

UNIVERSITY OF GHANA

COLLEGE OF BASIC AND APPLIED SCIENCES

**EVALUATION OF PUBLIC PARTICIPATION IN ENVIRONMENTAL
IMPACT ASSESSMENT OF THE NEW BUGESERA INTERNATIONAL
AIRPORT PROJECT IN BUGESERA DISTRICT, RWANDA.**

BY

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**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA,
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DECLARATION

I, Oliver Uwineza Kamu, hereby declare that, apart from references to other authors and their works which were acknowledged throughout the report, this thesis is a result of my own work carried under the supervision of supervisors indicated below and has neither in part nor in full been submitted for the award of another degree elsewhere.



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DEDICATION

This thesis is dedicated to my dear parents, Mr. and Mrs. Johnson Kamuzinzi and my siblings, Peace Mutesi, Eva Uwera and Emmanuel Mugisha who have been very supportive throughout the course of the study. Your encouragement played an important role and enabled me to bring this course to completion. May God richly bless you!

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LIST OF ABBREVIATIONS

| | |
|-------|--|
| EIA | Environmental Impact Assessment |
| PP | Public Participation |
| TOR | Terms of Reference |
| EMP | Environmental Management Plan |
| NBIA | New Bugesera International Airport |
| REMA | Rwanda Environment Management Authority |
| RDB | Rwanda Development Board |
| SWOT | Strength Weakness Opportunities and Threats |
| UNEP | United Nations Environment Program |
| NEPA | National Environmental Policy Act |
| WTE | Waste-to-Energy |
| EDCs | Environmental Distribution Conflicts |
| EBRD | European Bank for Reconstruction and Development |
| UNECE | United Nations Economic Commission for Europe (Aarhus Convention 1998) |
| SPSS | Statistical Package for Social Science |

ABSTRACT

The need for effective public participation in development projects has been widely recognized due to the benefits gained from such involvement. However, public participation is frequently reported ineffective. This prohibits the environmental impact assessment of various projects from reaching the intended goal of safeguarding the environment. The study adopted a mixed methods approach to assess the level of public participation during the environmental impact assessment of the New Bugesera International Airport project. Questionnaires and interviews were employed to gather the primary data whilst reports together with literature were explored to obtain secondary data. The results of the study revealed that overall there was some level of public participation. The respondents were generally aware of the project and were provided with opportunities to participate and share their concerns. However, the research described this level of participation as “*tokenism*” whereby the public is given opportunities to participate with limited powers to actually influence the decision-making process. The research concludes that, for future effective public participation, members of the public must be informed early on the proposed project and their concerns should be put into account to influence the decision-making process of the project to avoid mistrust and also for the proponent to attain the sustainability of the project. The research recommends the establishment of feedback channels for public satisfaction, continuous training activities for environmental impact assessment consultants to learn and improve on various recognized weaknesses such as lack of social learning and proper participation guidelines. Finally, the research calls for the responsible organizations to ensure the orderly operation of participation exercise, for future effective public participation in the environmental impact assessment of projects in Rwanda.

Key words: Public participation, EIA, NBIA project, Bugesera district, Rwanda.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the study

Environmental Impact Assessment (EIA) is a global environmental management tool that helps in protecting the natural environment. It has been defined by the United States National Environmental Act (NEPA) as “a multidisciplinary approach that ensures integral use of both natural and social sciences as essential elements in planning and making decisions that may affect the natural environment” (Black, 2004). However, EIA is said to be incomplete without public consultation and participation (Nadeem *et al.*, 2014).

Public participation (PP) is a key element for an effective Environmental Impact Assessment. It is referred to as “Citizen power” by many authors (Arnstein, 2004; King *et al.*, 1999). Public participation is defined as “a process by which an organization consults with interested or affected individuals, organizations and government entities before making a decision. It is a two-way communication and collaboration problem solving with the goal of achieving better and more acceptable decisions” (Creighton & Creighton, 2008). Public participation reduces conflicts by identifying issues of concern at the initial stages of the project. It helps identify the most significant impacts and suggests mitigation measures to address them. It also creates a sense of ownership among the citizens and builds trust between the government and its people (Nadeem *et al.*, 2014).

Public participation finds its roots in the theories of democracy which promote equality and local autonomy. Local autonomy calls for the public to have the freedom to affect particular outcomes that have effects on their lives and have a certain level of control over particular policy issues (Lawrence Pratchett, 2004). Together participation and autonomy call for the locals to be given the rights to take part in decisions concerning their lives (Barkay *et al.*, 2002; Ngonge, 2015).

Citizen participation is considered a resource for problem-solving since it offers practical knowledge to the policymakers and project developers for better-performing programs basing their knowledge on their day-to-day experiences hence being able to inform them of the overlooked impacts and thus avoid wastage of resources (Neshkova & Guo, 2012). Public participation is a crucial component of EIA because it is recognized as fair conduct that allows the public to influence the decision-making process of projects that can impact on their lives (Buchy & Race, 2001). It ensures that the proposed projects meet the needs of the public and are suitable for the affected citizens. Further, it gives the project more legitimacy if the affected parties have been exclusively involved and the decisions are more effective when the values and knowledge of the local people have been put into account while making final decisions and when the expert knowledge is publicly examined (Shepherd & Bowler, 1997).

Studies show that design and implementation of public participation have always been problematic and complicated when it comes to; “the scope, objectives and even the meaning of public participation” (Arnstein, 1969; Glucker *et al.*, 2013; Hartley & Wood, 2005; O’Faircheallaigh,

2010). However, the concept of “*influence*” has remained key to understanding public participation despite the diverse understandings of its practice (Brombal *et al.*, 2017).

Public participation should be done within principles of good practice and participatory exercises should be strategized for appropriate implementations (Buchy & Race, 2001). The proponent has to be very specific about what the project intends to accomplish to avoid raising false expectations from the public. There should be enough time for the public to gain relevant knowledge and a clear understanding of proposed projects before they can be able to respond to them (Pretty, 2010).

Airport projects are currently increasing worldwide. They are said to be big and have both environmental and social impacts, which is why they are subjected to full EIA. Public participation aspect of EIA must be transparent enough to give people who would be impacted upon by the project, the opportunities to influence the planning, design and the decisions of the project (Soneryd, 2004). However, studies show that public participation is often found ineffective when it comes to these type of projects (Brombal *et al.*, 2017).

A study by Soneryd (2004) on the Orebro airport extension project in Sweden revealed that there were many objections to the project. The surrounding area of the airport where the extension was going to be built was an agricultural area and the communities within the area had been living there for four to five generations. The report showed that the protests based their arguments on lack of access to information and opportunities to participate whereby only a few local residents were included during the public participation exercise. The residents who were going to lose both

their agricultural land and ancestral homes were not given chances to influence the decisions of the project. This gave the public a feeling that public participation was only a formality for the developer to meet the legislative demands and so there was no interest in opinions and concerns of the locals.

Another study by Brombal *et al.*, (2017) on the New Beijing Airport project showed that even though the public participation was carried out and there was access to information, the contents provided were incomplete and not understandable. The public was given opportunities to express their views however their views were partially included in the documents and also there was no feedback provided concerning the issues raised. This report indicated that even though the procedures for public participation are put in place in China, it has not gained the full potential to affect the decision output of various projects.

Johnson *et al.*, (2018) also reported on a waste incinerator construction project in China. It was proposed by the government of China that a waste incinerator be constructed in the village of Panguanying. However, the locals living within 200 meters near the proposed project site were not consulted and they were not provided with opportunities to participate. They were neither provided with information nor access to the information concerning the project instead the local leaders were given powers to neutralize the oppositions from their communities through denying them a voice. The local communities decided to protest against the project and attracted the National land ministry's attention. The project was put on halt due to villagers' complaints against the project which included land issues and compensations. This showed how a lack of effective public

consultation and participation can result in delays and waste of resources by the project developers. It also showed how powerful the public can be when it comes to decisions that may affect their natural environment and their everyday lives.

1.2 The New Bugesera International Airport project (NBIA)

The New Bugesera International Airport (NBIA) is a project that intends to replace the existing Kigali international airport which is to remain operational for military purposes. It is located in Bugesera District in the Eastern province of Rwanda, approximately 23km South-East of Kigali city. The new airport is being developed by the Bugesera Airport Company, which is a joint venture between the Government of Rwanda and Mota-Engil who is a major shareholder in Bugesera Airport Company (Bisset, 2017).

The proposal for the new airport was put forward because the existing Kigali international airport is unable to accommodate the passenger travels in and out of the country due to rapid economic development in Rwanda. The Environmental and Social Impact Assessment report showed that in 2016, the airport served about 710,000 passengers while the airport was designed to handle only 400,000 passengers per year. There was, therefore, a need for a bigger airport to accommodate the additional passenger traffic (Steve *et al.*, 2017). For such big projects where adverse impacts will be caused and people will be displaced and directly affected, it is a must for an Environmental and Social Impact Assessment to be conducted to ensure that impacts are avoided or well controlled. It is also under the Rwandan Government Organic law for the developer to comply with the requirements under this law (Government of Rwanda, 2005).

The NBIA project commenced in June 2017 and is still ongoing. It will cover approximately 2,500 ha of land which was previously used for subsistence farming. In 2010 a draft of Environmental and Social Impact Assessment report was published where it was indicated that public participation was conducted during the EIA process of the project. Also since the land was going to be taken from the communities within the vicinity of the project, a Resettlement Action Plan was prepared to ensure that people were well resettled and compensated (GIBB Africa, 2010).

1.3 Problem Statement

Airport construction can have effects on local communities such as noise, loss of cultural lands, attachment to ancestral homes, displacement, etc. Construction of NBIA has thus far brought about adverse impacts as people have been displaced. Despite all the reports prepared to ensure smooth land acquisition and resettlement well before the project implementation, a number of issues arose over the years since the project came into existence. The *East African*, a Kenyan newspaper reported on 1st May 2015 that the residents within the vicinity of the NBIA project have been complaining about their land being taken with no sufficient information given, others felt their properties were undervalued, there were delays in compensation while the government had set a deadline for the completion of expropriation of October 2014, resettlement problems, and even the project had been put on hold on several occasions. Reports abound that some property owners within the project area filed complaints that their properties had been undervalued (Bisset, 2017)

The fact that there have been complaints from the public against the NBIA project while it was claimed that public participation was carried out during the EIA process of the project raises questions regarding the effectiveness of the participation exercise. If public participation was undertaken during the EIA process of the project and the public was exclusively involved, what then went wrong during the negotiation process? Were the public given opportunities to raise concerns? How were public views incorporated within the decision-making process of the project? Currently, little is known concerning public participation in EIA of development projects in Rwanda. There is, therefore, a need to assess the level of public participation when it comes to EIA of these projects. This study appraises the effectiveness of the public participation conducted and based on the findings, recommendations are made for future effective public participation for EIA in Rwanda.

1.4 Objectives of the study

1.4.1 General Objective

The general objective of the study is to assess the level of public participation during the environmental impact assessment process of the New Bugesera International Airport project in Bugesera district, Rwanda.

1.4.2 Specific Objectives

- i. To assess the perception of the study population on the New Bugesera International Airport project (NBIA).
- ii. To assess the perception of the government and study population on public participation in EIA of the NBIA project.
- iii. To determine the nature and extent of public participation during the EIA of the NBIA project.

1.5 Research Questions

The following research questions guided the study

- i. What is the perception of the New Bugesera International Airport project in the study population?
- ii. What is the perception of the government and study population on public participation in EIA of the NBIA project?
- iii. What was the nature and extent of public participation during the EIA of the NBIA project?

1.6 Justification of the Study

Public participation is a valuable component of the Environmental Impact Assessment process. It empowers those who may be impacted upon by development projects to have a voice and affect the decision output (Hartley & Wood, 2005). It is, therefore, necessary to ensure public participation is well executed throughout the EIA process to ensure opportunities for the public to express their views and raise concerns are provided and incorporate their inputs within the decision-making process of the project for an effective EIA.

The study provides current information by highlighting the issues from public participation during the EIA of the New Bugesera International Airport project which adds information to the existing knowledge on how effective public participation can be conducted mostly in rural areas of Rwanda. The knowledge generated will provide an independent view of observation and this should inform the policymakers and EIA responsible authorities on issues to note in the conduct of similar participation processes. Also, the study forms the basis for future research in the area.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 The Environmental Impact Assessment evolution

Environmental Impact Assessment was originally established in the United States of America in the 1960s. After the Second World War, there was rapid population growth, industrialization, urbanization and overexploitation of resources (Caldwell, 1988). It was in the 1960s that people recognized that the environment was being destroyed at a faster rate than it was being replenished. It was then that they started looking for a tool that can help protect the environment. This resulted into establishment of EIA in 1969 from the provisions of the United States National Environmental Policy Act (NEPA) as a tool to help protect the environment through the identification of environmental and social impacts that are likely to rise from development activities and draw mitigation plans well in advance of implementation (Christopher Wood, 2003).

Since its establishment, over 100 countries have studied and implemented EIA around the world (Ogihara *et al.*, 2016). In many developing countries, environmental evaluation procedures were adopted since the late 1970s (Sowman *et al.*, 1995). In Nigeria, environmental awareness and legislation were initially introduced as a form of pollution reduction, as an away to deal with local problems in the petroleum industry (Ogunba, 2004). Several industry regulations were formulated to ensure the exploration of petroleum is done in an environmentally friendly manner and control pollution under the authority of petroleum Act, 1969. It was however observed that there were no environmental regulations outside the petroleum industry until in the early 1980s after the country participated in international conferences. The United Nations 1972 Stockholm Conference and the 1982 10th Anniversary of the Stockholm Conference which addressed the issues of the human

environment and called for protection and enhancement of the quality of the environment (Ogunba, 2004).

It was however noted that EIA operated by town planners was weak and required a total restructuring if an effective EIA was intended. Also, the lack of practice guidelines and political will were indicated to affect EIA effectiveness (Ogunba, 2004).

In South Africa, environmental conservation efforts were initially introduced in the protection of wildlife resources. In 1989, Environmental Conservation Act 73 was formulated which provided for regulations of development projects that may have adverse impacts on the environment and so were entitled to EIA (Sowman *et al.*, 1995). The constraints to implementation of environmental regulations have been inadequate information on the need to consider environmental problems, lack of transparency and accountability by decision-makers, inadequate public participation, lack of financial resources and expertise, and lack of political will (Sowman *et al.*, 1995).

Also, China introduced the EIA concept in 1973 during the first national environmental protection conference. It was however in 1979 that EIA was declared formally after the trial implementation of the environmental protection law and officially enacted in 1989 (Zhang *et al.*, 2012). Public Participation as a component of EIA was made formal in 1998 as a regulation for construction projects in China (Z. Zhou, 2012). For further emphasis on the importance of public participation, the EIA Law 2002 was formulated which provides that “the State encourages relevant units, experts and the public to participate in the environmental impact assessment in a proper way and specifically, requires public consultation to be conducted in the form of seminars, hearings or any other format over the EIA reports of government plans and construction projects”. Furthermore,

the provisional measures to ensure Public Participation in decision-making was adopted in 2006 by the Ministry of Environmental Protection. The Law is, however, short of operational rules for Public Participation to be substantiated in practice. (Zhang *et al.*, 2012).

Despite all the laws, however, it has been reported by Clausen *et al.*, (2011) that in developing countries, the major constraint towards an effective EIA is the limited number of competent EIA practitioners who are responsible for most EIAs of various projects. Several other limitations have been identified in the participation process. For instance, in China, It was indicated that only a few projects are entitled to compulsory public participation requirement. Also, the timing and engagement duration of the exercise has been reported to be short. Participation selection of the public is said to be unsatisfying and there is limited access to information as well as a low level of influence on the decision-making process (Zhang *et al.*, 2012).

Public participation has shown weaknesses globally which tend to affect the quality of the entire EIA processes (Wilkins, 2003). Kakonge (1998), reported that “EIA in Sub-Saharan Africa is still limited and not mandatory in many projects”. In 1971, a case was reported in Kenya about Kiambere George project which intended to construct a hydroelectric dam. Since many communities were going to be affected, the Government of Kenya carried out an EIA which identified about 3000 people that were going to be displaced and resettled. This, however, contradicted the numbers identified by the world bank which were close to 10,000 people. This left the public feeling that the process was only to secure the funds and not to seek for their views and put them into account (Wilkins, 2003).

While reading through the literature, it was observed that even though EIA is implemented worldwide, there are several challenges associated with it. The public participation component of EIA is still considered ineffective and various environmental conflicts have been observed. Marara *et al.*, (2011) in a comparative study reported that Kenya and Tanzania were the first East African countries to formally introduce EIA concept and so have relative experience compared to Rwanda which still needs more time to mature. However, most research done on the EIA process in Rwanda have focused on the EIA implementation as a general process but not enough is said on the public participation component of the EIA.

