Review Article
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A review of environmental, social and health impact assessment (Eshia) practice in Nigeria: a panacea for sustainable development and decision making

Abstract

Local participation is always beneficial for sustainable action and environmental problems resulting from urban implementation due to the failure of social and institutional change necessary for a successful transformation of rural life to urban life ahead of the rapid movement of the population. Despite good legal practice and comprehensive guidelines, evidence suggests that Environmental Impact Assessment (EIA) or more broadly Environmental, Social and Health Impact Assessment (ESHIA) have not yet been found satisfactory in Nigeria, as the current system amounts to duplication of efforts and cost. However, ESHIA has been developed and integrated to help manage project activities, facilities, and operations sustainably, so that both economic and ecological profits are accrued (sustainable development) or ensure that any development project does not result in excessive deterioration of and/or the irreversible adverse effect on any component of the environment – a recite for sustainable development. A literature review was done by using a variety of search engines including Research Gate, Google Scholar, Academia, Mendeley, SSRN search strategy to retrieve research publications, "grey literature" and expert working group reports. The thrust of this study is to evaluate the potential benefits of ESHIA as a tool for sustainable environmental development. The evaluation and implementation of EIA are one of the strengths of these tools. Indeed, EIA is the first and foremost management tool employed to help mitigate adverse, potential, and associated impacts of proposed major developments in our environment. EIA is a regulatory requirement that is efficiently used to improve performance, project design, enhancing decision-making, and facilitating policy programs in a sustainable environment. An evaluation of the EIA systems reveals several weaknesses of the EIA system. These include the inadequate capacity of EIA approval authorities, deficiencies in screening and scoping, poor EIA quality, insufficient public participation, and weak monitoring and erratic government policies. Overall, most EIA study rarely meets the objectives of being a project planning tool to contribute to achieving sustainable development and mitigate the impact of the development project. The study recommends some directions for the future to ensure that entire content of the EIA are religiously implemented, review the existing EIA act, increase the expertise of EIA consultants, create a liaison office with an international organisation and with sister agency, ESHIA must enjoy Improved budgetary provision, time latitude, spatial contexts and methodological improvements for outcome measures to achieve results that are relevant to sustainable development by improving project design, enhancing decision making and facilitating policy programs.

Keywords: environmental, social and health impact assessment, local participation, sustainable environmental development, proposed major developments, policy programs, approval authorities, Nigeria

Volume 9 Issue 3 - 2020

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Received: January 31, 2020 | **Published:** June 24, 2020

Introduction

Environmental issues have become top priorities in national, sub-regional, regional, and global agenda in the realisation of the importance and benefits of environmental protection for sustainable development. Industrialization, improved technology, and economic growth have considerably impacted positively on man's quality of life and regardless of the progress, the world continues on unsustainable pathways, this has however not been without its untoward consequences on our environment. However, a wide variety of environmental problems have arisen, complementing the natural ones to constitute hazards to the health of humans and their ecosystem. Therefore, there is a need for a balance between technological development which improves the quality of human life with minimal effect on our land, water, air, and biodiversity. Since, the antidote for this is the precautionary principle, ensuring that any technological development is done with due consideration to our environment. The global community is still far away from realizing inter and intra generationally just development that balances ecological, social, and economic needs. The way out, therefore, is to enforce the conduct of Environmental Impact Assessment (EIA) on every developmental project. Hence, the International Association for Impact Assessment (IAIA), defined EIA as the process of identifying, predicting, evaluating and mitigating the biophysical, social and other relevant effects of development proposals before major decisions being taken and commitments made or Environmental impact assessment (EIA) is a process to systematically identify, predict, evaluate and mitigate impacts of development proposals to facilitate decision-making by relevant authorities on the worthiness of the proposals.[1–5] The impacts evaluated consist mainly of the biological, physical, and social aspects.[6] The EIA has its origin in the United States (US) with the enactment of the National Environment Policy Act (NEPA) in 1970. The act was developed in response to mounting public awareness for environmental protection stemming from increasing pollution across the US due to industrialization and urbanization.[7] The Santa Barbara oil spill in 1969 and construction of the Interstate Highway System resulting in extensive losses of ecosystems both pushed for the subsequent passing of NEPA.[8] Since then, other countries began to model their environmental laws after NEPA and to date; there are more than 100 countries on the list.[9]

