



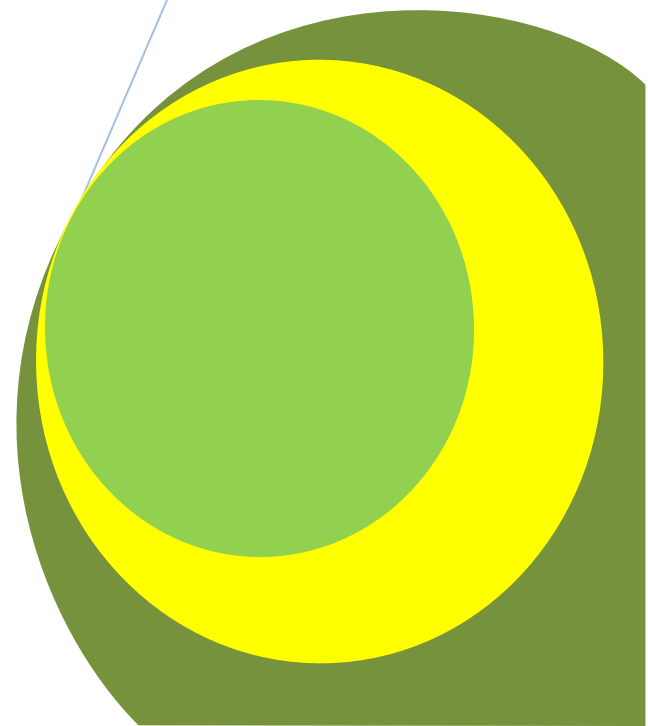
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Evaluation of Environmental Impact Assessment System in Nigeria

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Research Article

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ABSTRACT

Environmental impact assessment (EIA) came into being in Nigeria with promulgation of the Act establishing three independent EIA systems—the EIA Decree 86 (1992), the Town and Country Planning Decree 88 (1992) and the Petroleum Act (1969). Despite a sound legal basis and comprehensive guidelines, evidence suggests that EIA has not yet evolved satisfactorily in Nigeria, as the current system amounts to duplication of efforts and cost. An evaluation of the EIA system against systematic evaluation criteria, based on interviews with EIA approval authorities, consulting firms and experts, reveals various shortcomings of the EIA system. These mainly include inadequate capacity of EIA approval authorities, deficiencies in screening and scoping, poor EIA quality, inadequate public participation and weak monitoring. Overall, most EIA study rarely meets the objective of being a project planning tool to contribute to achieving sustainable development and mitigate impact from development project. The work concludes on the suggestions to involve in EIA process relevant authorities and to increase the competence of EIA consultants.

Keywords: Environmental impact assessment; effectiveness; Nigeria; shortcomings.

INTRODUCTION

Nigeria: Geography and Ecology

Nigeria lies between 4°16' and 13°53' north latitude and between 2°40' and 14°41' east longitude and has a land area of 924,000 sq. km, one of the largest in Africa. The geography varies greatly from tropical rainforest in the South to dry savannah in the North which is flat and sparsely vegetated. Nigeria is hilly and mountainous in the South East, along the border with Cameroon and also in the centre where the Jos Plateau rises to 5,000 feet above sea level. Nigeria is bordered to the West by the Republic of Benin, to the North by the Republic of Niger, to the North East by the Republic of Chad, to the East by the Republic of Cameroon, and to the South by the Atlantic Ocean. The average rainfall ranges from about 500 mm/year in the North to over 2,000 mm/year in the South. The country is blessed with mineral, physical, biological and energy resources. The mineral wealth of the country is vast and should enable it to establish a firm industrial base for rapid economic development. From the mangrove and rain forests of the south, through the various savannahs, and semi-arid ecosystems of the north, the nation is richly endowed with fishery resources, wildlife, timber, medicinal plants, mineral resources, water, ornamental and food crops. In general, the environment provides all life support systems in the air, on water and on land as well as the materials for fulfilling all developmental aspirations. However, the Nigerian environment today is faced with many problems, arising from the impacts of human activities and natural phenomenon.

