

**THE ROLE OF ENVIRONMENTAL EDUCATION IN THE PROMOTION OF  
COMMUNITY PARTICIPATION IN ENVIRONMENTAL IMPACT ASSESSMENT  
PROCESS IN LUSAKA DISTRICT**

**By**

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## DECLARATION

I, **Memory Sankando**, do declare that, with the exception of the references acknowledged, this dissertation represents my own work. It has not previously been submitted for any degree and is not being currently submitted in candidature for any other degree at this or any other university.

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## ABSTRACT

Community participation is acknowledged as a precondition for genuine realization of all other human rights. This is the reason why it is one of the core strategies in the National Policy on Environment (NPE). The policy states that all Environmental Impact Assessment (EIA) processes must be made public so as to encourage participation of the affected and, would be affected citizens as well as the biophysical phenomena. Despite this directive from the policy, participation by communities is still lacking. Thus this study sought to explore the role that Environmental Education (EE) could play to promote community participation in the EIA process. The EE context of this study was derived from the NPE 2007 whose strategy states that, individuals should have the necessary knowledge on the environment and this is what EE is all about. The objectives of the study were to: i) establish the indicators for community participation in Environmental Impact Assessment ii) investigate possible factors that may hinder community participation in EIA; iii) examine the method used to select participants in Environmental Impact Assessments; and iv) establish the role EE could play to promote community participation in EIA process. The study used a descriptive survey research design with both qualitative and quantitative approaches which were used to get the truth, through direct reflection and dialogue with participants. The study further employed a non-probability sampling method, which is expert purposive sampling and homogeneous purposive sampling method. Expert purposive sampling was used to come up with a sample of 5 experts and homogenous sampling to come up with 90 respondents from the general public of Lusaka district. The information was collected through the use of semi-structured interviews, and the Arnstein Ladder of Participation. Through the Arnstein Ladder of Participation it was found out that communities were only consulted during consultation meetings held by the project proponents which is an indication for low level of participation. The results also showed that there was lack of awareness of the EIA concerns due to less or no education. Therefore, lack of education was stated to be the possible factor that could hinder community participation in the EIA process. The result further indicated that 90% of respondents did not participate in EIA process due to lack of awareness, and that the methods used to involve people, was a method that only targeted people that were available and near the proposed projects. Thus, it was established that this method was failing to bring about a good and well balanced representation of community in the EIAs, as most people were not knowledgeable of EIA. It was further established that EE could play a role of increasing people's knowledge and awareness about the environment and its associated challenges so as to develop the necessary skills and expertise to address them. The conclusions made by the study were that, it is important for communities to participate in EIA, because their effort to define problems and incorporate local initiative and ideas in the design and implementation is a prerequisite to EIAs. Therefore, the success and sustainability of projects depend upon local understanding, approval and participation in all aspects of the project. It was thus recommended that Environmental Education should play a role of increasing people's understanding and participation in environmental matters in Lusaka and Zambia as a whole.

**Key words:** *Environmental education, community participation, environmental impact assessment.*

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## **ABBREVIATIONS AND ACRONYMS**

<b>DEAT</b>	Department Environmental Affairs and Tourism
<b>DEFRA</b>	Department for Environment Food and Rural Affairs
<b>E.C</b>	Environmental Conservation
<b>ECZ</b>	Environmental Council of Zambia
<b>EE</b>	Environmental Education
<b>EETAP</b>	Environmental Education and Training Partnership
<b>EIA</b>	Environmental Impact Assessment
<b>EMA</b>	Environmental Management Act
<b>EMP</b>	Environmental Management Plan
<b>GRZ</b>	Government of Zambia
<b>HRCZ</b>	Human Rights Commission of Zambia
<b>IAPs</b>	Interested and Affected Persons
<b>IUCN</b>	International Union for Conservation of Nature
<b>JICA</b>	Japan International Cooperation Agency
<b>MTENR</b>	Ministry of Tourism Environment and Natural Resources
<b>NEAP</b>	National Environmental Action Plan
<b>NGOs</b>	Non-Governmental Organisations
<b>NPE</b>	National Policy on Environment
<b>REMA</b>	Rwanda environmental Management Agency
<b>SD</b>	Sustainable Development

<b>TOR</b>	Terms of Reference
<b>UN</b>	United Nations
<b>UNEP</b>	United Nations Environmental Program
<b>UNESCO</b>	United Nations Education and Scientific
<b>UNZA</b>	University of Zambia

## DEFINITION OF TERMS

**Community Participation:**

a community is simply people working and living together to achieve a common goal and participation meant the real involvement of all social actors in social and political decision-making processes that potentially affect the communities in which they live and work thus community participation means people's involvement in all social, political decision making in order to achieve a common goal.

**Environment:**

understood as the surrounding of an individual, or the interaction of an individual with his surroundings (Chipatu, 2011).

**Environmental Education:**

in this study environmental education meant the education that aims at providing learners with the opportunity to gain an awareness of the environment, knowledge and experience of the problems surrounding the environment, to acquire a set of values and positive attitudes to obtain the skills required to identify and solve environmental problems, the motivation and ability to participate (UNESCO, 2005).

**Environmental Impact Assessment:**

in this study Environmental Impact Assessment Meant a systematic investigation of conditions within the environment of the proposed development, or project followed by an assessment of the impacts that the development or project will have on the environment in its totality which includes the physical, biological and socio economic aspects (Glasson, 2005).

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Overview**

This chapter presents the background of the research, statement of the problem, the purpose of the study as well as the specific objectives of the study. The chapter also includes the significance of the study, the conceptual framework and the theory that guided this study.

#### **1.2 Background**

The UN conference held in 1972 in Stockholm stipulated and initiated the efforts to establish environmental education programs at all levels that is, primary, secondary and tertiary levels and also to motivate the general public on environmental awareness. It was during the Tbilisi Intergovernmental Conference in Georgia, USSR in 1977 that the term Environmental Education was recognized as a tool that was going to foster awareness among the economic, social, political and ecological aspects of the environment and thereby provide individuals with opportunities to acquire the knowledge, values, attitudes, commitment and skills which would create new patterns of behaviour towards the environment [(Kumar De & Kumar De, 2004) (UNESCO, 1999)]. Education opens knowledge and skills that are needed by participants. Therefore, environmental education (EE) transforms the thinking of an individual who in turn changes his/her practices and attitude towards the environment and aspects that surrounds him through good behaviour.

On the other hand, Community participation is acknowledged as a precondition for genuine realisation of all other human rights in the UN General Assembly resolutions and in the general comments of the UN treaty bodies (Ghai, 2000). Although community participation still enjoys a high level of support across the world, its practice in Zambia is fraught with conceptual and practical difficulties. Some of the associated problems with participation as alluded to by Emmett (2010) are heterogeneity and fragmentation of many poor communities, lack of social material resources and community members' expectations of receiving a return from their involvement in development projects. The main key features of community participation are inclusiveness and involvement. Inclusiveness implies that everybody should be included and involved (directly or indirectly) in the processes and also on every stage of decision making. For example, power holders should put in

place and also ensure that various opportunities are seen by communities, to enable them make significant contribution or decisions that will enhance development and policies in their own areas (Ministry of Local Government and Housing, 2006).

The history of EIA process dates back to the 1960s. This was the period when issues concerning land use activities arose, and it has so far been a proven tool in evaluating the environmental risks and opportunities of project proposals for best outcomes. Therefore, before a structure can be built, an EIA needs to be performed to determine how the endeavor will affect the environment. This allows planners to make their projects more environmentally friendly and acceptable to all involved parties (Glasson, et al, 2005). The impacts maybe as a result of the changes that the project may create in the physical aspects of existing geography, chemical changes to the atmosphere including air and water, biological changes that affect plant, animal and human life, cultural impact on the society in the area, and other socio-economic effects. In other words, it is a formal method of judging the impact or the cost-benefit aspect that any new developmental project would have on the environment and its constituents (Lawrence 2003). A report by Human Rights Commission (2010) indicated that EIA is a vehicle that is used to enhance rights to information and participation by the public. Furthermore, National Policy on Environment (NPE) of 2007 states that all large projects that are to be done on the environment must carry out an EIA. The guidelines are that, issues to do with information access and community participation in EIA must be treated with urgency (GRZ, 2007).

### **1.3 Environmental Education (EE) Context of Study**

The ultimate goal of environmental education is to change human behavior in order to develop citizens who will behave in an environmentally responsible way. EE has the role to shape the knowledge and skills needed to solve complex environmental issues in human beings, as well as take action to keep the natural system productive, the economies fruitful, and active communities (Monroe *et al.*, 2007). It is therefore, important that EE should be one of the tools to be used in informing people about EIA process as this will be in fulfillment of a key strategy of environmental management given by the NPE of 2007 which highlighted the guidelines for community participation in EIA process that people should fully participate in EIAs and that they should be provided with full information concerning EIA (GRZ, 2007). Without an understanding in the

matters to do with EIA process environmental, problems, such as pollution, waste management and water shortages will remain a challenge. It is against this background that the study sought to explore the role of EE in promoting community Participation in EIA process.

### **1.3 Problem Statement**

Environmental Impact Assessment is a tool that works at lessening the impact of development on the environment. It is a guideline, commanding that that all large projects that are to be done on the environment must conduct it so as to ascertain the impact that a certain project may bring on the environment. In Zambia the EIA was adopted in 1997 and was stipulated in the national policy on environment (NPE) (GRZ 2007). The EIA guidelines are that people should fully participate in EIAs and that they should be provided with full information concerning EIA. However, despite these efforts to ensure people participate in EIA process, community participation is still lacking. This lack or low participation in EIA resulted in several problems such as negligence of the developed structures or projects not being completed. A nuclear construction in Choongwe is one of the examples that showed that there is lack of participation in communities. There were negative responses from the communities as well as chiefs due to the fact that people did not participating in the consultation that there was going to be a nuclear power station in their village, thus the communities protested against the project. Another example is the uncompleted building in Kalundu residential which was abandoned because the community did not welcome it. The study sought to explore what role could EE play to promote community participation in EIA process so as to have well rounded development in communities.

### **1.4 Purpose of the Study**

The purpose of the study was to explore the role EE could play to promote community participation in EIA process in Lusaka.

### **1.4 Specific Objectives**

The Study was guided by the following objectives:

1. To establish the indicators for community participation in EIA process.

2. To investigate possible factors that may hinder community participation in EIA process.
3. To examine the method used to select participants in EIA hearings.
4. To explore the role EE could play in enhancing community participation in EIA process

### **1.5 General Research Question**

What role could EE play to promote community participation in EIA process?

### **1.7 Specific Questions**

The study was guided by the following research questions:

1. What are the indicators for community participation in EIA process?
2. What are the possible factors that may hinder community participation in EIA process?
3. What method is used to select participants in EIA process?
4. What role could EE play in promoting community participation in the EIA process?

