

# Scaffolding: using social impact assessment to map framework for construction stakeholders' engagement

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## ABSTRACT

Strategy to construction stakeholders' engagement in Nigeria is anchored on environmental impact assessment (EIA) law. While EIA is conducted only in large projects, every project continues to witness one form of opposition or another from the community stakeholders. This study examined social impact assessment's (SIA) procedures as a scaffold to mapping framework for construction stakeholders' engagement. The objectives were to examine problems associated with the implementation of EIA which hitherto ought to address the social risk triggers in project delivery and to develop a framework embedded in SIA for construction stakeholders' engagement in Nigeria. The study engaged a sample of 46 respondents comprising project managers, environmental management experts and community stakeholders in Akwa Ibom State, Nigeria in a qualitative structured interviewing. Collected data were sorted and analysed. The study reveals extant approach to stakeholders' management failed as a result of low social context and impact mitigation are based on monetary incentives whereas there are relevant urgent needs to be satisfied. A framework integrating SIA procedures and construction stakeholder engagement strategy was also developed based on the peculiarity of the industry needs. The implication is that construction stakeholders' management must be structured on satisfying real needs of the citizenry.

**Keywords:** EIA; framework; SIA; scaffold; stakeholders' engagement

## 1. INTRODUCTION

The main stream project risk management focus is on technical and process impediments to the exclusion of uncertainties associated with ineffective stakeholders' engagement (Blood, 2013). The risks associated with ineffective stakeholders' engagement continue to plague the delivery of projects worldwide. Despite the widespread implications, the critical review of construction stakeholder's engagement strategy is yet to be considered by research in order to identify the level of interaction between the community, the promoters and the construction organisations. While it may be easy to predict and mitigate factors in the environment, design, and production that may affect the project; such expertise cannot be scientifically and experientially applied in evaluating impediments in which community's unmet social, economic and environmental needs can generate in the project lifecycle.

Numerous stakeholders interact in the pursuit of environmental friendliness objectives in the delivery of construction projects. These are the government regulators; the project promoters, the local communities, the non-governmental organisations and the general public. However the research focus in this study is on the community stakeholders.

In Nigeria, issues relating to stakeholders engagement is regulated by extant environmental Impact Assessment Law (EIA). Traditionally, EIA seeks to address problems associated with stakeholder management. But due to existing limitations and the increasing spate of social and health risk associated with construction projects, emphasis had shifted to Social Impact Assessment (SIA) (IAIA, 2013g). As the global best practice considers a complete departure from mainstream EIA paradigm, Nigeria still struggles to implement her EIA laws (IAIA, 2013f). Enabling laws also allow for community engagement at the early stages of the project, Teo & Loosemore (2012) and IAIA (2013g) asserts the process are either not followed through to the construction stage or are implemented during the execution stages of projects. Fragmented contractual practice in the Nigeria construction industry also allocates the eschewing risks to contractors.

Construction organisations are therefore in knowledge that, existing approach on management planning, impact assessment and stakeholder's engagement are inappropriate (Blood, 2013). Innovative and integrated approach is therefore desirable in order to adapt, curb inherent problems and improve project performance. This is necessary in order to understand the level of uncertainty associated with stakeholder's impact and their uncertain nature; understand and meet standards and convention nationally and internationally, explore platform for social performance management, justify the increasing linkages between environmental factors and social risks in the area, and to provide and respond appropriately to stakeholders' expectations (IAIA, 2013a). This calls for concurrent construction stakeholders' and social impact assessment in every project in Nigeria.

## **2. STATE OF ENVIRONMENTAL IMPACT ASSESSMENT IMPLEMENTATION IN NIGERIA**

The development of construction projects impact significantly on the environment and the living condition of people within it (Glass & Simmond, 2007). In order to mitigate losses and impact, firms recourse to ethical corporate social responsibility and compliance to extant regulatory laws. In Nigeria, the EIA law enacted in 1992 remains the leading legislation in this regard. 23 years at alas, the Nigeria EIA implementation have been criticised in many quarters. Owoyemi & Bamboye (2013) identified problems relating to inadequacies and misinterpretation of enabling laws and statute, duplication of roles by the various supervisory agencies of government, inability to enforce sanctions, and ignorance and lack of awareness on the part of the citizenry. Others include abuse of exclusion clause, corruption, inability of stakeholders to make informed contributions and decisions in accordance with extant law. These lacunas are associated with institutional problems in the act itself and enforcement agency. There is also very limited public participation (Keftin & Anigbogu, 2009). Exclusion of some development projects also imposed problems as a result of the difficulty in identifying when it is necessary due to the lack of clear definitive parameter. Evidence from practice makes this agenda discretionary and dependent on the officials of the regulatory body.