The issues of environmental degradation worldwide have attracted attention in the last two decades due to the incessant problems associated with it and the consequential influence it generates on the generality of the populace. In Nigeria, the environmental problems arising from the process of urbanisation are large because the social technologies and institutional changes necessary for a successful transformation from a rural to urban lifestyle have failed to keep up with the rapid movement of the population.[2,3,4,5,10] The millennium has witnessed sources of changes towards democratically moves globally with similar consequences resulting from the need to meet the yearning of the people. This has resulted in many multi-national projects springing up in different countries and thus infringing into the territorial communities with attendant effects on the environment and health determinant. The International Association for Impact Assessment (IAIA) classifies these determinants into three categories as outlined in Table 1 below:

Table 1 classification of determinants into three categories basing on International Association for Impact Assessment[11]

Categories of health determinant	Specific Examples
Individual factors: Genetic, biological, lifestyle/ behavioural, and/or circumstantial. Some of these factors can be influenced by proposals and plans, others cannot.	Gender, age, dietary intake, level of physical activity, tobacco use, alcohol intake, personal safety, sense of control over own life, employment status, educational attainment, self-esteem, life skills, stress levels; etc.
Social and environmental factors: Physical, community, and or economic/financial conditions.	Access to services and community (health, shopping, support, etc.); social support or isolation; quality of air, water, and soil; housing; income; distribution of wealth; access to safe drinking water and adequate sanitation; disease vector breeding places; sexual customs and tolerance; racism; attitudes to disability; trust; land use; urban design; sites of cultural and spiritual significance; local transport options available; etc.
Institutional Factors: The capacity, capabilities, and jurisdiction of public sector services	Availability of services, including health, transport and communication networks, educational and employment; environmental and public health legislation; environmental and health monitoring systems; laboratory facilities, etc.

These effects are bound to affect the totality of the environment including man's habitation. The need to assess such development efforts, therefore, arises to have sustainable development, giving to what is now known as environmental impact assessment (EIA).

In Nigeria, the issues of EIA dated back to the late 1990s, if it had been developed earlier, the consequential effects and environmental degradation resulting from the South-South region oil spillage could have been minimized. A lot of projects in Nigeria implemented without giving adequate attention to Environmental Impact Management. The establishment of the Federal Environmental Protection Agency (FEPA) by Decree 1998 has however worked positively on the education of the generality of Nigeria on the need to protect our environment. This has also led to the formation of various environmental protection agencies at both the state and local government levels. The Environmental Impact Assessment Decree of 1998 represented the formal change from a qualitative approach to environmental control and it signalled the beginning of the use of a more effective instrument of environmental control and management. Series of studies has shown that the process of environmental impact assessment involves many steps, the order of which varies. These include project screening, consideration of alternatives; scoping, description of the project, description of the environmental baseline, identification of the main impacts, evaluation, and presentation of findings, etc. (Table 2).

Table 2 ESHIA Project Planning showing Comparison of Preliminary and Detailed EIAs in Nigeria

S/N	EIA STAGE	PRELIMINARY EIA	DETAILED EIA
1.	Project Screening	Prescribed activities in the First Schedule of the EIA Order 2015	Prescribed activities in the Second Schedule of the EIA Order 201. Such as preliminary assessment in desk-based research and evidence review including spatial susceptibility analysis, rapid and risk assessment, stakeholder workshops, site visits, etc.
2.	Scoping	Terms of Reference (TOR) are submitted to the state DOE office. The scope of EIS is confirmed through the issuance of a formal letter by the office	TOR is submitted to the national DOE headquarters. DOE calls for an ad-hoc panel meeting for the TOR at the headquarters. The ad-hoc panel comprises government officers, academics of universities, and representatives of non-governmental organizations (NGOs). If additional scope is required, the TOR is then revised and resubmitted
3.	EIS Preparation	Preparation of preliminary EIS based on the scope stated in the letter issued by the state DOE. No public display and comment on EIS are required.	Preparation of detailed EIS based on the scope in the final TOR submitted. Copies of EIS are displayed at locations specified by the DOE, including the state DOE offices, the headquarters, universities and public libraries for public comments

Table Continued...