### **1.8 Significance of the Study**

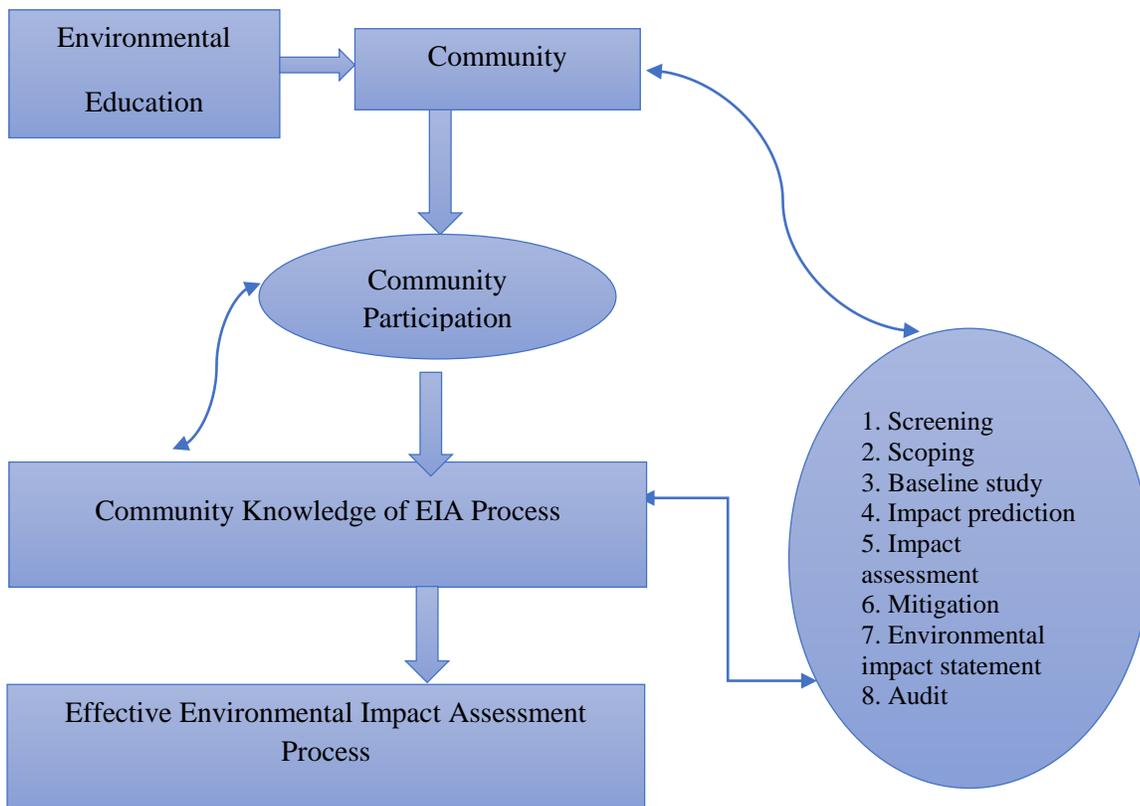
This study is important for several reasons; firstly, participation is an important factor when assessing the validness and public acceptance of any governance outcome. Furthermore, the study is significant in that the results may help change the way people think about and understand EIA and participation. The study may also complement the National Policy on Environment (NPE) 2007 specifically on public participation. It may further benefit the Environmental Education scholars who may wish to do further research on environmental education and community participation. Additionally, this research will be beneficial to communities who may be experiencing a similar problem of low participation or no participation in EIA. This is because it will open a certain understanding of the environment and this may encourage them to fully participate in any other EIAs. This in turn may lessen negative environmental impacts communities face.

Furthermore, the research carries great contextual relevance in relation to National Policy on Environment NPE 2007 which states under the Environmental impact assessment that;

“Environmental Impact Assessments and Statements shall be made public and public comments on them invited and taken into consideration” (GRZ, 2007:21, 23).

### 1.9 Conceptual Framework

A conceptual framework is an analytical tool with several variations and contexts (Mehta, 2013). It is used to make abstract distinctions and organize ideas. This section therefore, will look at a conceptual framework showing how EE could enhance community participation in EIA process. Conceptual framework shown in Figure 1.



**Figure 1: A conceptual framework of the study on the role of EE in the promotion of Community Participation in EIA process**

For the participation to take place there is need to develop in individuals a sense of ownership of their environment through empowerment, skills development and attitude change which could make people make sound decisions through their full participation in environmental and social impact assessments. EE refers to “a process aimed at developing a world population that is aware of and

concerned about the total environment and its associated problems, and has the attitudes, motivations to provide solutions. Therefore when EE is introduced in the communities, people would be aware of and be concerned about the total environment, and this will enable them take keen interest in decision that affect the environment. This would in return bring about participation. Picoletti (2003), describes participation as the real involvement of all social actors in social and political decision-making processes that potentially affect the communities in which they live and work. It also entails a commitment to bring to the table resources, skills and knowledge for the purpose of taking care of the environment as shown in Figure 1.

Therefore, it can be stated here that, with environmental education, there could be possibilities of communities gaining a sense of ownership to their environment and this could help them gain interest in participating in decisions that are to do with the environment.

### **1.10 Theoretical Framework**

For any meaningful dialogue to be possible there has to be meaningful communication. Education is said to be a sustained communication that brings about learning. Therefore, Education brings about dialogue and dialogue is one of the effective ways of communication. In view of this assumption this study utilised Habermas theory of Communicative Action (CAT). Communicative action theory was birthed to explain human rationality (reasoning) as the result of successful communication (Habermas, 1987). In other words it explains how humans come to make decision as a result of being engaged in a dialogue. It is defined as a communication that is oriented to bring about a sustaining and renewing consensus.

Communicative Action Theory was used in this study because it gave an image of what participation in EIA process by the community would bring about in maintaining the environment. As the Theory explains what successful participation entails it brings out what dialogue must be about as it enhances participation in any setting. Habermas (1978) argued that, communicative rationality has features which entail paying attention to participation and learning. Its main concern is quality dialogue which is done by creating a rational basis for constructing ends and means in a democratic society (Habermas, 1987). This notion supported this study in that, the only way that effective community participation in EIA could be reached was through quality and unbiased dialogue and what role education could play in enhancing that dialog or consensus.

The theory of communicative action calls for policy decisions to be reached through communicative processes involving all stakeholders and according to particular rules, which ensure that participation is fair, equal and empowering. Understood in this approach is an assumption that ‘community divisions can be overcome and consensus can be reached on (policy) issues’ (Harrison 2012).

Bras (2017), states that the theory of communicative action is the basis for the development of critical thinking. Critical thinking is an essential tool for the development of attitudes and skills. This underpinned this study in that, for people to make informed decisions as they participated in those consultations in EIA they needed to employ critical thinking, (reflective thinking). Additionally, Carvalho et al, (2017) went further to explain how communicative action theory develops critical thinking, they stated that as individuals got involved in dialogue they developed a reflection and understanding which formed critical thinking. Furthermore, communicative action in the production of knowledge promotes changes from the knowledge of the problems that affect the various sectors of society and the scientific research to solve them. This makes a student realize his or her importance and commitment to society and demonstrates autonomy, which contributes to a change in attitude. This assumption helped this study understand how a person’s attitude is changed through critical thinking which is developed as a result of dialogue (Carvalho et al., 2017).

### **1.11 Organisation of the Dissertation**

This dissertation is organized in 6 chapters. The first chapter gives the introduction to the study. It also presents the background to the study, statement of the problem, the purpose of the study, research objectives and research questions. Further the chapter describes the significance of the study, limitations of the study, theoretical framework and conceptual framework. Chapter Two is the literature review while Chapter Three presents the research methodology and explains the research design, study population, sample size, sampling technique, data collection instruments, data analysis, data presentation, validity and reliability of data collected and ethical considerations. Chapter Four presents the findings of the study. Chapter Five discusses the findings of the study. Finally, Chapter Six gives the conclusion of the study and makes recommendations based on the findings of the study.

## **1.12 Summary**

This chapter started by giving a background on the participation in EIA process as well as environmental education, it further gave an overview of the research problem as well as the objectives, aim and the research questions the study wanted to answer. The chapter further stated and highlighted the theory and a conceptual framework of the study and finally the organisation of the dissertation. The next chapter provides a review of literature on the role of Environmental Education in the promotion of community participation in EIA process.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

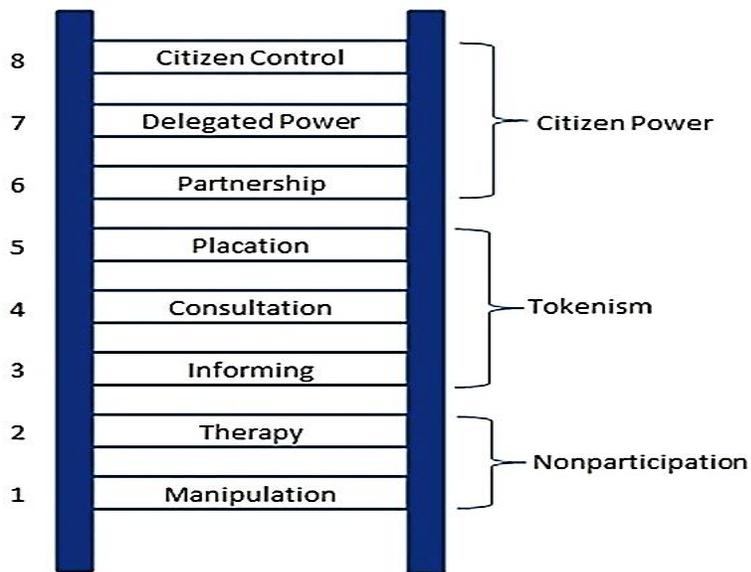
#### **2.1 Overview**

This chapter presents a literature review of literature. The literature is presented in themes, that is, emerging concepts on the topic and problem. As Cowell (1999: 34) states, literature review summarizes published information on a particular topic at a specified period of time. Therefore, in this study, literature presents the background of EIA and the steps taken to achieve it, the role EE plays to ensure participation, indicators that shows for community participation as well as factors that hinder participation amongst communities around the world, it was taken from the global, continental and local perspectives.

#### **2.2. Indicators for Community Participation**

There are a number of indicators for measuring participation. For example, Arnstein (1969) who used eight indicators, as highlighted in Figure 2, measured participation of citizens in decisions that affected them. Particular significance of Arnstein's work came from the recognition that there are different levels of participation. Manipulation, therapy, informing, consultation placation, partnership, delegated power and citizen control. Arnstein ladder of participation explains different types of participation and levels. Levels of manipulation informing and consultation entails a situation where the community is tricked and thinks there is participation. Communities are proffered by power holders the total extent of participation. They may indeed hear and be heard. But under these conditions they lack the power to ensure that their views will be heeded by the powerful. When participation is restricted to these levels, there is no follow-through, "muscle," hence no assurance of changing the status quo. Placation is the higher level of tokenism because the ground rules allow the have-nots to advice, but retain to the power holders the continued right to decide (Arnstein, 1969). Levels of partnership, delegated power and citizen control are the highest levels of participation and if these levels are reached then it can be said participation has taken place. Another scheme for community participation was developed by Rifkin et al, (1988), it had narrow participation on one end and wider participation on the other end. The indicators in the continuum were needs assessments, leadership, and organization of the program, management of the program

and resources mobilization (Robert, 2015). Each dimension was assessed through a series of questions and numerically ranked along a spectrum from narrow to wide participation. The Rifkin et al (1988) envisioned that the framework could be used to compare different programmes, the findings of different assessors of the same programme or different participants in the same programme, and changes in the level of participation over time. These were different from Arnstein but Draper et al (2010) used both to measure community participation in health programs.



**Figure 2: Arnstein ladder of Citizen Participation**

Source: Arnstein (1969)

### 2.2.1 Community Participation in EIA - Global perspective

Community participation was used synonymously with Public participation by the study, and was defined by Picoletti (2003) in Arizona as the real involvement of all social actors in social and political decision-making processes that potentially affected the communities in which they lived and worked. Communities could be defined by characteristics that the members shared, such as culture, language, tradition, law, geography, class, and race (Pecoletti, 2003). In other words, community participation meant a willingness to accept equal responsibilities and activities of both the government and the local people in managing their surroundings (Picolletti, 2003). It also entails

a commitment to bring to the table resources, skills and knowledge for the purpose of taking care of the environment.

Cotton and Mahroos (2015) argued that, despite community engagement being an integral aspect of the EIA process, it is still the least established aspect in the world. In addition, Baird and Frankel, (2015) in Mekong countries (Pacific) explained that the implementation of EIA often commences too late when the major projects decisions have already been made, rendering the EIA process ineffective. Similarly, Zhou (2012) also stated that the lack of participation in EIA process was mainly because, the communication of the EIA engagement was done late.

Therefore, there is need for improvement in community participation. This can be done in the legal aspects of community and post- Environmental Impact Statement (EIS) phase, meaning that the legal aspects in terms of participation must be or needs to be revisited so as to encourage participation by communities (Baird & Frankel 2015; Momtaz, 2013). On the other hand, Scot and Nguran (2003) in England, Denmark and New Zealand focused on the level of participation in theory and the real world and gaining understanding of the better practices with some recommendations. The research was done in three countries, to enable the researcher make comparisons. The findings were that, all the EIA systems are unique as they were linked to a particular domestic circumstances or land use. It further reflected the individual nations' concept of what EIA is, legal, and constitutional and cultural framework in which decisions-making takes place. The conclusion was that, the extent that public participation influences the EIA decision making process was limited in all three cases, meaning that the participation was mostly passive.