Public participation having been recognized as a crucial component for effective EIA, there is a need for research to investigate the effectiveness of participatory exercises of various projects. Also for a country like Rwanda that is quickly developing, it is likely that the environment might get affected as well as the people that sorely depend on it. It is, therefore, necessary to find out the level of public participation in the EIA of these projects and recommend accordingly to ensure the lives of the people are not adversely impacted upon as well as to ensure environmental sustainability. The study contributes to the body of knowledge by evaluating the public participation in EIA of the NBIA, an ongoing project in Rwanda, and based on the findings informs the policymakers and responsible agencies on identified issues to put into account while in conduct of similar projects to ensure a more meaningful participation and effective EIA in general.

2.2 Environmental Impact Assessment in Developed countries

Environmental Impact Assessment in developed countries has been practiced since the 1960s. It was first introduced in 1969 after the passing of the National Environmental Policy Act of 1969 in

the United States of America, where the concept started to spread to the rest of the world. Empirical studies indicate that EIA in developed countries is more mature and have attained an appreciable level of public participation (Jay *et al.*, 2007). In the United Kingdom (U.K), EIA was formally introduced in 1988 and has been used for various projects ever since.

A study by Jha-Thakur and Fischer (2016) using strength weakness opportunities and threats analysis (SWOT) identified some of the strengths and weaknesses in the U.K with regard to EIA. Some strengths identified were the provision of training, documents with guidelines and information on EIA to the EIA practitioners and the public to ensure that people understand the concept of EIA, and opportunities to be able to influence the decision-making. The weaknesses were inadequate consideration of alternatives together with the inconsistency in the monitoring stage of EIA. It was realized that as projects are implemented, different impacts arise and they are not well monitored to ensure the environment management plan (EMP) is followed. It was also indicated that the project teams change over time which then makes it difficult for the new teams to follow up hence the monitoring stage loses its quality. It was however reported that citizen involvement has been strongly established and their roles to be part in social and environmental matters have been well explored in developed countries (Momtaz & Kabir, 2018b).

In the countries like UK, US, Germany, and France, citizen engagement has become a typical political principle and mandatory for participatory rules to be put into effect by executive EIA agencies and urban planning/redevelopment. In these countries, the public is made aware and the participants are entitled to certain legal rights (Zhou *et al.*, 2019).

2.3 General Environmental Impact Assessment Process

Environmental Impact Assessment is a process that involves repetition of different stages to achieve its ultimate goal which is protecting the environment. Stages involved in EIA depend on the requirement of the donor or the country but the major steps are common for a good EIA practice (Figure 2.1). There are about eight major stages commonly applied in EIA and they carry the same importance in ensuring a healthy environment and give the overall performance of the project (Black, 2004). The following are the major stages in the EIA process;

- **Screening:** This is the initial stage in the process which determines whether or not a proposed project requires an EIA.
- **Scoping:** This marks a critical and early stage of EIA which helps in identifying the most significant issues that require more investigation and eliminates those of little concern. This benefits both the proponent and the donor by saving both time and money which would have been wasted on unnecessary issues. Scoping also helps to derive the Terms of Reference for the assessment.
- **Impact Analysis:** This stage of EIA identifies and predicts the most significant environmental and social impacts through evaluation of the magnitude and duration of the impact a proposed project is likely to cause.
- **Mitigation:** This stage of EIA suggests actions to avoid or reduce the adverse impacts identified during the impact analysis.
- **Reporting:** This stage shows the results from the EIA in a report form and presents it to competent authorities for review
- **Review of EIA:** Here the authorities examine the report by checking the effectiveness of the document and give the needed information to the decision-makers.

- **Decision making:** At this stage, the decision is made whether the project is approved, rejected or requires further investigation to make adjustments.
- **Post-monitoring:** This is a stage after the project has commissioned. It evaluates whether the impacts of the project are within the legal standards and how mitigation measures have been implemented.

Throughout these stages, public involvement is key to ensure all knowledge is acquired and to avoid social conflicts at an early stage of the proposed project.

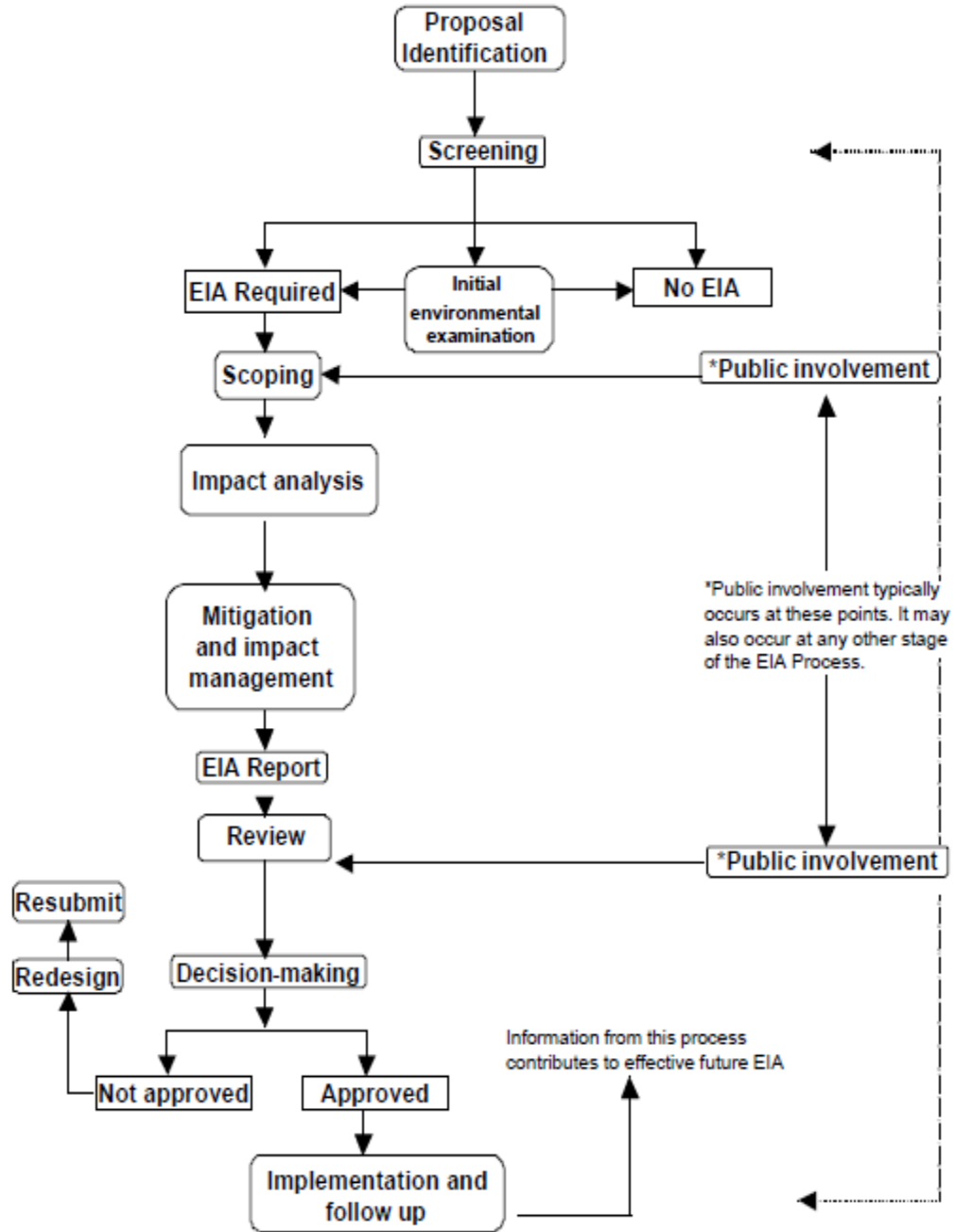


Figure 2.1. Generalized EIA process flowchart showing stages of critical Public Participation.

Source: UNEP (2002)

2.3.1 Public Participation in Environmental Impact Assessment

According to Arnstein (1969), Public Participation is “*citizen power*”. She continues that, “it gives a voice and opportunities to the marginalized individuals and those directly or indirectly affected by the proposed project to express their views and influence the decision-making process”. Nadeem *et al.*, (2014) stated that “EIA is considered incomplete without consultation and participation”, which reflects how important public participation is, throughout the EIA process. According to Glucker *et al.*, (2013), different objectives of public participation in EIA are classified into three categories and discussed in the following subsections.

2.3.1.1 Normative rationale

Public participation in EIA enables those that are directly affected by the proposed project and the decision to affect that decision. From a democratic perspective, “the individuals have rights to be informed, consulted and to express their views on matters that affect them personally. Since environmental decisions affect literally everybody’s quality of life, it would then be unfair and unethical not providing the public with opportunities to participate in EIA and influence the decision-making process” (Hartley & Wood, 2005). With public participation, alternatives are easily found and effective measure is established. A deliberate public participation provides the public with the opportunity to practice their citizenship and gain richer knowledge on matters that concern them. The ultimate objective of public participation is to empower marginalized groups of people who make public participation more meaningful and allows the influence of the public in decision making in meaningful ways (Arnstein, 1969).

2.3.1.2 Substantive rationale

Public participation in EIA harnesses local knowledge and information. Also, it makes it possible for the decision-makers to acquire knowledge and environmentally and socially information which then enhances the quality of the decision output. It also provides decision-makers with experimental and value-based knowledge through the sharing of local personal experiences (Glucker et al., 2013).

2.3.1.3 Instrumental rationale

Public participation in EIA increases legitimacy to EIA authorities and facilitates project implementation. It is through participation that the public develops a sense of ownership over the EIA process and the outcomes hence consider it legit and transparent. This also benefits the proponent since it avoids delays, project hindrances and protests against the decisions.

It provides ways to identify conflicts by taking an active rather than a reactive role to resolve them earlier before big decisions are made. It is however encouraged to practice deliberate participation than any other form of public involvement (Hartley & Wood, 2005).

2.4 Levels of Citizen participation

Literature reveals that “public participation is highly desirable and that the key issue for scholars and EIA practitioners is to find ways of making it more effective”(Afolabi, 2018). The ladder of citizen participation by Arnstein (Figure 2) explains eight different participation levels with each step of the ladder corresponding to the level of influence on a decision. The levels are discussed in the following sections.

Manipulation and therapy mark the two bottom rungs of the ladder which describe levels of non-participation. This describes a type of participation where people are placed on committees in the name of educating them. It does not give the have-not citizens opportunities to influence the decision-making process but rather the power holders lead and advise the citizen on how to respond to several situations relating to decisions that would affect their lives (Munch-Petersen, 2017).

Mostly these committees are set to create an illusion that people are involved when in reality they are not since they have no power. General statements made by the power holders blindsides the citizen about the real picture of the projects by showing them how beneficial it will be for them and get their signatures. This type of participation involves dishonesty from the administrators by manipulating people's thoughts and make them lose focus on what is actually taking place and put some canceling sessions for them. It silences people from reacting towards issues that concern them and decisions that would affect them by thinking that they are confused and that they need help instead (Arnstein, 2004).

Rungs 3,4,5 of the ladder: Informing, consultation and placation respectively are described as levels of tokenism. They allow the powerless citizens to hear and have a voice to some level. This type of participation gives the public the opportunities to hear about the developments and become informed of their right to participate. However, more often this practices becomes a one-way flow of information (top-down). There are no ways provided for the feedback and no power to negotiate and be able to influence the decisions. The most common tools used are news media, posters, and responses to inquiries (Babu, 2018).

The consultation level provides a two-way flow of information. This type of participation asks for the public opinions on development programs which normally encourages full participation. However, it can be less effective if other modes of participation have not been incorporated since it offers no guarantee that public concerns will be incorporated into the final decisions of the project. Also when there is no redistribution of power for citizens to fully participate, people are simply taken as statistical abstractions and participation is measured by how many attended meetings or answered questionnaires which then give a false feeling of participation to the public. Some of the tools often used are attitude surveys, public meeting, and public hearings (Afolabi, 2018). With placation level, there is some level of influence by the citizens in decision-making although tokenism is still present. The have-not citizens are put on boards of different agencies but hold minority positions since the final decisions are made by power holders and citizen advises are often outnumbered by the officials (Afolabi, 2018).

The 6th, 7th, and 8th rungs of the ladder: partnership, delegated power, and citizen control respectively describe the citizen power which is the expected outcome when citizens are exclusively included in public participation towards any project, program or policy that would affect their lives. For partnership rung of the ladder, there is a negotiation between citizens and power holders which initiates a certain level of partnership by agreeing to share planning and decision-making responsibilities. This marks an act of power redistribution amongst citizens and gives opportunities to people to be able to influence the decision output. This type of partnership, however, is more effective when there is a clear structure of power within the community to know what they are accountable for, hence making it easy for them to perform (Arnstein, 2004).

Delegated Power rung of the ladder, citizens hold important positions and play significant roles and also influence the decision-making process. They have rights to participate and react towards development programs that would affect their lives. Citizen Control level which marks the last rung of the ladder, citizens have full powers towards projects, programs, and policies that may affect their lives. The have-not citizens have voices and are given opportunities to participate, express their views and influence the decision-making processes. Also, “discussions are made between the proponent and key stakeholders in order to ensure consensus is built and reach a mutually acceptable resolution of issues of concern, such as on a package of impact mitigation and compensation measures”(Munch-Petersen, 2017).

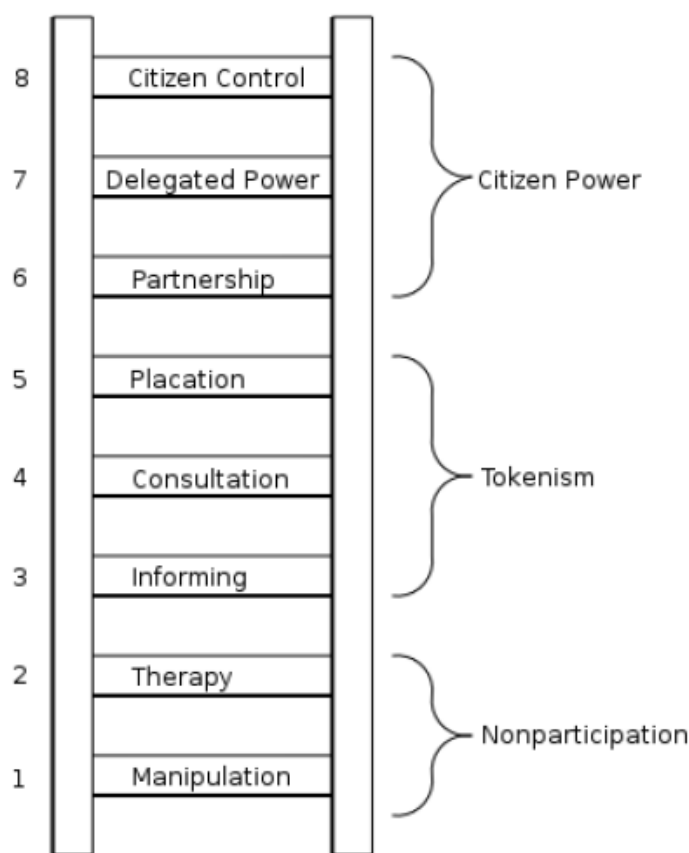


Figure 2.2 The ladder of citizen participation.

Source: Munch-Petersen (2017)

With this ladder, however, the major criticism has always been that it is top-down oriented because of its model which views those who have the power to delegate to others (Soneryd, 2004). Collins and Ison (2006) also pointed out that the ladder focuses only on the power which makes it insufficient for making sense at the conceptual or practice level. They argue that with environmental issues, it is rather not about the power but about social learning about the nature of the problem and how best it can be handled. They continue that “*the assumption that participation is hierarchical in nature with citizen control held up as the ‘goal’ of participation does not always align with participants’ own reasons for engaging in decision-making processes*”.

O’Faircheallaigh (2010) indicated that “many problems are associated with the identification of multiple objectives and their meanings towards public participation and the assumption that the key issue involved is how to pursue effective participation”. However, many of the goals require various concepts and activities which make the situation more complex. He argues that “sharing information with the public is a very different matter to allowing a community to influence government decisions or empowering individuals and communities”. It is again pointed out by Connor (1969) that, “a mutual educative process is essential for a meaningful public participation however for a complex economic, social, cultural and political issue there is a need for a systematic process appropriate for such situations and must be well designed and implemented since such issues will not be resolved by a news release and a public meeting”.

2.5 Environmental Impact Assessment in Developing Countries

Environmental Impact Assessment in developing countries dates back to the 1980s. It was in 1989 that the World Bank ruled that EIA for all major projects should be done by the country borrowing under the Bank's supervision. This allowed these countries to take responsibilities of the projects which may have impacts on the environment. The United Nations Environment Program (UNEP) put in place the guidelines on EIA and gave recommendations to member states on how to establish EIA in their representative countries and the goals and principles for EIA (Wood, 2003). The 1992 Earth Summit also contributed to the momentum of EIA in developing countries where Principle 17 of Rio declaration 1992 emphasizes on EIA prior to any undertaking of the proposed project. It states that "*EIA, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent authority*" (The United Nations, 1992).