The use of consultants by proponents often limits comprehensive consultation of the public notably at the scoping stage which defines concern of the public. The predominant use of English as the language of government and EIA limits public participation. The system in

Nigeria also lacks clear identification of alternatives. Olander & Ladin argue (2008) asserts effective stakeholder management should not be limited to identification of solution to needs but also stress the need to devise an alternative solution in the event that proposed solution fails.

As a result of the identified inadequacies, Owoyemi & Bamboye (2013) asserts 311 dead have been recorded as a result of non-compliance and collapse of earth structures. In the context of construction stakeholders, social risks are imminent. Such risks include lack of stakeholder acceptance of the project and the construction organisation, danger to construction organisation's reputation, delays, community protest and even violent opposition (Loosemore & Phua, 2010). DITR (2006) highlighted cases of legal challenge and stoppage or blocking of project development. Other widespread environmental risks include incessant flooding (Etuonovbe, 2011); health risk, and environmental degradation.

### 3. SOCIAL IMPACT ASSESSMENT

Social impact assessment is a mechanism which can be employed to tackle the effect of social impact of project from inception and guiding them to the advantage and to safeguard the local communities (IAIA, 2013c). SIA ensures sustainable environment by harmonising social, cultural and economic variables to better development outcome. There are two perspectives to Social impact mapping: direct and indirect. Direct impacts are closely related and are generally covered in most EIA assessment. It includes issues relating to resettlement, expertise quota, and health issues in respect of project. Indirect impact on the other hand, covers discrete variables such as: anticipated migration impact in the environment; impact of foreign personnel of project organisations on the environment; impact of project on people's expectation; communicable disease outbreak and increases; and impact on local prices or cost of living in the project environment. Unlike EIA in which compensation are broadly used to mitigate impact, social impact's mitigation requires effective community development programme mostly aimed at indirect impact. The principles and guidelines developed by IOCPG (2003) and Vanclay (2003) underpinned the global best practice in SIA. They form the crux upon which subsequent research (Vanclay, 2006) is anchored. IOCPG (2003) developed framework for SIA with a view to standardising practices. The report proposed basic guidelines to be adopted which is similar to the guidelines used in Environmental Impact Assessment (EIA) developed by the Council for Quality (1986). According to IAIA (2013c), the process framework developed in this context was a 'technical approach'. The approach leans towards dependent on expert's knowledge mainly social scientist. The social scientist body of knowledge is based on caused by planned interventions (Ziller, 2012). As a result of the importation of social procedure into the process, the approach is known to be impartial and logical; and involves quantitative pointers which are dependent on the expert knowledge (Felton, 2005).

Vanclay (2003) on the other hand, proposed SIA processes which focuses on stakeholders' engagement and participation. Vanclays approach is anchored on 17 activities which underscore SIA process. IAIA (2013c) argues that, these activities are passive by not giving specific instruction on implementation process. But focus centrally on participatory theme; and draw so much from community's knowledge in predicting social impact. This framework however enhances significant reflection on the specific features of the community that may be affected by a proposed action (Becker *et al.*, 2003). Participatory approach have also been criticised despite the wide adoption in the literature (Vanclay, 2003, Vanclay, 2006,

Bunchan, 2003 and Lane *et al.*, 2003). Esteves *et al.* (2012) stressed the need for an inclusive clarification to position the approach beyond mere information gathering and public comment soliciting. There are also problems associated with harmonising conflicting stakeholders' interest. Tendency abound that stakeholder when given wide margin to express their view might exaggerate data thereby impeding the reliability of the process. Based on the lack of basic skills and training on the parts of the community stakeholders, Ziller (2012) argue, they often subjugate the opportunity in expressing fears and needs that does not represent realistic social impact.

