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RESEARCH ARTICLE

EVALUATION OF STAKEHOLDERS' INVOLVEMENT IN MITIGATING ENVIRONMENTAL AND SOCIAL RISKS DURING PROJECTS' IMPLEMENTATION IN UYO AND ITS ENVIRONS

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ABSTRACT

Stakeholders' engagement in construction project remains a key tool for addressing environmental and social risks management of project delivery. The World Bank environmental and social framework article ten, emphasizes the objectives and key requirement for stakeholders' engagement in any project if we must achieve ecofriendly cities, communities and human settlements, which are safe, resilient and sustainable. Consequently, the study assesses the vital role of involving stakeholders in mitigating environmental and social risks of project with a view at improving environmental and social performance index in Uyo and environs. The study employed a two-pronged approach to acquire data in line with the study's objectives. It adopted inferential and descriptive statistical techniques to investigate the level of impact of selected environmental and social risks to project delivery, the Stakeholders and their importance in the mitigation process, the frequency in which they are involved and their benefits. Results of the study showed heavy impact of environmental and social risks on project delivery and recommended the early involvement of community locals as critical stakeholders in the project life cycle, establishment of a monitoring and evaluation system for environmental and social risks of project. It identified stakeholders important to projects and advocates a comprehensive stakeholder management plan that outline concerns and interest in a project. These promote informed decision-making and guaranteed an end user's participation approach in project implementation. It also enables construction experts to assess and timely manage environmental and social risks, comply with regulations, maintain a good reputation with stakeholders and promote sustainable practices during construction.

Keywords: Environmental and social risks, project delivery, stakeholders, mitigation process.

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1.0. INTRODUCTION

The involvement of Stakeholders in any sustainable development activities is an important aspect that cannot be ignored. Goodman et al., (2017) argued that stakeholders have long been at the forefront of sustainable development debates. From a technical sustainability perspective, sustainable construction is a growing force in the construction industry to help alleviate the negative impacts of the industry on the natural environment, such as global warming, environmental degradation and depletion of natural resources (Ahn et al., 2013). In line with Rio declaration on environment and development (1992), principle 10, which states "that Environmental issues are best handled with participation of concerned citizens." The obligation therefore implies that stakeholders should have access to project information all through the project life cycle. This engenders active participation in the decision-making process culminating to effective and efficient execution of the project.

Ekpo (2012) describes stakeholders as those who stand to benefit from the product of development. Their roles in project risk assessment and management are of enormous consideration. Stakeholders involve a whole lot of people and organization, and could be considered as primary or secondary stakeholders. They include Government Ministries and Agencies, donor agencies. Non-governmental organizations, Community and religious leaders, Women and youth groups,

Howlett and Nagu (1997) defined stakeholders as "all those people and institution who have interest in the successful design, implementation and sustainability of the project" this includes those positively or negatively affected by the project itself. Stakeholders' participation involves processes whereby all those with stake in the outcome of a project actively participate in decisions on planning and management. They share information and knowledge and may contribute to the project success and hence ultimately serve their own interest.

Environmental and social risks on the other hand are the potential negative consequences to a developmental project resulting from its perceived impacts on the natural environment, such as air, water, soil or communities of people. Failure to effectively manage environmental and social risks of a project can result to a wide range of financial, legal and reputational consequences for the developer. According to (Saltanzadeh *et al.* 2022) the nature of construction projects is one of the most complex and hazardous industries in the field of safety due to the large numbers of variables in it. Consequently, lack of attention to assessment of environmental and social risks in projects delivery will cause irreparable problems and impose heavy costs on the project.

Developmental projects are usually the desire of every community, as they are ignorantly celebrated as "dividends of democracy". However, research has shown that despite the increasing recognition of the importance of stakeholders' involvement in mitigating

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environmental and social risks, many projects continue to experience significant negative impacts on local communities and the environment. The lack of effective stakeholder engagement and participation in project implementation has resulted in inadequate identification and assessment of environmental and social risks. Also, this has led to insufficient mitigation measures bringing about unforeseen consequences, such as conflict, disturbances, closure of sites, health and safety threats (Ekung et.al; 2013), mistrust between project proponents, local communities and other stakeholders. lastly, it has led to non-compliance with regulatory requirement as well as local and international standards.

