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Quality of Environmental Impact Assessment Reports in Nigerian Oil and Gas Development Projects

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Abstract:- Environmental Impact Assessment (EIA) Reports contain findings on the biophysical, social and health impacts of a proposed project and the corresponding positive and negative impacts the project would have on the environment. It also contains information that would aid environmental decision making. Over the years, EIA Reports have at best been seen as satisfactory. It is based on this understanding that this study reviewed the quality of 33 EIA reports selected by convenience sampling from the oil and gas industry from 1994-2019. The study used the 2001 European Commission Checklist and the Smith 1984 Model for the assessment. The study revealed that EIA reports improved from a grade D in 1994 to A in 2016. The assessment of cumulative impacts revealed that this area improved over time. 48.48% of the reports neither mentioned nor assessed cumulative impacts, 33.33% did mention cumulative impacts but did not assess them while 18.18% mentioned and assessed cumulative impacts. Improvement in quality was more visible in the areas of the project characteristics, non-technical summary, consideration of alternatives, mitigation measures and presentation. The area of public participation documentation however, still needs improvement. The paper recommends that for public participation, a minimum requirement for documented information in the report is required and the 1984 Smith's Model should be used as the minimum requirement for public participation appraisal. It also recommends that public participation effectiveness in EIA reports be measured by the outcome of set objectives of various aspects of the consultation process.

I. INTRODUCTION

Environmental Impact Assessment (EIA) commenced in the late sixties as concerns for environmental issues grew. It obtained formal status in 1969 in the United States with the enactment of the National Environmental Policy Act (NEPA) of 1969. This law came in place as a result of actions of the government that lead to significant environmental problems in the 1960s. At this time, agencies in charge of energy facilities, water resource projects and highways had large appetites that appeared to be unquenchable and the mission statements of these agencies did not give room nor force them to account for the adverse impacts their activities had on the environment (Ortolano & Shepherd, 2012). Fortunately, there was public widespread awareness and the government was under pressure to act on the damaging effects these activities were causing and thus the United States (US) congress passed the 1969 NEPA Act. This law was made to ensure that agencies gave more than 'lip service' to their new responsibilities by including "action forcing provisions" (Ortolano & Shepherd, 2012). One of the Acts provision states that all agencies of the Federal Government shall in every report for proposals for legislation, recommendation and other major federal actions, which significantly affects the quality of the human environment, include a detailed report by the responsible official on the environmental impacts of a proposed action as well as its alternatives.

EIA Reporting is the heart of the EIA Process and EIA will not be meaningful if the findings from assessments are not documented (Wood, 2003). Quality review of an EIA Report is a formal step in the EIA Process. EIA Report preparation is perhaps the most important activity in EIA according to Canter (1996) as the findings from these documents are utilized for decision making (Wood, 2003). Sadler (1996) noted that the purpose of an EIA Report review is to verify that the document is suitable, adequate and sufficient for decision making.

There are limited studies in Nigeria that embark on EIA report quality evaluation. Thus, this study reviewed the quality of Nigerian oil and gas EIA reports over a period of 25 years (1994-2019). The aim is to examine various sections of the reports and check for their quality over time thus providing guidance on areas of the report that need improvements. Wood, *et. al.,* (1996) reviewed the quality of