In order to improve the quantum of impacts identify in a SIA process, IAIA (2013c) opined, there is a move in the literature seeking to amalgamate both processes. Empirical evidence provided by Becker *et al.* (2004) support an earlier position in Lane *et al.*, (1997) by running a concurrent SIA on the same project. The result indicates, integrative approach produces a greater number of cases that were more relevant to the community than the technical approach. Most recent studies adopt divergent view, and contend a consensus framework can only be developed internationally (Esteves *et al.*, 2012). Based on this conclusion, Burdge & Taylor (2012) conducted a study to determine international benchmarks for integrated SIA approach. The finding however was inconclusive and argues again, that further work is needed to develop such an international framework.

From these literatures, SIA has been identified as a veritable tool for mitigating social conflict in a project environment (IAIA, 2013d). Being a mechanism for tackling the effect of social risks in projects from inception and guiding them to the advantage and safeguard the local communities (IAIA, 2013c); SIA's research focus however centres on the development of best practice (Esteves *et al.*, 2012 and Burdge & Taylor, 2012) and little is done to explore possible integrative framework in construction project delivery. There is need therefore for further work in SIA process to localise procedure (IAIA, 2013a). The present study therefore seeks to explore adaptable framework for SIA implementation in construction projects in Nigeria. The objectives are to examine problems associated with implementation of EIA which hitherto ought to address the social risk triggers in project delivery and develop a framework embedded in SIA for construction stakeholders' engagement in Nigeria. The rationale for the present study is based on the advocacy by IAIA (2013a) which suggests further work is needed in SIA process to develop framework and approach that best suits specific industry needs. This also envisaged SIA's integration as a process to social change capable of mitigating social risk in construction projects (Esteves & Barclay, 2011).

## **4. METHODOLOGIES IN SIA**

### **4. 1. Life cycle Technique**

IAIA (2013a) remains the leading advocate of the life cycle approach. This approach is based on the multi phasing of construction projects. It enables stakeholders to view project completely over its life cycle thereby overcoming the segregation problem associated with the traditional contractual practice. IFC (2012) and World Bank (2012) policy guide on engagement also support this view by stressing the need to establish an on-going relationship that must be sustained within the life-cycle of the project. Life cycle approach facilitates an understanding of the objectives of the project by the stakeholders. However, the approach emphasises the integration of design and construction; social impact assessment and engagement. The threesome must be carried-out concurrently throughout the life cycle of the

project for it to be successful. Best practice in construction stakeholders' engagement also lean towards this approach (Olander & Ladin, 2008). Although specific data might be lacking; analyst are expected to adopt event-led approach from contractors and stakeholders past experience; put forward reasonable assumptions based on related case studies, and by documenting steps and rationality behind every assumption derived.

#### **4. 2. Livelihood-Based Assessment**

This involves the study of the means of livelihood of the stakeholders, impact of construction resource on the means of livelihood and possible alternative where this source is distorted or depleted. This is closely followed by sensitivity to variables such as seasonality or emergency in order to ascertain stakeholders' vulnerability premise. The outcome can be fused with the policy of appropriate regulatory agency in the respective area to evolve mitigation strategy. However, relevant strategy must be matched with appropriate engagement procedure. Early stakeholder mapping is critical; view every project as a large scale that could impact on the stakeholders, acknowledge that flux in stakeholders' interest in terms of layer and complexity. Understand also, the linkages between stakeholder influence and population size. Influence is inversely proportional to large population and directly proportional to small population. Early stakeholder information is essential because the likelihood of contact with a proposed project can never be over-ruled. This might be a network of horizontal and vertical relationships. The danger it poses however, is on the reliability of the information they receive concerning a project which directly influence their level of interest in a project. But ensure early reach-out. Ensure also contextual and informed consultation in a two way pattern with feedback loop. That is, consult with adequate information. Use also appropriate channels and medium to ensure effectiveness and adequacy for defined purpose. Wheeler *et al.* (2001) advocates the need to use community based local contractors to enhance dialoguing in native language and adequate follow-up. Endeavour to reach to every stakeholder with their different perspectives. It is a sign of an imminent danger to presume that outspoken stakeholders are the relevant ones. Adopt bespoke approaches in engagement rather than standard process. If possible de-emphasise town hall-like meeting and use more personally medium, telephone calls, social media and one-on-one meetings