1.1. Aim and Objectives of the Study

Therefore, to explore the gaps noted in previous works, the study aims to properly assess stakeholders' involvement in the mitigation of environmental and social risks during project implementation for overall project sustainability.

The specific objectives therefore are to:

(i) Evaluate the dimensions of environmental and social risks affecting construction project implementation in Uyo and environs.
(ii) Identify the various stakeholders important to mitigating environmental and social risks of infrastructural projects delivery.
(iii) Determine the involvement and benefits of stakeholders' engagement in the mitigation of environmental and social risks in construction project delivery.

2.0. CONCEPTUALIZATION AND LITERATURE REVIEW

2.1. Conceptualization of Infrastructure as Developmental Projects

The World Bank report of 1994 describes developmental projects provision as all necessary services, facilities, equipment and devices needed or desired for the physical, mental and social wellbeing of the family, individual and communities. They include projects such as roads, hospitals, schools, water supply, sewage, dams and the rest. Udoka (2011) opined that infrastructural development brings into existence basic amenities and services which must be put in place for a particular activity or pursuit and stated that no nation or state can boast of significant development or an enhanced economy without providing these basic infrastructures for its citizens. However, these developmental projects bring with it environmental and social impacts during construction. Table 1.0 below shows some of these impacts.

Effective stakeholder's engagement benefits the project by eliminating conflicts and increases cooperation between the firm and the stakeholders (Ekung et al., 2014). Apparently, the degree of importance attached to the engagement relationship can in fact influence the placement of the stakeholders on the importance scale.

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Table 1.0: Potential Negative Impacts during Projects Implementation.

ENVIRONMENTAL IMPACT	SOCIAL NEGATIVE
• Deterioration of local air quality due to the emission of dusts and gases during clearing and construction activities	• Storage of construction equipment and materials may invite thieves and hoodlums thereby posing security threats to lives and properties in adjoining communities.
• Noise and vibration disturbances from operation of heavy duty vehicles.	• Loss of employment for temporary workers after construction
• Loss of biodiversity.	• Increased traffic and risk of road traffic accidents and injuries.
• Tendency to soil erosion due to the removal of vegetal cover.	• Economic displacement and loss of assets
• Surface water contamination as a result of pollutants run off from project site.	• Increased demand and competition for local services such as water, electricity, medical services, transport, education and social services
• Soil contamination from leakage/ spillage of fuel or oil from equipment and vehicles.	• Risk of social conflicts between the local community and the construction workers, which may be related to religious, cultural or ethnic differences, or based on competition for local resources.
• Land degradation and increased susceptibility to erosion due to excavation of earth materials in borrow pit.	• Increased risk of spread of communicable diseases (including sexually transmitted diseases (STDs) and HIV/AIDS) and burden on local health services
• Accidents from abandoned borrow pits	• Increased rates of illicit behaviour and crime such as theft, physical assaults, substance abuse, prostitution and human trafficking.
• Generation of spoils and other excavated materials.	• Illegal lodging arrangements or the establishment of shanty towns. • Influx of additional population (“followers”) such as people who expect to get a job with the project, family members of workers, as well as traders, suppliers and other service providers (including sex workers)
• Generation of construction waste and debris	• Gender-based violence such as sexual harassment of women and girls and sexual exploitation and abuse and illicit sexual relations with minors from local community due to labour influx.
• Risk to community health and safety due to improperly abandoned borrow pits.	• Child labour and school dropout may occur as a result of the project, as families may encourage

	children under 18 to hawk or sale at construction sites
• Risks of occupational accident and injuries to workers.	• Increased volume of traffic and higher risk of accidents due to delivery of supplies for construction workers and the transportation of workers

Source: Akwa Ibom State Government report on environmental and social impacts plan (2019).

Ekung et al. (2013) in his discussion on Extenuating Community protest in controversial projects scenarios in the Niger Delta, a Case of Corporate social responsibility, emphasized the ever increasing cases of community protest and opposition to construction projects in the Niger Delta during construction stages, however, failed to described the roles stakeholders can play during the design and implementation stages of a project life-cycle and by so doing mitigate environmental and social risks of such projects.