### **2.2.2 Community Participation in EIA - African Perspective**

Malyoshi and Hughes (1998) in Tanzania found that the level of involvement in both incorporated and structured approach to public involvement in EIA study was mostly consultative rather than participatory. Furthermore, Ngonge (2015) in his study “effective participation in EIA” in Kenya found that although public participation influenced the EIA process by contributing to the decisions made on the project, it did not influence the design of the road project. This meant that, although the community was involved in the consultation they did not participate in the initial stages of the cycle. From his finding it could be stated that the level of participation was consultation as people's opinions and decision on the designs were not considered (Ngonge, 2015). The findings also showed

that there was less awareness about the projects (SBRP) and that the public was consulted late, and did not get involved at the initial planning and screening level of the EIA. This clearly shows that the public did not get involved in the process due to lack of awareness, making the EIA incomplete and ineffective. However, the author identified the ineffectiveness of participation but did not give ways in which this participation could be improved upon.

### **2.2.3 Community Participation in EIA – Zambian Perspective**

From the available literature, it was discovered that there are challenges that impact negatively on community participation in Zambia particularly Lusaka. These included, religious beliefs, illiteracy, poverty and inferiority complex (Hanangama, 2016). Furthermore, HRC (2010) did a study which focused on the rights to participate. Their findings were that the level of participation in EIA was very low as members of the community only participated because of incentives being given after the consultation meeting. The findings suggested that communities be engaged at an early stage in the process. The problems with these findings are that if they participated because of incentives, the solution would be to educate them on the importance of participation and not engage them at an early stage.

### **2.3 Factors that Hinder Community Participation - Global Perspective**

Hughes (1998) who focused on stakeholder participation in Europe stated that, most of stakeholders in EIA process hardly participate because of time and financial resource constraints. It was pointed out that, the factors that impede the effectiveness of community participation including political dominance and interference as well as the lack of transparency in the EIA process. Therefore, Mcdaid and Kruger (2005) proposed a funnel type of participation in EIA, stating that if more people participated at the initial stages of the process it will help curb some unforeseen negative impacts on communities.

In Asia Tang et al. (2005) undertook a research in China and Taiwan on the effectiveness of public participation in EIA. They analyzed the documents that constituted various EIA procedures in the two nations and interviewed EIA consultants to obtain information on how the EIA processes were executed. According to the study, political interference and lack of transparency in the EIA process majorly influenced the effectiveness of public participation. One factor identified by the study was

the lack of proper structures to inhibit the high level of politics in the process. In this sense, the current EIA processes in China and Taiwan are as good as the politicians and environmental agencies want them to be (Ngonge, 2015).

Gugushvili (2005) undertook a study in Georgia (USA) to determine the quality of and level of participation by stakeholders in EIA. The study satisfied its research by analyzing all the EIA processes that had been undertaken in the region since 2007. The study found out and identified several issues that affected participation in the EIA process. These included, among others, the lack of institutional factors in the way EIA was conducted, weak environmental sector, low level of participation by private sectors as well as low participation by the public in EIA related meetings. Similarly, Arnadottir (2002) documents the obstacles that gets in the way of an effective participation, directing it to technological issues or challenges. The study reveals that data outcome of the EIA screening is difficult to present to the public, which makes it more distrustful, and that community opinions are not taken into account. Additionally, Harma (2005) showed that the participation overall in EIA process in UK is not effective; the study concludes that, people got informed of the EIA proceedings after the project had been handed over to the proponents, which is why the participation is deemed futile without communities taking part.

Bynoe (2006) looked at the issue of Citizen Participation in the Environmental Impact Assessment Process in Guyana, South America. He argued that consultation meetings are held for the reason of introducing to the communities the projects. However many of them did not have more than a primary education (Guyana Census, 2002), in this way communication becomes a barrier, in that often times oral communication is used with little or no visual aid. This thus, brought about the ineffectiveness of the EIA process in Guyana.

### **2.3.1 Factors that Hinder Community Participation - African Perspective**

A study in Nigeria pointed out the reasons why Nigerians are not fully participating in EIA process. The study concluded that lack of participation was is due to inadequate legal framework (Agaja, 2013). It was further argued that the law did not provide for an effective sanction for failure to consult the public in EIA process, making it a factor affecting community participation in EIA process. Furthermore, Ijaiya, (2015) who did a study in Nigeria, stated that, public participation in EIA process was low and the factors that accounted for this included lack of relevant skills and

experience in public participation by the EIA team, negative perception of the public process by regulators, and poor funding of EIA process by project stakeholders/owners. In Southern African Development Community's (SADC's) region EIA has been recognised as a key planning tool for sustainable development. Despite this, in sub-Saharan Africa, it has been found that decision-makers and experts have failed, within the EIA process, to rise to the challenge of genuine public participation (Hughes, 1998). Furthermore, a report for the publication entitled "*Environmental Impact Assessment in southern Africa*" by Tarr (2003) showed that more than half of the challenges associated with environmental decision-making in EIAs were linked to the public participation process.

Furthermore, Ngonge (2015), in his study in Nairobi (Kenya) pointed out that public participation helps to reduce the conflict that may arise due to contentions issues. The research showed that public participation was lacking in the EIA process. He also stated that public participation is critical in the EIA process, adding that it impacted on the design and implementation of projects. Furthermore, the finding indicated that public participation was only possible through focus group discussions and consultative and public meetings, among others.

However, a report by Economic Union for African (2005) argued out the reasons why there was ineffectiveness in the EIA process. The report cited that low level of public awareness of environmental concerns, and limited expertise, experience and lack of coherent legal frameworks and guidelines are some of the things that had compromised EIA quality in Africa. It also added that often times the significance of impacts is not adequately qualified, making it difficult for assessments to focus on issues, and interventions, on significant impacts. Furthermore, Capion (2013) whose focus was on EIA and its contribution to sustainable development and poverty reduction in Africa, showed a successful integration of EIA into planning and decision-making process. However, the application was limited to the project level. Capion (2013) further argued that illiteracy, poverty population growth and corruption remain a threat to the success of EIA in Africa. His recommendations state that the community must be empowered to actively participate in the early phases of the EIA process. This recommendation is similar to that made by HRC (2010), that communities should be involved in the EIA process at an early stage.

### **2.3.2 Factors that Hinder Community Participation – Zambian Perspective**

In Zambia, public participation is considered important given the socio-economic implications of most investment projects; it has become a practice to include potentially affected people during the implementation of the EIA process (ZEMA, 2012). To state its importance, public participation is also a legislative requirement under the Environmental Protection and Pollution Control Act (1990). Therefore, every project, before its development, must ensure that the public takes part in its implementation. However, a study done by Hanangama (2016) to evaluate enhancement of community participation in Kembe constituency's Chibombo Development Committee, found that there is lack of sensitization among members of the community so not a lot of people participated in the development committees. This study however, focused on participation in committees and not in EIAs. Similarly Phiri (2015) studied the *effectiveness of Community Participation in Decision-Making and Implementation of Water Supply and Sanitation Projects in Chongwe District Zambia*. The less participation in the implementation of water supply and sanitation projects. The study also found that there were no available resources for all to participate in these projects. Furthermore, the majority of the local people were ignorant of the existence of incentives for participation in water supply and sanitation issues. All the studies in this context did not stress the role of EE to enhance participation, thus this is the gap this study endeavored to close.

### **2.4 Methods used to Engage Communities - Global Perspective**

A study by Jolly (2007) whose focus was on public involvement tools in environmental decision-making, explored the weaknesses and strengths of the three public involvement tools, including, citizen survey, public hearing/meetings and stakeholder interviews. He stated that these tools are good although they do not involve and engage citizens in the deliberation fully due to lack of technical knowledge. He, therefore, recommends education as a tool that can ensure non-experts are involved in decisions as they offer rich history of issues affecting communities. He further advocates for public deliberation as the best tool to use if participation is to be effective. In Pakistan, people participate through workshops, public hearings and interviews with the experts. So, according to the study this is the mechanism used for participation (Nadeem et al., 2014). A study done by Enserink *et al.* (2015) in China stated similar findings to Jolly that firstly the public is informed by using notices on TV and newspapers, which is followed by a hearing meeting where the information is

disclosed through an out-door meeting, and door to door interviews. To this, they stated that this kind of mechanism lead to passive involvement of communities, as their opinions are not taken into consideration. The recommendation is that a detailed mechanism should be established and information disclosure system to be improved upon (Enserink at al., 2015). Therefore, Enserick et al. (2015) did not recommend EE

#### **2.4.1 Methods of Participation - African Perspective**

In Kenya a study by Kakonge (1996) indicated that the use of Rapid Rural Appraisal (RRA), the strategies include local people in project appraisal and the assessment of rural conditions. Social relationships, and existing initiatives, the study further observed that using this technique a team can gather data, define problems, rank solutions, and, in a relatively short period of time, devise an integrated village plan for natural resource management with substantial community participation.

In South African a study by Aregbeshola (2009) observed a method that indicated community participation and stated that it was done through information dissemination to interested and affected parties, consultation and participation (MacKay, 1998; Chenoweth et al, 2002). The study indicated that such participation can be modest or status quo-oriented. They may also be useful in informing far reaching changes in decision making system (Aregbeshola, 2009). Additionally, Ananda (2007) stated that different techniques should be employed in different situations, as one technique is not a solution to all problems.

#### **2.4.2 Methods of Community Participation - Zambian Perspective**

A study by Manatsa (2015) on the law and practice on environmental impact assessments (EIAs) in Zambia, revealed the strengths and weaknesses of EIAs in Zambia. The study indicated that Zambia had recorded a strengthened EIA administration due to the legal framework that supported it. The framework had elaborated provisions for public participation (Manatsa, 2015), as stipulated in Regulation 10 (1) of the EIA Regulations which provides that,

*The developer shall, prior to the submission of the environmental impact statement to the Council (now ZEMA), take all measures necessary to seek the views of the people in the communities, which will be affected by the project.*  
(The Environmental Management Act (EMA), No. 12 of 2011).

The study further established that, in theory, Zambia has shown its commitment to the cause of environmental protection by enacting the environmental regulations and environmental protection laws. However, EIAs are not as effective as they ought to be (Manatsa, 2015). The study indicated the weaknesses and strength of EIAs in Zambia, weaknesses included the absence of a constitutional guarantee of the right to environmental protection as a factor that may negatively impinge upon EIA implementation. Furthermore, the paper showed the entrenchment of a specific provision for environmental protection in the Zambian Constitution as a condition necessary for the promotion of sound environmental management in the country and lack of it caused low level of participation by communities (Manatsa, 2015).

In Zambia, the EMA of 2011 provides for a public review of documents and for public hearings on any document under public review. However, public participation is exceptional during the review of the project brief and for large development proposal the public needs to be involved. For example, access to information and access to participation is covered under the National Environmental Management Plan (NEAP) (1994) and the Environmental Protection and Pollution Control (Environmental Impact Assessment) Regulations (No 28 of 1997), which states in section III, No. 8 (2) that “ the developer shall organise a public consultation process, involving Government agencies, local authorities, non-governmental and community based-organisations and interested and affected parties (GRZ, 2007). The gap is that the frameworks had not indicated the procedures of engaging the public.

The EIA report done in Mufwembwe dam construction showed that the community participation involved not limited to interviews and discussion but also included how people understood the dynamics of the environment on which the project was to be located. This, in itself, was a good move but the report did not give the details as to whether the community had an understanding of the nature of their environment, or whether they knew the underlying causes that could lead to changes over time if the project was implemented. Ideally, community participation should include representatives from all socioeconomic backgrounds, to ensure acceptable and appropriate project design. Although project documents frequently stipulate community participation, these are all too often neglected; and when such participation is attempted, it does not necessarily include a representative sample of the target community, focusing instead on community leadership (HRC, 2010).

There should be an understanding that a vast representation is required for the EIA process to be effective. For example, for an EIA process involving a ring road in Lusaka, a stakeholder meeting was undertaken without the assessment of the people to be involved (JICA) (ZEMA, 2012). An assumption can thus be made to say those who participated had no prior education on EIA process. Furthermore, when it comes to selection, the Human Rights Commission report on community participation in EIA indicated that the local people were selected to EIA committees based mainly on their relevance to the project and not whether they are affected or not. What should be noted is that, “participation” whether you are affected or not is a basic human right (HRC, 2010).

## **2.5 Environmental Education**

This section will discuss environmental education and the role it plays in promoting participation among communities. It will look at related studies on participation and the role of environmental education.