#### **4. 3. Methodology**

The study is a qualitative research involving structured interviewing. Being a two tier research, a set of 46 professionals comprising project managers, environmental experts and others in Non-governmental organisations (NGO) and community leaders in Akwa Ibom State were interviewed. This population were also presented with a list of indicators associated with implementation of EIA in Nigeria. The choice of Akwa Ibom State for the study is informed by the volume of on-going and completed mega projects in the state between 2007 and date. Within the referenced timeframe, a total of 84 mega infrastructures projects worth billions of Naira with full EIA reports have been executed. The population was selected using purposive sampling. This sampling technique is used where there is no data base of the exact number of the characteristics required by a study. This method is also widely used in construction industry's research (Dada, 2013 and Li *et al.* 2005). The list and address of environmental experts were obtained from the state branch of Environmental Managers Association of Nigeria, Uyo.

Project managers were also purposively selected based on knowledge of involvement in key projects with full EIA report. Community representatives and Non-governmental organisations were also selected based on knowledge of their role in previous engagement activity.

The interview themes were based on two focal areas, failure of the EIA to address stakeholders' management and best approach and criteria for adoption to ensure effective SIA framework. Prior to the field work, extensive literature search was conducted on research themes and factors generated collectively and individually and from practice formed the structured interviewing questions. Best practice criteria generated from literature and circumstantial evidences were incorporated in generating the proposed framework.

## 5. RESULTS AND DISCUSSIONS

The 46 respondents replied to the questions designed to assess the state of EIA implementation in Nigeria using indicators generated collectively and individually from literature. The indicators were ranked on a three point scale with one being the least and 3 the highest. The result is shown Table 1. Table 1 shows the overall rating of ten problems associated with the implementation of EIA in Nigeria. The overall mean value range from 2.19 to 2.87. The most critical problem has mean value >2.5.

**Table 1.** Indicators of EIA Problems in Nigeria.

Problems	Score	Rank
Low citizenry participation	2.76	4
Low Social impact context	2.85	3
Selective implementation	2.43	8
Misinterpretation of enabling laws and statute,	2.24	9
Duplication of roles by the various supervisory agencies of government,	2.19	10
Inability to enforce sanctions,	2.56	7
Ignorance and lack of awareness on the part of the citizenry.	2.65	6
Corruption	2.66	5
Inability of stakeholders to make informed contributions and decisions in accordance with extant law.	2.87	2
Use of ad-hoc monetary incentive to mitigate needs and as compensation	2.88	1

The six factors in this band are inability of the community stakeholders to make an informed contribution to policy, low citizenry participation, low social context, and inability to enforce sanction, ignorance, corruption, and use of ad-hoc monetary incentive to mitigate needs and as compensation.

Other factors below the 2.5 benchmark include selective implementation, misinterpretation of enabling laws and duplication of roles. These factors collectively and individually plagued the implementation of EIA in Nigeria thereby necessitating a significant departure to framework that will address inherent lacunas.

On the awareness level of SIA methodologies and its ability to improve construction stakeholders' engagement, respondents interviewed agreed that SIA is conducted as an integral part of EIA in Nigeria. A view also held in the literature as applicable to many developing countries (Mamzat, 2009). The term 'SIA' has not been included in extant EIA law. However, the definition of environment provided in the legal documents includes social aspects of the environment. This study argues therefore whereas EIA incorporates evaluation of social and economic impacts, this partial integration is inadequate and impetus must be aimed at ensuring clear legal mandate for SIA implementation.

### **5. 1. The Proposed Framework**

Numerous studies have stressed the need to review existing impact assessment approach in Nigeria. Keftin *et al.* (2009) emphatically advocated the need for the integration of impact assessment in construction project cycles. Empirical evidence provided by Becker *et al.* (2004) which support an earlier position held by Lane *et al.*, (1997) further assert SIA can be run concurrently on the same project.