Mitigating project risks require the collective efforts of relevant stakeholders with vested interests in the projects. Regrettably, the involvement of the relevant stakeholders in environmental and social risks mitigation during construction project delivery is uncertain, notably, the locals (Ekung et al., 2013). Also, Ekung and Effiong (2014) in their work "Scaffolding: Using social impact assessment to map framework for construction stakeholders' engagement" linked the increasing tension during construction project delivery to the increasing emphasis on environmental impact assessment (EIA). They emphasized that Environmental impact assessment lacks inadequate social contexts and prioritizes monetary incentives only.

Related studies have isolated the specific strata of stakeholders' engagement, for example Ekung et al., (2013) appraised strategies for extenuating protests against project delivery looking into only the drivers from community-based stakeholders' controversies from the perspective of corporate social responsibility only. Another study criticized the lacunas in environmental impact assessment based on its emphasis on environmental context only and advocated the newer framework integrating social and environmental contexts for effective stakeholder's involvement in project risks management (Ekung and Effiong, 2014). Extant studies have therefore focally addressed stakeholders' engagement but limited knowledge exist about their involvement in environmental and social risks management during project delivery.

3.0. MATERIALS AND METHODS

Study Area

Akwa Ibom State is the 30th largest in area and fifteenth most populous state in the country with an estimated population of nearly 5.5 million as of 2016 census. However, in view of the

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large landmass of the State, the study chose to delimit itself to Uyo municipal city Area. This is an area regulated upon by Uyo Capital City Development Authority. The area is chosen due to constraints of time, money and expertise. Besides, this area has enjoyed enormous developmental projects within the last ten years. The location is mostly warm with cloudy wet seasons with a yearly average temperature of 28.24^{o}C. Uyo experiences about 2000mm of precipitation level annually. The city lies between 7^{o} 51'E and 7^{o} 59'E longitude and latitude 5^{o}41'N and 5^{o}59'N. It was a district Headquarter during the colonial era, but later became a Local Government Area. And then upgraded to a Capital City, when Akwa Ibom State was created as a state. With these changes, urban expansion and economic growth in Uyo had led to infrastructural development that allows the city extends to nearby LGAs of Itu, Uruan, Nsit Ibom, Ibiono Ibom and Ibesikpo Asutan. Land use categories as identified by (Ituen and Udoh, 2004).

Again, studies have shown that residential land use dominate the area while vegetation shrinks with recent upsurge in developmental transformation. The occupation and enterprising nature of the people brings to fore the need to assess the involvement of the locals in the emerging environmental and social risks this developmental project has brought with it. The native people are predominantly Ibibio speaking indigenous people with their occupation primarily petty trading and farming. The city is heterogeneous in nature as it accommodates people from various parts of Nigeria with most residents being civil servants. Also, Uyo city is characterized by mixed land use development pattern with a social mix of all income categories.

The creation of Uyo Local Government Area as a state capital in 1987 brought about a significant deal of transformation which directly led to population increase and high commercial activities and by extension, a high demand for an upgrading in its infrastructural services. Besides, it has a high number of registered built professionals living within it. Most environmental built professional bodies have their state offices in Uyo. Below are figures 1.0 and 2.0 showing the map of Akwa Ibom State and the study area of Uyo municipal capital city respectively.