S/N	EIA STAGE	PRELIMINARY EIA	DETAILED EIA
4	Review of EIA	EIS is distributed to technical committee members for review. The technical committee usually comprises government officers. A technical committee meeting is held at the state DOE office for evaluation of whether the EIS meets the legal requirement and addresses all relevant impacts satisfactorily	EIS is distributed to ad-hoc panel members for review. Ad-hoc panel meeting is held at the DOE headquarters for evaluation of whether the EIS meets the legal requirement and addresses all relevant impacts satisfactorily
5.	Decision-making/ Implementation	The state DOE director approves or rejects the EIS or requires the provision of additional information before approval. If approval is granted, it comes with a set of approval conditions.	The Director-General of DOE approves or rejects the EIS or requires the provision of additional information before approval. If approval is granted, it comes with a set of approval conditions
6.	Follow-up/ Monitoring & Evaluation	Post-EIA monitoring which involves the submission of quarterly environmental monitoring reports to the DOE	Post EIA monitoring which involves the submission of quarterly environmental monitoring report to DOE

Results & discussion

Environmental impact assessment, practitioner's participation, and sustainable development goals

There is hardly any major developmental project without collateral effects on the environment namely, water bodies, land, air, and the inherent biodiversity, the interactions between the environment and development, in most cases result in negative impacts on the environment. In the course of project development, negative impacts on the environment may be expressed in deforestation,[12,13,14] land degradation,[12,13] air pollution,[15] surface and groundwater contamination[2–5,13,14,16–17] to mention just a few. To avoid or minimize these impacts, a compromise between environmental protection and project development should be considered necessary in the process of gathering information about how the project could affect the environment.[2,3,4,5] There is a need therefore, for a proactive decision on how to minimize or address any negative impacts of the project on the environment.

Hence, Environmental Impact Assessment (EIA) is a major instrument in decision making and for measurement of sustainability in the context of any national carrying capacity, provided the conceptual framework is extended to the cumulative assessment of developmental policies, plans, and projects. Therefore, the EIA procedure was developed as a step by step guide for the prediction of environmental impacts of any development activity and to provide an opportunity to mitigate negative impacts and enhance positive impacts. Thus, the EIA has three main functions:

i. To predict problems,

ii. To find ways to avoid them, and

iii. To enhance positive effects

During its twenty-five years of existence, the international institute for Environment and Development (IIED) has been promoting a vision encapsulated in the term sustainable development. This might mean the end goal of our environment.[20] The concept of sustainable development has a complex pedigree, as there have been different definitions of what could be termed sustainable development. The basic implication of the concept of sustainable development as embraced by the Brundtland Commission and IIED is that such development that will entail that we should leave to the next generation a stock of the quality of life assets no less than those we have inherited. Holmberg and Sandbrook (1992)[21] indicated that can be interpreted in three ways:

i. That the next generation should inherit made assets and environmental assets.

ii. That the next generation should inherit a stock of environmental assets no less than that inherited by the previous generations

iii. That the inherited stock should comprise man-made assets, natural assets, and human capital.

Sustainable development, therefore, means either that per capital utility or well-being is increasing over time with a free exchange or substitution between natural and man-made capital or that per capital subject to non-declining natural wealth,[22] such a development should be seen as that which involves trade-offs between conflicting goals, such as between economic growth and environmental conservation,[12–14] introducing modern technology and preserving a traditional culture or recording growth with improved social equity. Yet, one of the aims of the EIA process is to provide information about a proposal likely environmental impact to the developer, public decision-makers, so that a better decision may be made. Consultation with the public and statutory consultees in the EIA process can help to ensure the quality, comprehensiveness, and effectiveness of the EIA as well as to ensure that the various group's views are adequately taken into consideration in the decision-making process. A framework that will encourage sustainable development through involvement in public participation, which is embedded in participatory development. Thus EIA:

i. Provides a unique opportunity to demonstrate ways in which the environment may be improved as part of the development process.

ii. Predicts the conflicts and constraints between the proposed project, program or sectoral plan, and its environment.

iii. Provides an opportunity for mitigation measures to be incorporated to minimize problems.

iv. Enables monitoring programs to be established to assess future impacts and provide data on which managers can make informed decisions to avoid environmental damage.

It is now well understood that environment and development are complementary and interdependent and EIA is a technique for ensuring that the two are mutually reinforcing.

Public consultation and participation

One of the aims of participatory development is to allow the local people to participate in the planning procedures of projects that will affect their lives to allow for sustainability and empowerment. However, EIA on developers do not usually favour public participation because of these disadvantages:

i. It carries the risk of giving a project a high profile, with attendant cost in time and money.

ii. It may upset a good relationship with the local planning authority

iii. It may not lead to a conclusive decision on a project

iv. The decision may also represent the views of most local interest groups rather than of the general public

On the other hand, public participation offers the following advantages:

i. It can be used positively to convey information about development, clear misunderstanding of relevant issues.

ii. It allows the planners to learn from local people's perception and ideas and using their idea to plan for them and with them

iii. The process may suggest measures the developers could take to avoid local opposition and environmental problems.

iv. These measures are likely to be more innovative viable and publicly acceptable than those purposed by the planners.