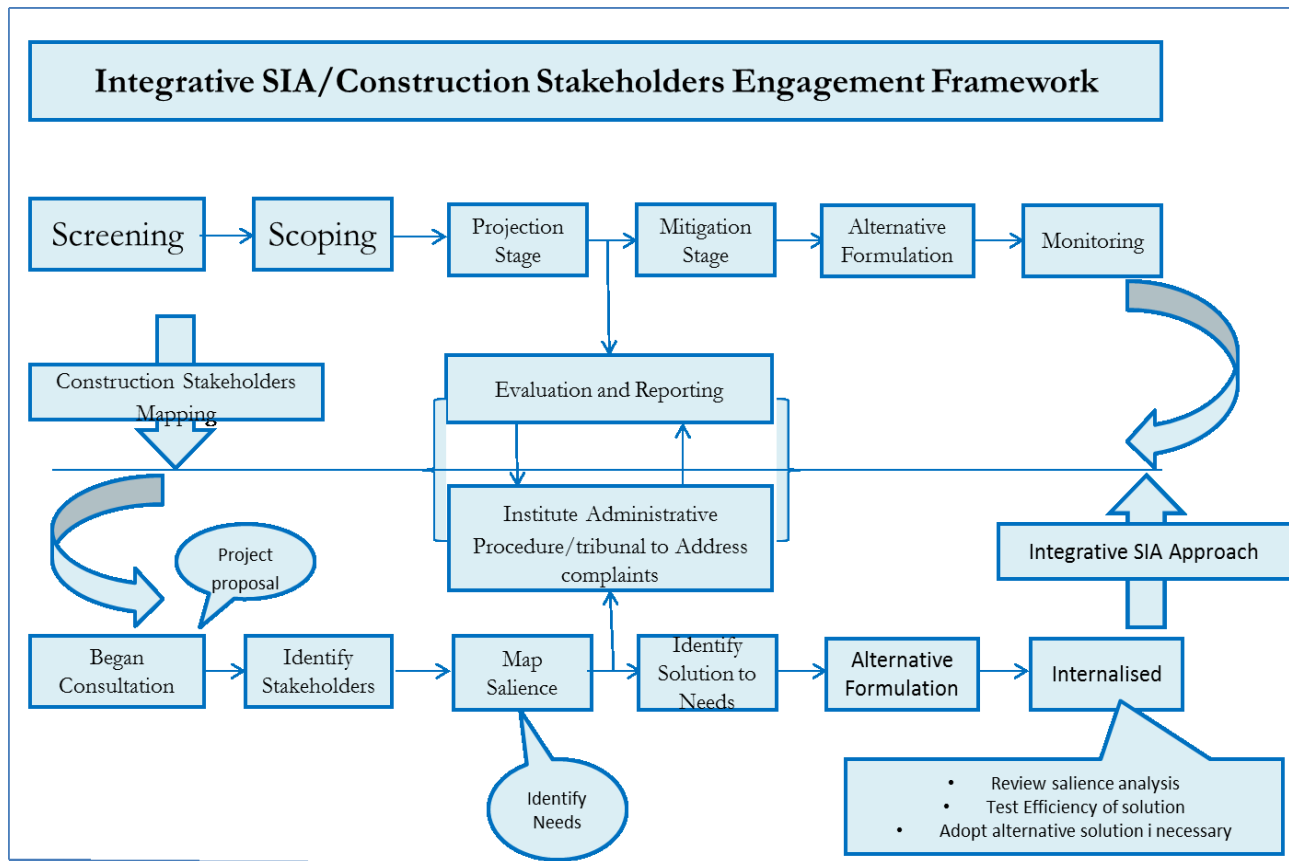
Their result indicates integrative approach produces a greater number of cases that were more relevant to the community than the technical approach. IAIA (2013c) seeks to broaden an understanding of the integrative approach by developing eight critical processes for SIA. They are screening; baseline conditions; scoping; projection stage; mitigation stage; alternative formulation; monitoring; evaluation and reporting. The proposed framework is according to IAIA (2013c) integrative SIA's critical steps and circumstantial construction engagement strategy. The aim is to demystify the emphasis placed on environmental dimension of the impact assessment law to inculcate social and economic parameters.

In the proposed framework (Fig. 1), impact assessment applies to every project and is conducted concurrently with construction stakeholders' engagement. But, an aspect, environmental dimensions still remains an exclusive activity subject to determination under Federal Environmental Protection Agency (FEPA). Where a project fails to meet stipulated requirements for full scale assessment, scoping in these projects will focus on stakeholder impact analysis.