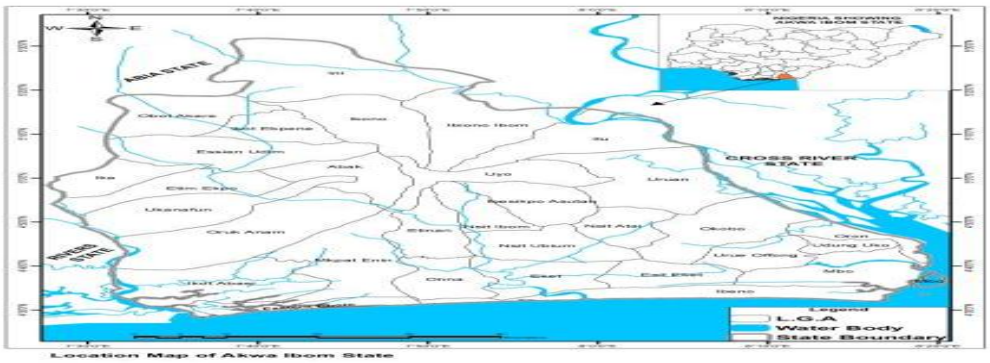

Figure 1: Map of Akwa Ibom State

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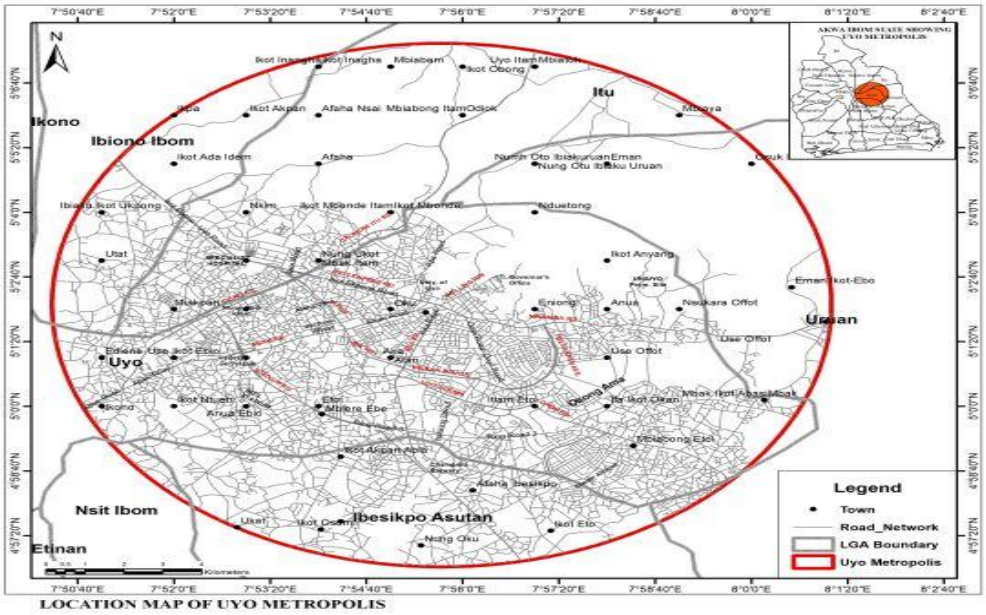

Figure 2: Map of Uyo Metropolis

The study adopted mixed approach research design involving the administration of structured questionnaire to professionals in the built industry, conduct interview on community locals in areas where construction works are currently ongoing. Questionnaires provided evidence of patterns amongst large population and qualitative interview data gathered more–in-depth analysis on participant attitude, thoughts and actions (Kendall, 2008). With respect to this study, 264 persons from different professional bodies in the built industry within the study area were targeted as the sample size. Their informed response served as a better parameter or attributes in achieving the study's objectives. This includes Engineers, Environmentalist, Urban and Regional Town planners, Architects, Quantity Surveyors, and Builders with 35% success rate of returned questionnaires.

4.0. PRESENTATION OF RESULTS AND DISCUSSIONS

4.0. PRESENTATION OF RESULTS

A five-point Likert scale of various interpretation was used to determine respondent level of awareness on the objectives of the study. SPSS version 17 was used in the analysis of data. Table 2.0 below shows result of chi-square test of the significance effect of environmental and social risks on project delivery. Table 3.0 shows result of Chi-square test of the significance of identified stakeholders important in mitigating ESRs in project implementation. While table 4.0 shows significance level of involvement of stakeholders in mitigating ESRs during project implementation

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Table 2.0: Chi-square test of the significance effect of environmental and social risks on project

S/n	Environmental and social Risks	Chi-Square	df	Asymp. Sig.	Decision
1	Air Pollution	44.632[a]	3	.000	Reject
2	Noise Pollution	24.678[a]	3	.000	Reject
3	Water Pollution	43.057[b]	4	.000	Reject
4	Soil Pollution	21.678[b]	4	.000	Reject
5	Waste Management	40.126[a]	3	.000	Reject
6	Climatic Change	8.115[b]	4	.087	Accept
7	Natural Resource Depletion	36.161[b]	4	.000	Reject
8	Loss of Biodiversity	14.782[b]	4	.005	Reject
9	Accidents and Failures	41.448[b]	4	.000	Reject
10	Community Engagement and Acceptance	38.920[b]	4	.000	Reject
11	Human Rights Violation	16.391[b]	4	.003	Reject
12	Labour Practices and Working Conditions	47.195[b]	4	.000	Reject
13	Health and Safety of Workers and Communities	59.954[b]	4	.000	Reject
14	Involuntary Relocation	21.103[b]	4	.000	Reject

Source: Author's field survey (2024).