However, EIA in developing countries vary in its practice due to several reasons, some of them being resources, social-cultural systems, political and administrative systems, and the nature and level of economic development. The differences observed in the EIA systems in developed and developing countries are generally because it was introduced later in developing countries compared to developed countries which then makes it less firm in the developing world (Christopher Wood, 2003). A review by Wood (2003), on EIA in developing countries, indicated that the performance was relatively poor and some of the criteria for an effective EIA were not given as much value and attention as they should. It was noticed that in these countries, there are no clear and specific legal provisions on EIA which then brings bias to the EIA practitioners (Momtaz & Kabir, 2018b).

Also, major projects in developing countries require EIA but implemented most of the time without it and alternatives such as “no-action” are often not considered (Wood *et al.*, 1998). Consultation and participation in developing countries were also found to be weak. It is no tradition and found a revolutionary in these countries. The public is usually not consulted during the planning and is excluded from the decision-making process of the EIA of different projects since the requirements for public participation are not clear in the developing world. Most local communities who are directly affected by the projects are unaware of EIA as well as their rights to participate in EIA processes and therefore not given opportunities to participate and moreover be able to influence the decisions that tend to affect their lives (Nadeem *et al.*, 2014).

Public participation exercise in these countries is often done after the initial stages of EIA have been carried out and decisions have been made (Nadeem *et al.*, 2014). It is usually done as a formality to meet the legal requirements rather than actually giving people opportunities to influence the decision-making process (Ahmad & Wood, 2002). This creates distrust between the public and developers since they feel their views and concerns will neither be valued nor accounted (Glucker *et al.*, 2013).

When there is no effective Public Participation in EIA, proponents face different cases of oppositions from the public which results in delays and waste of resources. For example, China has been the world’s biggest waste generator since 2004 and it was predicted to have doubled the municipal solid waste produced by the United States by the year 2030 (Johnson *et al.*, 2018). China

has therefore been constructing solid waste disposals; Waste-to-Energy (WTE) incinerators of which some can burn tonnes of wastes per day (Johnson *et al.*, 2018).

However, there have been oppositions from the local communities whose grievances are based on the quality of their environment affected by developing activities and hence affect their daily lives. Mobilizations by the local communities against these economic activities which base on the environmental impacts that are likely to be caused normally referred to Environmental Distribution Conflicts (EDCs) have increased in numbers since these incinerator projects came into existence. These conflicts arise not only because locals are afraid of losing their natural environment but also because there is no equal redistribution of power and lack of effective participation during environmental impact assessments of these projects (Johnson *et al.*, 2018).

Wood (2003) discussed some of the identified constraints that lead to rare public participation in developing countries; There are high levels of illiteracy which makes communication a problem and understanding of the EIA concept becomes more difficult, some communities are remotely lived others have little access to participative processes due to their cultural and traditional values, for instance, some, of these countries gender equality, is still at low levels and so women rarely participate.

Lack of communication between the government and local citizens has become one among other factors limiting levels of public participation in the EIA of African countries. It was also shown that there are many promises made by project authorities during EIA processes which are rarely kept. Some include; compensations, resettlement packages and employment opportunities for local

communities (Kakonge, 1996). Many governmental institutions in African countries also lack the capacity to foster public participation. This sets them apart from local communities mostly the illiterate populations and creates unnecessary boundaries for the public to be able to participate in EIA processes. Inadequate provisions for informing the public during EIAs of major projects also limits levels of participation in African countries.

Lack of transparency in EIAs which leads to mistrust and misunderstanding between the public and project authorities. Some of the EIAs in these countries are not taken seriously, in some cases they are prepared very late and even sometimes at the end of the project which limits the chances for the public to participate and have an impact on the decision output (Kakonge, 1996). Also, Ogunba (2004), pointed out that the EIA systems in these countries have not yet provided ways for strong PP mostly in rural areas, where most locals are illiterates and have no knowledge of EIA provisions.

Lack of baseline data has been reported to be another constraint in developing countries since the unavailability of past and current baseline data on the behavior of local ecosystems can lead to ineffective EIA (Appiah-opoku, 2001). He points out that, “indigenous ecological knowledge is also invaluable in these countries however, it could be used to supplement scanty scientific data and information in the developing world”. Also, it has been indicated that many times some professionals have little respect for the general public which has strongly affected the ongoing efforts in public participation (Grossardt, 2018).

In this regard, it can be observed that public participation in the EIA of developing countries has not attained an appreciable level of its effectiveness. There is, therefore, a need for more research to determine the challenges and suggest recommendations for effective public participation implementation.

2.6 Environmental Impact Assessment in Rwanda

Rwanda administrative divisions are grouped into five categories arranged from the largest division to the smallest. These are Provinces, Districts, Sectors, Cells, and Villages. There are five Provinces in total within which districts are found. Each district has different sectors under it for easy service delivery to the public. Sectors then have cells, which narrow down to give villages (NISR, 2012b).

Rwanda has been faced with various environmental issues which still persist due to economic development struggle that intends to improve the wellbeing of the society after the total destruction of the country 25 years ago during the 1994 Genocide. In the year 2000, a national strategy “vision 2020” was launched. It aimed at transforming Rwanda from a low-income to a middle – income country and also called for a well-regulated environment. The Republic of Rwanda constitution adopted in 2003 also “ensures the protection and sustainable management of the natural environment and avoids misuse and overexploitation of natural resources” (REMA, 2015a).

In the year 2005, EIA was introduced in legislation under the Organic law (Number 04/2005) as a tool towards sustainable development where its article 67 states that “*Every project shall be*

subjected to environmental impact assessment, before obtaining authorization for its implementation. This also applies to programs and policies that may affect the environment”. It was also under this law that an EIA responsible body, Rwanda Environment Management Authority (REMA) was established. In the year 2008, with the Organic law providing the legal basis, several ministerial orders were issued relating to EIA; Number 003/2008 Ministerial Order that elaborates more on the requirements and procedures for EIA, Number 004/2008 Ministerial Order that explains in details on the activities, works, and projects that require EIA, and Number 005/2008 Ministerial Order establishing the inspecting modalities of companies or related activities that pollute the environment (REMA, 2015a).

Public participation is a very important element of the EIA process in Rwanda. It is considered valuable in the identification of adverse impacts, suggesting mitigation measures, and alternatives. It ensures equitable use of natural resources and environmental protection and gives opportunities to the public to express their views during public participation exercise and be able to influence the decision-making process. It also ensures that projects do not disturb the ecological functions of the environment and the wellbeing of the people who depend on them. However, EIA in Rwanda has been reviewed by a number of researchers, one of the reports indicated that EIA in Rwanda is generally poor and there is some level of weakness in the public participation stage of the EIA process (Hasan *et al.*, 2018).

Rwanda Environment Management Authority (REMA) which was established under the Organic Law Number 04/2005 is responsible for the EIA implementation under supervision of the Ministry of Natural Resources (REMA, 2015a). The following are the phases of the EIA process in Rwanda;

- **Project brief submission and registration:** This is a concept that is submitted by the developer to the responsible authority explaining in a concise manner about the proposed project. This information is then used to carry out other phases of the EIA process.
- **Screening:** This is done after the submission of the project brief by reviewing the document and searching for further information from lead agencies and other relevant stakeholders to determine whether the proposed project requires EIA or not. The screening process also helps categorize the activities into three impact levels; the projects with impact level 1 do not require EIA, however, they, are subjected to a public hearing and reviewing. Projects with impact level 2 do not require a full EIA but require further levels of assessment and the ones with impact level 3 require a full EIA.
- **Scoping and consideration of alternatives:** This marks a critical stage of the environmental impact study phase that requires relevant stakeholders, lead agencies and proponent inputs to determine the important issues to be included in the study and the alternatives to be considered. This stage also helps in the formulation of Terms of Reference (TOR).
- **Baseline data collection and analysis of initial state:** The state of the environment is then analyzed using different sources of information such as geographical records, scientific data, and photographs of the area. The environmental, social and economic impacts are also identified during this exercise.

- **Impact prediction and analysis of alternatives:** The magnitude, spatial-temporal scope of the impacts are discussed at this stage. Also, different characteristics of the impacts whether positive or negative, direct or indirect, short or long term are determined and considered alternatives are discussed and analyzed.
- **Preparation of EIA report:** The report compiles the results from the assessment study. It shows in details the objectives of the project and describes alternatives of the proposed project. A brief description of a baseline study of the area, the magnitude, the spatial-temporal scope of the impacts and different characteristics of the impacts and viable alternatives should be clearly stated.
- **Public hearing:** REMA (2006) the EIA guideline document mentions three major stages at which the public is given opportunities to participate namely; before, during and after the EIA study. REMA is responsible for the public hearing process and provides publicity for the hearing and covers all the costs.
- **EIA review:** According to the Ministerial Order 003/2008, REMA analyses the EIA report checking the Terms of Reference (TOR) before providing copies to relevant stakeholders and lead agencies. A technical committee and an executive committee within REMA review the report in order to approve or reject the proposed project.
- **Decision-making:** After the EIA document has been reviewed, the executive committee can then to approve or reject the development project.
- **Environmental monitoring:** Monitoring stage is encouraged to be done during construction and operation phase of the project. This is done together with compliance of the project. In case of non-compliance measures are taken by REMA to ensure that the proponent stays in line with the Environmental Managing Plan (EMP). The proponent shall

be charged with an offense if found non-compliant, can be penalized, can have his license terminated and the development can be put on halt temporarily or permanently.

2.7 A review on Environmental and Social Impact Assessment report of the NBIA project

As part of the country's vision 2020, the NBIA project was proposed to be able to handle more passengers than the existing Kigali International Airport and improve on infrastructure, the economy and the wellness of the population. It is observed that consultation of the public was done during the design and implementation of the project as well as the initial operation of the project. This intended to bring about awareness to the interested and affected people, solicit their views and consult on sensitive issues of the project. It was expected that the output would be incorporated in the development measure, environmental and social management plans and resettlement action plan. It was also a way to minimize conflicts and delays in implementation of the project (GIBB Africa, 2010).

It was indicated in the report that various stakeholders were involved and local communities from two sectors were informed. To ensure that information generated was representative of the general public in and around the project area, meetings were organized at different community levels to obtain local opinions about the project and ensure holistic assessment of key issues relating to the project. It was again mentioned that a total of 6 public meetings were organized where participants included local communities. The sector officials and opinion leaders were also involved in a group discussion and separate sessions for women and youth were organized at the sector level. Some of the concerns mentioned by the public during the meetings were that properties especially land should be given the value, the compensation should be handled in a transparent and attentively

manner to avoid conflicts and social tensions among the community members, adequate information should be passed across the communities on the project (Steve *et al.*, 2017).

The participants also asked for training on financial management to be able to manage the funds given for compensation and they were concerned that air pollution and related health impacts would arise. It was however observed that the majority of the community members were excited towards the project and expected a number of benefits such as increased income, job opportunities, creation of markets for local agricultural products promotion of education and health services in the district as a result of the project among others. Some of these, however, did not align with the project since it was an airport project and not an education or health institution (Steve *et al.*, 2017).

Regardless of the positive perception of the public towards the project according to the discussions held, owing to NBIA being a government project, the people within the project area did not have much of a choice but to consent to the project. However, the major issue of relocation and compensation was intended to be addressed carefully so that the livelihood of the people does not get impacted upon (GIBB Africa, 2010).

2.8 Gender and Public Participation in EIA

Nguyen & Taalaibekkyzy (2016) report the results of three case studies from Cambodia, Vietnam, and Myanmar on gender and public participation in EIA. It was indicated that women were not given enough opportunities to showcase their views and be able to affect decisions since they were not the heads of the families. Factors such as low levels of education, language barrier, cultural norms, and stereotypes were found to contribute to women's non-participation. However, women in these countries were seen to have important local knowledge of their natural environment and cared about their communities. "Women and the Environment 1. Global commitments The Beijing," (2002) also shows that women keep being under-represented in environmental decision-making processes. The report indicated that various environmental assessments are often viewed as technical exercises that require scientists and experts and ignores the knowledge of local people, the vulnerable and women which has become a major problem towards effective public participation. Principle 20 of the Rio declaration states that "*women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development*"(The United Nations, 1992).

This principle gives women the rights to participate and be able to influence the decisions made towards their natural environment which would affect their personal lives. In Rwanda, gender equality is highly promoted. REMA (2015b) report indicates that in 2012, 51.8% of the population were females and almost 30% of Rwandan households were headed by women. In rural areas, the numbers are even higher whereby 53% are women and in urban areas 49% are women. Rural women depend on their natural environments especially the poor for the survival of their families. When these natural resources are degraded, polluted or taken away they suffer.

Most Rwandan women practice subsistence farming which makes them have a strong connection to their lands. The study, therefore, becomes necessary as a way to investigate the levels of public participation by specifically looking at the participation of the vulnerable groups to ensure equal opportunities are provided if participation is to be effective.

2.9 Conventions and Treaties in support of Public Participation in Environmental Impact Assessment

Convention on the Environmental Impact Assessment in a transboundary context, United Nations Economic Commission for Europe (1998) entered into force in 1997 and it marks the First Multi-lateral EIA treaty that looks at EIA in a transboundary context. It sets the obligations for parties to assess the environmental impacts of projects which are likely to have significant impacts on the environment at an early stage and to notify each other of the ones that would cause trans-boundary significant impacts (Huertas-Olivares & Norris, 2013).

Aarhus convention (UNECE) calls for “protection of the right of every person present and future generations to live in an environment adequate to his/her well-being. It guarantees the rights to access to information, public participation in decision-making and access to justice in environmental matters” (United Nations Economic Commission for Europe, 1998).

A study by Smith et al (2012) indicated that the European Bank for reconstruction and development (EBRD) developed a range of public consultation requirements where stakeholders get involved prior to and during the project implementation. The bank has also developed an accountability mechanism for grievances from people directly affected by the project financed by

the bank. It also requires a detailed scoping stage for various projects with potential transboundary impacts due to its commitment to the UNECE convention.

United Nations' Rio Summit on Environment and Development 1992 which resulted in one of the major documents Agenda 21. Chapter 23 of the document focuses on strengthening the role of major groups. It identifies broad community participation as one of the prerequisites for Sustainable Development. The Preamble says;

“In the more specific context of environment and development, the need for new forms of participation has emerged. This includes the need of individuals, groups, and organizations to participate in environmental impact assessment procedures and to know about and participate in decisions, particularly those which potentially affect the communities in which they live and work” (Agenda 21, 1992).

According to Principle 10 of the Rio Declaration on Environment and Development (1992),

“Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes” (The United Nations, 1992).

2.10 Theoretical framework governing the conduct of public participation

2.10.1 Stakeholder theory

The stakeholder theory finds its roots in principles of democratic theory. It argues that every individual that will be impacted upon by corporate decisions should have a chance to voice their

opinions and influence the decision-making process. It claims that stakeholders should be differentiated into those who control the process and those who rely on and are influenced by the process and the decisions made, in order to establish the adequate participatory ways to involve them since they are made up of various individuals and categories who possess different skills. It would, therefore, be inappropriate to apply the same participatory methods to all (Vivvianne, 2013).

The theory justifies the need for incorporating stakeholder opinions in the planning of projects for a successful implementation. Roberts (1992) points out that, there is a positive relationship between stakeholder power, social performance, and social disclosure. This, however, can only occur when social responsibility activities are viewed as an effective management strategy. The theory stands for stakeholder involvement not only because this would serve the organization that includes them and takes their opinions into account, but because it is regarded as ‘the right thing to do’. Again, it shows that stakeholder engagement helps in building long term relationships which would return in even higher financial benefits (de Gooyert *et al.*, 2017).

2.11 Conceptual framework guiding public participation

The conceptual framework guiding the conduct of this study was adopted from (Ngonge, 2015). As illustrated in Figure 2.3, it is indicated that various factors can influence the effectiveness of public participation in EIA. It is observed that gender is one of the factors that can affect the individual participation of the public. As reported by Kakonge (1996), in some African countries, it is still a tradition for females to be excluded from participatory exercises and decision-making

processes. It is, therefore, responsibility for the responsible authorities to ensure gender equality while carrying out such processes to ensure representativeness of all categories of people for effective participation.

It is also noted that awareness is another factor that can influence Public Participation exercise. This implies that having knowledge on various projects of interest triggers how the public respond to the exercise. It is worth to note that the knowledge can also be on the participation process and the EIA process, in general, to ensure that the public is well informed which later results in meaningful participation (Hartley & Wood, 2005).