### **2.5.1 Related Studies on EE as a Tool for Participation in Environmental Matters**

Hungerford and Volk (1990) have observed that community education is required to improve awareness about how some activities impact the environment and improve people’s knowledge on how to adjust their behaviour in order to reduce the environmental impacts. This shows how environmental education is an important tool that can help people understand the nature of their environment in totality and strive to make sound decisions. Additionally, UNESCO (2007) in the Tibilis Declarations recommended EE as a lifelong process, interdisciplinary and holistic in nature. This means that it can fit anywhere and caters for all. EE views the environment in its entirety that is in all its aspects including, political, social, economic, technological, moral, aesthetic and spiritual and uses a range of teaching and learning methods (UNEP, 2007). Thus making it a good tool that could help promote community participation in EIA process.

EE emphasizes skills essential for succeeding in tomorrow’s world, such as questioning, investigating, defining problems, analyzing, interpreting, reasoning, developing conclusions, and solving problems (Monroe, *et al.*, 2007). Through the development and application of knowledge, skills, values and behaviors necessary to inspire critical thought processes, the community will be able to increase their capacity to explore and understand issues more thoroughly and identify

appropriate courses of action (Bory-Adams, 2006; Fien & Tilbury, 2002). So in relation to EIA EE could play a role of helping people solve problems in their communities as they get involved in EIA processes.

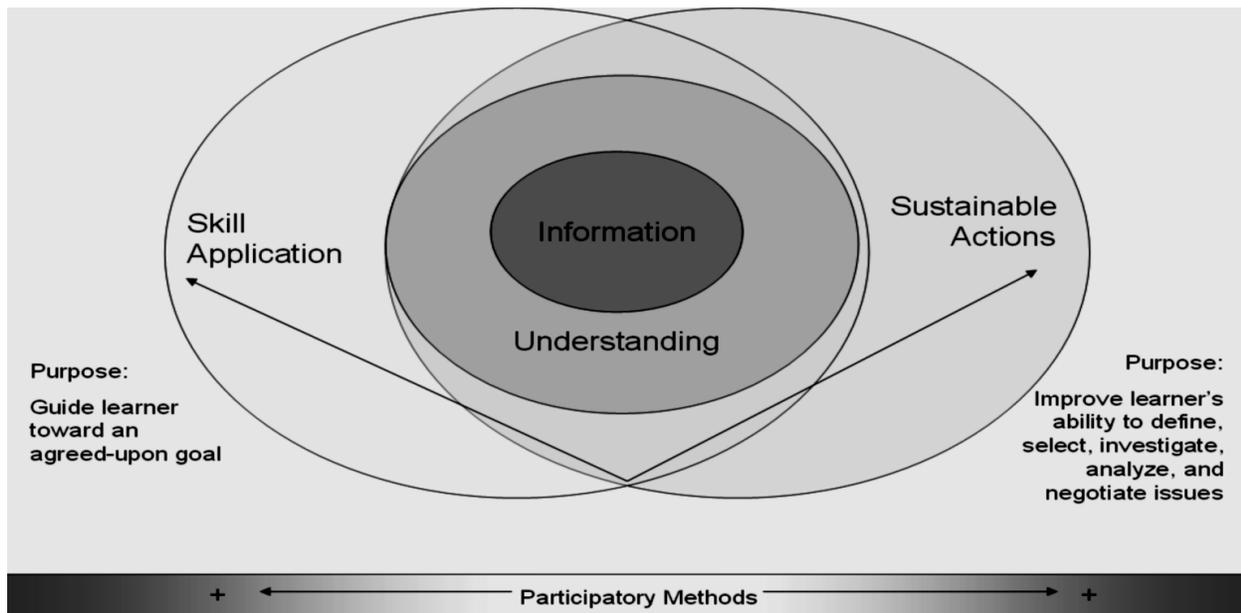
Howe (2009) focused on the role of education as a tool for environmental conservation interventions. The findings of the report were that the role of education communication, education and public awareness was recognized as essential part of the project and the education that was offered included formal training, awareness raising, media and ad-hoc informal education such as theatre groups. The report showed that environmental education intervention included skills specific training, public awareness-raising using the media and /or posters and leaflets, workshops and discussion. This brought out the desired outcomes.

The Environmental Education and Training Partnership (EETAP) (2000) also observed that EE encourages citizens to make knowledgeable and informed decisions about their environmental behavior based on the awareness, knowledge, skills, and attitudes instilled in them. EE relies on both formal and non-formal teaching techniques to accomplish the ultimate goal of encouraging citizens to make informed and positive actions toward the environment. Thus, it could make an effective tool to promote community participation in EIA. Furthermore, EE allows a person to create a sense of ownership of environmental issues and thereby developing a sense of accountability. People gain the ownership and create an attachment between them and the environment.

In addition, it has been revealed that a person's connection with nature is an important predictor of ecological behaviour (Hannemann, 2013). EE is an important tool that can enhance community participation in environmental decision making, in that, the literacy received gives individuals impetus to be good stewards of the environment in their communities and trigger their interest to participate in public services and leadership projects. Additionally, EE challenges educators to provide students with activities that cover complex societal issues by enhancing critical thinking and commitment to work individually and collectively towards solutions of current problems and the prevention of new ones (Hannemann, 2013). As people gain the skills of questioning wrong decisions they prevent wrong agendas to become fruitful and this enable them to voice out the matter and find better solutions to it (Chipatu, 2011).

### 2.5.2 Method used in EE

Non-formal environmental educational activities exist alongside the formal educational systems, at curricular and extracurricular levels, in occupational training, and through wide public awareness activities through non-formal channels such as mass media and voluntary organizations. Monroe et al (2007) has explained the several ways in which EE is applied as a discipline. He states that because EE is considered to be a tool, profession, discipline as well as a philosophy, the programs provide opportunities to discover nature in the outdoors, information about conservation, environmental issues, as well as opportunities to gain knowledge and skills that can be used to defend, protect, conserve and restore the environment (Monroe, et al., 2007). This has been termed as education in, for and about the environment, the best way to engage people and have them gain passion for the environment and thus see participation as something to embrace. Therefore, Monroe et al, (2007) suggests a new strategy of offering environmental education and this has been presented in a framework as shown in Figure 3.



**Figure 3: A Framework for Environmental Education Strategies.**

Source: *Monroe et al. (2007)*

The above framework (Figure 3) incorporates all the possible ways of ensuring that the information given will be used to form skills that would be used towards making sound decisions.

In South Africa, EE is now recognized as one of the core responses to the environmental crisis. It was established to look into the affairs of EE (DEAT, 2001). DEAT (2001) highlighted ways in which EE emerged as a tool to combat Environmental issues. However, the ideas of the author were not eminent in this study. This was due to the fact that too much literature was used, thus it is difficult to get the ideas of the author. It was well noticed that EE can play a very vital role in the EIA process as many EIA done lack the education and training aspect. For example, in a study by Agaja (2013), in Nigeria, people did not get engaged in public participation this was because the population lacked experience in public participation and the government did very little to educate its people on issues to do with the environment.

Zambia Network for Environmental Education Practitioners (ZANEED) reported that EE promotes behavioural change by stirring people to do things in a way that is acceptable and does not misuse the resource base. This meaning that EE helps create something in individuals which make them think for the environment (ZEMA, 2012). In a similar vein, a study by Phiri (2012) on prospects of EE in Zambia, attributed the failure of EE to how it is delivered. He stated that it is too concerned with the cognitive approach of creating environmental awareness than educating learners on ways of addressing root causes of environmental problems. This was also supported by Monroe et al. (2007), who as result formulated a model of EE which was shown in Figure 3.

A study by Monde (2011) on environmental education in Zambia's high schools. The study discovered that most countries are striving to use education as a panacea for solving economic, political, social and natural crises. It was further discovered that Environmental Education is an important tool in responding to the global environmental crisis. Similarly, a study by Cheelo (2006) indicated that EE was the best tool whose role was to increase people's knowledge and awareness about the environment. The study further stated that Environmental awareness should be done through both formal and informal education, which should both aim at cognitive and affective behaviour modification. The latter makes necessary for both classroom and field activities while the former, understanding of environmental issues (Cheelo, 2006). According to Cheelo this is an action-orientated, project-centered and participatory process leading to self-confidence, positive attitudes and personal commitment for environmental protection.

## **2.6 Research Gaps**

Not many of the studies done on EIA and used in this study touched the issues of EE and its importance in skill development and attitude change as ingredients for participation. Furthermore, a closer look at these studies done on participation in environmental impact assessments has revealed a common challenge in achieving effective participation of the public in EIAs, most common challenges have been outlined, including attitude by the communities themselves, lack of sensitization, passive participation, ineffectiveness of the process, corruption and also lack of knowledge on what an EIA is. Studies have further confirmed that there is limited participation in EIA. The findings by Kakonge (2012) indicated that lack of knowledge on what an EIA meant influenced the low levels of participation. Others like HRC (2010), Zhou (2012) Frankel (2015) have in one way or another explored public participation in EIA process, all stating that the public is engaged in the process late. One common gap is that the studies did not make any recommendation on how EE could promote community participation in EIA process as well as the role it could play.

Zambia has made considerable progress in addressing some of the various environmental issues that have been highlighted in the NEAP. However most of the efforts to conserve the environment are fragmented and in some instances overlapping, especially issues related to Environmental Education. This formed a research gap in the aspect of EE.

## Table 1: Research Gaps Summary

Table 1 below gives a summary of the reviewed literature.

Author	Focus	Gaps
Ngonge (2013)	An Evaluation of the effectiveness of public participation in EIA	How the challenges that hinder participation would be overcome was not clearly stated.
Scot & Ngoran (2003)	theory and practice of public participation in Environmental Impact	Did not show how and what method is used to ensure that people participate in the EIA process.
Phiri (2015)	Assessment of the Portuguese profile of EIA education	How EE could be used to promote public participation did not come out prominently.
Tang et al, (2005)	Effectiveness of Public Participation in EIA	Did not state what an effective participation entails.

## 2.7 Summary

The literature has revealed that there are different ways in which EIA is carried out throughout the world. What is mostly lacking is the participation of the general public. It has been observed throughout the world, (Zambia not an exception), that EIAs are superficial process. Most countries do not have good criteria for engaging the public/community in the process. Many of the authors cited have also indicated that people do not understand the EIA process. This leads to a barrier in participation as the process. Furthermore, people do not know at which stage of the EIA they are supposed to participate.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter seeks to provide a description of the geography and social-economic characteristics of the study area and why the area was chosen. The chapter will further give the research methodology which was employed to collect data. It will further explain the philosophical underpinning of the study and the research design that was used in the study.

#### **3.2 Location of the Study Area**

The City of Lusaka is situated in the central part of Zambia on the Central African Plateau and lies at an altitude of 1280m above sea level. The co-ordinates for Lusaka are 28° east of the Greenwich meridian and 15° south of the Equator. The district has a surface area of 360 square kilometers (Lusaka City Council, 2013). Lusaka district shares boundaries with Chongwe in the east, Mumbwa in the west, Chisamba in the north and Chilanga district in the south.

#### **3.3 Socio-economic Characteristics**

The central position of the City has made it to be one of the most important economic hubs of Zambia. According to the 2010 Census Report, the population density for Lusaka Province increased from 63.5 persons per square kilometer in 2000 to 100.1 persons per square kilometer in 2010, representing an increase in density of 36.6 persons per square kilometre. This section describes the demographic status of Lusaka district. In terms of population growth at district level, Lusaka has the highest population growth rate at 4.9%, followed by Kafue district in Lusaka province (Lusaka city Council, 2010).

The areas of Lusaka District are mainly inhabited by people whose socio-economic statuses are low. Major economic activities are quarrying, road side business, manufacturing industries, financial institutions, among others (LCC, 2010). The city prides itself in its market culture; there are literally thousands of stalls that sell a myriad of things. There are fresh fruit stalls, hairdressers, fishmongers, restaurants, spare parts, second hand clothing and gifts to name a few (UNDP, 2001).

Infrastructure serves a central delivery mechanism in achieving sustainable economic development and in the generation of quality social-economic development in the country. Lusaka has grown rapidly economically over a period of time. This development dates as far back as the 1930s when it was selected as the capital city of Zambia (LCC, 2001). Among this growth witnessed is the growth in infrastructures, like malls, roads and business buildings.