The null hypothesis, which states that environmental and social risks have no significance effect on construction project delivery in Uyo and environs is rejected for 13 environmental and social risks factors of projects only (Table 2.0). The implication for the evaluation of these risks reveals that they have significance effects on infrastructure project delivery based on respondents' level of awareness only.

The null hypothesis, which states that identified stakeholders are not important to mitigating environmental and social risks in construction project development in Uyo and environs is rejected for 8 identified stakeholders, which are project proponents/Developers, Government agencies, Local communities, NGOs/Civil society Organizations, Financial institutions, Consultants/Construction Experts, Stakeholder Engagement Specialist and Political Leaders in the communities (Table 3.0).

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Table 3.0: Chi-square test of the significance of identified stakeholders important in mitigating ESRs in project implementation

S/n	Identified Stakeholders	Chi-Square	df	Asymp. Sig.	Decision
1	Project Proponents/Developers	58.241[a]	3	.000	Reject
2	Government Agencies.	31.931[b]	2	.000	Reject
3	Local Communities.	106.736[c]	4	.000	Reject
4	NGOs/Civil Society Organizations	16.391[c]	4	.003	Reject
5	Financial Institutions.	29.494[c]	4	.000	Reject
6	Consultants/Construction Experts	66.851[c]	4	.000	Reject
7	International Organizations.	13.632[c]	4	.009	Accept
8	Vulnerable Groups in the Communities.	9.034[c]	4	.060	Accept
9	Stakeholders Engagement Specialist	21.678[c]	4	.000	Reject
10	Political leaders in the Communities.	69.609[c]	4	.000	Reject

Source: Author's field survey (2024).

Table 4.0: Chi-square test of the significance of level of involvement of stakeholders in mitigating ESRs during project implementation

S/n	Level of Involvement	Chi-Square	df	Asymp. Sig.	Decision
1	Consultation and Engagement	27.713[a]	3	.000	Reject
2	Risk Assessment and Impact	51.678[b]	4	.000	Reject
3	Stakeholders Committees.	35.011[b]	4	.000	Reject
4	Transparency and Disclosure	28.575[b]	4	.000	Reject
5	Participatory Decision Making	37.770[b]	4	.000	Reject
6	Capacity Building and Training	49.609[b]	4	.000	Reject
7	Grievance Mechanism	49.494[b]	4	.000	Reject
8	Collaborative Problem Solving	26.391[b]	4	.000	Reject
9	Independent Monitoring and Review	28.345[b]	4	.000	Reject
10	Continuous Engagement throughout project life-cycle	24.782[b]	4	.000	Reject
11	Free, Prior and Informed Consent (FPIC)	22.713[b]	4	.000	Reject
12	Transparency and Accountability	15.931[b]	4	.003	Reject

Source: Author's field survey (2024).

This implies that these identified stakeholders' have statistical significance effects on infrastructure project delivery based on respondents' level of awareness. However, most respondents disagree that international Organization and Vulnerable groups, who are largely dependent on the project are not important stakeholders in the mitigation of environmental and social risks of project. Therefore, the null hypothesis is accepted for both.

The result of the Chi-square presented in Table 4.0 shows p-value less than 0.005 for all variables, this means we reject the null hypothesis, which indicates that the opinion of most

respondents regarding the level of stakeholders' does vary in mitigating environmental and social risks of project development and is statistically significant and valid (p, 0.00 < 0.005).