Most planner's contact with the public comes only at the stage of planning appeals and inquiries by this time participation has often involved in a systematic attempt to stop their projects. Public consultation and participation are also essential during the evaluation and identification of mitigating measures and evaluation. This can be useful in:

i. Determining the scope of an Environmental Impact Assessment

ii. Providing specialist knowledge about the site

iii. Evaluating the relative significance of the likely impacts

iv. Proposing mitigation measures

v. Ensuring that EIS is objective, truthful and complete

vi. Monitoring any conditions of the development agreement.

There exist a large number of consultations, communication, and participation methods. Examples include:

a. Public communication avenues

b. Questionnaires and surveys

c. Advertisements

d. Leafleting

e. Use of media

f. Displays and exhibitions

g. Group presentations and workshops

h. Public meetings and inquiries

i. Community interest advocates and Development partners i.e. NGOs.[16,17]

No matter which of the methods is used, the main aim and conclusion would be too effective participation and consequently participatory sustainable development.

Challenges in the implementation of EIA in Nigeria

Public participation

The EIA report is not adequately presented to the public for comments. Usually, about 3 copies are made available in the project State for everyone to view and comment on. This number does not give room for sufficient public participation or engagement.

Delay in EIA process

The EIA process is unduly delayed due to administrative bottlenecks and inadequate staffing.

Inadequate screening and scooping

The type of impact to be addressed in the EIA report and the identified alternatives are not adequately outlined and understood by the proponent.

Limited scope of EIA review

The EIA report is not subjected to wider public participation for encompassing views, comments, and observations.

Lack of awareness

Perhaps, lack of public awareness of the short and long term value of EIA based projects and the resultant sustainability of the environment is a major detriment and drawback in the enforcement of the Act. In other words, proponents of development projects do not know about the existence of the EIA Act, nor do they appreciate the inherent value when the Act is eventually introduced to them. General public awareness has been the bane of EIA enforcement in Nigeria and likely to be so in other West African countries.

Deliberate resistance to compliance with the Law of the land: In Nigeria like other West African countries, a lot of development projects are owned or operated by multinational companies. Examples are quarries, construction companies, Companies with interests in the Food and Beverage, Sector, Tannery, Textile, etc. Most of these multinationals have operated in Nigeria for many decades without giving the environment the same attention it is accorded in their parent/ home country. Although they are aware of the legal environmental requirements of operating major development facilities, it is unfortunate to note that these multinationals and even indigenous companies relegate environmental concerns to the background by deliberately resisting compliance with extant rules.

Weak enforcement of the EIA Act: During the FEPA days considerable efforts were made to enforce environmental laws at all tiers of Government, including the EIA Act. However, when FEPA became defunct up to the establishment of NESREA in 2007, only

some operators in the oil and gas sector, continued to conduct EIA. Most operating facilities stopped adhering to the provisions of the EIA Act including State Laws and Local Government Bye-Laws. In the course of NESREA enforcement action, many violating companies have been brought to book and quite a number of them are complying voluntarily. A testimony to this is the increase in application for the conduct of EIA received by the EA Department and the significant increase in application for Environmental Audits and Management Plans at the NESREA.

The conflict between various tiers of government on the administration of environmental impact assessment

While progress is being made, there are numerous challenges ahead. This has been one of the major bottlenecks in the administration and enforcement of the EIA Act. The issuance of EIA certificate and the enforcement of its provisions have generated controversies between the Federal Government and some State Governments. A landmark judgment that has put the controversy to rest is hereby detailed below according to Ayuba, 2019:[23]

Helios Towers Nigeria Limited Vs NESREA & KASEPA, Judgment Delivered on the 10th Dec 2014

NESREA by way of Originating Summons approached the Federal High Court for the determination of the following:

i. A declaration that the EIA permit issued by KASEPA is illegal, unlawful, and void.

ii. An order directing Helios towers to dismantle and remove the huge telecommunication mast erected and installed in a residential area immediately.

iii. An order declaring the EIA permit issued by KASEPA to the Appellant as illegal and void

iv. The Federal High Court presided over by Hon. Justice M.L Shuaib granted all NESREA's reliefs in a considered judgment delivered on the 1st December 2009.

v. Being dissatisfied with the judgment of the Trial Court, Helios Towers Nig Ltd appealed against the judgment before the Court of Appeal, (Kaduna Division) on the 3rd December 2009.