### **3.4 Reasons for Choosing Study Areas in Lusaka**

Lusaka is the capital city of Zambia. It is, therefore, the most rapidly developing city and hub for economic activities. Over the past decade, Lusaka has had tremendous infrastructure development. This makes it a good study site for the current research topic.

#### **3.4.1 Philosophical Orientation**

The Philosophical orientation of this study was interpretivist, a school of thought rooted in the philosophy of Plato and his teacher Socrates. It holds that the 'truth', even if it is only dimly shadowed by human's approximation of it, can only be approached through careful reflection and dialog with others. It is a paradigm in the qualitative research design, which can also use a positivist paradigm to add more precision and clearer understanding of the phenomenon and according to the philosophies of pragmatism of Johnson and Onwuegbuzie (2004) and dialectical pluralism (Johnson, 2017) mixing quantitative and qualitative is a possibility as the two paradigm strengthens the findings. Therefore through the use of qualitative approach a reflection and dialog by participants produced the truth that indeed participation was important and this was measured through the use of quantitative approach. Therefore, study utilised both qualitative and quantitative approach to get the view of respondents as well as to strengthen. This was in a quest to get the feelings and views of respondents on what role EE could play to promote community participation in the EIA process.

The epistemological assumption was that knowledge is constructed through the subjective experiences of others (Denzin and Lincoln, 2011). In other words, human beings construct their realities and truths by sharing their experiences with others. For the purpose of this study the research determined the level at which the community participated in the EIA process this enabled the researcher understand the respondent's point of view by being subjective. Therefore, the researcher always had put in mind that knowledge only comes about when they engage with the participant.

Ontology is basically the study of the nature of reality (Denzin and Lincoln, 2011), it explains that reality is subjective; the assumption is that that we get to know reality after an engagement with different people who give different experiences, by getting different views from different people, one gets to know what is real. This assumption helped this study in getting different realities of how people perceive and understand the EIA process.

### **3.5 Research design**

The study employed a descriptive survey which is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (Orodho, 2003). The study used it to help describe the events in the field as they occurred. Furthermore, descriptive research involves gathering data that describe events and then organize, tabulate, depict, and describe the data collection (Burns and Groves, 2003). It helped this study establish the range and distribution of some social characteristics, such as education or training, occupation, and location, and discover how these characteristics related to certain behavior patterns or attitudes. The study aimed at collecting information from the respondents on their opinions, attitude and behaviour towards community participation in EIA. Both qualitative and quantitative approaches were used in order to obtain the most accurate and realistic picture of the problem situation, under which a semi-structured interview guide and likert scale was used. The data collected was used to generate frequencies, and bar charts.

### **3.6 Population**

Burns and Grove (2003:213) describe population as all the elements that meet the criteria for inclusion in a study. The target population for this research included the following: The target population of Lusaka residents. The local authorities that have interest in EIA. This population was chosen because it carried similar characteristics.

### **3.7 Sample Size, Sampling design and Techniques**

Ninety (90) members of the public and five (5) officials were sampled for study, Organisations dealing with environmental issues and academicians were such officials. Mainly because they are well conversant with issues to do with the environment and education. They were thus the best to interview. Members of the public from Lusaka were also part of the sample because they were also

the best in giving accurate information on the ground and these interacted with their environment more often, therefore their perception and opinions were cardinal.

The study employed a non-probability sampling design which involved expert purposive sampling and the homogeneous purposive sampling techniques. The aim was to construct a sample that could generate the most useful insights that can be gained by the researcher into study's particular focus, the focus of the study was the role that EE could play to promote community participation in EIA.

By using the purposive sampling technique, information were deliberately chosen due to the qualities that possessed (Bernard, 2002). The officials chosen in the study had knowledge on EIA and EE as well as the community who were in the environment themselves. These experts were the officials directly dealing with EE and have expert knowledge on the subject matter (Parahoo, 1997; Lopez *et al.* 1997).

Homogenous sampling was to achieve a sample whose units share the same characteristics. It was used in this study because the question being addressed is specific to the characteristics of a particular group of interest, which was subsequently examined in detail (Mugere, 2013). In this study the members of public were selected on basis of their location (that is those that lived near any developmental projects), their level of education and gender, the areas like Kalingalinga, Kalundu, UNZA and Mass Media area carried similar characteristics as communities affected by the constructions (of new malls and roads).

### **3.8 Methods and tools of data collection**

Basically there are two types of data were collected namely; primary data and secondary data (Creswell, 2009).

#### **3.8.1 Primary**

Primary data was collected from respondent's words in the context of the research problem (Holloway & Wheeler, 2002:8). This approach allowed greater latitude in providing answers which led to respondents providing in-depth information regarding the topic at hand. For this purpose, the tools used included semi structured interviews and Arnstein Ladder of Community Participation model. Semi-structured interview were of benefit to this research as the respondents were given freedom to deviate from the interview questions as needed to pursue the findings that were not

anticipated. The Arnstein Ladder of Community Participation helped to establish the indicators that show for community participation in EIA process. There are basically 8 levels in the ladder of participation that is manipulation, therapy, informing, consultation, placation, partnership, delegated power and citizen control. The Arnstein ladder of citizen participation as shown in Figure 2.

### **Level 1**

Level one is the lowest level in the participation ladder as shown in figure 2. It has basically 2 indicators and is described as non-participation level, the 2 rung/indicators include manipulation and therapy. Manipulation or therapy is described a form of participation where the public is tricked into thinking that participation is in progress, this happens when the project proposers influence communities instead of communities doing so (Kreinken, 2018). At this level there is no form of participation, people are carried only as passengers and have no power to make decisions over anything (Brooks and Harris, 2008).

### **Level 2**

The indicators for level two which is termed Tokenism include, placation, consultation and informing. The level of Tokenism entails a situation where views given by participants are not implemented. This situation allows the individuals to hear and voice out their opinions but there is no assurance that what they have put across will be put into consideration. Consultation simply means obtaining community and individual feedback on analysis, alternatives and or decisions. For example, EIA stakeholder meeting and consultation may fall in this category of participation. This is what is termed the lowest means of participation (Gershman, 2013).

### **Level 3**

Level three or citizen control has three top most levels; that is citizen control, delegated power and partnership which explains a certain or highest degree of true participation as people here are able to dialog and make informed decisions, they are able to control the input and outcome of any proposal or undertaking, this is also termed as Citizen Control (Arnstein, 1969). This level gives citizens a sense of ownership over the state of their community, communities are given majority of power to control the outcome of any undertaking.

### **3.8.2 Secondary Data**

The study also made use of the secondary data as primary data alone was not enough to reach a satisfactory point. Thus, in order to bridge the gaps of the primary data, document analysis, a review of policies and reports on community participation and the EIA process as well as other literature with similar topic were utilized. Secondary data is important as it contain interpretations and personal views of other authors. It also provided a starting point for the study. Secondary data was also important for comparison between what the researcher found in the field and what is published (Hox and Boeiji, 2005).

### **3.9 Data Analysis**

Qualitative data was analysed using thematic analysis, that is, by bringing out emerging themes that were categorized and interpreted. Responses were grouped in themes according to the research questions of the study. The grouping of themes was done so that the variables whose frequency distribution emerged more than others were considered. The researcher used thematic analysis to organise and describe the data set in detail while interpreting various aspects of the research topic (Clarke, 2006). Thematic analysis organized and described the data set in details while interpreting various aspects of the research topic. This enabled the researcher to have in-depth rich information as each thematic area was exhausted.

On the other hand, quantitative data were analysed using a likert scale. Descriptive statistics were applied to the processed data by showing variable frequency distributions from the community responses. Thus the use of graphs, tables and percentages was utilized.

### **3.10 Ethical Consideration during Data Collection**

An introductory letter was obtained from the University of Zambia explaining that the purpose of the study was academic and that the information obtained would not be used for any other purpose than fulfilling the requirement for a post graduate dissertation in Environmental Education. A consent form was issued to the respondents who were required to acknowledge their willingness to

provide information to the researcher. No personal information such as names, residential addresses or photographs were obtained from the respondents in order to protect their privacy and identity.

### **3.11 Data Validation and Consistency Checks**

Methodological Triangulation method was used to validate the data. This method allows the researcher to consider data from several sources and so gain a wider approach to the research problem. Furthermore, triangulation is a method that combines both qualitative and quantitative research approach. It helped to overcome the weakness and biases that could come from single method and observatory methods (Jakob, 2001).

### **3.12 Limitations**

Some of the required data was not availed by respondents as they were scared. In some organisations, permission to interview people was tiresome due to bureaucracies in some organizations. In other cases individual interviews were not easy to organize as the respondents kept on postponing the meeting times and dates. As a result, the postponements dragged the research period. Secondly, most respondents had difficulties understanding some terms used in the research. This posed as a challenge and it was overcome through the use of explanation in local languages. Thirdly, there was limited information from respondents, as some thought they were being interrogated, otherwise an introductory letter to show that the research was for academic purposes was used to overcome this limitation.

### **3.13 Delimitation**

The study was limited to some places selected from Lusaka districts which included Kalundu, Kalingalinga, UNZA area, and Mass Media. Consequently the findings may not be generalized to the whole country.

### **3.14 Summary**

This chapter presented the methodology that was used in the study. It gave an explanation on the research design chosen and its relevance to the study. The chapter also looked at a combination sampling techniques applied in the study, key informants and research instruments used in data

collection. Furthermore, the chapter discussed data analysis procedures and ethical issues. The chapter that follows presents the findings of the study.

## CHAPTER FOUR

### PRESENTATION OF FINDINGS

#### 4.1 Introduction

This chapter presents findings of the study. Kombo and Tromp (2006) explain data presentation as a way of arranging data to make it clearly understood. Thus, the purpose of this chapter is to provide answers to the research questions set.

#### 4.2 Demographic Characteristics of Respondents

This section presented data on the demographic characteristics of respondents such as age, gender, occupation and education.

##### 4.2.1 Respondents' Gender

Results in Table 2 shows that 54% of respondents were males and 46% were females. Gender was important to this study because it gave a spatial difference and diverse in knowledge of EIA among males and females.

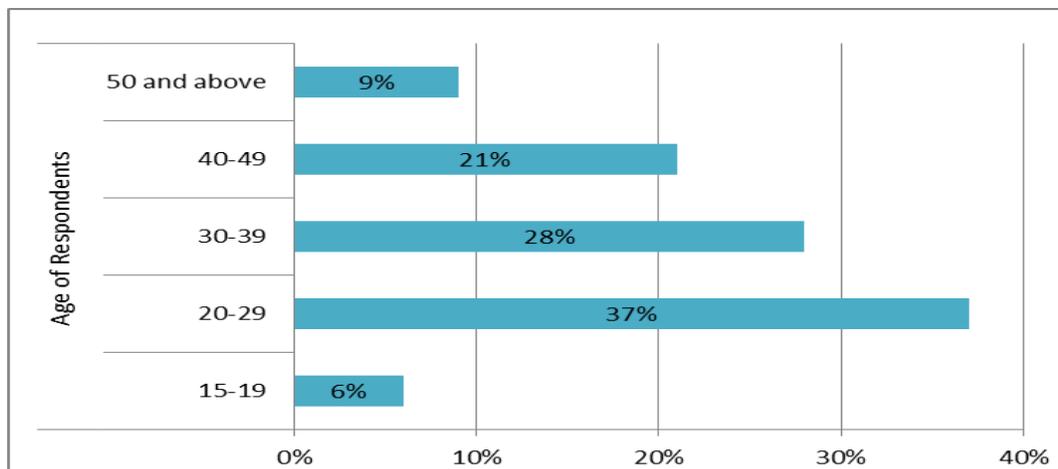
**Table 2: Gender of Respondents**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	49	54%
Female	41	46%
Total	90	100%

*Source: Field Data, 2017.*

### 4.2.2 Respondents' age

Figure 4 presents the age range of all respondents.