4.0. DISCUSSION OF FINDINGS

4.1. Types of Environmental and Social Risks of Projects

Nine environmental and five social risks affecting project implementation were identified, this include Air Pollution, Noise Pollution, Water Pollution, Soil Pollution, Waste Management, Climatic Change, Natural Resource Depletion, Loss of Biodiversity, Accidents and Failures, Community Engagement and Acceptance, Human Rights Violation, Labour Practices and Working Conditions, Health and Safety of Workers and Communities, Involuntary Relocation. On the significance effect of environmental and social risks on project delivery, the study shows that air pollution, noise pollution, water pollution, soil pollution and waste management were statistically significant with p(value) less than 0.005. This agrees with (Guzder, 2019) findings that these environmental risks are of great concern to construction industry experts, attesting that it can directly affect site operations, employees' health and that of community people living nearby. On waste management, Ambegonkar (2024) submitted that the volume of waste and debris grow as the demand for construction project grows. Hence, the need to properly manage waste in order to avoid accidents on site, reduce cost by decreasing the cost of disposal while also advocating for maintenance of a healthy working environment. On this, he gave useful tips to help manage waste and debris on site.

Furthermore, natural resources depletion on site, was identified in the uniform perception of respondents to have significant effect on environmental and social risks of projects delivery with kaja and Goyal (2023) in agreement, where they relate the impact of construction activities on the environment and submitted that construction activities have significantly aided environmental pollution and degradation of natural resources, affirming that it has negative influences as a result of waste creation and heavy consumption of natural resources. Also, (Minett 2022) in his study on construction's Biodiversity threat and how to mitigate it, narrated that the built environment is a significant driver when it comes to biodiversity loss. He stated that current housing deficit and the demand to develop more land to assuage this need will inevitably affect biodiversity with the destruction of some habitats, ecosystems and food resources.

However, climate change was accepted by most respondents as not having significant effect on construction project delivery, but, in contrast with the view of some scholars, Kendle (2023) in his findings on climate change and managing it's implication on construction project, revealed that unpredictable weather affects construction timelines and budgets. Besides, it can result to physical damage to infrastructure and transportation networks leading to long delays, impacting business revenue and project delivery schedules. Also, changing

water table level as a result of climate change will affect excavation, tunneling and in case of flooding, it affects storage of materials on site.

Also, the study identified Human right violation, labour practices and working conditions, community engagement, health and safety of workers and community as some Social risks that can significantly affect project delivery if not properly managed. Gibbons and Klinker (2022) share the same opinion in their findings that human rights have significance effect on construction project delivery, therefore, it is important to ensure that the voices of the communities, workers and others are not only heard but also that collaboration exist between appropriate government agencies and civil society organization. Aasonaa (2023) in his study on Health and Safety management in construction projects in the Wa municipality of Ghana, corroborated respondent thoughts with emphasizes on the need for proper monitoring of construction sites to ensure that companies comply with state regulations on health and safety of workers and communities. He further stressed the need for provision of personal protective equipment at construction project sites as well as maintaining proper work ethics.

In addition, (Muchoki, 2011) in his case study work of Mwea irrigation Project, Kirinyaga county, Kenya, agrees with respondents on involuntary relocation as a social risks affecting project delivery and commented that resettlement plan should be done to affect not just the project but the housing quality, income and environmental quality of the affected people without also significantly interfering with peaceful co-existence in the community social relationship or disrupting their culture and tradition.

4.2. Important stakeholders to Mitigate Environmental and Social Risks

Respondents had divergent opinions on the various stakeholders important to mitigating environmental risks. Majority were of the view that Developers, Government agencies, Local communities, NGOs/CSOs, Financial institution, Consultant/Construction experts, Stakeholders engagement Specialist and Community Political leaders are significantly important if environmental and social risks of project should be well mitigated during project delivery. Their thoughts align with Banaitiene and Banaitis (2012) where findings shows that the problems of managing risks and its uncertainty in construction project heavily rest on the project proponents/developers due to their dissatisfaction in project outcomes and dynamism within the construction environment. Consequently, some areas were identified which are prone to greater risks and uncertainty and proposed an agile management principle based on the concept of integration and fragmentation.