EIA concept and legal basis in Nigeria

Environmental Impact Assessment (EIA) study is a tool used to identify the environmental, social and economic impacts of a project before decision is made. Its goal is to predict environmental impacts during project planning and design stage, find ways and means to reduce adverse impacts, shape projects to suit the local environment and present the predictions and options to decision-makers. Tayo, (2008) noted that EIA involves a systematic process

for identifying, predicting and evaluating potential impacts associated with a development project. The EIA process is therefore expected to provide measures that will mitigate perceived negative impacts on the environment. The mitigation measures entail identifying possible alternative site, project, process design, including that of not proceeding with the project (Tayo, 2008). The EIA process continues even after approval for project execution is granted, till the project is decommissioned. The restoration of the old project site also forms part of the EIA process.

EIA legislations and the required procedural guidelines for carrying out the EIA process became effective since the 1970s in developed countries (Tayo, 2008). EIA is proclaimed in Principle 17 of 'Agenda 21' (Agenda for the 21st century) of the United Nations Conference on Environment and Development (UNCED), which was held on 3-14th of June, 1992, in Rio de Janeiro, Brazil. It states that: "Environmental Impact Assessment as a national instrument shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and subject to a decision of a competent authority"(UNCED,1992).

The EIA Act No. 86 of 1992 makes the EIA mandatory for development projects likely to have adverse impacts on the environment prior to implementation. Prior to the enactment of the EIA Act in Nigeria, project appraisals were limited predominantly to feasibility studies and economic-cost-benefit analysis. Most of these appraisals did not take environmental costs, public opinion, and social and environmental impacts of development projects into consideration.

Currently, EIA is practiced in over 100 countries of the world (Jay et al., 2007). While its effectiveness has been explored to a certain extent in some developed countries, the research in developing countries such as Nigeria requires consented effort. Even if most of the scholars generally agree that EIA plays an important role in environmental decision-making, the effectiveness, accessibility and influence of EIA, and specifically the accuracy and the methods of the assessment can be openly questioned and criticized. The field scholars attempt measuring the EIA effectiveness either through the quality of EIA report and EIA procedural implementation or relate it to the viability and the role of EIA in factual development planning (Bailey, 1997; Baker and Wood, 1999; Simpson, 2001; Ogunba, 2004; Sakalauskiene et al., 2004; Pinho et al., 2006; Pölönen, 2006).

The paper described current practice of EIA in Nigeria, the main strengths and weaknesses of the system and also provided the recommendations for further improvements.

METHODOLOGY

The research strategy is based on a combination of quantitative and qualitative data acquired through analysis of relevant legislation, EIA programmes and reports, and the use of questionnaires and semi-structured personal and focus groups' interviews with the field and EIA experts from agencies concerned with enforcement of the EIA act in Nigeria.

The study started with the analysis of scientific literature and theoretical basis of EIA formation followed by survey of EIA studies, programmes and reports in Nigeria. The main shortcomings and strengths of Nigeria EIA system were conducted from the analysis of current EIA practice in Nigeria and interviews with EIA experts and practitioners. The group of 50 respondents interviewed in 2011 was made from 25 EIA experts from the Department of Petroleum Resources (DPR) and Federal Ministry of Environment (FMENV), and also 25 EIA consultants. These agencies are by the EIA Act responsible for the enforcement of the provisions of the EIA Act. Half of the interviewed EIA consultants have been actively involved in EIA for up to five years; the others fall within a range of professional experience of five to ten years. The interviewed experts from DPR and FMENV have been working in the field of EIA for ten years. A structured questionnaire consisting of closed ended or ranking questions was used to record the answers to the questions related to the issues of EIA efficiency (including EIA procedural implementation, quality of EIA reports and others). Moreover, respondents were encouraged to provide the details on personal opinion as well as to present comments. The data collected were analyzed with Minitab 14 edition.

EIA System in Nigeria

The law that governs EIA practice in Nigeria as adopted in 1992 is the main document explaining the system and principles of EIA in Nigeria. Previous authors have elaborated on the evolutionary advancement of EIA in Nigeria (Ogunba, 2004; Okorodudu-Fabura, 1988; Isichei, 2000). In Nigeria there are three independent EIA systems in operation—the EIA Decree 86 (1992), the Town and Country Planning Decree 88 (1992) and the Petroleum Act (1969). Ogunba (2004) observed that whilst the current practices of the three EIA systems in Nigeria were at different stages of evolution, the EIA schemes (the Town and Country Planning Decree) has not evolved satisfactorily, whereas the other two EIA systems (Petroleum Act and EIA Act) have produced intricate legislations and guidelines, but fall short of first-rate practice.