112 EIA Reports from Belgium, Denmark, Portugal, Ireland, Greece, Germany, Spain and the UK, using the Lee and Colley Review Package. In terms of overall quality, it improved from 50% to 71%. Nwoko (2013) conducted a study on the strengths and shortcomings of EIA in Nigeria with EIA experts and practitioners. 50% of Nwoko (2013) respondents were of the opinion that EIA report quality in Nigeria is unsatisfactory. Nwoko (2013) blamed the lack of experienced EIA consultants and approval authorities as well as reluctance on the part of the proponent to allocate sufficient resources as impediments to better EIA quality. In addition to previous claims, the author also said that there is no code of conduct for EIA consultants claiming that the role of consultants in most cases is limited to addressing just economic benefits of the project forgetting the environmental implications. Isah (2012) surveyed a total of 560 EIA stakeholders comprising of industry personnel, academics, representatives from local communities affected, NGOs and government personnel. The aim of the survey was to determine the view of the targeted stakeholders in the role of EIA in oil and gas development projects. In addition, the study analysed the quality of environmental reports for each of the project components. The results showed that 18% of the respondents believed that EIA report presentation is very poor, 27% of the respondents said that findings from these documents are poorly presented, 33% believed that they are adequate while 13% and 9% believed that they are good and very good respectively. With respect to consultation, 19% and 24% said that it was very poor and poor respectively, 25% said it was adequate, 15% said it was good and 12% believed it was very good. In terms of consistency in the quality of EIA reports, 36.8% believed that there was a moderate variation in quality while 36.1% said the variation was significant. About 14% said the quality was minor in its variation, 10% said it was negligible while the remaining 3% said report quality had no variation. Furthermore, 33% of respondents mentioned that EIA Report quality had improved moderately over time while 9.8% said there was no improvement. 24.1% said improvements in quality has been minor while 15.5% said improvements had been negligible. Olokesusi (1992) also highlighted the issue of poor EIA report quality especially between the years 1994-1995, were only nine projects from the petroleum industry, out of 25 where given approval due to poor EIA reports. The author also mentioned the issues with the EIA document. These include poor identification and description of possible environmental impacts, poor prediction and evaluation of impacts and jaundiced method of communication. Report developers see EIA as an end product used to obtain planning permission rather than a step in the environmental assessment and management process. Moreover, the distribution of the final report is confined to the approving authority only as well as 'no public participation'. In addition, the Town and Country Planning authorities that currently request EIA reports lack the right type of EIA format as well as staff for that purpose. The author finally added that indeed the EIA process was evolving in Nigeria; however, in an unstructured and haphazard manner.

Nadeem and Hameed (2008) suggested that a code of conduct and registration of EIA consultants is important as it leads to better quality consultants who would prepare better quality EIA reports. Nwoko (2013) also suggested that EIA report quality can be improved by seeking International functioning and training. There are certain issues with the comprehensiveness and reliability of EIA reports. Nevertheless, they are important and intelligible. Firstly, the methodology used in reviewing such reports is loaded with subjectivity. In fact, Nwoko (2013) respondents stated that EIA report quality is highly dependent on the competence and experience of the developer as they are the ones who hire the consultants. Therefore, EIA consultants often prepare subjective reports to favour the approval of a project. Unfortunately, whether or not the consultant is subjective in his or her review, the process of preparing and reviewing the report does not give room for so much objectivity. This review system and technique is a major weakness when it comes to EIA report quality not just in Nigeria but around the world. The issue of its subjectivity gives room for a lot of errors both in the preparatory stages and the reviewing stage. Additionally, there is the non-ending issue of funding and time constraints. High demands for project approval may likely lead the review committee members having to fast track the approval of the project, not paying attention to the contents in the report and perhaps may miss vital information necessary for final decision making. Aifeseni *et. al.,* (2014) used their own version of a checklist system to review 19 EIA reports from the oil and gas sector from the year 2000-2013 from upstream activities. The results confirm that the Nigerian EIA process is in line with best practice, based on what is represented on paper. According to the authors, this outcome was not unexpected since Nigeria is a signatory to a hand full of environmentally related conventions and has a 'mature' legislation especially when compared to other developing countries. Nigeria also has a strong academic base and thus the EIA practice in Nigeria has no reason not to follow best practices.

A study by Agaja (2013) showed that out of a total of 53 developmental reports submitted to the Federal Ministry of Environment (FMEnv) in Abuja between 2001 and 2012, 29(54%) of these reports had low public participation, 8(15%) were at medium level and 16(31%) had a high level of public participation. The study also highlighted the objectives of public participation and what it aims to achieve. These are; to ensure community and public participation in the definition of decision making and environmental policy objectives, enable the citizens have access to environmental information as well as data in order to promote the quality of environmental management and compliance monitoring, boost public confidence in the administration of the environment. This is done by demonstrating the resolve of government to enforce environmental stewardship in government agencies, elite organizations and corporate citizens. The author however said in practice, the realities of these objectives are still far and it appears that public participation is carried out to fulfill all righteousness and paper statements. Perhaps the reason for the poor public participation is that both the proponents

and the public do not really understand its importance. Nwoko (2013) mentioned that active public participation is considered to be the key strength in the EIA process in Nigeria. In his study, 79% of his respondents said public participation is weak. The author mentioned that a major drawback is that generally, the attitude of those affected by the project is indifferent. Again, those who show interests are poorly informed about the potential negative environmental effects, especially the long-term impacts. The affected public is not adequately informed on the prevailing issues or they may not be able to interpret the EIA reports. Nwoko (2013) suggested that these issues could be curbed by public hearings were face to face explanations can be carried out by the proponents, EIA consultants and the public.