vi. The Court of Appeal in a well-detailed judgment delivered on the 10th December 2014 dismissed the appeal and affirmed the judgment of the Federal High Court delivered on the 1st December 2009.

vii. One of the fundamental questions before the Court was "Whether or not the 2nd Respondent, i.e. the Kaduna State Environmental Protection Agency shares concurrent powers with the Federal Government in issuing Environmental Impact Assessment Certificates under the provisions of the EIA Act Cap E12 LFN 2004".

viii. In answering the above question, the Court held that by Section 36 of the NESREA Act the Agency being referred to under the EIA Act which is FEPA (now repealed) and any further reference to the repealed FEPA Act shall now be construed as a reference to the NESREA Act.

ix. Thus, all reference to the Agency in Section 61 of the EIA Act shall now be construed as a reference to NESREA Act, therefore NESREA is the statutory body established by law to replace FEPA and the Agency entrusted with the enforcement of all environmental laws, standards, and Regulations in Nigeria (Adapted from Ayuba, 2019).[23]

Conclusion & recommendation

The importance of EIA is seen in the fact that it seeks to provide information that will help to identify the consequences of the establishment of a project within the environment. This will further identify the effects (both negative and positive) such a project will exert on man's biophysical environment. In recent years, there has been a remarkable growth of interest in environmental issues particularly, in sustainability and the better management of development in harmony with the environment. Participation issues are seen as a strength that can encourage sustainability. It is clear that sharply altered and improved decision-making and action are necessary to secure a better future for humanity and the planet. Besides decision-makers in politics, business, media, and civil society, as well as citizens, consumers, and academia have to play a significant pivotal role in this endeavour. Through research and teaching, higher education institutions are prime places to explore and shape the future. But the traditional academic disciplines, which function as if "society has its problems – universities have their disciplines," are not adequately equipped for the enormous challenges ahead.[24] The disciplines that want to contribute effectively to sustainable development must transform their modi operandi toward transformational and solution-oriented research and education.[25] Beyond interdisciplinary collaboration (working across disciplinary boundaries), transdisciplinary research projects are needed because researchers and practitioners collaborate in problem-solving efforts.[26,27] If assessment issues are greatly considered before projects are established, it will encourage the sustainability and successes of environmentally friendly projects. However, acknowledging that Nigeria has taken serious steps to develop effective environmental strategies by the promulgation of the ESHIA Decree and all the procedural guidelines. Nigeria, ESHIA experts, and proponents believe that the main objective of ESHIA is to enhance sustainable development and to reduce environmental impact from projects, and to help in decision making. To date, the success has been rooted in public participation and the legal regulation of E(SH) IA. However, the Environmental Impact Assessment is a veritable and effective tool for achieving sustainable development in Nigeria if properly conducted and coordinated. However, one of the major constraints for the effective implementation of E(SH)IA as a central tool for sustainable industrial development is that the E(SH)IA is seen differently from technical feasibility studies. To resolve this problem, the following recommendations are made:

i. EIA Act must be revised appropriately,

ii. the EIA process should be adequately funded,

iii. more environmental public enlightenment activities should be conducted,

iv. low competence of authorities and practitioners need to be addressed urgently.

v. ESIA practitioners need to have a thorough knowledge of ESIA procedures and legal requirements, but forecasting the

effects and evaluation of the results should be reserved for the recognized experts.

vi. EIA reports preparers should be trained and retrained while effective monitoring activities should be frequently carried out by the regulators. The enforcement of EIA provisions by the appropriate authority will contribute significantly to the achievement of sustainable development.

Much more needs to be done individually and collectively in transforming societies, governments, and companies around the world toward Environmental, Social, and Health Impact Assessment (ESHIA) trajectories in Nigeria. As maintenance of human well-being is highly dependent on nature and the natural environment provides a source of both directly used goods and services that support human livelihoods and an intrinsic value that contributes to human flourishing. Today, a large part of the planet is influenced or even modified by human activity, and natural ecosystems are increasingly threatened.[28,29]

Consent

All authors declare that 'written informed consent was obtained from the participants.

Funding

None.

Acknowledgments

None.

Conflicts of interest

We declare that we have no conflict of interest that could be perceived as prejudicing the impartiality of the research reported. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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Citation: Adedoyin OO, Olalekan RM, Olawale SH, et al. A review of environmental, social and health impact assessment (Eshia) practice in Nigeria: a panacea for sustainable development and decision making. *MOJ Public Health.* 2020;9(3):81–87. DOI: 10.15406/mojph.2020.09.00328