Additionally, there are several supporting orders exploring the provisions for public involvement in the processes of screening, drafting the guidelines, scoping, reporting, etc.

The EIA Act made it mandatory for EIA to be conducted for projects which are likely to have significant effects on the environment. These projects are listed in category 1 of the Act (Table 1). For Category 2 activities (unless within the Environmentally Sensitive Area), full EIA is not mandatory. Project proponent (or an independent EIA consultant upon a request from a proponent) is required to submit a short description/synopsis of the project and the intended development location to the relevant supervisory authority (in this case the Ministry of Environment or Department of Petroleum Resources (DPR as the case may be). The description of the project should include the analysis and estimation of the extent of the activity, should explain the planned use of technologies, materials, natural resources and hazardous substances, waste generation and handling, predicted pollution, probable interaction with neighbourhood activities, accidents and their prevention. The regulatory agency then examines the obtained information, determines whether the project is likely to have a significant effect on the environment in accordance with the Guidelines for Screening Procedure on the case (Fig. 1). Normally, the information above serves as the decision-making on whether a full EIA study and report is necessary. In the meantime, a parallel process of informing the general public (via newspapers and local municipalities) about the decision of a regulating agency is started to ensure that local and regional residents have a possibility to express their views. The public opinion must be considered when taking the final decision regarding the likelihood of significant effects and the need of a full EIA study.

The EIA study commences with an extensive scoping procedure, with the purpose to determine the issues to be analysed in the EIA study and the related report, i.e. to identify all potential impacts and to foresee which of them are likely to be relevant. The agreement on the alternatives to be examined, the direct and indirect effects and their mitigation measures to be analysed, also the structure and specifics of an EIA report and its contents, and the methods used to forecast the effects on certain environmental media must all be analysed and presented in the scoping phase. During this period, the proponent (or independent EIA consultant upon a request by the proponent) is required to prepare so-called "EIA-scope draft report" to be submitted to relevant authorities for consideration and feedback. The feedback might be by way of additions or corrections that will be incorporated in the EIA study.

Public consultation is another compulsory requirement for the scoping phase procedures. As the general public is informed via the press and announcements in local municipalities about the