Likewise, (Qudus, 2016) on construction risk management explained that government agencies are enforcers of rules and regulations, hence, their involvement in construction project delivery process helps to define and enforce standards. Moreover, on communities local as very important stakeholders, Ekung et. al., (2013) in their findings on extenuating community protests in controversial projects in the Niger Delta- A case for CSR, reported

that traditional ruler's council, youth council and community based professional groups most times constitute project committee and their responsibility is to ensure that construction work is executed according to acceptable standards. These standards must not be inimical to the environment and social life of the community. Other study such as (Ekung et al., 2014) align with this thought, stressing that community stakeholders are in three groups, social, economic and political and that the political groups are instituted agencies of government in the community. These are council of chiefs, traditional ruler's council and youth council and based on their uniqueness and level of opposition they posed to project; effective engagement is a critical step to ensuring successful project outcomes. A community leader in Etoi community of Uyo L.G.A, Eteidung Precious Udoh, in his interview response, corroborated the above assertion and stressed that the community has in place a project stakeholder committee that collaborate with the developer in information sharing on project and risks mitigation process.

International organizations and vulnerable groups in the community were adjudge not important as stakeholder to engage in mitigating ESRs during project delivery. Kuran et al (2020) in their studies on vulnerable groups described them as highly marginalized and disadvantage groups whose inputs are usually not taking into perspective within the community. On this premise, they might be considered not so important in mitigating Environmental and Social risks. However, Jandhyah (2016) in his findings disagrees with the respondents on International organization not being an important stakeholders in mitigating ESRs in projects, opine that most international organization like World Bank, International Monetary Fund, World Trade Organization, European Union as well as the United Nation are widely recognized and they promote a wide range of projects cutting across agriculture, infrastructure and environmental with great emphases placed on mitigating environmental and social risks in line with established sustainable goals.

4.3. Stakeholders' involvement in environmental and social mitigation processes

Generally, the involvement of stakeholders in the mitigation processes start from the inception of the project and all through its life cycle. The null hypothesis was rejected with acceptance of the alternate on the following mitigation processes: Consultation and engagement, risk assessment and impact, stakeholders' committee, transparent and disclosure, participatory decision making, capacity building and training, grievances mechanism, collaboration in problem solving, independent monitoring and review, continuous engagement throughout project life-cycle, free, prior and informed consent. Stewart (2009) agrees and submit that formal consultation and engagement in mitigation process establishes the general 'rules of the game' and will ensures transparency and fairness for all stakeholders. Again, Valentin et al., (2018) in line with this thought, emphasized that lack of a systemic approach to integrated input of a wide range of stakeholders in infrastructural project planning will result in the neglect of interactional dynamics and can

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overshadow the accuracy of the project schedules and estimates, therefore, to address this lack, risk assessment and its impact must be critically considered early in the project.

Anderson and Holcombe (2010) corroborate that stakeholder committee – from communities to governments and funding agencies has enabled the implementation of 'on the ground' construction to effectively reduce landslide hazard. Specifically, a cross-agency management team liaised closely with the local social intervention fund, community project committees and individual residents to map the highly localized landside triggers and to design and build appropriate mitigation measures. Hagelsteen and Baker (2013) support the view of Capacity development in projects delivery for disaster risk reduction which must focus frequently on training of individuals. Yi and Peterson (2017) in their alignment stated that grievance management acts as risk management tool that trigger early warning sign of potential risks or impact in a project, hence, must be adequately put in place. Besides, Kujawski and Angelo (2010) in their submission affirm that construction projects involve high consequences, therefore, project specific risks require detailed independent monitoring and analysis for which risk response actions must be developed. Lastly, (Goodland 2004) agrees that FPIC is a better means rather than force in development or imposing involuntary conditions on impacted people.

4.4. Benefits of stakeholders' engagement in mitigating environmental and social Risks during Project delivery.

In testing hypothesis three, the uniform perception of respondents was totally in agreement with the benefits derived through early engagement of stakeholders in construction project delivery in order to mitigate environmental and social risks. The benefits considered include, elimination of conflict and increase co-operation on sites, improve project information flow, influence project design and cost, improve acceptability and quality of mitigation process, help reduced security expenses, properly addresses ESRs affecting communities, eliminate potential marginalization of vulnerable groups and protect veritable cultural heritage. Mwalyosi and Hughes (1998) found a similar pattern in environmental assessment experience in Tanzania. From a decision-makers perspective, soliciting input from as many stakeholder groups as possible help avoid unforeseen impacts, or conflicts with local communities. In some cases, failure to involve other stakeholder groups resulted in extremely costly mistakes being made. Positively, high recurrent costs for security will be reduced. From the perspective of `the public', participation helps reinforce accountability, clarify positions and provides an opportunity to influence the decision-making process. This help protects the veritable heritage and reduced to minimum, environmental and social risks that might affect the community. Also, stakeholders' engagement will definitely harness traditional knowledge which conventional approach may overlook, provide information flow between proponents and stakeholders groups, improving understanding and ownership of a project. Most importantly improve the acceptability and quality of mitigation and monitoring processes.