II. 2 DATA AND METHODS

2.1 Data

The study utilized EIA reports from Shell Petroleum Development Company (SPDC). The data set consists of 33 oil and gas development Projects reports from 1994 to 2019 mainly from the core Niger Delta states (Rivers, Bayelsa and Delta). One reviewed report was from Abuja FCT.

2.2 Methods

The 2001 EC Review Checklist (modified) was used to assess the quality of the EIA Reports. Reports were selected by convenience sampling. The checklist is a method used to review the adequacy of the EIA Reports in terms of general good EIA practice and compliance with the requirements of the relevant directives. It does not verify if the EIA Reports meet legal requirements (EC Guidance on EIS Review 2001). The checklist was designed for two purposes-to assess the adequacy of a single EIS/EIA Report for decision making and to assess EIS/EIA Report quality for monitoring and research (The EC Guidance on EIS Review 2001). It is intended to be used by academics, developers, environmental authorities, EIA practitioners, organizations in the EU and all over the world (CEC 2001). The EC Review checklist was published in 2001 and is the latest EIS Checklist review method used to check the quality of EIA Reports/Environmental Impact Statements. It consists of 143 questions which are covered under 7 sections which include; the Description of the Project, the Alternatives considered, Description of the environment likely to be affected, Description of the likely significant effects, Description of Mitigation, Non-Technical or Executive Summary and Quality of Presentation. Furthermore, the checklist grading system was modified for better precision.

Modified Grading System for EIA Report Assessment

90-100= A
80-89= B^{H}
70-79= B_{L}
60-69= C^{H}
50-59= C_{L}
40-49= D^{H}
30-39= D_{L}
20-29= E^{H}
10-19 = E_{L}

$_{H}$ and $_{L}$ represent 'High' and 'Low'

The 1984 Smith's Model

The 1984 Smith's Model was used to evaluate the level and extent of public participation in the EIA Reports. Four (4) additional assessment criteria- 'presence of a scoping report, pictorial representation, met objectives and evidence of continuous consultation' was included for 'outcome' for the study. This was included to ensure uniformity in assessment and it was the opinion of the reviewer that these additional assessment criteria would boost quality checks.

III. RESULTS

3.1 Quality of EIA Reports

The results of the reviewed EIA reports (Table 1)

Table 1: EIA Report Grades (Scores)

Project ID	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
Grade	D_L	D^H	D^H	D_L	D_L	D^H	D_L	D_L	D^H
Project ID	10	11	12	13	14	15	16	17	18
Grade	D^H	D^H	D^H	D^H	B_L	C_L	D_L	C_L	C_L
Project ID	19	20	21	22	23	24	25	26	27
Grade	C_L	C^H	C^H	C^H	C^H	C^H	B_L	B_L	A
Project ID	28	29	30	31	32	33			
Grade	B_L	B_L	B^H	B_L	B_L	B^H			

The table shows that oil and gas reports improved from grades D in 1994 to grade A (Project 1D 27) in 2016. The results also reveal areas with the best performance and worse performance (Fig 1). Review topics with the best performances are the Project Characteristics (71%), alternatives considered (62%), project location (61%) and the NTS (65%). Presentation and Consultation have scores of 50% and 43% respectively. Figure 2 show the results for the overall quality of the reviewed EIA Reports. One report (Assa-North Ohaji-South 2016) had an excellent grade with a score of 90% falling short in the area of public participation and NTS. Three (3) reports had very good quality, six (6) had good quality, five (5) satisfactory, four (4) unsatisfactory, nine (9) poor and five (5) very poor. Results in Table 2 show the outcome of public participation appraisal.