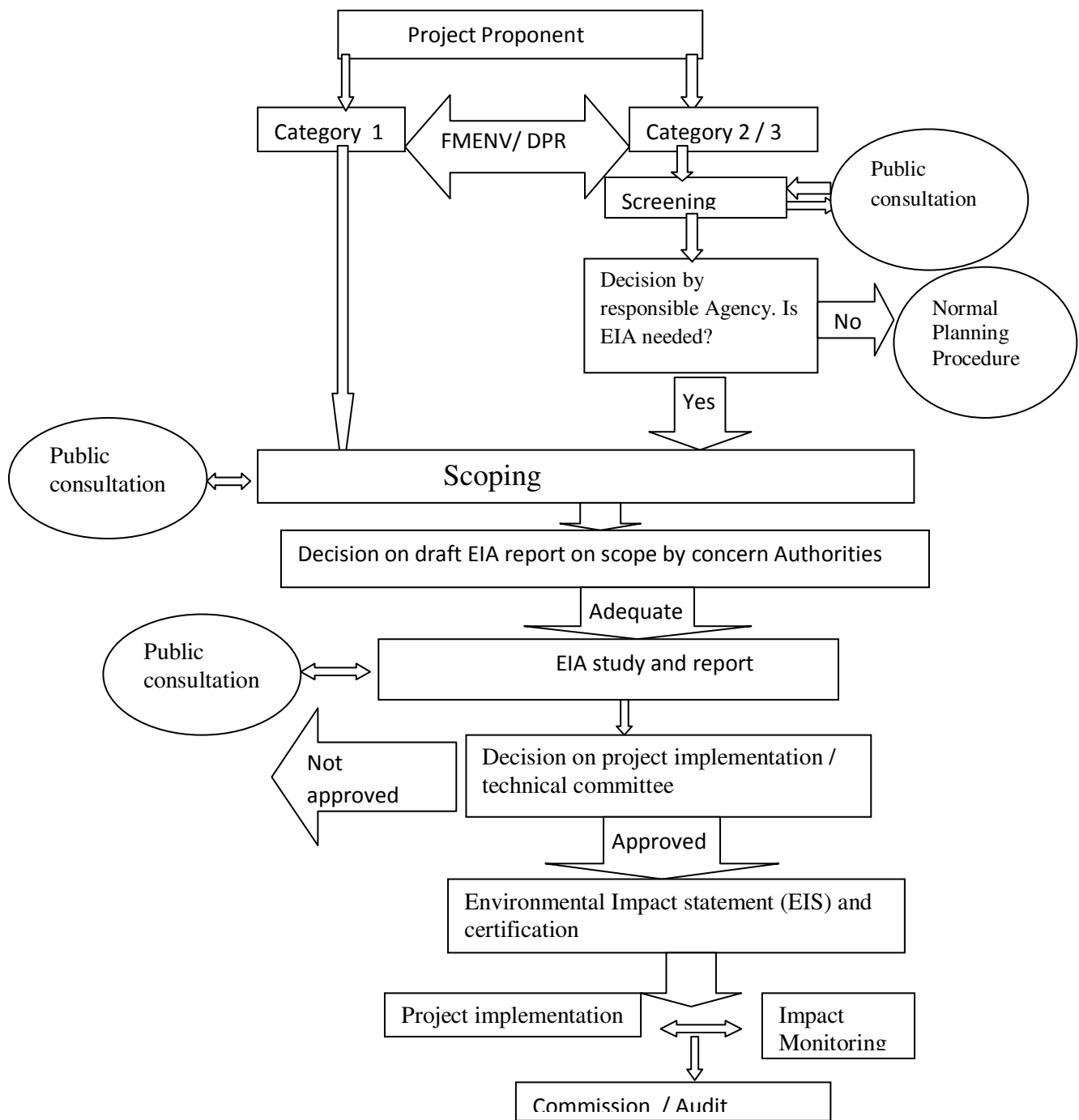


Fig.1.0: Flow chart on EIA procedure in Nigeria.

Table 1.0: Category on mandatory EIA study in Nigeria.

Project Category	Project type	Other considerations
1	Agriculture/ Agro allied Industry/ manufacturing Food, Beverage, Tobacco processing. Infrastructure: Ports, Housing, Airport, drainage and irrigation, railway. Transportation: resort and recreational development, Power generation. Petroleum, mining, quarries, waste treatment and disposal, water supply, land reclamation and Brewery.	
2	<u>Agriculture/rural development</u> Reforestation/ afforestation project, small scale irrigation, small scale aquaculture, saw milling, logging, rubber processing, fish processing <u>Industry/Infrastructure</u> Mini-hydropower development, any small scale industry development e.g. textiles, chemical industry, power transmission, renewable energy development, telecommunication facility, rural water supply, public hospitals, road rehabilitation. Any form of quarry or mining.	If the project is located: environmental sensitive area:e.g. coral reefs, mangrove swamps, small inland. Tropical rainforest areas prone to erosion, mountain slope areas prone to desertification, natural conservation areas, areas with protected /endangered species, areas of scientific interest. Etc. moves to category 1
3	Institutional development, health, family planning, nutritional and educational programmes.	If project involves physical interventions in the environment Moves to category 2

Source: (FMEnv, 1995).

Up-coming EIA programme, they can make suggestions on the inclusion of the issues to be covered by the EIA study and report. In accordance with the provisions of Section 25 of the EIA Act, interested members of the public are given the opportunity to participate in the EIA review process through comments on project reports that are put on display. Such displays are usually done for a 21-working-day period at strategic locations. Notices of such venues of display are usually published in the National and relevant State daily newspapers and information about such display are complemented with further announcements on the relevant state electronic media. Often times, the venues of displays include the Local Government Headquarters, where a project is located, the State Ministry of Environment or Environmental Protection Agency(ies), The Federal Ministry of Environment's Zonal Offices, Liaison Office, Lagos and the Headquarters, Abuja. Comments received from the display venues are forwarded to the Federal Ministry of Environment Headquarters for collation and evaluation preparatory to the Review Panel meeting for the project. The consideration of the opinions of competent authorities and public at this early stage allows avoiding delays in the following steps, and also ensures sufficient quality and completeness of the information provided in the final EIA report.