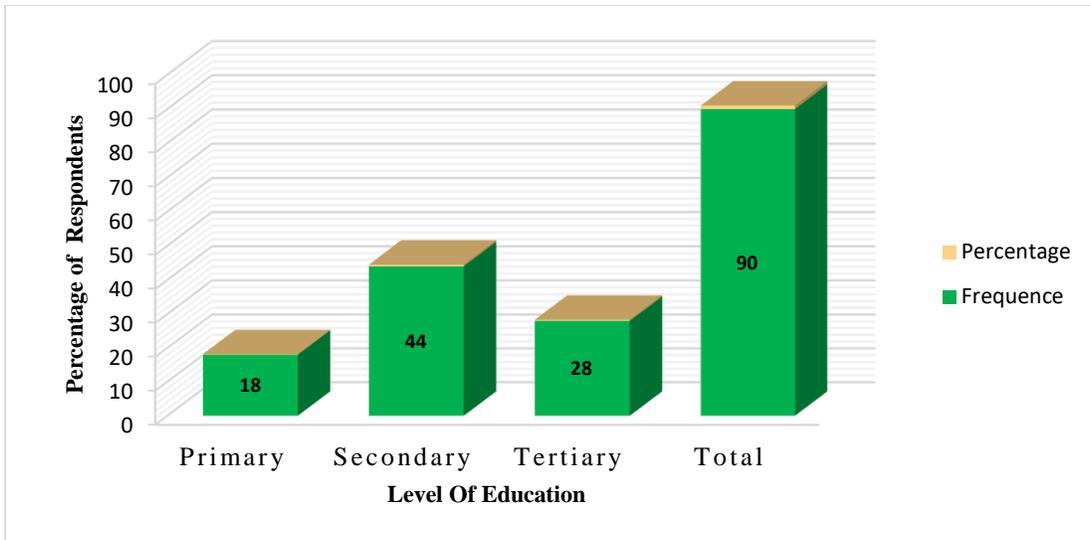
**Figure 4: Age of Respondents**

Source: Field Data (2018)

The data on age was important as it helped to know at what age a person knew and got to participate in EIA process. All the age groups that could respond to the question on the study were accorded the chance to participate in the research exercise as follows. 6% came from the age 15-19, 37% came from the 20-29 age group, 28% came from 30-49 age group, 21% came s from 50-59 and 9% were from age range above 60.

### 4.2.3 Level of Education

To establish what role environmental education played in promoting community participation, it was vital for this research to include the level of education of respondents. This was ranked as primary level, secondary level and tertiary level as shown in Figure 5.



**Figure 5: Responses on level of education**

Source: Field Data, 2017.

Results in Figure 5 show that 35% of respondents had finished their tertiary education and 49% had at least reached the secondary school level. The remaining 16% had only ended at primary school level. These results were important because they helped to know the levels of education in the communities as this would result in knowing if the levels education encourages or discourages participation in EIA.

### **4.3 Indicators for Community Participation in EIA**

Table 3 shows a series of items and indicators that show community participation on a three likert scale where 1=low, 2=medium and 3= high.

The results in Table 4 indicated that tokenism was the low (19), consultation high (35), and non-participation (41) and was the highest. This simply meant that when it comes to EIAs meetings, communities were mostly consulted but not fully engaged because of that, most of them did not participate.

Note: The non-participation level included individuals that failed to attend meetings.

**Table 3: Level of Community Participation in EIA process**

<u>Description</u>	<u>Indicators</u>	<u>Low</u> <u>(1)</u>	<u>Medium</u> <u>(2)</u>	<u>High</u> <u>(3)</u>
I participated by contributing something to the discussion (Tokenism)	Views taken into account	5	-	-
I participated and influenced decisions (citizen control)	My opinions were taken into consideration (Citizen control)	-	-	-
I was only informed that there will be a meeting for an EIA (tokenism)	TV announcements and door to door invitation	-	-	35
I participated in called up meeting and I was informed of what was going on (tokenism)	Actual attendance of the meeting	-	14	-
I was given an opportunity to see that my contributions were put into consideration (citizen control)	Citizen control	-	-	-
I participated but I did not contribute anything to the discussion at hand (non-participation)	The consultants take the center stage and the community just listens	-	-	41

*Source: (Field Data, 2017)*

### **4.3.1 Participation Significance**

Table 3 shows a series of descriptive levels at which the community participated in EIA. The results in Table 4 amplifies or solidifies the results in Table 4 which shows significance rating at each level.

Citizen control level of participation was not significant as it recorded 1. However, tokenism (9) and non-participation (9) were significant as they both recorded 5 or higher in the significance level. Tokenism and non-participation were the lowest levels of participation in the Arnstein Ladder of Participation and what this simply mean is that, there was no true participation by communities.

**Table 4: Significance of Community Participation**

<u>description</u>	<u>Participation significance</u>	<u>Frequency</u>	<u>S×F</u>	<u>Significance</u>
participation by contributing something to the discussion	1	1	1	Not significance
participated and influenced decisions	1	1	1	Not significance
was only informed that there will be a meeting for an EIA	3	3	9	Significance
participated in called up meeting	2	2	4	significance
Given an opportunity to see that contributions were put into consideration	1	1	1	Not significance
Did not participate at all	3	3	9	Significance

Furthermore, to support the outcome depicted in Table 3, 30 out of 90 respondents from the community stated that they were not aware of most of the happenings in their community. The following verbatim were some of their grievances.

We are only involved when all the decisions have been made including the site where the proposed project should be and to only be told the benefit that will come as a result of the project. (Interview with Respondents)

Another respondent from the community stated that,

We just see building rising without knowing anything, so what you are saying about participation we do not see it in this area/community. The council should do something about it and you should continue coming to teach us and let us know about this thing. (Interview with officials)

#### **4.4 Possible Factors that may Hinder Community Participation**

The study also gathered data on factors that possibly hindered community participation in EIA process

##### **4.4.1 Views of the Community Members**

In order to get the possible factors that may hindered participation in EIA, respondents were provided with a list of items which showed the statements that perfectly suited their situation when it came to community participation in EIAs, the results are shown in Table 6.

**Table 5: Factors that could hinder community participation**

Responses on factors that hinder community participation	Frequency (F) and Percentage (%)	
	(f)	(%)
I do not know what an EIA hearing is for	22	24
I do not have time	9	10
I do not see the sense of attending	16	18
I do not have ownership to the property being constructed	3	3
I have never been told what happens at the hearings of the EIA	20	22
No one came to sensitize us on the issues to do with my participation in the EIA	14	16
	6	7
<b>Total</b>	<b>90</b>	<b>100</b>

The results in Table 5 show that 24% members of the community attributed lack of knowledge on what an EIA is and what its importance was. Furthermore 10% indicated they lacked time to participate in EIA meetings, 18% said they lacked interest, 3% stated that they saw no sense of ownership, 22% said lack of public awareness, 16% lack of sensitization, 7% not being involved in the initial stage. One respondent stated;

We hear of meetings to attend but these meetings are always held on awkward days and time. Most of us work and can't possibly find time to attend such meetings. But I always send my nephew to attend on my behalf.  
(Interview with respondents)

Furthermore, a number of respondents said that they received no sensitization on the issue of EIA and that they felt that they did not have rights to the said properties once they were constructed. The following depicts what one of the respondents stated:

The channel of relaying the information should be improved upon as we are not aware of the said process (EIA). (Interview with respondents).

Similarly, another respondent added by stating that;

There is lack of ownership among the members of community as they see everything as government property. (Interview with respondents).

It was thus found that the factors that affect community participation were, lack of interest, lack of knowledge, lack of awareness and lack of sensitization.

#### **4.4.2 Views of officials on factors that may hinder community participation**

On factors that hindered community participation, all five officials stated lack of education as the main factor that could lead people not to attend EIA meetings. They explained that most of the individual have negative attitude towards participation due to low levels of education. Furthermore two out five officials asserted that EIA was a complicated terminology and thus the reports and also the discussions that took place caused people to lose interest due to lack of understanding. One official explained that,

It's not possible for an individual to understand an EIA due to the technicalities it is enshrined with. It will take someone with prior knowledge to understand. Mostly communities participate because they want to be paid at the end of the day (Interview with Officials 2018).

It was further established that there was no representation of the communities in EIA meetings that were held in almost all the areas of development. And this was attributed to lack of information regarding EIAs.

The findings from both the community and officials indicated lack of awareness due to poor publications or how announcements about the meetings were made before the consultation meetings for EIA begin. And this was given as a reason why communities did not participate in EIA process. Furthermore, because the building which were to be constructed were seen as private property the level of morale was reduced and this affected their participation.

## **4.5 Methods used to select Participants in EIA Hearings**

The study further examined the methods that were used to select participants in EIA hearings.

### **4.5.1 Views of Officials on the Method used to Select Participants**

The findings obtained from officials established that the method used to select participant in EIA hearings could be likened to convenient and purposive sampling of participants. Only used for those that were directly affected, could be reached out so easily and were known to be the one directly affected. The following explains what one officials stated.

The process of consultation is open to anyone, there is no necessary method of engaging the public. However, there is always an awareness program tailored for the affected communities who receive invitation to participate in the hearing. But this is not to say that ZEMA picks who should participate. Individuals that participate in those meetings are just those interested in the projects and in most cases communities have a lower representation. (Interview with officials, 2018).

Another one stated that:

These communities are visited individually for the discussion of the project that is coming in their communities. However, attending meetings is up to the community members, we do not force them. Once the information has been relayed, we move on to another issue which is consultation, otherwise, the invitation is open to anyone concerned. Interview with official, 2018).

Apart, from what ZEMA does, WWF had also a way they made sure that the community participated in the EIA, the officer at WWF stated that;

Mostly as WWF and other NGOs, we carry out awareness programs after the project area has been proposed. This awareness is carried out in the affected communities who are taught how to get involved in such matters. They are also educated on issues to do with their rights to participate. (Official Interview, 2019).

### **4.5.2 Views of Community Members on Methods used to Select Participants**

Looking at the issue of participation it was important to hear views of the community on the method of engagement. Therefore from the ninety respondents who were interviewed, sixty respondents, stated that they were not selected but only told of the project that was going to be put up in their community and that they should prepare themselves for minor changes that would be brought about

as a result of the project. This view was supported by the majority of respondents as the following indicates.

We are mostly left out on such issues, what these guys do is that they only get representatives of the university like one of the union members and some administrative staff from management, and I think that representation is biased and should stop because what ten of us can contribute is different from what someone whose interest is the allowance being given at the end of the meeting would. (Interview with Respondent 2019)

Another Respondent stated that

we do not know how to participate in the decisions because I attended one EIA meeting were we just sat hearing about how the development will benefit us but I never saw any one air out their grievances.

Furthermore, another one stated that

How can we participate when they already know what decisions they will take, because an EIA always has section of an alternative in times where the impacts may be too severe”(interview with respondent from community).

#### **4.6 The Role of Environmental Education in Promoting Participation in EIA by Communities**

The following section presents the views of different expert informants and respondents on the role EE could play to promote community participation. In order to establish the role EE could play to promote participation it was important to know how much the community knew about EE.

##### **4.6.1 Understanding the term “Environmental Education”**

Table 6 shows the findings to the question on whether the respondents had an idea about EE.

**Table 6: Knowledge about environmental education**

<b>Respondents Knowledge of Environmental Education</b>	<b>Frequency</b>	<b>Percentage</b>
Had an Idea	57	63%
Had no idea	33	37%
<b>Total</b>	<b>90</b>	<b>100%</b>

*Source: Field Data (2018)*

The findings in Table 6 show that 63% had an idea of what EE is, and 37% had no idea of what EE meant. Fifty seven out of ninety said the environment education is learning about the surrounding, including plants animals, building and people. In support of this, one respondent said:

It is the education which involves the environment, like learning about plants, animals, and the surroundings.