Timing is another factor that can affect the quality of participation exercise. Informing the public about development projects well in time can allow them to have enough time to reflect and gather various ideas and concerns. This will then make them feel the urge to attend participation exercises since they have generated opinions and need to share their concerns. Also choosing the time within which the exercise will take place should consider different daily activities that are carried out to ensure the time is convenient for the public (Lachapelle *et al.*, 2003).

It is necessary to ensure that the language being used in the participation exercise is well understood and avoid technical terms. This also would influence participation in the sense that the public does not feel left out. Also, the information shared to the public should be adequate enough to avoid mistrust but rather encourage transparency and accountability of the project hence effective participation. Cultural values of the public should also be considered whilst carrying out

the exercise. This too will allow the various categories of people with different beliefs to feel included, and allow the exercise to gather diverse ideas. Since the flow of information can also affect the end results of the exercise, it is necessary to ensure that it is not one-way and provide ways for the public to raise views and get feedback. Also, the exercise should be open enough to promote social learning where the public learns and become aware of their rights to participate and have open communication with stakeholders hence be able to reach a mutual understanding (Wilkins, 2003). Other factors such as resources and capacity building can influence the effectiveness of the participation exercise. It is therefore important to provide responsible authorities with adequate resources and technical support to ensure the consultants are well equipped for carrying out a smooth and effective Public Participation (Sowman *et al.*, 1995).

As indicated by Momtaz and Gladstone (2008), “it is evident that the purposes of public participation are to collect information, building support, taking account of values, giving the community the ability to influence the outcome of decision or empowerment, avoiding litigation, strengthening the democratic fabric of society and so on”. This framework (Figure 2.3) suits the study because it provides a general picture of what variables that may influence public participation effectiveness in EIA, and drawing from the framework, the mentioned variables were studied to evaluate the effectiveness of public participation in EIA of the NBIA project.

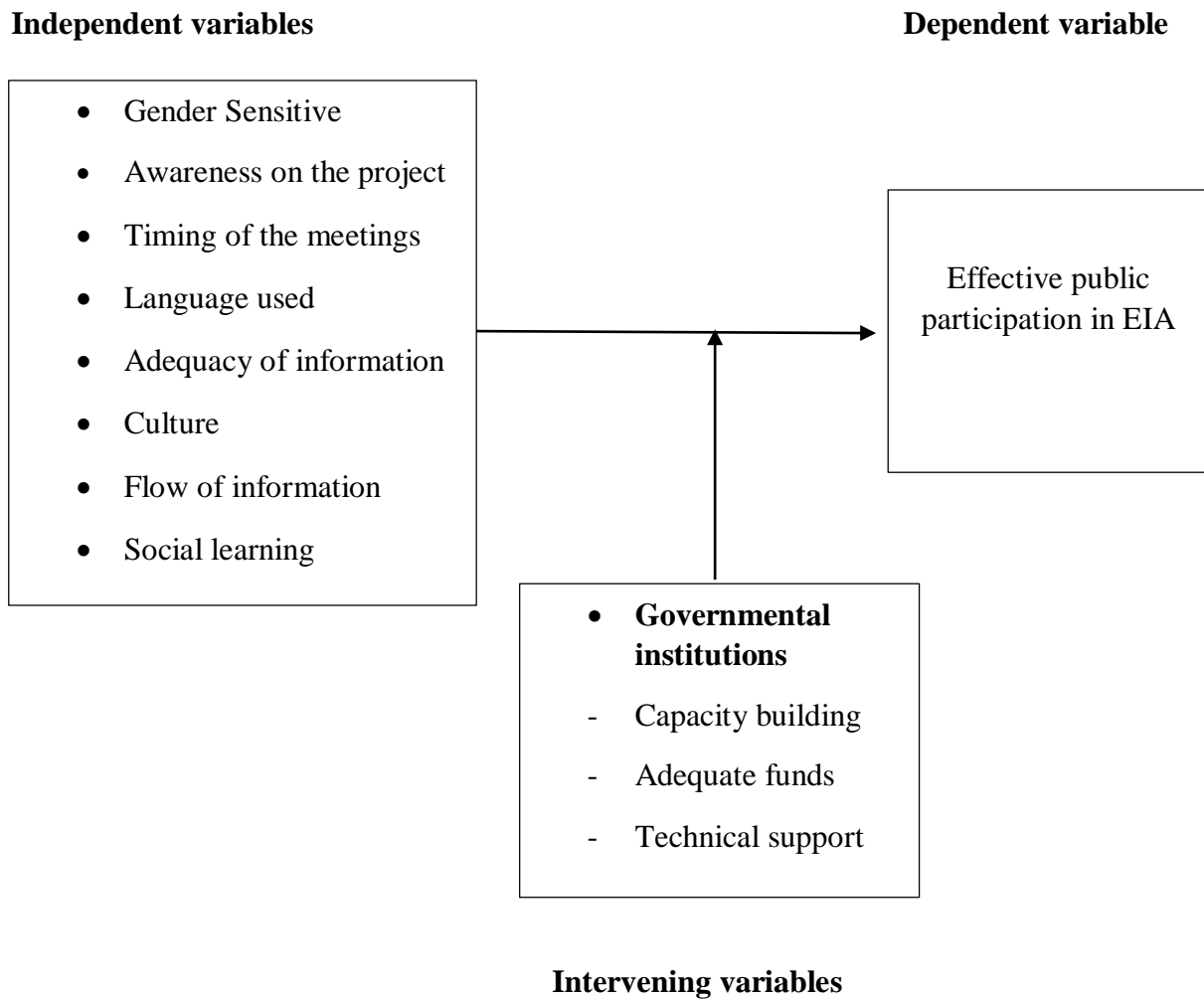


Figure 2.3. Conceptual framework indicating various factors that influence the effectiveness of Public Participation in EIA.

Source: Ngonge (2015).

It is against this background, that the research sought to contribute to knowledge by evaluating the level of Public Participation in EIA of Rwanda, by giving an insight on an ongoing project of an airport construction located in Bugesera District, Rwanda.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study area

3.1.1 Location

The study was conducted in Bugesera district in the eastern province of Rwanda. The study area lies within latitude 2.2315° S and longitude 30.1127° E as shown in (Figure 3.1). Bugesera district shares borders with the Republic of Burundi in the South, Ngoma which is one of the Eastern provinces to the East, Kigali City (the Capital City of Rwanda) and Rwamagana district which is also one of the Eastern provinces to the North. Bugesera district covers a total surface area of 1337km² of which arable land is estimated at 91,930.34 ha (RDDP, 2013). Rilima is the nearest urban center, approximately 3.86km away from the New Bugesera international airport with a population of 26,803 residents (NISR, 2012a). The cells studied were Nyabagendwa, Kabagore, Karera, Kimaranzara, Kabukuba, and Rwinume of Bugesera district.

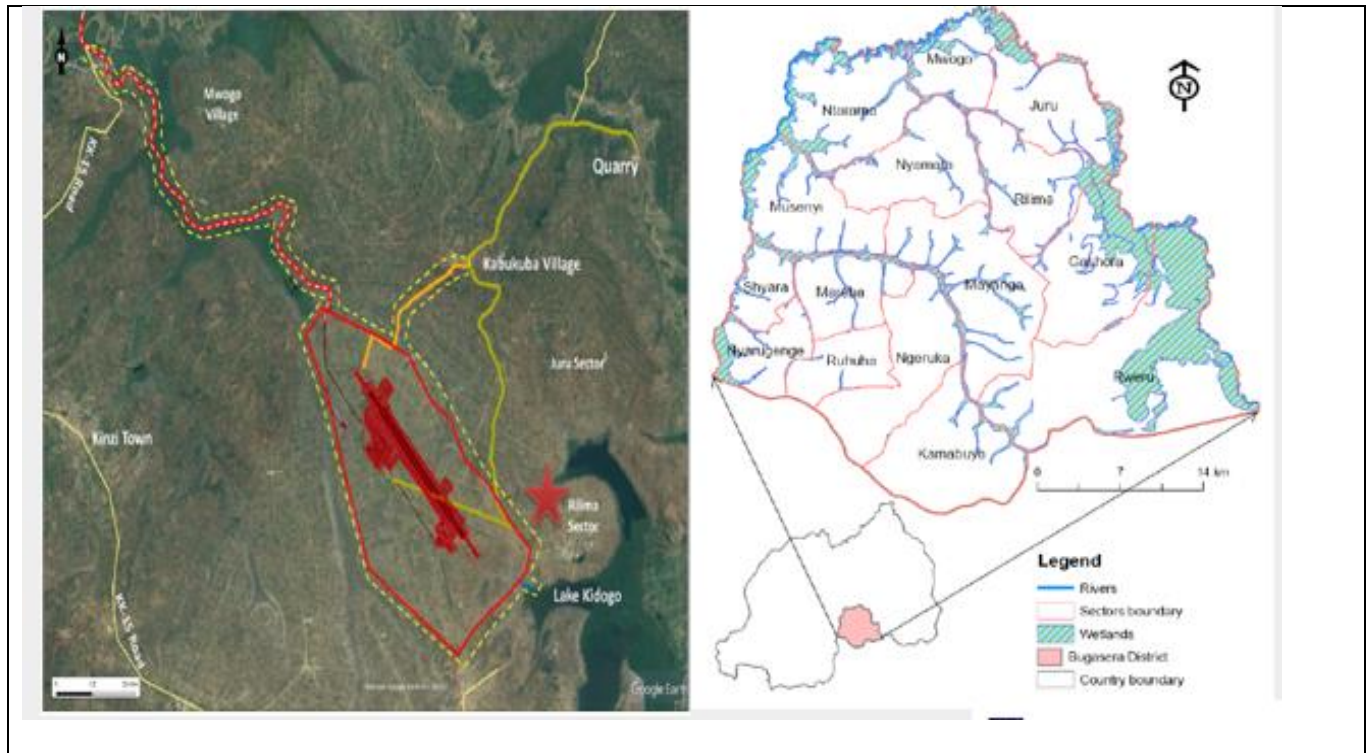


Figure 3.1. Map of Rwanda showing the study area.

Source: Steve *et al.*, (2017)

3.1.2 Climate

The climate in Bugesera is dry compared to other districts. Its temperature varies between 20⁰C and 30⁰C. The district experiences two dry seasons and two rainy seasons all year round with mean annual rainfall of 854 mm (WES, 2011).

3.1.3 Hydrology

Bugesera district has three main rivers namely; Akanyaru, Akagera, and Nyabarongo and 9 lakes which are: L. Rweru, Cyohoha North, Cyohoha South, Gashanga, Kidogo, Rumira, Mirayi, Kirimbi, and Gaharwa. The lakes formed as a result of the overflow of Akagera river, apart from lake Rweru and lake Cyohoha South. These do not however affect the formation of rainfall. Mainly, they are used for fishing, and irrigation purposes (Province, 2012).

3.2 Demographic characteristics

3.2.1 Population and population density

Bugesera is one of the seven districts that make up the Eastern province of Rwanda. It is made up of 15 Sectors, 72 Cells and 581 Villages with a total population of 363,339 people where 177,404 are males and 185,935 of the population are females. The district's average annual growth rate is 3.1% and the population density is 282 people per km² (NISR, 2013).

3.2.2 Age structure

The population of Bugesera district is mostly young with 62.1% of the population being under the age of 25 years whilst the elderly (60 and above) represent 4.6 % of the total population of the district (NISR, 2012b).

3.2.3 Education

This sector has generally shown good performance. The literacy rate among the adult population is 72.9% while the illiterates make about 39.6% of the population whereby 22.2% are females and 17.4% are males (nistr, 2013). The net attendance rate in primary school for the district is 86.3% with Rilima sector having the high net attendance in the primary school of 91.6%. Among the population aged 3 years and above, 28.7% of them have no education, 56.5% have attained the primary level and 9.8% attained secondary level, while 1.0% attained university. Currently, many, primary and secondary schools have been built which are expected to increase the literacy levels and give opportunities to young generations to attend schools and be able to gain knowledge on different matters of concern in their lives (RDDP, 2013).

3.2.4 Economic status

Crop farming and livestock rearing are the major activities for the economy in Bugesera district whereby 78.4% depend on agriculture against 72% for the national average. Rilima sector is one of the district's remote areas. The large population 93% is rural-based and solely depend on subsistence farming which makes it important to care about their natural environment and only 7% of the population live in town. Tourism activities also contribute to the economy of Bugesera district (NISR, 2012b).

3.2.5 Religion

The predominant religion in Bugesera district is Christianity with 94.1%. Protestants are 42.2%, Catholics are 35.9%, Adventists are 15.4% and Jehovah witnesses are 0.7. Muslims represent 1.5%

of the resident population while 3.4% of the resident population declares to be without religion (NISR, 2012b).

3.2.6 Marital status

Within the resident population of Bugesera district 49.6% aged 12 and above are married with the dominating age groups ranging from 35-39 while 41.7% have never been married (age groups 12-14 and 15-19 being the most dominant), 6.0% are widowed, while separated and divorced are moderately few (0.7% and 2.1%, respectively) (NISR, 2012b). It is intended that different categories of the public are considered during participation exercise to make sure all opinions are gathered even those from the underprivileged (Nkulanga, 2010).

3.3 Research design

The research is descriptive and mixed methods approach was adopted. Quantitative and qualitative methods were used to collect and analyze data. A survey was conducted using a semi-structured questionnaire which was administered in directly affected cells in the study area to obtain primary data. The variables used to assess public participation included knowledge and awareness on the NBIA project, the satisfaction of the participation exercise, time convenience of the public meetings and the level of consideration of public views in the decision-making process of the project. Secondary data were obtained from EIA reports on NBIA project submitted to EIA responsible authorities, different scholarly articles, books, and journals in the related field were also used to support the primary data.

3.4 Study Population

The study population was made up of residents from six cells within the vicinity of the NBIA project which was affected by the project, and the EIA consultants from EIA responsible authorities; Rwanda Environmental Management Authority (REMA) and Rwanda Development Board (RDB) who participated in the EIA of the project.

3.5 Sample size determination

Stratified random sampling technique was used to select cells for the study. The six selected cells made a total of 1016 houses giving a population of 4,024 residents (RMIS, 2019). Yamane formula was then employed to calculate the sample size of the study (Glenn, 1992);

where n = sample size, N = the total population (4,024), e = margin of error (10%).

$$n = \frac{N}{1 + [N \times (e)^2]}$$

by substituting in the formula;

$$n = \frac{4,024}{1 + [4,024 \times (0.1)^2]} = 97.6 = 98$$

The formula gave a minimum sample of about 98 respondents that could be recruited for the study however a total of 100 respondents were randomly selected from the cells and were recruited for the study.

3.6 Sampling procedure

Rilima sector has many cells. In order to be able to select those that were more affected than the rest, stratified random sampling technique was used to select six cells in Rilima sector for the study. The respondents were then selected from the selected cells using simple random sampling technique for every respondent to have a chance to be selected. The number of the respondents in each cell was arrived at based on the population sizes of the various cells. Thus the cell with a big population number had a greater number of respondents and that with the least population had the lower number of respondents.

The study also used a purposive sampling technique in the selection of six personnel from the EIA responsible authorities; REMA and RDB for interviews. The use of purposive sampling technique was to be able to find out from people with high levels of knowledge on the subject under investigation. The interviews allowed respondents to give expressive responses and in-depth perspective in relation to the objectives of the study.

3.7 Data collection instruments

Both Primary and secondary data sources were used. Primary data were obtained from the respondents through the use of surveys and interviews. Questionnaires designed with open and closed-ended questions (Appendix B) were administered to the respondents within the study area, while in-depth interviews were conducted to the selected EIA consultants from responsible authorities; Rwanda Environment Management Authority (REMA) and Rwanda Development Board (RDB) with a designed interview guide (Appendix D) to guide the researcher throughout the interview. Some of the variables used were; awareness on the NBIA project, satisfaction of the participation exercise by the respondents, provision of equal opportunities during the exercise,

timing of the public meetings and the level of influence of public views in the decision-making process of the project.

3.8 Questionnaire administration

Semi-structured questionnaires (Appendix B) were administered to respondents within the study cells who were randomly selected. The researcher started by introducing herself to the respondent. Respondent was then informed that each semi-structured questionnaire would last for about 25-30 minutes to answer. The questionnaire was individually administered to the respondent to ensure the questions were well understood and gave chances for clarifications to the respondents. After completion of the questionnaire, the researcher expressed her gratitude to the respondent.

3.9 Informant interviews

In this study, interviews were undertaken involving the EIA consultants from EIA responsible authorities; Rwanda Environment Management Authority (REMA) and Rwanda Development Board (RDB). A total of six interviews were held with the consultants. At the beginning of the interview, the researcher introduced herself and informed the respondent that the study was only for academic purposes and that the responses would stay anonymous. The respondent was also informed that the interview would last for about 45minutes to one hour. An interview guide was used throughout the interview to ensure the intended questions were covered (Appendix D). At the end of the interview, the researcher expressed her gratitude to the respondent.