After the conclusion of the public display exercise, The Federal Ministry of Environment may decide to set up a review panel to review the draft EIA report depending on the sensitivity or significance of the comments received. The review panel meetings are held in the public so that stakeholders can utilize this opportunity to put forward their views and concerns for consideration. The choice of members of the review panel depends on the type of project, its scope as well as the ecosystem to be affected. However, the Chairman of the affected Local Government(s) and the Commissioner of Environment of the project location are always included in the Panel. Projects that may likely cause significant adverse effects that are immitigable, or public concerns about the project warrant it, such a project is referred to Ministry Of Environment Ministerial Council for subsequent referral to mediation. For a mediation to be

set up, Ministerial Council would have been convinced that the parties involved are willing to participate in the mediation and to abide by its decisions.

After the submission of a satisfactory Final EIA report, the Federal Ministry of Environment may decide to set a number of conditions for the approval of the implementation of the project. Such conditions usually include a statement that mitigation measures highlighted in the projects EIA report shall be complied with.

Environmental Impact Monitoring is designed to monitor the Environmental Management Plan, and concerns during project operations. It is also designed to assess the extent to which commitments contained in EIA reports are reflected during the various phases of project development and operations. Impact Mitigation Monitoring exercises are conducted to assess the degree and effectiveness of the mitigation measures proffered in an EIA report.

In a typical Impact Mitigation Monitoring (IMM) exercise, the following statutory actions are carried out:

- Facility inspection
- Interactive session with project managers on the Mitigation Checklist for the EIA of that project.
- Interview and interaction with the action party responsible for ensuring full implementation of a particular action.
- Inspection and Verification of the parameters that shall be monitored to ensure effective implementation of that action.
- Check the timing for the implementation of the action to ensure that the objectives of mitigation are fully met.
- Interact with project Engineers and Technicians on mitigation measures that are not applicable, or not enforceable or still not practicable in line with good environmental principles with a view to finding out practical alternatives.

Strength and Shortcomings of Eia in Nigeria.

Nature of the administrative setup

The legislative provisions and guidelines for EIA in the country are quite comprehensive. However, 57 % of the respondent agreed that lack of implementing mandatory requirements for EIA including no use of powers to impose fines resulting in the development and operation of many projects, is likely to cause environmental and socio-economic impacts, without undergoing an EIA (Table 2.0). Furthermore, proponents take the responsible authorities for granted for lack of coordination in enforcement machinery. Thus, projects for which EIA is carried out, may take place after procurement of site or even after start of construction and hence EIA becomes just a formality. Similar trend was also noted in Lithuania (Kruopienė, et al., 2009).

Table 2.0: Questionnaire on the strengths and shortcomings of EIA process in Nigeria.

s/n	Questions raised	Percentage frequency (%)
1	Poor administrative set up within the responsible authority	57
2	Weak coordination along the line departments (EIA proponents, consultants, local financial institutions)	60
3	Few EIA production per annum	67
4	Inadequate screening and scoping	65
5	Limited scope of EIA review	54
6	Poor quality of EIA report	50
7	Weak public participation	79
8	Inadequate implementation of mitigation measures and monitoring	75
9	Is EIA objectives to reduce environmental impact of projects?	100
10	Effective legal system and legislation	57
11	Extensive politicization of the EIA process	46
12	Is 21 days allowed for public comments adequate	78
13	Is baseline data available?	53
14	Need to maintain professional ethics	87

Weak coordination

Sixty percent of the respondents agreed that coordination among EIA proponents/consultants, DPR and FMEnv, local financial institutions and the line departments are generally weak. This is leading not only to the inadequate

consideration of concerned departments' views in the EIA report but also to the start of development works prior to getting EIS and certificate.

Few EIA production per annum

The EIA production rate of the country has been approximately 23 per annum during the last five years (Suleiman, 2007). Respondents agreed that there is slow pace of EIA production in Nigeria (67%). Data regarding average time of approval of an EIA are not available. Some of the EIA reports are not yet approved. However, this is not an indication that all such projects are stopped. How many projects for which EIA was required by law but have been developed during the last seven years without EIA is also unknown. The investigation of these aspects may provide useful insights into the cause of delays as well as the weight given to various types of impacts and to the public opinion during review.

Inadequate screening and scoping

The unit in DPR and FMEnv responsible for screening and processing initial environmental examination (IEE) of public sector projects appear to be one of the causes of no or late initiation of EIA studies, if so required under the law. Being an in-house department for government projects, it sometimes ignores the requirement of EIA due to political pressure. Furthermore, inadequate involvement of stakeholders and the concerned experts during scoping is resulting in a thin coverage of environmental and socio-economic issues in the EIA reports.