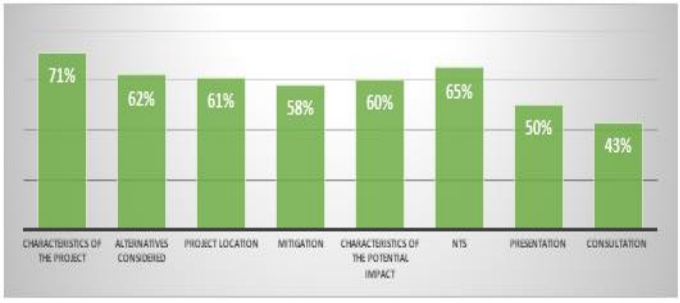

Fig 1- The Average Quality scores for review topics

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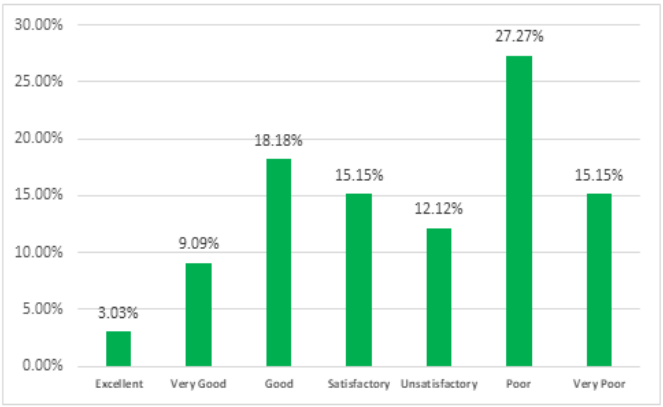

Fig 2- Assessment of the Overall Quality of EIA Reports

3.2 Assessment of the Level of Public Participation

The results for the assessment of the level of public participation documented in the reports is represented in Table 2. The reports performed best in the content section (48%), followed by process (44%) and then least for outcomes with a total score of 36%.

Table 2 Results of Public Consultation using the Smith (1984) Model.

s/n	*EIA Report ID*	*Content (C)*	*Process (P)*	*Outcome (O)*	*% Total Average of CPO*
1	ID 1	20	20	20	20%
2	ID 2	30	30	30	30%
3	ID 3	30	30	30	30%
4	ID 4	30	30	30	30%
5	ID 5	20	20	20	20%
6	ID 6	50	40	40	43%
7	ID 7	60	50	40	50%
8	ID 8	60	50	40	50%
9	ID 9	60	50	40	50%
10	ID 10	30	30	20	27%
11	ID 11	30	30	20	27%
12	ID 12	50	40	40	43%
13	ID 13	50	40	30	40%
14	ID 14	70	70	70	70%
15	ID 15	50	40	20	37%
16	ID 16	50	50	30	43%
17	ID 17	40	30	20	30%
18	ID 18	40	30	20	30%
19	ID 19	40	30	20	30%
20	ID 20	40	30	20	30%
21	ID 21	50	40	30	40%
22	ID 22	50	40	30	40%
23	ID 23	50	50	50	50%
24	ID 24	50	40	30	40%
25	ID 25	50	40	30	40%
26	ID 26	50	40	30	40%
27	ID 27	80	80	60	73%
28	ID 28	60	70	60	63%
29	ID 29	60	70	60	63%
30	ID 30	70	70	60	67%
31	ID 31	60	60	50	57%
32	ID 32	50	60	50	53%
33	ID 33	40	40	40	40%
	TOTAL AVERAGE SCORES	**48%**	**44%**	**36%**	**43%**

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IV. DISCUSSION

EIA reports initially lacked quality as a result of lack of cumulative impact considerations and assessments, presentational issues and poor-quality documentation of public consultation; especially failing to meet some aspects of the Smith (1984) evaluation criteria. Nonetheless, quality of reports improved over time with more visible improvements from 2015. Findings from this study are in line with Isah (2012) as 91 % of respondents from the study agreed that EIA documents have improved over the years however to varying degrees.

Consideration of alternatives, mitigation, evaluation of significant potential impacts and presentation when compared to Isah (2012) study also produced similar findings. The area of presentation made a significant leap in improving the way data and imagery are presented. This is not unexpected as there has been improvements in technology over the years. The area of NTS was quite interesting. In a way, it improved in its content documentation. This means that newer reports recorded more information than older reports. However, there were more technical terms seen in the newer reports than the older. Thus, the NTS area improved in its content over time but not in its simplicity. With respect to consultation, findings are similar to other studies.