3.10 Ethical considerations

Ethical clearance for the research was granted by the ethics committee for basic and applied sciences, University of Ghana (ECBAS) (Appendix E) which gave permission to the researcher to embark on the study. National council for science and technology (NCST) also granted permission to the researcher to conduct the study in Rwanda, specifically within the selected cells of Bugesera district (Appendix F). An introductory letter was attached on the first page of each of the instruments which included the profile information of the researcher and the reasons for the research. Respondent names were not included to ensure anonymity and they were informed that their participation was completely voluntary and they can withdraw from the study at any time should the need arise. They were also informed that the information generated was strictly for academic purposes and would be treated with the utmost confidentiality (Appendices A & C).



Plate 1. A photograph showing the researcher in an interactive meeting with some of the residents, during the questionnaire survey.



Plate 2. A photograph showing the researcher interviewing one of the EIA consultants.

3.11 Data analysis

The quantitative data obtained from the survey were coded and carefully entered into Statistical Package for Social Sciences software (SPSS) version 23 for analysis. Both descriptive and inferential statistics were used to analyze the data. Descriptive statistics were performed on all variables to generate percentages and frequencies and gain a clear distribution and representation of responses from respondents on various variables under study.

Chi-square test of independence was employed to determine if significant relationships existed between the independent and dependent variables whilst Multinomial logistic regression was used to predict the likelihood of nominal dependent variables to occur given one or multiple independent variables (Starkweather and Key Moske, 2002). Qualitative data were analyzed thematically by transcribing the data and carefully identifying the important themes with regard to the objectives of the study.

CHAPTER FOUR

4.0 RESULTS

4.1 Description of study participants

4.1.1 Demographic characteristics of the questionnaire respondents

A total of 100 questionnaires were administered in the study area with a response rate of 97%. Table 4.1 presents the general characteristics of respondents to questionnaires. The majority of respondents 53.6% (52) were males, whilst 46.4% (45) were females. Most of the respondents (33%) in the study were between the age of 40-50 years. The majority of the respondents (52.6%) were married. About 8.2% of them had no education, however, most of the respondents (54.6%) attended primary school, 32% had received ordinary level education, 4.1% attended advanced level whilst 1.0% had attended university studies. The dominant religion (85.6%) was Christianity and most of the respondents (64.9%) were engaged in agriculture as the main source of income.

Table 4.1 Indicating demographic characteristics of the questionnaire respondents

| | Frequency | Percent (%) |
|-----------------------|-----------|-------------|
| Sex | | |
| Male | 52 | 53.6 |
| Female | 45 | 46.4 |
| Total | 97 | 100.0 |
| Age | | |
| 18-28 | 10 | 10.3 |
| 29-39 | 28 | 28.9 |
| 40-50 | 32 | 33.0 |
| 51-61 | 19 | 19.6 |
| 62 and above | 8 | 8.2 |
| Total | 97 | 100.0 |
| Marital status | | |
| Single | 9 | 9.3 |
| Married | 51 | 52.6 |

| | | |
|------------------------|-----------|--------------|
| Divorced | 18 | 18.6 |
| Widow | 11 | 11.3 |
| Widower | 8 | 8.2 |
| Total | 97 | 100.0 |
| Education level | | |
| No education | 8 | 8.2 |
| Primary | 53 | 54.6 |
| Ordinary level | 31 | 32.0 |
| Advanced level | 4 | 4.1 |
| University | 1 | 1.0 |
| Total | 97 | 100.0 |
| Religion | | |
| Christianity | 83 | 85.6 |
| Islam | 9 | 9.3 |
| Traditional | 5 | 5.2 |
| Total | 97 | 100.0 |
| Occupation | | |
| Agriculture | 63 | 64.9 |
| Daily wage | 12 | 12.4 |
| Business | 17 | 17.5 |
| Housewife | 2 | 2.1 |
| Apprentice | 2 | 2.1 |
| Teacher | 1 | 1.0 |
| Total | 97 | 100.0 |

4.1.2 Characteristics of subjects interviewed

The respondents interviewed were the EIA experts from the two EIA responsible authorities; Rwanda Management Authority (REMA) and Rwanda Development Board (RDB) (Table 4.2). A total of six respondents were interviewed. Those from REMA were; environmental manager, and two EIA consultants whilst those from RDB were; two consultants and the head of EIA unit.

Table 4.2. Showing the characteristics of the interviewed respondents

| Sex | Position | Category | Institution |
|------------|-----------------------|------------------|--------------------|
| Male | Head of EIA unit | Lead expert | RDB |
| Female | Consultant | Associate expert | RDB |
| Male | Consultant | Junior expert | RDB |
| Male | Environmental manager | Lead expert | REMA |
| Male | Consultant | Associate expert | REMA |
| Female | Consultant | Associate expert | REMA |

4.2 Public perception of the NBIA project

The study showed a high level of awareness of the project among the affected population studied (Table 4.3). The majority of respondents (88.7%) had heard about the project whilst 11.3% did not. Most of them acquired information from public notices, radios, and T.V announcements. Concerning the knowledge on the project, many of them (74.2%) responded that it was an international airport project. Some respondents had a general idea of the project. About 12.4% mentioned that it was a project that intended to develop Bugesera district whilst 2% said it was a project that will reduce unemployment problems in the district, however, these respondents did not know what the project was really about. The remaining 11.3% did not hear about the project (Table 4.3).

Regarding how the respondents felt about the project, most of the respondents (51.5%) were excited and about 77.3% thought NBIA was beneficial. Some of the benefits of having the project mentioned by most respondents were electricity and employment opportunities. Majority of respondents (71.1%) also mentioned they knew about the location of the project and about 35.1% said they would have suggested a different location for the project, reasons being to minimize loss of properties and cultural violation whilst 64.9% said they were happy with the location of the project.

EIA consultants from both responsible authorities REMA and RDB, during the interviews also affirmed that the public was aware and had gotten involved during the early stages of the EIA process. Similar to what other respondents said, one consultant from REMA indicated that;

“The public was long informed about the project during the Umuganda meetings (communal gatherings) which happen every last Saturday of the month and during other gatherings which happen in the middle of the week. People were explained about the benefits, the impacts and mitigation measures that will be taken to ensure sound construction. Also, there were different publicities and posters put up for them to be constantly reminded of the new project in the district”

A consultant from RDB who was assigned to follow-up on the project’s EIA and also reviewing the report mentioned that, when they are assigned a project they make sure that the things submitted in reports match what happened on the ground and ensure that they explain to the public their rights to participate. He seemed happy about what he found out when he went to the field by saying;

“I was impressed when I went to the nearby communities around the NBIA project site and found them aware concerning the project. I managed to speak to some of the community representatives since I couldn’t reach each individual, but I was really impressed with the information they held. One of them was excited that they had been promised electricity and water in their neighborhood and these were indeed some of the benefits of the project”

Table 4.3 Participants' responses on the perception of NBIA project.

| Questions on the perception of the NBIA project | | Frequency | Percentage (%) |
|---|---------------------------------|-----------|----------------|
| Aware of NBIA? | Yes | 86 | 88.7 |
| | No | 11 | 11.3 |
| Source of information | Public notice | 38 | 39.2 |
| | Posters | 7 | 7.2 |
| | Radio | 25 | 25.8 |
| | Newspaper | 2 | 4.1 |
| | Neighbor | 10 | 10.3 |
| | T.V | 4 | 2.1 |
| Knowledge | International airport | 72 | 74.2 |
| | Development project in Bugesera | 12 | 12.4 |
| | Did not hear about it | 11 | 11.3 |
| | Reduction of unemployment | 2 | 2 |
| Feeling | Very excited | 22 | 22.7 |
| | Excited | 50 | 51.5 |
| | Bad | 7 | 7.2 |
| | Very bad | 2 | 2.1 |
| | Neutral | 16 | 16.5 |
| NBIA beneficial? | Yes | 75 | 77.3 |
| | No | 10 | 10.3 |
| | Neutral | 12 | 12.4 |
| Why beneficial? | Employment | 18 | 18.6 |
| | Electricity | 18 | 18.6 |
| | Water supply | 10 | 10.3 |
| | Means of transport | 14 | 14.4 |
| | Business opportunities | 15 | 15.5 |
| Why not beneficial? | I will not use it | 3 | 3.1 |
| | Agricultural land was taken | 2 | 2.1 |
| | Displacement | 5 | 5.2 |
| Knowledge about the project site? | Yes | 69 | 71.1 |
| | No | 28 | 28.9 |
| Would you have suggested a different location? | Yes | 34 | 35.1 |
| | No | 63 | 64.9 |

| | | |
|--|----|------|
| Why a different location? | | |
| To minimize loss of properties | 16 | 16.5 |
| To minimize undervaluation of properties | 7 | 7.2 |
| To minimize cultural violation | 8 | 8.2 |
| To minimize mistrust between the government and the public | 3 | 3.1 |
| Type of consultation; Public meetings | 56 | 57.7 |
| Radio announcements | 7 | 7.2 |
| Not aware | 34 | 35.1 |

4.3 The perception of Public Participation (PP) in the EIA of NBIA project in the study area

4.3.1 Importance and purpose of Public Participation in EIA of NBIA project

Table 4.4 presents the findings from the assessment on views of the residents within the study area about the EIA process of the NBIA project. The majority (89.7%) agreed that public participation was carried out, about 45.4% felt it was important for public participation to be undertaken and 44.3% further indicated that the main purpose of public participation is to ensure transparency and accountability of the project. About 17.5% did not know the importance and purpose of public participation. The study, however, reveals that (85.6%) were not satisfied with the participation exercise conducted. The reasons for dissatisfaction were that the flow of information was one-sided and that participants were not involved throughout the EIA process. As indicated in figure 4.1, it was believed by the majority of respondents (70.1%) that the participation exercise was generally a formality.

When the interviewed respondents were asked about the importance of public participation in EIA of this project, they agreed that it was very important for them to allow the public to get involved since the project was in the public's interest. The respondents said that since they are responsible for the EIA process and arrangement of public hearings, they prepared the meetings early and made sure the public was involved. One of the consultants pointed out that;

“It is very important to engage the public in projects which are within their interest and tend to impact upon their lives. Also when the public is involved, it avoids conflicts of which we would have to deal with, saves proponents a lot of costs and time wastage and avoids stoppages of the project”

However, a challenge was raised by the EIA consultants while discussing the purpose and benefits of participation in the EIA of the NBIA project, one being public dishonesty. One consultant mentioned that;

“Sometimes early consultation of the public and allowing full participation can become problematic to us as consultants. For instance, when we first told people in the project area about the project and that some of them would have to shift, some residents who had bare lands or small plantations, once informed about the project, they went and looked for an expensive tree species called Macadamia and planted it so that when it comes to compensations they would steal big money from the government. You see, when not careful with the public we might end up being in bad situations like these where we have to explain ourselves concerning such cases which would even end our career. So sometimes we have to decide for the public at large and avoid personal interests”

Table 4.4 Showing responses on the perception of Public Participation in EIA of NBIA project in the study area

| Questions on the perception of PP in EIA of the project | Frequency | Percentage |
|---|-----------|------------|
| Was there PP? | | |
| Yes | 87 | 89.7 |
| No | 10 | 10.3 |
| How would you scale the importance of PP? | | |
| Very important | 29 | 29.9 |
| Important | 44 | 45.4 |
| Less important | 17 | 17.5 |
| Not important | 7 | 7.2 |
| What is the main purpose of PP in EIA? | | |
| Transparency and accountability | 43 | 44.3 |
| Involvement of affected groups | 29 | 29.9 |
| Identifying possible alternatives | 8 | 8.2 |
| I don't know | 17 | 17.5 |
| Were you satisfied by the PP exercise? | | |
| Yes | 13 | 13.4 |
| No | 83 | 85.6 |
| Neutral | 1 | 1.0 |
| Reason for satisfaction | | |
| NBIA information was shared | 3 | 3.1 |
| Timing was effective | 1 | 1.0 |
| Venues were accessible | 1 | 1.0 |
| Open communication | 1 | 1.0 |
| Concerns were considered | 7 | 7.2 |
| Suggestions for improvement | | |
| Change meeting locations | 5 | 5.2 |
| Increase the number of meetings | 18 | 18.6 |
| Involve all stakeholders throughout the EIA | 34 | 35.1 |
| A two-way flow of information | 25 | 25.8 |

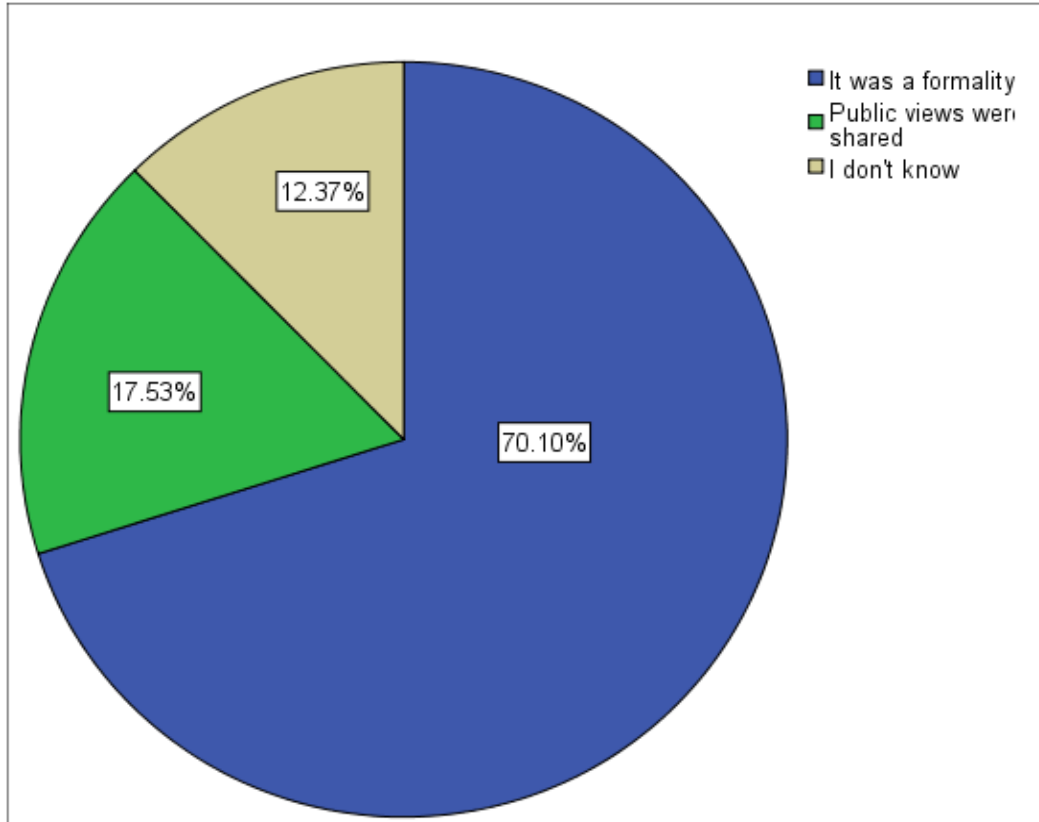


Figure 4.1 A pie-chart showing public views on the EIA process of the NBIA project

4.3.2 Equal opportunities in Public Participation during EIA of the project

Regarding the provision of equal opportunities for participation, Table 4.5 shows that the majority of respondents (84.5%) had participated. Out of those, 56.1% were males and 43.9% were females. The youth aged 18-28 years found in the sampled respondents (10.3%) had participated, however, the dominant age groups were between the age of 29-39 and 40-50 years (Table 4.6). Despite the fact that respondents with different statuses were present during the participation exercise, It can be realized that the widowed (13.4%) and the aged (62 and above) with only 6.2% of the total sample were under represented and less aware of the project which resulted into low participation. It is again seen that those into agriculture (34.0%) and local businesses (11.3%) were more present during the exercise in comparison to the apprentices (2.1%) and house wives (2.1%).