Limited scope of EIA review

EIA review process involves third party participation that ultimately enhances the quality of EIA study and final report. This third party involvement in the review can be marked as a salient feature of the EIA process in Nigeria. Although, an independent EIA review commission does not exist in Nigeria, more resources are expected to be allocated by the government to transform third party involvement into formal review bodies. Fifty-five percentage of the respondent agreed that some anomalies exist in the process due to lack of technical capacity and subjective review. Political pressure is also causing approval of poor quality EIA reports.

Poor quality of EIA reports

The quality of EIA report is a reflection on the competence of the EIA consultants and the review committee members. The overall quality of EIA reports is unsatisfactory. The lack of experience of EIA consultants and approval authorities along with reluctance on part of the proponents to allocate sufficient resources are some of the impediments to a better quality EIA. In addition to that, there is no code of conduct for EIA consultants; not even any requirement of registration. In many cases, a consultant's role has been limited to highlight the economic benefits and justify the project forgetting environmental approval.

Weak public participation

The active public participation is considered to be the key strength of the EIA process in Nigeria. This topic gets the most important place from respondents (79%). According to the official national requirements (guides for public information and participation in EIA Act 1995), the general public is informed about EIA process and has a realistic chance to actively participate throughout all phases of the application: from the very beginning (screening process) up to the final development consent. The massmedia and local municipalities are involved in spreading the information. Moreover, the applicants and regulators must follow the legal requirement to organise a series of presentations on the intended projects that may be requested/organized at any stage, e.g. in a screening procedure. Public opinion must be considered at all times and only highly qualified arguments may serve as grounds for its refusal. However, the major drawback is that general public in Nigeria is comparatively indifferent and poorly informed about the potential negative environmental effects, and especially the long-term impact. The training of personnel, the guidelines, the discussions on EIA are usually in English. Quite often, the affected public is not adequately informed of the issues at hand or able to interpret the EIA reports. These difficulties are partially alleviated by public hearings where explanations can be provided face-to-face by the Project Proponents and EIA consultants.

Inadequate implementation of mitigation measures and monitoring.

Quite often, EIA are approved on the basis of proposed mitigatory steps and monitoring. Post-EIA monitoring has been poorly implemented so far. The implementation of an environmental management plan, mitigation measures and post-decision monitoring are some of the weakest facets of Nigeria's EIA system. These weaknesses can be explained by the lack of adequate workforce, logistics and enforcement machinery. While the project proponents (usually industrialists and government departments) are highly influential, responsible agencies are considered among the weakest government agencies. Political manifestos, generally speaking, are to encourage investment in the development sector. There is a need to transform political will in favour of development but not at the cost of environment.

EIA objectives

One hundred percent of experts and practitioners interviewed agreed that the main and basic objective of EIA is to reduce environmental impact. This statement is followed by such objectives as a tool for making sustainable development progress. Respondents saw it as an important issue and for improvement of decision-making process.

Effective legal system and legislation

Fifty-seven percent of interviewed practitioners and experts said that comparatively effective legal regulation of EIA is another strength that should be emphasized. Now there are more than sixty various legal acts, orders and other documents related with EIA. The legal framework regulating the EIA is a result of harmonization of Nigeria legal system guidelines with UN requirements that lead to the relatively effective control over environmental impact assessment of projects.

Extensive politicization of the EIA process

Extensive politicization of the environmental assessment process is another problematic issue to be addressed (47% respondents admitted that). According to the EIA procedural guide (1995), in a case that the local council/*chief* takes a reasoned negative resolution regarding the possibility of a project in its territory already during screening or scoping stages, the environmental assessment procedures must be discontinued until the initial resolution is revised and overturned. However, the members of the council, even if being not environmental experts, have the right to take such a decision on their own discretion without having considered expert conclusions or recommendations, and this is a premise for politicization of EIA process. Therefore, an amendment to the Law on Environmental Impact Assessment is highly recommended to ensure that members of local councils can only stop EIA procedures after they have considered conclusions and recommendations from recognized experts.

Is 21 days allowed for public comments adequate?