#### **4.6.2 Promoting Community Participation in Environmental Impact Assessments Process**

From the findings on the role that EE could play to promote community participation, the results were that EE was one of the tools that targeted at changing one's mindset, attitude and behaviour. It was discovered that Environmental Education did not advocate a particular viewpoint or course of action, rather, environmental education taught individuals how to weigh various sides of an issue through critical thinking and it enhance their own problem-solving and decision-making skills. The reasons given were as stated:

EE sets to inform an individual about the relation between the environment and the other aspects which includes social, economic and political this was as explained by one of the interviewee. (Interview with officials)

##### **4.6.2.1 Changing Attitude**

The findings showed that EE could have a big role to play in promoting community participation because it enhances a concern for the environment among communities and this could motivate them to improve and maintain their environment well through the change of attitudes among communities. Therefore, it was established from four officials that EE could play that role to change the attitudes of individuals because as attitudes of people change they are more interested in things to do with the environment and this is what would promote participation. The following is what 2 officials explained;

EE is the education that opens up the minds of individuals to think positively about the environment. It changes their attitude and way of doing things as well as gives them an art of stewardship to the environment as well the right to participate in decisions that affects the environment. (Official 1)

“EE targets to change the mindset of an individual, and it is the only tool that can be used to make the community environment active. The only way communities can be proactive in EIA is when they have the knowledge of the

environment. That is, how the environment is affected by the social activities, the economic and the political decisions. (Official 2)

#### **4.6.2.2 Increasing public awareness**

Findings showed that EE could increase public awareness. Thus, it could play a role to bring about an awareness about environmental issues. Since lack of awareness was stated as a reason for Lack of participation, therefore, if people were aware they would be keen to participate. The following is what officials had said concerning the role that EE could play;

The role of EE is to ensure that communities are aware of environmental problem present in their localities. It also develops a human person into taking action for the environment.

EE's role include to make community be aware of any environmental changes taking place in their localities, and to find solution quickly if any changes proved to be disastrous before they can occur.

#### **4.6.2.3 Teaching critical thinking**

The findings established that EE plays a role of teaching individuals how to weigh various sides of an issue through reflective thinking. The following is what one official stated concerning teaching critical thinking.

The role EE could play to promote community participation in EIA is that of changing the way a person looks at things, EE aims at educating an individual who begins to think on his own and solve problems individually without being told, when a person is able to weigh issues from different angles they can make sound decisions”.

#### **4.6.3 Suggestions on how EE could Increase Community Participation**

The results were that all the respondents agreed that EE can play a role in increasing community participation.

One key informant advised that, in order for EE to work well it should be present at Strategic Environmental Assessment (SEA) and this to be achieved through the assessment of the level of education of the targeted community. He further suggested that,

EE to come at the SEA stages (which will teaches people to understand EIA) so that by the time consultations are starting the community members will have

been informed in advance. Like this they will never shun away from participation”

Another official indicated that

That in order for community participation to be effective there is need of employing actors of EE, which include the EE educators, Councils from the local government, and Nongovernmental organisation as well as community development. (Interview with officials)

Furthermore, other key informants stated that in order for the process of EIA to be effective EE should stand alone so that it can tackle problems even when the EIA is not there. The response by one official was that;

EE is broad, first of all there is awareness, for example, if a dam is to be constructed, the key education program should concentrate on is that which will make the community understand what is going on and what impact this development will bring about”. (Interview with officials)

Similarly, another official stated that

EE mainly involves making people aware of the impact that they will be faced with in cases where a development was given a go ahead and how those impacts would be mitigated.

It was further indicated that lack of participation had brought more harm than good, as people did not influence decisions made by authorities. It was therefore suggested that education should be introduced in communities before projects were brought to them and way before screening of the area was done. This would help to enlighten local people and change their perception.

#### **4.7 Conclusion**

From the findings, it was established that EE could play an important role in the promotion of community participation in EIA. This is because it aims to change attitudes of people and instill good values of care. It teaches them to be good stewards of the environment and also to see and solve problems in communities. It was further established that the methods being used to engage communities in EIA were not producing desirable results. The ineffective methods of engaging communities meant that communities did not receive enough sensitization and awareness of EIA. Furthermore the findings indicated that there is no true participation as the type of participation that

occurred was only consultation. On Arnstein Ladder of participation it meant that communities were no fully participating.

## CHAPTER FIVE

### DISCUSSION OF FINDINGS

#### 5.1 Introduction

This chapter discusses the findings of the study. This discussion addresses the research objectives and attempts to answer the key research questions. It will also seek to establish commonalities between views of different informant and groups. Ultimately, the discussion will establish the role EE could play to promote community participation.

#### 5.2 Indicators for Community Participation in EIA

When you hear “participation” it is very easy to think that there is always an exchange of information among the involved parties, however, it is until you go deep into what the term really mean that you will understand that is not the case. And taking it from Arnstein ladder there different levels of participation and each level has indicators, **Tokenism** entails a situation where the community was in some way given a chance to air out their opinion but there was no assurance that what they said was taken into consideration, and **citizen control** entails a situation where the community was involved from the initiation of the program to its completion and were given majority power to influence the outcome, while **non-participation** is when the community was only carried on like passengers in a vehicle, no views were taken from them (Arnstein 1996).

From the findings 68% of respondents indicated that they participated through consultation which on Arnstein Ladder of participation meant low level of participation (Arnstein 1969). This meant that, individuals only received the information on the meeting taking place and the reason for the meeting and never got to contribute in the meeting. The result was in contrast with what Arnstein (1969) model of participation called true participation. The Model indicated that consultation level is a two-way flow of information between the proponent and the public with opportunities for the public to express views about the proposal while informing only ends at adverts and information given to the communities. Therefore, just inviting citizens' opinions offer no guarantee that citizen concerns and ideas will be taken into account. For this reason, true participation occurs when people get involved in decisions, air their voice and influence decisions (Ngonge 2015). Therefore, linking this view to the study result, it can be stated that there is low level of participation in communities.

This is also in line with communicative action theory which states that there can only be true participation when individual engage in some kind of dialogue and not merely being informed (Carvalho et al. 2017).

Using Arnstein Ladder of Participation which show indicators of participation, (such as manipulation, citizen participation informing and consultation) it was noted that in EIA process, the community is involved through informing and consultation, which is the passive level of participation anyone could be involved in. Contrary to this finding, Webmaster (2004) stated that inviting citizens' opinions, like informing and consulting them, can be a legitimate step toward their full participation. But if these are not combined with other modes of participation, then participation will be a vague thing, for it offers no assurance that citizen concerns and ideas will be taken into account. However, too frequently the emphasis is placed on a one-way flow of information from officials to citizens with no channel provided for feedback and no power for negotiation. Under these conditions, particularly when information is provided at a late stage in planning, people have little opportunity to influence the programme designed for their benefit. The theory of communicative action theory states that for critical thinking to take place there is need of understanding of and reflecting on (going back and forth on the topic of discussion) something by communities. The most frequent tools used for such one-way communication are the news media, pamphlets, posters, and responses to inquiries (Arnstein, 1969). Therefore, it can be concluded that there is low level of community participation in the areas of development.

### **5.3 Possible Factors that May Hinder Community Participation in EIA process**

With reference to objective two which looked at possible factors that may hinder community participation in EIA process, lack of interest (24%) and lack of publicity by the agencies involved (22%) accounted for the most negative and possible factors that hindered participation. Since people had no interest in things that took place in their communities they tended to also shun meetings when called upon. In addition, lack of awareness made people not to participate in EIA meetings. This finding was similar to what Hanangama (2016) also found, that people do not participate in EIA process due to the reasons of awareness which is lacking in the procedures. It was further discovered that, lack of participation in EIA was due to lack of sensitization on what caused some detrimental

environmental impacts found. Generally, it can be stated is that, lack of interest and poor publicity, were possible factors that hindered participation.

Similar to Hanangama (2016) a study by Roberts (1995) found that many people do not like attending meetings due to what they termed NIYMBY (not in my back yard) syndrome. This meant that so long as the projects were not done at their yards they can watch at a distant themselves even if the environment is being destroyed. Therefore, the issue was not knowing what an EIA is but the attitude of people. Therefore, if attitudes of people could be changed then there could be participation (Roberts, 1995). It was also discovered from literature that that Sensitisation and awareness (education) programs help the community make decisions with accurate existing knowledge in policy decisions as well as community participation in development projects (Zhou, 2012).

Relating the results to the theory that guided this study, it can be stated that the findings are in line with Communicative Action Theory which states that, action, the quest for knowledge, reason and awareness can be mediated by educators during the training process. And that the action taken can promote changes from the knowledge of the problems that affect communities and the scientific research to solve them.

Furthermore, in the findings it was realized that there were several reasons as to why people were not participating in EIA process. The reasons included, among others, lack of interest, no education on the issues to do with EIA. This finding is similar to that by Economic Union for African Report (2005) who stated that the reasons for lack of community participation was due to low level of public awareness of environmental concerns, limited expertise, experience and lack of coherent legal frameworks and guidelines. Therefore, HRC (2010) advised that a network of educators and communicators should be supported to ensure an effective dissemination of information throughout the country. Similarly, Communicative Action Theory explains that, the quest for knowledge, reason and awareness can be mediated by educators during the training process. If people are informed well in advance with the help of education, then there could be effective participation.

#### **5.4 Methods of Engaging the Community**

According to the findings from the key informants, it was established that the process of consultation is open to anyone. The method used was that which does not necessarily depict the most needed population for the EIA consultation. It was further found out that there was always an awareness

program tailored for the affected communities who received invitation to participate in the hearing. One official from ZEMA stated that when conducting EIA, ZEMA did not necessarily pick who should participate, individuals that participated in the meetings were just those interested in the projects, and in most cases communities had a lower representation.

It was further established that the method that was used was not producing the results needed for true participation to take place. People attended meetings depending on what the discussion was going to be about. This made it difficult to engage people who were mostly affected by the projects. These findings were similar to Roberts (1995) who stated that it was very challenging to engage the target communities due to differences in understanding of things. However one of the officials interviewed stated that the process was open to whoever is interested as that was what is stipulated in the policy for the environment and a requirement by ZEMA.

Wassermann (2012) also found that engaging communities is the most lagging concept in EIA and therefore it was suggested that in order to engage the affected community, there was need to identify the most affected communities. These individuals must be selected based on the geographical location, place and interest. Furthermore, Hanangama (2016) also explained that there was need to involve the target population who were residents in all the stages of the projects, from the conception through planning and designing to implementation and operation.

It has therefore been established in this study that the method currently being used was not working but producing superficial kind of participation, or robotic participation. It was therefore clear that the method used to select participants in EIA was not working as it had a tendency of leaving out the key individuals who could influence decisions. Therefore, the use of adverts and other means of relaying messages to do with EIA hearings should be avoided as this is the least means of engaging the community in cardinal decision-making meeting like EIA consultations.

This is what was causing problems and challenges when programs or projects were being implemented in communities. Communities were not educated enough, therefore, they tended to give a blind eye to the problems resulting from not being represented in EIA meetings.

## **5.5 The Role of Environmental Education in Promoting Community Participation in EIA**

The following paragraphs discuss the themes that emerged from the study, these included changing attitude, creating public awareness, and teaching critical thinking. But firstly it discusses how people understood EE

### **5.5.1 Understanding Environmental Education**

From the findings 63% of the respondents had an idea of what EE meant while 37% of respondents had no idea. This meant that more respondents had an idea of what EE meant. They understood it as the education that taught how to take care of the environment; to others it meant education about vegetation and waste management. Furthermore, environmental education was understood as a tool that helped to foster behaviour change and create an awareness of the environment. These findings were in support with Monroe *et al.* (2007) who indicated that EE is a tool that brings about important aspects of an individual which are essential concepts of environmental awareness, knowledge, attitudes, skills, and participation.

### **5.5.2 Changing Attitude**

It was established from four officials that EE could play the role of attitude change and as attitudes of people change they are more interested in things to do with the environment and this is what promotes participation. Kimutai (2006) has a similar view that environmental education aims at providing learners with the chance to gain an awareness or sensitivity to the environment, knowledge and experience of the problems surrounding the environment. To attain a set of values and positive attitudes which help to acquire the skills required to identify and solve environmental problems, as well as the motivation and ability to participate in decision making. One of the objectives of EE is enhancing participation. Which makes it an important tool for promoting community participation. Environmental education promotes behavioural change by motivating people to act in a responsible way (Kimutai, 2006).

#### **5.5.2.2 Increasing public awareness**

On ascertaining what role EE played in ensuring that people participated in decision-making, the results indicated that EE activities that were carried out were meant to make people aware of the

meetings as well as to help them participate in EIA. Similar to the results, Bory-Adams (2006) explains that environmental awareness increases public knowledge thereby creating a platform to combat environmental problems that are being confronted in the world today. Therefore, the role environmental education could play is to ensure that people are aware of issues to do with the environment. Additionally, Environmental Education and Training Partnership, (EETAP) (2000) explains that EE encourages the development of sensitivity awareness, understanding, critical thinking and problem-solving skills. Therefore, EE does not only create awareness, but also changes people's attitudes towards adopting new approaches and acquiring new knowledge. Furthermore, in support of the findings, UNESCO (1986) stated the role of EE, part of which is to increase people's knowledge and awareness about the environment and the associated challenges. It, therefore, is important to embark on sensitization programs that will emphasize knowledge, awareness, skills and participation in environmental issues at all levels (UNESCO, 1999). As it has been alluded to from the results, there is lack of environmental education in communities. This is what has led to lack of participation in EIA as people fail to understand the complexity of the environment.