The respondents interviewed from EIA authorities also agreed that equal opportunities were provided to different groups of people within the study area. They said Rwanda as a nation promotes gender equality and gives opportunities to unprivileged citizens to have a voice. It was therefore in their responsibility to ensure good representative numbers of various groups of people; youth, women, the poor and the unprivileged from the district to participate in EIA of the project. One RDB consultant, however, indicated that;

“Even though women are given equal opportunities to participate, in Bugesera it was found to be a culture for some women not to attend meetings when men are available. This can be problematic for female-headed households and house wives who would not get a chance to express their concerns during projects like these which can affect their lives. Otherwise, I can say that the overall participation included various categories of people within the district”

Table 4.5 Participants' responses on equal opportunities to participate in EIA of NBIA project

| Views on opportunities to participate in the EIA of the project | Frequency | Percentage |
|---|-----------|------------|
| Did you participate? Yes | 82 | 84.5 |
| No | 15 | 15.5 |
| Males participated | 46 | 56.1 |
| Females participated | 36 | 43.9 |
| Youth (18-28) | 10 | 10.3 |
| Divorced | 15 | 15.5 |
| Widowed | 13 | 13.4 |
| Agriculture | 33 | 34.0 |
| Business | 11 | 11.3 |
| Apprentices | 2 | 2.1 |
| House wives | 2 | 2.1 |
| How did you participate? Sector meetings | 79 | 81.4 |
| Attended an interview | 3 | 3.1 |
| Were you negatively affected by the project? Yes | 59 | 60.8 |
| No | 38 | 39.2 |
| Negative effects encountered; Resettlement | 31 | 32.0 |
| Displacement | 11 | 11.3 |
| Undervaluation | 2 | 2.1 |
| Pollution | 14 | 14.4 |
| Time wasting | 1 | 1.0 |
| Opportunity to voice your concerns? Yes | 25 | 25.8 |
| No | 22 | 22.7 |
| Compensation received? Yes | 19 | 19.6 |
| No | 28 | 28.9 |
| Reason for no compensation; Incomplete documents | 13 | 13.4 |
| Some impacts had no compensation | 12 | 12.4 |
| Lack of enough money for follow-up | 3 | 3.1 |

Table 4.6 Indicating factors associated with individual participation of respondents.

| Variables | | Individual participation | | Total | χ^2 | p value |
|---|-------------------------|--------------------------|----|-------|----------|---------|
| | | Yes | No | | | |
| Time convenience of the meetings | Yes | 34 | 0 | 34 | 50.628 | 0.000 |
| | No | 48 | 7 | 55 | | |
| | Neutral | 0 | 8 | 8 | | |
| Total | | 82 | 15 | 97 | | |
| Age of respondents | 18-28 | 10 | 0 | 10 | 4.581 | 0.333 |
| | 29-39 | 25 | 3 | 28 | | |
| | 40-50 | 27 | 5 | 32 | | |
| | 51-61 | 14 | 5 | 19 | | |
| | 62 and above | 6 | 2 | 8 | | |
| Total | | 82 | 15 | 97 | | |
| Marital status of respondents | Single | 9 | 0 | 9 | 3.514 | 0.476 |
| | Married | 44 | 7 | 51 | | |
| | Divorced | 15 | 3 | 18 | | |
| | Widow | 8 | 3 | 11 | | |
| | Widower | 6 | 2 | 8 | | |
| Total | | 82 | 15 | 97 | | |
| Occupation of respondents | Agriculture | 51 | 12 | 63 | 4.653 | 0.46 |
| | Daily wage | 11 | 1 | 12 | | |
| | Business | 16 | 1 | 17 | | |
| | Housewife | 1 | 1 | 2 | | |
| | Apprentice | 2 | 0 | 2 | | |
| Total | | 82 | 15 | 97 | | |
| The first source of information on NBIA | Public notice | 34 | 4 | 38 | 29.019 | 0.000 |
| | Posters | 7 | 0 | 7 | | |
| | Radio | 25 | 0 | 25 | | |
| | T.V | 4 | 0 | 4 | | |
| | News paper | 2 | 0 | 2 | | |
| | Neighbors | 5 | 5 | 10 | | |
| | I did not hear about it | 5 | 6 | 11 | | |
| Total | | 82 | 15 | 97 | | |

Table 4.7 Logistic regression model showing the individual participation of respondents

| Individual participation ^a | | B | Sig. | Exp(B) | 95% Confidence Interval for Exp(B) | |
|---------------------------------------|------------------------------|----------------|-------|----------|------------------------------------|----------------|
| | | | | | Lower Bound | Upper Bound |
| Yes | Intercept | -20.774 | 0.000 | | | |
| | Source of information | 2.565 | 0.039 | 13.000 | 1.143 | 147.819 |
| | Public notice | | | | | |
| | Radio & TV | 17.234 | 0.990 | 3.05E+7 | 0.000 | . ^b |
| | Neighbors | .000 | 1.000 | 1.000 | 0.080 | 12.557 |
| | I don't know | 0 ^c | | | | |
| | Time convenience of meetings | | | | | |
| | Yes | 36.719 | 0.975 | 8.85E+15 | 0.000 | . ^b |
| | No | 20.774 | | 1.05E+9 | 1.05E+9 | 1.05E+9 |
| | Neutral | 0 ^c | | | | |

The reference category is: No.

4.3.3 Public views on the effectiveness of Public Participation during the EIA of the NBIA project

Concerning the effectiveness of the exercise, 25.7% of respondents felt it was highly effective. It was however observed that most of the respondents (43.3%) felt it was rather moderate, with about 7.2% saying it was very low. This is further illustrated in Figure 4.2. Again respondents mentioned some of the negative and positive impacts shared by the consultants during the exercise where resettlement, displacement, business opportunities, and infrastructure were mentioned among others (Table 4.8). Almost 80% of the respondents mentioned Kinyarwanda was the language used during the participation exercise, with 11.3% saying English terms were used. Generally, it can be seen that the majority of respondents (79.4%) understood the language used during the exercise. Regarding the stage of the project with which respondents were consulted, Table 4.4 indicates that 46.4% mentioned during the planning and designing of the project. It is however observed that most of the respondents (56.7%) were inconvenienced with the time of the meetings but found the venues quite accessible.

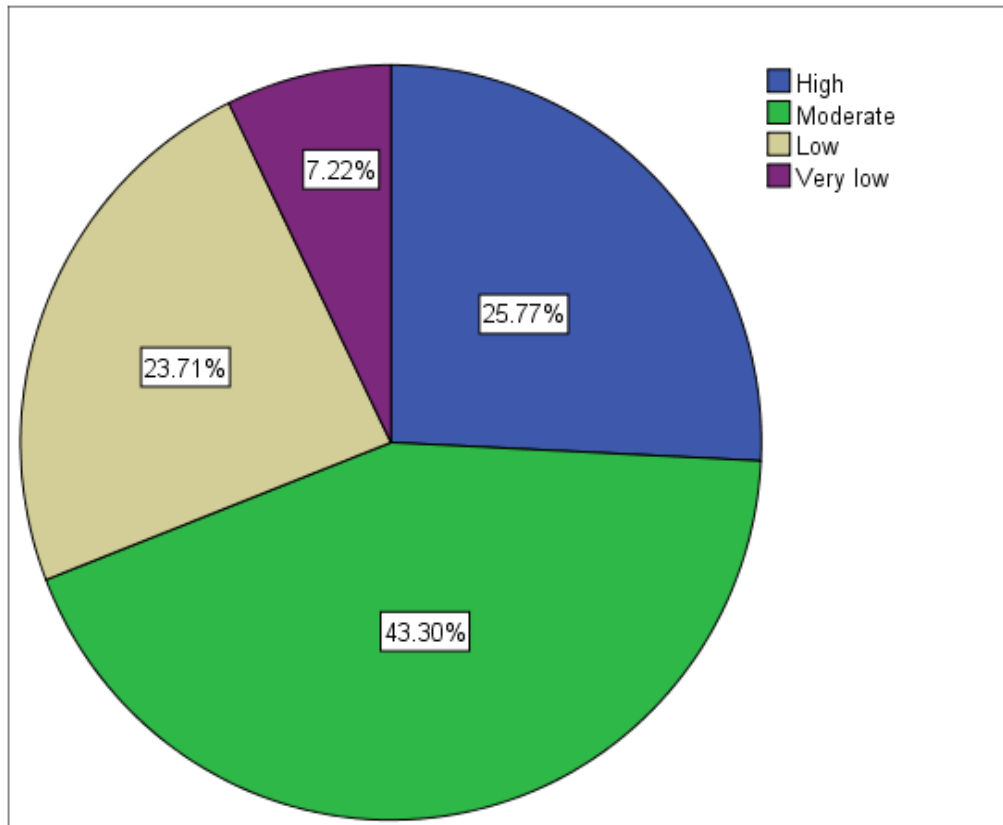


Figure 4.2 A pie-chart showing Public views on Public Participation effectiveness during EIA of NBIA project

Table 4.8 Showing Public views on the effectiveness of Public Participation during the EIA of the NBIA project

| views on the PP effectiveness of the project | Frequency | Percentage (%) | |
|--|------------------------|----------------|------|
| Was the information adequate? | Yes | 62 | 63.9 |
| | No | 34 | 35.1 |
| | Neutral | 1 | 1.0 |
| Negative impacts mentioned | Resettlement | 22 | 22.7 |
| | Displacement | 33 | 34.0 |
| | Deforestation | 4 | 4.1 |
| | Pollution | 28 | 28.9 |
| | Not aware | 10 | 10.3 |
| Positive impacts mentioned | Business opportunities | 20 | 20.6 |
| | Infrastructure | 51 | 52.6 |
| | Employment | 15 | 15.5 |
| | Don't remember | 2 | 2.1 |
| | Not aware | 9 | 9.3 |
| Language used | Kinyarwanda | 77 | 79.4 |
| | English | 11 | 11.3 |
| | I don't know | 9 | 9.3 |
| Was the language understood? | Yes | 77 | 79.4 |
| | No | 11 | 11.3 |
| | I don't know | 9 | 9.3 |
| Stage of consultation | Planning and design | 45 | 46.5 |
| | Impact identification | 10 | 10.3 |
| | Implementation | 22 | 22.7 |
| | I was not consulted | 8 | 8.2 |
| | Not sure | 12 | 12.4 |
| Was the time of the meetings convenient? | Yes | 34 | 35.1 |
| | No | 55 | 56.7 |
| | Neutral | 8 | 8.2 |
| Was venue accessible? | Yes | 76 | 78.4 |
| | No | 13 | 13.4 |
| | Neutral | 8 | 8.2 |

4.4 Public views on the influence of their concerns on the decision-making process of the NBIA project

The majority of respondents (52.6%) thought the information shared was honest while about 32% thought it was not. Some of the reasons mentioned for dishonesty were land complaints and resettlement issues (Table 4.9). Whether respondents had been given a chance to negotiate and communicate their views, about 69.1% said no. It was further indicated that most of the respondents (40.2%, 18.6%) thought there was a moderate to low level of influence on the decision making of the project while none of the respondents thought that the influence was very high.

Some of the information shared by the respondents that were considered were business opportunities and electricity installation (Table 4.9). As indicated in tables 4.10 and 4.11, the logistic regression coefficient, B of a particular variable tells us how that variable is likely to occur relative to the reference variable depending on the sign of its value. Also the p values provided inform of the variables that are significant in the subject matter under investigation. A significant association was found among education level, awareness, source of information, adequacy of information and time convenience of the meetings and the thoughts of respondents on the level of consideration of public views in decision making of the project with p values (0.005, 0.005, 0.000, 0.000, 0.000 respectively) (Table 4.10).

As shown in Table 4.11, respondents who felt the information shared on the impacts of the project was adequate were approximately 3.3 times more likely to believe that there was a moderate level of consideration of public views in relation to those who disagreed. It is also indicated that

respondents who agreed that the time of public meetings was convenient were approximately 375.5 times more likely to think that there was a high level of consideration of public views relative to those who felt the time was inconvenient.

The interviews from government officials in response to the influence of public views on the decision-making process of the project, the head of the EIA unit from RDB mentioned that as part of the EIA process, the decision-making process incorporates public views and concerns generated during the public hearings to ensure fairness. However, he also explained that some concerns can be impossible to incorporate;

“Of course their views were considered during the decision-making process, but we can’t ignore that some of them can be almost impossible. For instance, one citizen gave a concern that he had a patient with heart-related diseases and so it would even worsen the case if the noise was generated. So, in this case, all we had to do was to assure the citizens that their safety comes first and that it had long been thought about and incorporated. However, this was not entirely true because there was no way we can assure total avoidance of noise disturbance from a construction site”

A challenge was raised by the EIA respondents concerning compensation complaints, however, it was that people who were compensated following the then-existing environmental law were given less compared to those compensations which followed the amended law. This is because things were cheaper then, but after the amendment of the law, some of the expropriation prices were changed to meet the existing market rates. This, however, brought about issues of unfairness among the public and has been complaining since. Another issue was those who did not have proper or complete documents for their properties. It became hard to compensate them when their

documents were not legit or did not even have them at all since they were claimed to belong to their ancestors. This lowered down the compensation process while giving them enough time to look for proper documents.

Table 4.9 Showing participants’ information on the influence of public views on the decision-making process of the project

| Public views on the decision-making process | Frequency | Percentage |
|--|-----------|------------|
| Do you think you were given honest information? Yes | 51 | 52.6 |
| No | 31 | 32.0 |
| If no, why? | | |
| Land complains | 6 | 6.2 |
| Resettlement issues | 5 | 5.2 |
| Undervaluation of properties | 7 | 7.2 |
| Delays in compensation | 3 | 3.1 |
| Pollution complains | 10 | 10.3 |
| If yes, which of the information was shared? | | |
| The purpose of the project | 26 | 26.8 |
| The positive and negative impacts | 19 | 19.6 |
| The compensation plan | 6 | 6.2 |
| Were given opportunities to negotiate? Yes | 30 | 30.9 |
| No | 67 | 69.1 |
| Which stage of the EIA process? Planning and designing | 13 | 13.4 |
| Compensation plan | 12 | 12.4 |
| Project implementation | 5 | 5.2 |
| Level of influence on decision-making High | 3 | 3.1 |
| Moderate | 39 | 40.2 |
| Low | 22 | 22.7 |
| Very low | 18 | 18.6 |
| Information considered during the decision making | | |
| Business opportunities | 14 | 14.4 |
| Employment | 8 | 8.2 |
| No opportunity to give views | 28 | 28.9 |
| Fair compensations | 9 | 9.2 |
| Infrastructure | 8 | 8.2 |
| Change of meeting venues | 2 | 2.1 |
| None were considered | 28 | 28.9 |

Table 4.10 Indicating significant factors influencing thoughts of the public on how their concerns were considered in the decision-making process of the project

| Variables | | Level of consideration during decision making (dependent variable) | | | | | Total | χ^2 (p value) |
|---------------------------------|----------------|--|----------|-----|----------|---------------|-------|--------------------|
| | | High | Moderate | Low | Very low | I do not know | | |
| Gender of respondents | Male | 2 | 19 | 17 | 8 | 6 | 52 | 7.259 (0.123) |
| | Female | 1 | 20 | 5 | 10 | 9 | 45 | |
| Total | | 3 | 39 | 22 | 18 | 15 | 97 | |
| Age of respondents | 18-28 | 0 | 6 | 2 | 2 | 0 | 10 | 22.303 (0.134) |
| | 29-39 | 2 | 16 | 4 | 3 | 3 | 28 | |
| | 40-50 | 0 | 13 | 6 | 8 | 5 | 32 | |
| | 51-61 | 0 | 3 | 7 | 4 | 5 | 19 | |
| | 62 and above | 1 | 1 | 3 | 1 | 2 | 8 | |
| Total | | 3 | 39 | 22 | 18 | 15 | 97 | |
| Marital status of respondents | Single | 1 | 5 | 1 | 2 | 0 | 9 | 10.745 (0.825) |
| | Married | 1 | 21 | 14 | 8 | 7 | 51 | |
| | Divorced | 0 | 7 | 4 | 4 | 3 | 18 | |
| | Widow | 1 | 4 | 1 | 2 | 3 | 11 | |
| | Widower | 0 | 2 | 2 | 2 | 2 | 8 | |
| Total | | 3 | 39 | 22 | 18 | 15 | 97 | |
| Education level for respondents | No education | 1 | 0 | 1 | 1 | 5 | 8 | 34.061 (0.005) |
| | Primary | 1 | 22 | 10 | 13 | 7 | 53 | |
| | Ordinary level | 0 | 14 | 11 | 3 | 3 | 31 | |
| | Advanced level | 1 | 2 | 0 | 1 | 0 | 4 | |
| | University | 0 | 1 | 0 | 0 | 0 | 1 | |
| Total | | 3 | 39 | 22 | 18 | 15 | 97 | |
| Occupation of respondents | Agriculture | 0 | 19 | 17 | 15 | 12 | 63 | |
| | Daily wage | 1 | 5 | 3 | 2 | 1 | 12 | |
| | Business | 2 | 13 | 1 | 0 | 1 | 17 | |

| | | | | | | | | |
|---|-------------------------|---|----|----|----|----|----|-------------------|
| | House wife | 0 | 0 | 1 | 0 | 1 | 2 | |
| | Apprentice | 0 | 1 | 0 | 1 | 0 | 2 | 29.859 (0.072) |
| | Teacher | 0 | 1 | 0 | 0 | 0 | 1 | |
| Total | | 3 | 39 | 22 | 18 | 15 | 97 | |
| <hr/> | | | | | | | | |
| Awareness on the NBIA project | Yes | 3 | 39 | 20 | 14 | 10 | 86 | |
| | No | 0 | 0 | 2 | 4 | 5 | 11 | 14.819 (0.005) |
| Total | | 3 | 39 | 22 | 18 | 15 | 97 | |
| <hr/> | | | | | | | | |
| The first source of information on NBIA | Public notice | 0 | 20 | 9 | 5 | 4 | 38 | |
| | Posters | 0 | 2 | 4 | 1 | 0 | 7 | |
| | Radio | 2 | 15 | 5 | 3 | 0 | 25 | |
| | T.V | 0 | 1 | 1 | 2 | 0 | 4 | 56.092 (0.000) |
| | News paper | 0 | 0 | 1 | 1 | 0 | 2 | |
| | Neighbors | 1 | 1 | 0 | 2 | 6 | 10 | |
| | I did not hear about it | 0 | 0 | 2 | 4 | 5 | 11 | |
| Total | | 3 | 39 | 22 | 18 | 15 | 97 | |
| <hr/> | | | | | | | | |
| adequacy information on +ve and -ve impacts | Yes | 3 | 34 | 12 | 10 | 3 | 62 | |
| | No | 0 | 5 | 10 | 8 | 11 | 34 | 28.359 (0.000) |
| | Neutral | 0 | 0 | 0 | 0 | 1 | 1 | |
| Total | | 3 | 39 | 22 | 18 | 15 | 97 | |
| <hr/> | | | | | | | | |
| Time of the meetings | Yes | 1 | 19 | 7 | 6 | 1 | 34 | |
| | No | 2 | 20 | 15 | 12 | 6 | 55 | 51.162 (0.000) |
| | Neutral | 0 | 0 | 0 | 0 | 8 | 8 | |
| Total | | 3 | 39 | 22 | 18 | 15 | 97 | |

It can be deduced from the model, that, source of information, adequacy of information and time convenience of the meetings during the EIA of the project could have influenced how the public felt concerning the level of consideration of public views in the decision-making process of the project.

