thus dissimilar from the national EIA laws. These are foundations for ineffective EIA executions and as such ineffective environmental governance (Ogunlela & Mba, 2010). The lack of coordination between federal, state, and local government agencies also hampers the EIA process, with multiple agencies sometimes issuing conflicting regulations or approving projects without considering their cumulative environmental impacts (NEST, 2004).

e. Challenges with Data Availability and Scientific Expertise

Any researcher in the process of secondary data collection, and also to some extent primary data collection, will note the great difficulty in such an enterprise. Thus, another major limitation in Nigeria's EIA process is the lack of reliable data and scientific expertise required to carry out rigorous and detailed EIA. Environmental monitoring data, is often either not existing or sparse, making it difficult to make informed decisions about the environmental consequences of development projects (Olaniyan, 2011). In some cases, they are not accessible because of suspicion, and may also be outdated, or non-comprehensive.

Unbelievably, although it is the fact, that in a country like Nigeria, with decades of EIA practices, there exist lack of baseline data on the pre-project environmental conditions of affected areas before the commencement of projects. These baseline data are the yard sticks with which the levels of alterations, that would likely occur after several years of the project's operation, can be measured against the original state of the environment. As is to complicate

these, there is a frightening inadequacy of highly skilled environmental professionals, such as environmental scientists, ecologists, and engineers. These categories of consultants are armed with relevant skills, coupled with experiences from past projects, to conduct high-quality Environmental Assessments, which will invariably result in the recommendation of appropriate mitigation plans (Mbah & Ekweozor, 2013). This skills inadequacy, lack of experience, selection and payment of consultants by the proponents further undermines the credibility of the EIA process in Nigeria. Its common sense that a consultant must necessarily write a favourable EIA report, to justify another invitation and contract for a future project by the same developer. He who pays the Piper dictates the tune.

f. Cultural and Social Challenges

Cultural diversity and its associated attributes are factors that limit the efficiency of the EIA execution mechanism in Nigeria. The country's multiple ethnic groupings, each with its own environmental practices and traditional indigenous knowledge systems, make their incorporation into the EIA process a high task. Indigenous knowledge, are panacea for providing very valuable insights into local ecosystems and environmental risks, but is unjustifiably preferred to the scientific body of knowledge, which may be most unsuitable for capturing in totality the local context (Akinyemi, 2014).

In Nigeria, most times well well-embraced EIA methodologies fail to significantly consider all the social dimensions of environmental impact. This is much so, in terms of large-scale population relocation, as well as the resultant and inevitable loss of livelihoods. In agreement with these Omoweh (2005) pointed out that at the time decisions and concessions are made, host communities may not understand the full implications or the cumulative impacts of project actions. The reality tends to result in distrust, especially where adequate compensations are not paid. All these largely affect the EIA process in Nigeria

g. Cumulative and Long-Term Environmental Impacts

The adequate prediction, documentation and plans for the eradication of cumulative impact is another issue in EIA processes in Nigeria. This is much so, because of the new revitalization and drive for economic development, associated with the numerous large-scale projects across industrial sectors including several Crude Oil Refineries, such as that by the Dangote Conglomerate, other oil and gas exploration activities including resurgence of activities by Oando in acquiring a number of exploration licenses, involvement in mining, infrastructure development, and agriculture, each of which can have incremental negative effects on the environment. The traditionally, familiar EIA has been the Project- Specific Environmental Impact Assessments (PSEIAs), which focuses on only one project at a time, without adequate consideration of long-term, future, or other existing projects in an area (Cashmore, Gwilliam,

Morgan, & Bond, 2004). Though cheaper can be problematic in the future, as further developments in the area begin to come up in the area.

The Sectoral Environmental Impact Assessments (SEIAs) and Regional Environmental Impact Assessments (REIAs) are better equipped to consider cumulative impacts. The Strategic Environmental Impact Assessments (SIAs) largely help at the policy level to identify sustainability-oriented alternative projects, at the legislative level, before final decisions are made or specific projects are selected. For instance, a policy aimed at increasing electricity generation can have alternatives such as thermal, solar, wind, sea waves, and other options as sources of energy to choose from. Almost all of them could be considered concerning environmental implications. For example, in the Niger Delta, the combined impacts of oil extraction, deforestation, and pollution from industrial activities have led to long-term environmental degradation, affecting local ecosystems and communities. Cumulative impacts are not always adequately addressed in the EIA process, leading to the deterioration of natural resources and ecosystems that communities depend on for their livelihoods (Olaniyan, 2011). The challenges facing Environmental Impact Assessment in Nigeria are multifaceted, ranging from weak enforcement and institutional capacity to corruption, inadequate public participation, and regulatory shortcomings. Addressing these challenges requires strengthening the legal and institutional framework, improving the quality and transparency of the EIA process, and ensuring that local communities and stakeholders are meaningfully engaged in decision-making. Furthermore, incorporating cumulative impacts, integrating indigenous knowledge, and enhancing scientific capacity will help to make the EIA process more robust and effective in promoting sustainable development in Nigeria.

The contextual factors that shape the Environmental Impact Assessment process are numerous and complex. Each project operates within a unique setting that combines geographical, social, political, and economic elements. Understanding these factors is crucial for ensuring that the EIA is comprehensive, transparent, and effective in identifying and mitigating potential environmental and social impacts. By considering these contextual elements, decision-makers can more effectively integrate sustainability into development projects and promote long-term environmental and social well-being.

Conclusion

Environmental Impact Assessment (EIA) has grown from a procedural formality into a critical framework for safeguarding environmental and social interests in the face of development. In Nigeria, where environmental degradation, rapid urbanization, and socio-political complexity

converge, the EIA process must be context-aware and dynamic. This study has shown that the effectiveness of EIAs depends not only on the legal and institutional frameworks in place but also on a deep engagement with geographic, ecological, and socio-economic realities at the project level. Adequate considerations of the geographical and environmental context, socio-economic context, legal and regulatory context, political context, temporal and development context, stakeholder and public engagement, cannot be overemphasized.

The findings emphasize that local conditions, such as ecological sensitivity, climate variability, and community vulnerability, significantly shape both the risks posed by development and the strategies needed for mitigation (Olorunfemi, 2011). Moreover, the social fabric of affected communities, including indigenous knowledge systems and traditional land use patterns, must be meaningfully integrated into the assessment process to enhance legitimacy and sustainability (Adeleke & Adekoya, 2019). Equally important are the political and regulatory dimensions. While Nigeria has made commendable progress in establishing EIA procedures, enforcement remains uneven, often hampered by weak institutions, bureaucratic inertia, and limited public participation (Echefu & Akpofure, 2003). The need for stronger governance, greater transparency, and inclusive stakeholder engagement cannot be overstated.

Technological tools such as Geographic Information Systems (GIS) and remote sensing offer powerful means of enhancing the quality and spatial precision of assessments, but they must be accompanied by capacity building and institutional support to ensure their effective use (Abegunde, 2017). Furthermore, the growing relevance of sustainability, framed by concerns for climate change and intergenerational justice, requires EIAs in Nigeria to evolve into instruments of long-term environmental planning rather than short-term compliance. Ultimately, for EIAs to fulfill their potential in Nigeria, they must be seen as more than just a technical checklist. They must be embedded within a broader framework of contextual awareness, environmental governance that is participatory, adaptive, and grounded in both scientific knowledge and local realities. Only through such an integrated approach can EIAs contribute meaningfully to sustainable development in Nigeria.

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