Consultation in EIA has been one that has been problematic and this study, like similar studies by Agaja (2013), Nwoko (2013), Isah (2012) revealed that this area of EIA reporting still needs much to be desired. The reports failed to meet the 'Outcome' evaluation criteria although they performed relatively well in the 'process' and 'content' evaluation criteria. For content evaluation, the reports fell short in providing adequate information in the consultation section on historical backgrounds, institutional framework, administrative set up and status, functions and financial resources. For public participation process, the reports did not do justice to access to information, availability of resources, techniques of participation and participants objectives. The Outcome section performed the least with its shortcomings ranging from lack of participation effectiveness to lack of documentation of the degree of awareness achieved to the impact/influence of the participants in the consultation process. In addition, there was lack of a scoping report in a majority of the reports evaluated. Scoping reports are important as they are detailed representations of the scoping exercise. Perhaps many reports lacked this addendum as its incorporation is not legislatively required. It is important to note that the appraisal of public participation corresponds to what the content of the report documents and not the actual public engagement. Thus, it is poor documentation by the responsible authority of the outcomes of public exercise that give rise to poor reviews in this area of the EIA document.

V. CONCLUSION

There is evidence to show that EIA Report quality has improved as well as an indication that project owners have seen the need to produce quality reports. Improvements have been seen in various areas of the EIA oil and gas report but the area of public participation still needs improvements. For public participation, a minimum requirement for documented information in the report is required and the 1984 Smith's Model should be used for this appraisal. Furthermore, public participation effectiveness should be measured by the outcome of set objectives of various aspects of the consultation process.

REFERENCES

[1]. Agaja, S. (2013). "Public Participation in Environmental Impact Assessment (EIA) Reports: The Nigerian Experience. Impact Assessment the Next Generation. 33rd Annual Meeting of International Association for Impact Assessment.

[2]. Aifeseni, E., E., P., Altwood, J. Fagbeja., Mofoluso., Adole, T. Amhandin, E.V., Asuquo, E. E., & Ikenna, J., (2014) A Review of Environmental Impact Assessment in Nigeria as compared to selected standards from Countries and Agencies. National Coalition on Gas flaring and oil spill in the Niger Delta.

[3]. Beanlands, G. E., & Duinker, P. N., (1983) "An Ecological framework for Environmental Impact Assessment in Canada". Institute for Resource and Environmental Studies, Dalhousie University, Halifax, NS and Federal Environmental Assessment Review Office, Hull, QC.

[4]. Canter, L., (1996) Environmental Impact Assessment, 2nd edition. New York: McGraw-Hill.

[5]. Commission of the European Communities (CEC) (2001): Our Future. Our Choice. The 6th EU Environment Action Program. Brussels.

[6]. European Commission Guidance on EIS Review (2001).

[7]. Morris, P. & Therivel, R. (2001) Methods of Environmental Impact Assessment. Built Environmental Series of Textbooks. Volume 2 of Natural and built environmental series. Spoon Press.

[8]. Nwoko C. (2013). Evaluation of the Environmental Impact Assessment System in Nigeria. Vol 2 (1). pg. 022-031.

[9]. Ortolano, L. and Shepherd, A. (2012). Environmental Impact Assessment: Challenges and Opportunities. *Journal of Impact Assessment. Vol 13. Pg. 3-30.*

[10]. Ortolano, L (1997) Environmental Regulation and Impact Assessment. Environmental Regulation and Impact Assessment

[11]. Põder, T., & Lukki, T. (2011). A critical review of checklist-based evaluation of environmental impact statements. *Impact Assessment and Project Appraisal*, 29 (1): 27-36.

[12]. Sadler, B (1996) International Study of the Effectiveness of Environmental Assessment *Final Report* Environmental Assessment in Changing World: Evaluating Practice to Improve Performance pp. 1-248.
[13]. Wood, C. (2003). Environmental Impact Assessment in Developing Countries: An Overview' (Paper presented at the conference on New Directions in Impact Assessment for Development: Methods and Practice, Organised by University of Manchester and Women in Sustainable Enterprise (WISE) Development Ltd, Manchester 24-25 p.13.
[14]. Wood, C., Baker, A., Jones, C., and Hughes, J., (1996) Evaluation of the Performance of EIA Process. Final Report. Vol 1. EIA Centre, University of Manchester. Manchester.