Interestingly, it is indicated from table 4.11, that, the respondents who were informed about the project through radio and TV, were about 25.2 more likely to believe that there was a high level of consideration in relation to those who got information from public notices. It is also realized that those who felt the information was adequate were approximately 1.2 more likely to say that there was a moderate level of consideration during the decision making process of the project.

It is again seen that the respondents who had some level of education were more likely to participate during the exercise and believe to have had an impact on the decision making process of the preejct. Unlike those who were less educated, the access to the meetings also affected the response of the respondents on the level of influence where those who easily accessed the venues were approximately 16.8 times more likely to believe there was a moderate level of consideration in relation to those who did not.

Also looking at the adequacy of information, respondents who believed were told adequate information on the project were about 14.4 more likely to say there was a high level of consideration in the decision making process of the project compared to those who did not believe the information given to them during the exercise.

Table 4.11 Logistic regression model showing the level of consideration in the decision-making process of the project

| Level of consideration during the decision making | | B | Sig. | Exp(B) | 95% Confidence Interval for Exp(B) | |
|---|--------------------------|----------------|-------|-----------|------------------------------------|----------------|
| | | | | | Lower Bound | Upper Bound |
| High | Intercept | - 31.060 | .998 | | | |
| | Public notice | 2.278 | .998 | 9.759 | 0.000 | . ^b |
| | Radio & TV | 25.283 | .979 | 9.559E+10 | 0.000 | . ^b |
| | Neighbors | 11.970 | .990 | 1.579E+5 | 0.000 | . ^b |
| | I don't know | 0 ^c | | | | |
| | Information adequacy Yes | 14.423 | .999 | 1.8366E+6 | 0.000 | . ^b |
| | No | 0.176 | 1.000 | 1.192 | 0.000 | . ^b |
| | Neutral | 0 ^c | | | | |
| | Time of meetings Yes | 5.928 | .999 | 375.465 | 0.000 | . ^b |
| | No | 3.936 | .999 | 51.237 | 0.000 | . ^b |
| Neutral | 0 ^c | | | | | |
| Moderate | Intercept | -26.215 | .995 | | | |
| | Public notice | 14.520 | .958 | 2.0228E+6 | 5.833E-231 | 7.01486E+242 |
| | Radio & TV | 24.994 | .940 | 7.156E+10 | 2.530E-272 | 2.0240E+293 |
| | Neighbors | 9.691 | .972 | 1.616E+4 | 4.641E-233 | 5.6340E+240 |
| | I don't know | 0 ^c | | | | |
| | Information adequacy Yes | 1.208 | 1.000 | 3.348 | 0.000 | . ^b |

| | | | | | | |
|-----|--------------------------------|----------------|------|-----------|------------|----------------|
| | No | -2.738 | .999 | 0.065 | 0.000 | . ^b |
| | Neutral | 0 ^c | | | | |
| | Time of meetings Yes | 16.897 | .986 | 2.179E+7 | 0.000 | . ^b |
| | No | 14.323 | .988 | 1.66E+6 | 0.000 | . ^b |
| | Neutral | 0 ^c | | | | |
| Low | Intercept | -2.442 | .999 | | | |
| | Public notice | 1.671 | .285 | 5.319 | 0.249 | 113.843 |
| | Radio & TV | 11.792 | .948 | 1.322E+5 | 5.667E-150 | 3.085E+159 |
| | Neighbors | -14.655 | .974 | 4.320E-07 | 0.000 | . ^b |
| | I don't know | 0 ^c | | | | |
| | Information adequacy Yes | -13.182 | .000 | 1.884E-06 | 1.177E-07 | 3.016E-05 |
| | No | -15.327 | | 2.206E-07 | 2.206E-07 | 2.206E-07 |
| | Neutral | 0 ^c | | | | |
| | Time of meetings Yes | 18.794 | .990 | 1.45E+7 | 0.000 | . ^b |
| | No | 17.130 | .991 | 2.75E+8 | 0.000 | . ^b |
| | Neutral | 0 ^c | | | | |

| | | | | | | |
|----------|----------------------|----------------|------|-----------|------------|----------------|
| Very low | Intercept | -14.883 | .992 | | | |
| | Public notice | 0.245 | .868 | 1.278 | 0.071 | 23.134 |
| | Radio & TV | 10.896 | .952 | 5.396E+4 | 2.316E-150 | 1.257E+159 |
| | Neighbors | -2.415 | .143 | 0.089 | 0.004 | 2.261 |
| | I don't know | 0 ^c | | | | |
| | Information adequacy | | | | | |
| | Yes | -0.504 | .711 | 0.604 | 0.042 | 8.677 |
| | No | -2.468 | | 0.085 | 0.085 | 0.085 |
| | Neutral | 0 ^c | | | | |
| | Time of meetings | | | | | |
| | Yes | 19.157 | .990 | 2.0886E+7 | 0.000 | . ^b |
| | No | 17.548 | .991 | 4.1765E+7 | 0.000 | . ^b |
| | Neutral | 0 ^c | | | | |

Reference category: I don't know

CHAPTER FIVE

5.0 DISCUSSION

Despite the arguments that effective public participation can contribute to transparency, legitimacy and public acceptance of development projects (Glucker *et al.*, 2013), the study findings rather show that the participation exercise during the EIA process of the NBIA project did not influence the decision making process of the project.

5.1 Public perception of NBIA and Public Participation in EIA of the NBIA project

The residents within the study area seemed to have acquired relevant knowledge on the project. As reported by (GIBB Africa, 2010), the NBIA project was communicated through public meetings and radio announcements which allowed the public to gain information concerning the purpose and benefits of the project.

The study, however, revealed that some respondents had false information on the project and little knowledge on the purpose of public participation. This could have been due to lack of access to information to allow participants to gain a clear understanding of what public participation intended or they were told false information to raise their expectations which made the public confused while others had no idea concerning the public participation. A similar case was reported by Kakonge (1996), that, the public may be given false information to raise their expectations, for the developer to acquire the project license. It can be learned from the study that, the residents within the project area were informed on the project, however, some seemed to have limited knowledge on the purpose of the exercise. It would, therefore, seem practically ineffective to talk

about EIA and public participation prior to the sensitization of the affected public. Therefore, to ensure meaningful participation of the public for various projects in Rwanda, it is required of the EIA responsible authorities to mobilize all those who will be directly or indirectly affected by a particular project and sensitize them about their roles and rights in the EIA process and the main purpose of public participation (Nkulanga, 2010).

It was indicated that the Kinyarwanda language was used during the exercise to ensure the information was well shared across all categories of people. A small number, however, claimed that the language was too technical to understand. Lack of the capacity to understand the language during participation exercises contributes to ineffective public participation. This conforms with what has been previously reported by Kibreab *et al.*, (2004), that sometimes the language used during the participation exercise is not entirely understood by all the participants due to the use of technical terms that leaves certain groups of people feeling outvoted or not taken seriously. It is therefore very important for the responsible authorities to make sure that technical problems are eliminated before the exercise. It is also necessary to find various ways to communicate to different groups of people about the proposed project early enough, to be certain that the public is well informed and as a result legitimize the project (Momtaz & Kabir, 2018a). As discussed in figure 2.3, when the language used is well understood, it gives the public a sense of ownership. It also avoids the feeling of being leftout and outvoted but rather empowered.

This study also found that the majority of respondents were not satisfied with the overall public participation of the project. Some reasons identified were that not all people were involved and

even those who did, were partially involved. Also, it was noted that there were no provisions of feedbacks which gave a false feeling to the public towards their reasons to participate and hence created a room for mistrust. This also aligns with a study by Lachapelle *et al.*, (2003), that, often the participation exercise is one-way, whereby the public is not provided with ways to receive the decisions on the concerns raised. Also, it was learned that even the EIA consultants agreed that there were no ways provided apart from responses to inquiries given on the same days of the exercise. Public participation is a very crucial part of the EIA process, once not well executed could result in the low quality of the entire EIA process. It is, therefore, necessary for the responsible authorities to organize and communicate to everyone who will be impacted upon by the project and encourage them to participate during the EIA of the project and provide ways for sharing the feedback to the public to ensure their satisfaction (Ogihara *et al.*, 2016). This could be done through communicating the projects during the communal gatherings that happen mid-week and every end of the month to ensure that all the affected citizens are informed of the development projects.

The number of meetings was not sufficient and it was also indicated that some people were consulted during the implementation of the project which did not guarantee any adjustment since decisions had already been made. Contrary to the study findings, principle 10 of the Rio Declaration on Environment and Development (1992) states that “*environmental issues are best handled with the participation of all concerned citizens, at relevant levels of governance, and each individual shall have appropriate access to information concerning the environment that is held by public authorities*”(The United Nations, 1992).

Regardless of the efforts to make the public aware of the project, it was seen that the guiding principles of EIA process by consultants in development projects remain dismally low and the responses from interviews have verified this. They feel it is important to inform the public but also believe there is a cost to it. As pointed out by Kibreab *et al.*, (2004), when guidelines are not followed strictly enough to ensure feedback is provided to the public and are involved throughout the process, it leads to ineffective EIA. As observed in the study, some government officials from responsible authorities mentioned that sometimes the projects are big and they are given a short period to conduct the EIA. This becomes problematic when the experts are few in the field and possess limited competencies for implementing the EIA guidelines. This could also result in low quality of public participation. Clausen *et al.*, (2011), has indicated that in developing countries, limited numbers of experienced EIA practitioners have always been the major constraint. Therefore, a lot remain to be done to raise the level of awareness concerning EIA and public participation across all categories of stakeholders especially those that are adversely impacted upon by projects, and ensure the necessary resources and skills are provided to the practitioners for successful implementation of EIAs of development projects.

5.2 Provision of equal opportunities in Public Participation during EIA of the NBIA project

Some level of evidence was seen from this study that, some effort was made for equal opportunities to participate in engagement events. It was realized that the majority of respondents were consulted during the planning and designing stage of the project and the implementation stage of the project and that both men and women were involved during the public participation exercise along with other group representatives through public meetings and group discussions. This, however, does not guarantee the participation of the public. As seen earlier, the widowed and the aged were under

represented. Also those into agriculture and local businesses were more present compared to casual workers, apprentices and house wives. This does not show equal representation of the participants but rather the groups of interest were present in great numbers than the rest of the groups. Some respondents indicated that they were given chances to give their concerns whilst nearly the same number claimed to differ. They argued that, even though they shared their concerns, they were not incorporated in the decisions which was noticed during the compensations where some people were delayed or not even compensated. They felt the whole exercise was only to acquire the license and not necessarily to seek public views. This aligns with previous studies that, very often officials undertake EIAs because it is required by international aid agencies, and ignore the residents at stake who will suffer the impacts of the project (King *et al.*, 1999; O’Faircheallaigh, 2010; Mareddy, 2017).

It was later addressed by EIA consultants who explained that some residents did not have complete documents for their properties during the compensation which delayed the process. This, however, should not have been the case if the public was exclusively involved because it is during the exercise where concerns are raised and ways could have been proposed to help those with such issues to ensure that the living standards of the affected are not seriously impacted upon. It also became clear that some EIA consultants disagreed with early public participation, they argued that it contributes to delays and can lead to huge economic losses. In contrast to their views, existing literature indicates that it is rather very important to involve the public in the early stages of the EIA process if improved decision-making is intended (Simpson & Basta, 2018).

O’Faircheallaigh (2010) reported that “it may only be through public participation that all of the issues potentially associated with proposed actions can be identified and that information can be obtained on the fears and hopes that accompany peoples’ own predictions of the likely effects of projects, which are themselves an important component of social impact”. It was however realized that even though the public was aware of the project, the meetings were held for the leaders to inform the public of the project without allowing those that will be adversely affected by the project a chance to get involved. “Sharing information with the public is a very different matter from allowing a community to influence government decisions or ‘empowering’ individuals and communities”(O’Faircheallaigh, 2010). It is therefore important to allow those adversely impacted by the project to get involved and share their concerns and then incorporate these within the decision-making process to promote fairness and avoid conflicts.

In a study conducted by Okello *et al.*, (2009), a significant association was found between individual participation and awareness of the project. Similarly, this study found out that individual participation in the EIA of the NBIA project had a significant association with the awareness of the project and the convenience of the public meetings held during the process. This observation suggests that, both awareness and proper planning of the meetings are very crucial for public participation. It is therefore important that the public participation organisers ensure that the public have access to information as required by the Aarhus convention (United Nations Economic Commission for Europe, 1998).

5.3 Influence of public views on the decision-making process during the EIA of NBIA project

Earlier studies have shown that, sharing of adequate information on development projects to the public creates a sense of trust and ownership and validates the EIA process (Glucker *et al.*, 2013). It helps to identify concerns and ensures a more quality decision-making process (Appiah-opoku, 2001). Contrary to these arguments, It was evident from the study that respondents felt the information shared during participation exercise was not completely honest, due to the recurring land and resettlement issues. It was also realized that some potential impacts from the public engagements were not well addressed during project implementation and properties lost were not / or partially compensated for. It can be observed from the study that, even though the public was consulted, their views and concerns were not put into account and the level of influence remained very low which made the participation exercise belong to particular groups of people with a certain degree of powers.

Interestingly, a significant association was found between the adequacy of information and how respondents' views were incorporated within the decision-making process of the project. This confirms with earlier studies that, when the public is given adequate and honest information on the development projects, it gives them the assurance that their concerns will be put into an account and hence legitimizes the project (Lachapelle *et al.*, 2003).

It was also indicated by the respondents that the concerns shared were not entirely considered and that the level of influence was low since the big decisions were made before the participation exercise took place or because it was late during the project implementation which would not really make any impact (Wood, 2003). As mentioned earlier in the report, with government projects,

often the affected communities within the project area do not have a choice but to consent to the project (GIBB Africa, 2010).

Sherry describes this type of participation as “*tokenism*” which only gives some level of participation to the public without allowing them full power to negotiate and influence decisions rather, the decisions are made for them. This is commonly recognized in different policies and projects where very often during community consultation, public concerns are of little value and their comments have no impact on the decision outcome (Arnstein, 1969; Momtaz & Gladstone, 2008).

It is highlighted from the study that, some EIA consultants believed that, in the Bugesera district, women still found it no tradition to participate in such projects simply because they have not been part of the decision-making processes historically. This communicates that there is a need for more efforts to be made by the responsible authorities to inform and encourage these categories of people to participate and hence give them a sense of inclusiveness in matters that concern them. It would also be interesting to find new alternative ways to involve such groups of the public to ensure representation for all (King *et al.*, 1999). This can be done through mid-week evening meetings (*umugoroba wababyeyi*) which can encourage women to communicate their concerns and empower them to share their opinions.