### **5.5.2.3 Teaching Critical Thinking**

The findings established that EE plays a role of teaching individuals how to weigh various sides of an issue through reflective thinking. Environmental Education and Training Partnership EETAP (2000) also observed that Environmental Education encourages citizens to make knowledgeable and informed decisions about their environmental behavior based on the awareness, knowledge, skills, and attitudes instilled in them. Environmental Education relies on both formal and non-formal teaching techniques to accomplish the ultimate goal of encouraging citizens to make informed and positive actions toward the environment. This is also supported by Hungerford and Volk (1990) who proposed that EE allows a person to create a sense of ownership of environmental issues and thereby developing a sense of accountability. People gain ownership which in turn creates an attachment between them and the environment. Similarly, through the development and application of knowledge, skills, values and behaviors necessary to inspire critical thought processes, the communities will be able to increase their capacity to explore and understand issues more thoroughly and identify appropriate courses of action (Bory-Adams, 2006; Fien & Tilbury, 2002).

In addition, respondents said that EE ensured that communities were aware of environmental problems present in their localities. It was the education that developed a human person into taking action for the environment. These findings were similar to Palmer (2003) who described Environmental Education as the organized efforts to teach about how natural environments function and, particularly, how human beings can manage their behavior and ecosystems in order to live sustainably. Additionally, EE has been described as a multi-disciplinary approach to learning that develops the knowledge, awareness, attitudes, values and skills that would enable individuals and the community to contribute towards maintaining and improving the quality of the environment (IUCN, 1970).

### **5.5.3 Suggestions of how EE could Increase Community Participation**

All the respondents suggested education as a means to make EIA issues known to them. They further indicated that the awareness attained through education would increase their knowledge on certain issues, such that when those meetings were called for they would attend. Thus, introducing EE which would cater for all ages would bring about participation. In line with this, UNCED (1992) Agenda 21 indicated that in order to accomplish the objectives for EE, there was need for individuals, groups and organizations to directly participate in environmental impact assessments and to know about and participate in decisions which potentially affected the communities in which they lived and worked” (UNCED, 1992)

Additionally, findings indicate evidence that EE is one of the best tools that would help people understand the EIA process and what their role should be in that process. And because it targets both adults and children it becomes a great too to change the attitude of the entire community. Similarly, Todaro and Smith (2009) state that the provision of knowledge and advocacy work of citizens has resulted in a more educated population that is able to contribute in various national forums and at various levels in the development of policies and programs aimed at solving existing problems.

One official also stated that in order for the delivery of EE to be effective there is need of employing actors of EE which included the EE educators, councils from the local governmental organisation as well as workers from community development. Similarly, Wals (2007) states that effective environmental education comes about as people interact with one another and also with the environment, this means that people are the best to deliver EE are the communities themselves.

In summary, environmental education could bring about community participation in the EIA process due to its nature and scope, covering awareness and skill development as well as attitude change and behaviour of individuals. This could be done through community education, education in the environment, formal education, education about the environment and education through the environment. These methods (transformative) and models of EE are powerful enough to change an individual to become a responsible citizen.

## **5.8 Conclusion**

This chapter has discussed the findings and answered the research questions of the study. This was done by discussing the findings in the light of the objectives and research questions. The chapter has discussed the role EE could play to promote community participation in the EIA process. It has also established that using the right method and a good EE communities will be aware and change their attitude and behaviour towards those that are in line with sustainable development and thus community participation will be achieved.

## CHAPTER SIX

### CONCLUSION AND RECOMMENDATIONS

#### 6.1 Introduction

This chapter is a summary of all the chapters of this dissertation and recommendations based on the major findings. The research aimed at exploring the role Environmental Education could play to promote community participation in in EIA.

#### 6.2 Conclusion

The conclusions made by the study were that it is important for communities to participate in EIA because their effort to define problems and incorporate local initiative and ideas in the design and implementation is a prerequisite to EIAs. Therefore, the success and sustainability of projects depend upon local understanding, approval and participation in all aspects of the project. Thus, community participation should not just be consultative but deliberative. These conclusions were made based on the objectives of the study.

According to the indicators of participation on the ladder of participation, there is lack of community participation in Lusaka district. And yet there is a belief that Participation of communities in EIA always takes place but on the ground it does not. It was established that tokenism and non-participation were the only indicators of participation and the highest level being non-participation.

It was further discovered that factors that pose as a hindrance to community participation are those that emanated from the umbrella challenge of education such as lack of understanding of the term EIA, lack of awareness and lack of interest. Communities are lacking education, and according to the findings and other literature, education is key to achieving true citizen control or full participation, this is because it informs people on matters of the environment to later change their attitudes and act to serve the environment through sound decisions. Furthermore, the study found that there were several reasons as to why people did not participate in EIA process. The reasons included, among others, lack of interest and no education on the issues to do with EIA.

It was further established that the methods currently being used were not working to produce sound developmental structures as a result of lack of participation but producing superficial kind of

participation, or in other words robotic participation. This was what brought about problems and challenges when programs or projects were being implemented. Communities were not educated enough, thus they tended to give a blind eye to the environmental problems in their communities.

The findings indicated evidence that EE is one of the best tools that could help people understand the EIA process and what their role should be in that process. Because it targets both adults and children, it becomes a great tool to change the attitude of the entire community. It could bring about an effective community participation in EIA process due to its nature and scope, covering awareness and skill development as well as attitude change and behaviour of individuals. It was suggested that encouraging participation through EE could be done through community education. These methods (transformative) and models of EE are powerful to change an individual to become a responsible citizen and help communities become active citizens who will work towards protecting their environment. In summary

### **6.3 Recommendations**

1. Participation of communities to be emphasized in the legal framework. This follows the findings that communities were only being consulted and at no point did they influence decisions. Therefore it is recommended that communities must be involved from the very beginning of the project or programs to the implementation and this should be as part of a legal framework for EIA processes.
2. There is a need for a mechanism that is going to cause more people to participate in the EIA process. This should be through the identification of the closely affected parties (i.e. the community near developmental projects). This is in line with the finding on the methods used to engage communities in EIA process, which was found not to be working to produce true participation.
3. The results showed that there was low participation due to lack of sensitization and awareness on environmental issues. It is therefore recommended that there should be increased access to information through sharing information with local communities at the early stage of

projects; discussing worries with the affected communities, encouraging public comments on the draft EIA through workshops, and door to door meetings.

4. Basing of the findings that EE plays an important role in the promotion of community participation in the EIA process, it can be recommended that ZEMA should increase its capacity on education that is to reorient its EE to include the broad EE and not just awareness, which will increase critical thinking and enhance behavioral change, attitude change and problem solving skills).
5. An independent policy on environmental education to be formulated. This policy should deal with the inclusion of EE in every sector and organisation. This is due to the fact it is not only the uneducated that are ignorant of the term EIA but also the educated. This is in line with the findings that some members of the community had no idea of what EE was.
6. There is need for further related study which should specifically look into an environmental education model that is going to deal with the grassroots (communities) and the policy makers. This is in line with the finding that communities do not receive adequate awareness and sensitization when it comes to EIAs.

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## **APPENDICES**

### **Appendix 1: Letter of consent**

**The University of Zambia**

**School of Education**

**Department of Language and Social Sciences Education**

Dear Participant, I am (Memory Sankando ID 2016145327) a post graduate student of Environmental Education at the University of Zambia. This semi-structured interview schedule on the role of Environmental Education in the enhancement of community participation in EIA process could be used to find out ways in which Environmental Education can be used as an effective tool to enhance community participation in the EIA process. The findings may also help different stakeholders to participate in EIA process especially communities affected which may lead to an effective EIA process. Be assured that this research is purely academic and your responses will not be used or published anywhere. The information you are going to provide in this interview will be treated with a high degree of confidentiality therefore you will not be expected to indicate your name anywhere except your signature to show your consent. In this regard, I kindly appeal for honesty and truthful answers.

Participant's signature.....

## Appendix 2: Semi Structured Interview for Respondents

Key words: **Environmental Impact Assessment (EIA)**; a step by step procedure to find both negative and positive impacts (consequences) of construction and projects. **Community**: a group of people in an area who are in contact with one another on a daily basis. **Participation**: to take part in something or to share in something. And **Environment** will mean the surrounding area and **Consultations** will mean an act of hearing, asking and answering of questions and concerns (negotiations).

### Section A

#### A. Demographic Characteristics

Gender:

1. Female (1) Male (2)

Age:

2. What is your age .....
3. What is the level of Education Attained
  - i) Primary (1)
  - ii) Secondary (2)
  - iii) Tertiary (3)
4. What is your occupation? .....

#### Section B. Indicators for Community Participation in EIA process

5. How often were you engaged in the EIA process
6. What stage in the process were you fully engaged
7. What challenges do you face in attending the EIA procession
8. There about 7 levels of effective participation and the table shows the items that best describes the stages that is Citizen Control, Delegation Power Partnership, Placation, Consultation, Informing, Manipulation at which level of participation do you fall? Tick your choices

Item	Tick the item that best suits how you participate in EIA (√)
I participated by contributing something to the discussion	
I participated and influenced decisions	
I was only informed that there will be a meeting for an EIA and that I was invited to attend the meeting	
I participated by just being present in the meeting	
I was given an opportunity to see that contributions were put into consideration	
I did not receive the invitation and thus I did not participate	
I received the notice to attend the meeting but I had no time and so did not participate	

9. Are you are satisfied with the level of participation in EIA process?

**Section C. Possible Factors that may Hinder Community Participation in EIA process**

**Community Respondents interview**

1. The following table has the items that best describes the factors that could hinder community participation please tick the items that you think gives you more reasons for not attending the meetings.

<b>Item</b>	<b>Tick the item</b> (√)
I do not know is discussed at the meeting	
I do not have time	
I do not see the sense of attending	
I do not have ownership to the property being constructed	
I have never been told what happens at the hearings of the EIA	
No one came to sensitize us on the issues to do with my participation in the EIA	
In the first phases of the project I was not involved	

2. Do you fully participate in EIA process like from the initial stages to the end (Yes or No) give reasons for your answer
3. If you fully participate do you get involved in the participation
4. How important is participation (in decision making and implementation of projects in communities) to the local people
5. What do you suggest should be put in place to overcome the challenges that affect community participation in EIA process?

### **Appendix 3: Semi Structured Interview for Key Informants Officials**

1. What could be the possible factors that could hinder community participation?
2. How could these challenges be overcome
3. Are there measures that could help overcome these challenges

### **Section D. Methods used to Engage Communities in EIA process**

#### **Community Respondents interview**

1. How do you get involved in the consultations to do with Environmental Impact Assessment (EIA) process?

#### **Appendix 4: Semi structured interview for key informants officials**

1. What method is used to choose who is to be in the meeting for an EIA
2. How do people know about the Environmental Impact Assessment process Consultations
3. How do you carry out the awareness during the EIA process if at all you do
4. Whose role is it to ensure people participate in the EIA process consultations.
5. How do you evaluate the method used to select who should participate in EIA?
6. Give reasons for your answer
7. Does the current method for selecting participants in Environmental Impact Assessment process ensures that all members of the community participate in Environmental Impact Assessment?
8. Is the method used to select community participants in EIA effective?

#### **Section E. The Role environmental education could play to promote community participation in EIA process**

##### **Community Interview**

1. What do you understand by the term Environmental Education?
2. Is there environmental education in the communities?
3. What role could EE play in promoting community participation in EIA?
4. Do you have any suggestions on what could promote community participation?

## **Appendix 5: Semi structured interview for key informants officials**

1. What is Environmental education?
2. What role does EE play in ensuring that communities are engaged in EIA process?
3. How do you think Environmental Education (EE) could be used to ensure that people participate in EIA process?
4. What suggestions could you give that could promote community participation in EIA?

***END OF INTERVIEW***

***THANK YOU FOR PARTICIPATING***