Seventy-eight percent of the respondent agreed that the 21-day display of the EIA report is not adequate for anyone to make incisive comments especially for complex projects. During these 21 days, copies of the EIA report are available at the Local Government Headquarters, where the project will be located, the State Ministry of Environment or Environmental Protection Agency(ies), The Federal Ministry of Environment's Zonal Offices, Liaison Office Lagos and the Headquarters, Abuja. In the ordinary course of events, the affected public often does not come to know of the project or the EIA report until it is too late.

Availability of baseline data

Frequently, the environmental data needed to prepare EIA is often not available or is inaccessible (53%). This has even led to the fabrication of data. Sometimes, the pretext of inadequacy of data is used by the project proponent to short-circuit the EIA process.

Need to maintain professional ethics

The EIA process relies heavily on the judgment of the EIA consultants for three reasons. First, the consultant works with a limited time frame and of necessity can consider only a few impacts seriously. Second, requisite environmental data are not available or are not readily accessible. Third, some of the adverse environmental impacts may not be

manifest immediately. A Project Proponent who is intent on obtaining a favourable report is able to stack the EIA team with particular types of specialists who are predisposed in favour of the project. At present, consultants are not taken to task for unethical practice.

The respondents have uncovered a wide range of issues they encounter during the EIA process. Most of the indicated difficulties are related to the drawbacks of EIA in the country_ an overall lack of institutional framework and strong implementation strategy. Additionally, experts and practitioners have also mentioned incompetence of EIA practitioners, deficiencies in screening and scoping, weak coordination, subjective review, ineffective public participation and no formal monitoring as some of the shortcomings militating against effective EIA practice in Nigeria. Of note is the passiveness of relevant authorities involved, politicization and bureaucracy of EIA process in self-governing institutions, and problems arising from vague methodologies used to forecast and measure the potential impacts of the project are the key areas for attention and revision. It is suggested that the following measures can help enhance the effectiveness of the EIA system in Nigeria.

Proper coordination among project proponents and responsible agencies would help ensure that no project, which is to cause adverse impact, will be launched before obtaining clearance.

It is necessary that the FMEnv and DPR should initiate consultations with all the EIA consultants, experts and members of the academia for wider consultation during EIA review process.

Independent EIA review bodies should be involved at different levels of decision- making. Third party evaluation is already done at FMEnv and DPR levels. Such review bodies/boards can be established at State or zonal Ministries of Environment and DPR. The board at the FMEnv office becomes clearinghouse as earlier suggested by Ogunba, (2004). This measure, of course would help dispense EIA reports waiting approval as quickly as possible. Budget allocation to these agencies should be increased to accommodate expenses for review committees as without paying handsome remuneration, some experts do not return their comments and even the copy of EIA report.

A code of conduct and registration of EIA consultants is important as suggested by Obaidullah and Rizwan (2008). It will not only help do away with a copy and paste culture when producing reports but also discourage one or two persons 'jack of all trade master of none' type of consultants. Grabbing international opportunities of funding foreign training of officials and consultants may also contribute to improving the quality of EIA reports. In general, EIA reports are appropriate and intelligible; nevertheless, there are certain problems with their comprehensiveness and reliability. Respondents have taken note that EIA report quality is highly dependent on experience and competence of an EIA practitioner carrying out the study and preparing the report. Moreover, EIA consultant often acts as an advocate of a developer/proponent, since it is a developer who chooses an EIA consultant and pays for the services. Thus, EIA consultant often prepares a subjective report in attempt to persuade the council to approve the project. The quality of reports can also be linked to the methodologies used to forecast the environmental effects.

CONCLUSION

There is remarkable increase recently on the number of EIA for screening and full EIA studies conducted in Nigeria. It is attributable to the economic growth of the country.

Nigeria, EIA experts and consultants believe that the main objective of EIA 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 EIA. However, some problems such as subjectivity during scoping process, insufficient consideration of alternatives, politicization of EIA process, and low competence of involved authorities need to be addressed urgently. EIA practitioners need to have a thorough knowledge on EIA procedures and legal requirements, but forecasting the effects and evaluation of the results should be reserved for the recognized experts.

A rapid increase in the number of specialists who undertake preparation of EIA documentation, especially documentation for screening procedure, requires effective investigation and regulation, perhaps in a form of a licensing system which would also provide for the professional competence building scheme, would enable setting up a network of experts capable of contributing to EIA studies, and would assist regulators in those cases when participation of such experts in EIA study is required.

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