It has been indicated that “in an open democratic society, the ultimate objective of public participation is to empower the affected community” (Ngonge, 2015). However, can only happen when the public is exclusively involved in the initial stages of the decision-making process and get the chances to influence the decision. It is argued that “it is the affected people who will have

to live with the consequences of the proposed development and it is they who should have the power to determine the outcome of the decision-making” (Momtaz & Kabir, 2018a). Having access to information indicates high level of transparency, it is therefore expected that an explanation is provided to the public on how the final decision was made and how their views have been considered in the final decision, which can help build public trust in those who make decisions and carry out development projects (Nadeem & Fischer, 2011).

It was again revealed from the study that time convenience of the meetings undertaken during the EIA of the project was statistically a significant factor ($\rho = 0.000$) in influencing respondents’ thoughts towards the level of consideration of their views during the decision-making process of the project. This can be explained that flexibility is required while planning for a meaningful public participation exercise to avoid inconveniences and allow the public the freedom to participate and generate various ideas from a diverse group of stakeholders. It has been shown that “it is only when rigid time constraints are avoided that relationship building necessary to appreciate viewpoints and establish trust occurs” (Lachapelle *et al.*, 2003). This again was indicated in figure 2.3 that timing is another factor that can affect the quality of participation exercise. Informing the public about development projects well in time can allow them to have enough time to reflect and gather various ideas and concerns.

5.4 The nature and extent of public participation during the EIA of NBIA project

Public participation in EIAs has been reported to be rhetoric over time (Nadeem & Fischer, 2011). The exercise is often limited to certain stages of the process and not into the implementation and operational stages of projects. The ability for the local communities to influence the decision-making process is largely tokenism, where their ideas hardly make any significant impact on the EIA process and decision outputs (Bawole, 2013). Similarly, this study revealed that the public had little to no say on NBIA project where the exercise was largely a formality to acquire licence. Also since this was a government project, the public had really no choice but to consent to the decisions made.

The study also revealed that the EIA process did not adequately address the environmental concerns raised by the public. This too gave the public a sense of mistrust, since the project organisers were ready to risk publics' health and safety for their own interests. This shows a top-down approach, where the information shared to the public is final. There is no room for consideration of public views and no feedbacks provided concerning the issues raised. It may also confirm with the study, that, environmental and social concerns are secondary to economic benefits of the project (Bawole, 2013). This, however, may affect long term relationships between communities and the project proponents and may give a bad image and reputation to the organisers and the project despite the benefits presented to public.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This marks the last chapter of the thesis report. Under this section, the conclusions are drawn from the previous chapters of the thesis, recommendations are generated for future effective public participation in EIA of various projects in Rwanda and finally, areas for future research are also highlighted.

6.2 Conclusion

The study investigated the level of public participation during the EIA of the NBIA project in the Bugesera district, Rwanda. Overall there was some level of public participation that can be described as “*tokenism*” which only informed the public about the project without allowing them total engagement to be able to influence the decisions of the project (Arnstein, 2004). This was further showed by the majority of respondents who were not satisfied with the participation process and also the recurring issues of resettlement. The study showed that the vulnerable groups were generally involved as it was shown in previous chapters that different categories of the study population were recruited for the exercise. It was, however, observed that, generally, the respondents within the study area were aware of the project and had positive attitudes towards the project even though their concerns were not necessarily taken into consideration during the decision-making process of the project.

6.3 Recommendations

Based on the study findings, the study recommends the following issues to consider in future public participation in EIA of various projects in Rwanda;

- Feedback channels should be well established by EIA responsible authorities to ensure public satisfaction. Having face-to-face personal, frequent contact with the people who will be impacted upon by the project and providing answers to their inquiries will help to build a sense of trust between the proponent and the public and will help avoid complaints and protests against projects.
- Rights for the public to participate should be clearly stated. It should be a responsibility for responsible authorities together with the local leaders to explain why it is important and encourage them to participate to ensure democracy is well-practiced and hence allow citizens to practice their rights and have a better understanding of public participation.
- To prevent conflicts and promote fairness, government responsible authorities need to ensure public views are considered. The promotion of information disclosure should be emphasized as an important tool that can lead to greater involvement of a wide range of stakeholders in both decision-making and project implementation processes.
- The government should promote social learning by ensuring open communication and diverse participation of all categories of people including the vulnerable groups to gain various perspectives on matters of concern. This would create a sense of trust between the public and project developers which can lead to the sustainability of the project.
- Also perhaps to ensure the sustainability of the participation process, it may be important for the government to design and adopt a flexible and appropriate public participation guideline in Rwanda. It would also be necessary for the EIA responsible authorities to

ensure that the guidelines are well followed and quality is attained. Also, the study recommends that, before participation, the responsible authority should ensure that orderly public participation is put in place. A criterion for selecting the participants should be formulated and ensure to give the public a clear understanding of their rights and obligations for participation. Participatory forms and consultancy groups should be established and finally register the participation groups.

- During the public participation exercise, it is proposed that the responsible organization ensures that the participation is well implemented and oversees the entire process. Finally, the responsible organization should organize and invite relevant parties to evaluate the participation exercise and then summarize lessons learned and make improvements for future public participation.

6.4 Avenue for further research

To ensure effective public participation, quality EIA and sustainable development in Rwanda, further studies can be directed to assessing the compliance of project developers to early public participation in projects. It would also, be interesting to establish an evaluation mechanism of public participation to ensure set principles are adhered to. Also, to find out whether adequate resources are provided to the EIA responsible authorities, an evaluation can be done on the government's capacity to foster effective public participation. Lastly, an establishment of new innovative and alternative ways to involve all categories of people without necessarily attending public meetings would be an interesting area of study to ensure participation of diverse groups of people, mostly those who have been historically excluded from decision-making processes.

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APPENDICES

APPENDIX A: LETTER OF INTRODUCTION TO QUESTIONNAIRE

RESPONDENTS

Dear Respondent,

My name is Oliver Uwineza Kamu, a student at the University of Ghana, undertaking a Master of Philosophy in Environmental Science. I am currently evaluating public participation in the EIA process of the New Bugesera International Airport project in Bugesera district, Rwanda.

In order to evaluate the level of public participation in the EIA of this project, it is necessary to conduct a survey as part of the study. It is in this regard that your kind support is highly appreciated since the information you provide is very crucial to the study. This study is only for academic purposes and the information you generate will be treated with the utmost confidentiality. Please be informed that participation is completely voluntary and you may withdraw from the study should the need arise.

Thank you for your kind support!

APPENDIX B: QUESTIONNAIRE FOR THE RESPONDENTS

PLEASE MARK WITH (✓) THE APPROPRIATE BOXES

PART A. Personal Profile

1. Gender

- (i) Male (ii) Female

2. Age

- (i) 18-28 (ii) 29-39 (iii) 40-50 (iv) 51-61 (v) 62 and above

3. Marital status

- i) Single (ii) Married (iii) Divorced (iv) Widow (v) Widower

4. Education level

- (i) Primary (ii) Ordinary level (iii) Advanced level (iv) University
(v) Other (Please specify)

5. Religion

- (i) Traditional (ii) Christianity (iii) Islam (iv) Other (please specify)
.....

6. Occupation

- (i) Agriculture (ii) Livestock (iii) Daily wages
(iv) Other (please specify)

PART B. Public perception of the NBIA project

7. Were you aware of the NBIA project? (i) Yes (ii) No

8. What did you know about the project?.....

9. Where did you first hear about the NBIA project?

(i) Public notice (ii) Posters (iii) Radio (iv) T.V

(v) Newspaper (vi) Other (please specify)

10. How did you feel about the NBIA project?

(i) Very excited (ii) Excited (iii) Bad (iv) Very bad

(v) Neutral

11. Do you think of NBIA project as beneficial? (i)Yes (ii) No (iii) Neutral

12. If Yes, what are beneficial activities does it have?

(i) Employment (ii) Electricity (iii) Water supply

(iv) Means of transport (v) Business opportunities

(vi) other (Please specify).....

13. If no, what would be the reason?.....

14. Were you aware of the project site location? (i) Yes (ii) No

15. What consultation process took place for site selection?

.....
.....

16. Would you have suggested a different area for the NBIA project? (i) Yes 2. No

17. If Yes, why?

i) To minimize loss of properties

ii) To minimize undervaluation of properties

iii) To minimize cultural violation

iv) To minimize mistrust between government & the public

v) Other (Please specify)

PART C. Public perception on Public Participation (PP) in EIA of the NBIA project

18. Was there public participation in EIA of the NBIA project? (i) Yes (ii) No

19. How would you scale the importance of PP in EIA of the NBIA project?

(i) Very important (iii) Less Important

ii) important iv) Not important

20. What do you know about the main purpose of PP in EIA of the project?

i) To ensure transparency and accountability (iii) To identify possible alternatives

ii) To ensure the involvement of affected groups (iv) I do not know v) Other....

21. Were you satisfied by the PP exercise of the NBIA project? (i) Yes (ii) No (iii) Neutral

22. If yes, what would be the reason?.....

23. no, what would be your suggestions for improvement?

i) Change the meeting locations (iii) Involve stakeholders throughout the EIA

ii) Increase the number of meetings (iv) Two-way flow of information

v) Other

24. In a few words, how would you explain the EIA process of this project?.....

25. In your view, how effective was the whole public participation exercise of the project?

i) Very high ii) High iii) moderate iv) Low v) Very low

26. Were you given adequate information on the positive and negative aspects of the project?

(i) Yes (ii) No

27. In few words share some of the negative and positive aspects of the project mentioned

.....
.....

28. Which language was used during the PP exercise?

(i) Kinyarwanda ii) English iii) French iv) Other (please specify)

29. Was the language well understood? i. Yes ii. No (iii) I don't know

30. At what stage of the project were you consulted?

i) Planning and design iii) Project alternatives

ii) Impact identification iv) Project implementation (v) Other (please state)

31. Was the time of the meetings convenient?

i) Yes ii) No (iii) Neutral

32. If Yes, what time were the meetings held?

i) 9am-12pm iii) 11am-14pm

ii) 10am-13pm iv) 12pm-15pm v) Other (please specify)

33. If No, what would have been a convenient time for you?

i) 4pm-5pm ii) 6pm-7pm iii) 8pm-9pm

iv) Other (please specify)

34. Was the venue for the meetings accessible?

i) Yes ii) No (iii) Neutral

PART D. Equal opportunities in PP exercise during the EIA of the project

35. Did you participate in the EIA of the NBIA project? 1. Yes, 2. No

36. If yes, how did you participate?

(i) sector meetings iii) Attended an interview

(ii) Filled a questionnaire iv) Other (please specify)

37. Were you affected negatively by the implementation of this project? (i) Yes (ii) No

38. If yes, what were some of the effects?

.....

39. Have you been given an opportunity to voice your concerns about the project?

- (i) Yes (ii) No

40. Did you receive any compensation for the losses caused by this project?

- (i) Yes (ii) No

41. If no, why so?
.....

PART E. PP levels and public views influence on the decision-making process

42. Do you think you were given honest information about the project? i) Yes ii) No
iii Neutral

43. If No, why so?

i) Land complaints iii) Undervaluation of properties

ii) Resettlement issues iv) Delays in compensation v) Other

44. If yes which of the following information was given?

i) The purpose of the project iii) The compensation plan

ii) The positive & negative effects of the project iv) Project alternatives

v) other (please state)

45. Were you given opportunities to negotiate and communicate your views during the EIA of the project? i. Yes ii. No

46. If Yes, which of the following were you involved in?

i) Planning and designing iii) Site alternatives

ii) Compensation plan iv) Other (please specify)

47. To what level do you think your opinions were considered during the decision-making process of the project?

i) Very high iii) Moderate v) Very low

ii) High iv) Low vi) I don't know

48. In few words share some of the information you gave that was considered in the decision-making process

.....
.....

APPENDIX C: INTRODUCTORY LETTER TO EIA CONSULTANTS

Dear Respondent,

My name is Oliver Uwineza Kamu, a student at the University of Ghana, undertaking a Master of Philosophy in Environmental Science. As part of the University's requirements for the program, research must be conducted in the final year. I, therefore, in this regard that I wish to conduct a study on the level of public participation during the EIA process of the New Bugesera International Airport project in Bugesera district, Rwanda.

It is therefore important to carry out interviews as part of the study to be able to gain a better understanding of the area of study. It is in this regard that your support is highly appreciated since the information you provide is very crucial to the study. This study is only for academic purposes and the information provided will be treated with the utmost confidentiality. Please be informed that participation is completely voluntary and you may withdraw from the study should the need arise.


Thank you for your kind support!

APPENDIX D: INTERVIEW GUIDE FOR EIA CONSULTANTS

1. Kindly tell me how and when you were involved in the EIA of the NBIA project
2. What is your opinion on PP in EIA of the NBIA project? Please explain
 - How important?
 - What is its main purpose?
3. How was the communication done (through what means) during the EIA process of the project?
4. Were there opportunities provided for PP during the EIA of the NBIA project?
5. Who were the stakeholders involved during the PP exercise of the project?
6. Would you say the public opinions were incorporated within the decision-making process of the project?
7. Was the feedback provided to the public concerning their project suggestions and / inputs?
8. How was the feedback provided to the public?
9. How would you rate the overall PP exercise during the EIA of the NBIA project?

Thank you for your kind support!

APPENDIX E: ETHICAL CLEARANCE

 **UNIVERSITY OF GHANA**
ETHICS COMMITTEE FOR BASIC AND APPLIED SCIENCES (ECBAS)
P. O. Box LG 1195, Legon-Accra

Ref. No: ECBAS 011/18-19

10th January, 2019.

Miss Oliver Uwineza Kamu
Institute of Environment & Sanitation Studies
University of Ghana
Legon, Accra

Dear Miss. Kamu,

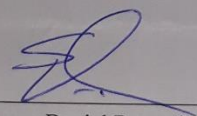
ECBAS 011/18-19: THE ASSESSMENT OF PUBLIC PARTICIPATION IN ENVIRONMENTAL IMPACT ASSESSMENT PROCESS OF THE NEW BUGESERA INTERNATIONAL AIRPORT (NBIA) PROJECT IN BUGESERA DISTRICT, RWANDA


This is to inform you that the above referenced study has been presented to the Ethics Committee for Basic and Applied Sciences for a full board review and the following actions taken subject to the conditions and explanation provided below:

| | |
|----------------------------|--------------------|
| Expiry Date: | 09/01/2020 |
| On Agenda for: | Initial Submission |
| Date of Submission: | 18/10/2018 |
| ECBAS Action: | Approved |
| Reporting: | Quarterly |

Please accept my congratulations.

Yours sincerely,


Professor Daniel Bruce Sarpong
ECBAS Chairperson



IP No.: 3014 Email: ethicscbas@ug.edu.gh

APPENDIX F: RESEARCH PERMIT


NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY (NCST)
Grand Pension Plaza, 13th Floor, KN 2 Roundabout, Kigali
PO Box: 2285 Kigali – Rwanda
E-MAIL: info@ncst.gov.rw WEBSITE: www.ncst.gov.rw

PERMISSION TO CONDUCT RESEARCH IN RWANDA

N° NCST/482/ 76/2018

I, the undersigned, hereby grant the researcher (s) in Section I permission to conduct research in Rwanda. This permission only covers research activities related to the provided research title, during the specified period and at specified location (s) in Section II of this form.

Section I: Personal Information

1. Family Name: **KAMU** Other Names: **OLIVER UWINEZA**

2. Academic Qualification (Highest degree): **BS, BA**

3. Home Institution: **University of Ghana** Occupation: **Master**

4. Phone Number (in Rwanda): **+250783466055**

5. Email: **oliverkamu@yahoo.com**

6. Primary Research Supervisor:

a. Names: **Dr Ted Yemoh Annang**

b. Institution: **University of Ghana** Occupation: **Coordinator, ESF**

c. Phone Number: **+233204336677**

d. Email: **tynnang@ug.edu.gh**

7. Research Collaborators:

| Names | Institution |
|-------|-------------|
| 1 | |
| 2 | |
| 3 | |
| 4 | |




Section II: Research Information

1. Research Area: **Environment**
2. Research Title: **Assessment of Public Participation in Environmental Impact Assessment process of the New Bugesera International Airport Project in Bugesera District, Rwanda**
3. Affiliating Rwandan Institution: **University of Rwanda**
4. Rwandan Supervisor:
 - a. Names: **NTAKIRUTIMANA Theoneste**
 - b. Occupation: **Senior Lecturer, College of Medicine and Health Sciences**
 - c. Phone Number: **+250789453462**
 - d. Email: **tntakirutimana@nursph.org**
5. Fieldwork Location: **Bugesera District**

6. Research Period:
 - a. From: **January 21, 2019**
 - b. To: **January 31, 2019**

Section III: Other important Notes

Section IV: Signature

This permission to conduct research in Rwanda is issued in accordance with Ministerial Instructions 003/2010 of 09/12/2010 regulating research activities in Rwanda.

Kigali, on



NCST Ref: **211/NCST.2019**

KALISA M. Felly

Ag. Executive Secretary