This is aimed at determining the primacy of every stakeholder's salience. Emphasis is on the less vocal vulnerable group as direct impact bearers and agent of opposition at the community level (Ekung, 2013b). Another essential paradigm in the proposed framework is the need to begin consultation at the proposal or feasibility stage before conceptualisation and design begin. This becomes imperative as impact mitigation strategy may involve the design of ancillary facilities as compensation.

This practice is prevalent in the UK and Australia notably in privately promoted developments. Schools, recreational facilities and health centres are built for community as

requirement for obtaining planning and social permit. Early consultation will also ensure participation of all parties not just appointed consultants but construction organisations also.



Consultation by consultants only inhibits internalisation of envisaged impact mitigation strategy into construction organisation plan of action. Early consultation is also intended to provide accessibility and foreclosure of information about the project to enhance in-house consultation within stakeholders' groups. Lack of information is an acknowledged trigger of dispute and crisis in global infrastructure (Johanson & Andersson, 2011). Again, since stakeholders' interests are dynamic and changes within currency of the project's life cycle; stakeholder primacy must be closely monitored and reviewed in each phase of the project.

The screening process basically seeks to determine what a project requires to embark on SIA and engagement (Momtaz, 2009). IAIA (2013c) argues screening focus is on informing the proponents on the necessity of undertaking SIA. Scoping is an essential step to developing mitigation strategies in the proposed project (IAIA, 2013c). Again, the approach adopted is a determinant of success. Projection is closely related to the scoping; it involves the analysis of the identified impact to fully comprehend the exact implications on the community stakeholders (IOCPG, 2003).

In mitigation, a plan is developed with possible solution to the social impact screened, scoped, and projected. Unlike technical risk management where only high impact/probability risks are recommended for avoidance; in SIA, every social impact with negative consequence is to be avoided (Joao *et al.*, 2011). Mitigation normally is in the form of compensation and enhancement strategy. Enhancement strategy involves the incorporation of positive social



impact into the design of the project. Alternative formulation involves factoring alternative to the proposed project and is conducted concurrently with mitigation during the mitigation stage. In monitoring, the mitigation plan is evaluated, control and reviewed during implementation stage.

It involves the design of monitoring mechanism for the implementation of mitigation strategies (Frank, 2012). Finally, evaluation and reporting is needed to monitor how a process have been formulated, implemented and the possible level of stakeholder satisfaction. Reporting is tied to the evaluation carried out. It is mainly used to communicate between the community and other stakeholders (Esteves & Barclay 2012).

## 6. CONCLUSIONS

A scaffold is use to assess a working platform higher than the natural ground level. The present study considers a construction stakeholders' engagement at the community level a platform technically different from the main stream construction organisations environment plagued with numerous social impact risks. Social impact mitigation is used the world over excluding the research environment to address these problems. In Nigeria, issues relating to community stakeholders engagement is regulated by extant environmental Impact Assessment Law (EIA). Traditionally, EIA seeks to address problems associated with stakeholder management. But the implementation of EIA is faced with numerous problems amidst low social context. Because the social and economic parameters dominate discussions during construction stakeholders' engagement, this study explored social impact assessment's procedures as a scaffold to mapping framework for construction stakeholders' engagement.

The objectives were to examine problems associated with the implementation of EIA which hitherto ought to address the social risk triggers in project delivery and to develop a framework embedded in SIA for construction stakeholders' engagement in Nigeria. A sample comprising of professional groups, community stakeholders and Non-governmental organisations were interview. The result on the first objective highlights that extant approach to stakeholders' management failed as a result of low social context and impact mitigation are based on monetary incentives whereas there are relevant urgent needs to be satisfied. A framework integrating SIA procedures and construction stakeholder engagement strategy was also developed based on the peculiarity of the industry needs. The implication is that construction stakeholders' management must be structured on satisfying real needs of the citizenry. The study nevertheless recommends that further work is needed to test the proposed framework in order to facilitate possible refinement for an industry-wide application.

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( Received 13 June 2014; accepted 24 June 2014 )