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5.0. Conclusion and Recommendations

In conclusion, for sustainable cities and human settlement, the study identified various environmental and social risks affecting construction project delivery in the study area, findings show these environmental and social risks possessed adverse threat to infrastructural development if not properly assess and managed. They could either lead to litigation by parties, increase constructional cost and sadly, to project abandonment. The study further disclosed the importance of early engagement and involvement of stakeholders in construction project delivery, identified certain stakeholders as critical in terms of their relevance in project risk mitigation process. These are the project proponents/developer, government agencies, Local communities, non-governmental organization/civil society organization, consultant and construction experts as well as political leaders in the communities.

Subject to the findings of this work, the following recommendations were suggested to help in the adequate involvement of stakeholders in mitigating environmental and social risks during infrastructural project implementation in the study area. These include discovering the various environmental and social risks affecting effective project delivery, the study recommended that for every proposed project, a monitoring and evaluating system for both positive and negative impacts should be established through an early stakeholders' engagement plan. This should involve setting key performance indicators and conducting regular assessments. Also, external experts should be involved, such as environmental consultants and social impact assessors. These are necessary to provide expertise and guidance on risks mitigation strategies, which includes, environmental and social impact assessment, environmental and social audit, Hazard and risk assessment plan, environmental and social management plan, social and conflict impact and the likes.

The second objective attempted to identify the various stakeholders important to mitigating environmental and social risks of infrastructural projects delivery in Uyo and environs. The work looked at the different categories of stakeholders involved in infrastructural project delivery and their responsibilities. Therefore, the study recommended subject to their importance, the need to always recognized and engage key stakeholders in a proposed project at it early stage, starting with the community locals, government agencies, non-governmental organization, financial institutions, developers, political leaders and other relevant organizations. This will go a long way in creating a sense of ownership on the part of all. Also, meaningful engagement with these stakeholders should be encouraged and sustained throughout the project implementation period through regular meetings, consultation sessions, town hall meetings, and other feedback mechanisms.

On the third objective, which strive to determine the involvement and benefits of stakeholders' engagement in the mitigation of environmental and social risks in construction project delivery. The study recommended that a well develop comprehensive stakeholder management plan that outlines concerns and interest of each stakeholder groups is put in place. This will facilitate participatory decision making, collaborative problem-solving

approach and independent monitoring and review mechanism to address various concerns during the project implementation, including the need for transparency and disclosure. While these are advocated for, it will certainly help build trust and credibility with stakeholders over time, harness traditional knowledge which conventional approach may overlook, provide information flow between proponents and stakeholders groups, improve understanding and ownership of a project.

The study positively impacted on the following sustainable development goals: Goal: 1, No poverty. Stakeholders' involvement in risk mitigation will help create job, provide income and improve livelihood. Goal 3: Good health and well-being. Through effective risk governance, environmental health risks are reduced while occupational health and safety are better enhanced. Goal 6: Gender inequality. Women groups participation as stakeholders are diligently recognized and gender-based violence are timely addressed. Goal 11: sustainable cities and communities. The study impacts this goal by establishing better environmental and social planning and management system, community engagement and participation in project delivery as well as environmental sustainability. Goal 16: Peace, justice and strong institution. It impacts this goal through its initiative of promoting peace and inclusiveness between the developer and community. Building trust and accountability among stakeholders including government institution in line with Goal 17, partnership for the goals is impacted through resource mobilization, data monitoring and review mechanism, capacity building and technology innovation in project delivery. These goals were all positively impacted by the findings of this study.

Competing Interest

The authors have declared that no conflicting interest exist in this paper.

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