

**Assessment of the effectiveness of public participation in Environmental Impact
Assessment: A case study of Matseke filling station development**

by

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DISSERTATION

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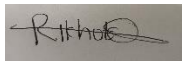
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(2023)

DECLARATION

I declare that the *Assessment of the effectiveness of public participation in Environmental Impact Assessments: A case study of Matseke filling station* that is hereby submitted to the University of Limpopo, for the degree of Master of Science in Geography has not previously been submitted by me for a degree at this or any other university, that it is my work in design and in execution, and that all material contained herein has been duly acknowledged.



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ABSTRACT

The process of Environmental Impact Assessment (EIA) aims at identifying the significant environmental, social, and economic impacts of a proposed project before a decision is made of whether a project should commence. The Public Participation Process (PPP) should occur throughout all phases of an EIA process and forms an integral part of successful EIAs. It allows for input from stakeholders and subsequently contributes to sustainable development. This process is however often viewed as a “box-ticking” exercise negatively impacting the intended effectiveness thereof. This study therefore aimed to assess the perceived effectiveness of public participation in EIA processes of the Matseke filling station project in the Capricorn District of Limpopo from the perspective of various key stakeholders. The study was descriptive and exploratory in nature and a qualitative research approach was considered pragmatic. Two key informant interviews were undertaken with the environmental assessment practitioner (EAP) and government official that was involved in the EIA processes. Furthermore, a total of 16 Interested and Affected Parties (I&APs) were identified to participate in the study. Different methods of qualitative analyses were used to analyse the objectives of this study. The methods include thematic analysis and descriptive statistics such as percentages and frequencies. The Statistical Package for Social Science (SPSS) version 24.0 software was used to analyse the data. The study findings show that the identified I&APs indicated that they were not involved in project planning and design. It further shows that only one I&AP commented during the process. Education, language, gender and methods of communication were identified as key factors in determining level and effectiveness of public participation processes. The study recommends that potential I&APs need to be educated by EAPs and government officials as to the role they play in ensuring effective public participation.

Key words: Public Participation and Environmental Management Assessment

DEDICATION

I dedicate this dissertation to my daughter N.P Rikhotso who has constantly encouraged and given me hope to finish this course and to my family, especially my mother, E. Rikhotso for all the support and encouragement.

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LIST OF ABBREVIATIONS

BAR	Basic Assessment Report
CDM	Capricorn District Municipality
DEA	Department of Environmental Affairs
DEAT	Department of Environmental and Tourism
DWS	Department of Water and Sanitation
EADP	Western Cape Government Environmental Affairs and Development Planning
EAPs	Environmental Assessment Practitioner
ECA	Environmental Conservation Act
EIA	Environmental Impact Assessment
I&APs	Interested and Affected Parties
IAIA	International Association for Impact Assessment
LEDET	Limpopo Department of Economic Development, Environment and Tourism
NEMA	National Environmental Management Act
NEPA	National Environmental Policy Act
PPP	Public Participation Process
SA	South Africa
SPSS	Statistical Package for Social Sciences
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Programme
WCED	World Conference on Environment and Development

CHAPTER ONE: INTRODUCTION

1.1 INTRODUCTION

This chapter outlines a brief overview of introduction on the background of the assessment of effectiveness of public participation in Environmental Impact Assessment (EIA). It further highlights a statement of the problem, the rationale of the study, the research aims and objectives, the significance and limitation of the study, and the definitions of key terms. The summary of chapter 1-5 is also presented in this chapter.

1.2 INTRODUCTION TO THE BACKGROUND OF THE STUDY

Public participation process (PPP) is a prerequisite and essential phase of an Environmental Impact Assessment (EIA) process. It plays a vital role in achieving sustainable development, social- and environmental justice. It is a process that ensures that all necessary information regarding a proposed development is collected and is used in the final decision-making in an EIA system (Mathope & Toteng, 2015 and Omenge *et al.*, 2019). It allows the public to be provided with the necessary information about the proposed project and with an opportunity to raise their views and concerns about the proposed plan and right to go to court, especially if there are any deficiencies in the life cycle of the proposed project (Maphanga *et al.*, 2022).

Despite the provisions and the importance of PPPs, it still appears to be neglected in EIA processes and considered as a rubber-stamping exercise (Mnengwane, 2014). Achieving effective and efficient PPPs in EIAs therefore remains a challenge in most of the activities that require an approval of environmental authorisation prior to commencement. Most EIA processes are undertaken through consultative procedures rather than participatory approaches (Ibrahim, 2009). The developers consider PPP to be costly and time consuming, as they are general under pressure to implement and operate the proposed

project. They often view PPPs as never-ending discussions only to achieve insignificant results with conflicts arising (Mohammed and Kurian, 2016 and Atieno, 2019).

Environmental Assessment Practitioners (EAPs) argue that the public often does not have sufficient technical knowledge to make valuable input into environmental assessment and decision-making, and that the process seldom achieves the desired outcome (Moyo, Dirsuweit, & Cameron, 2017). The public is further hindered from participatory activity in the processes through lack of information and transparency, late public consultation and involvement, low level of education, employment status, cultural barriers, gender inequality and other demographic characteristics (Ngonge, 2015).

Public participation has gained a lot of momentum since its emergence in 1969 through the United States National Environmental Policy Act (NEPA). However, hitherto there is no international consensus on what effective public participation entails (Simpson & Basta, 2018) and very often the criterion that is used to measure effective PPP differs from country to country (Kalipa-Mini, 2018). In many developing countries, there is still a lack of legal frameworks to govern PPP in EIA (Mohammed & Kurian, 2016). Some African countries like South Africa, Nigeria, Zimbabwe, Kenya, Tunisia, Malawi, and Uganda have frameworks that guide PPP in EIA, whereas in other countries, there is a minimal guidance of PPP through legal frameworks (Atieno, 2019). Legislation is viewed as an important tool to achieving effective PPPs in EIAs and therefore the adoption of these legal frameworks is considered a major milestone to achieve effective public participation (Atieno, 2019). This study therefore assessed the perceived effectiveness of public participation from three key stakeholders involved in the processes.

1.3 PROBLEM STATEMENT

EIA is one of the most well-known planning tools used in environmental management. The EIA process consists of several stages i.e., “*screening, scoping, impacts analysis, impacts mitigation, EIA reporting, reviewing of EIA report, decision-making and monitoring*” (DEA, 2017). Throughout the EIA process, public consultation needs to take place in accordance with legislative requirements (Ngonge, 2015). The National Environmental Management Act (107 of 1998) subsequently defines public participation as “*a process by which potential*

interested and affected parties are given an opportunity to comment on, or raise issues relevant to the application”.

Despite PPPs being part of the legislative requirements, many studies have found that public participation in EIA is still ineffective (Aregbeshola, 2009; Mnengwane, 2014; Ngonge, 2015; Munch-Peterson, 2017; Moyo, Dirsuweit, & Cameron, 2017). According to Mnengwane (2014) and Schoeman (2017), consultants and developers undertaking EIA applications usually overlook the process of public participation and it is viewed as a regulatory “add on” or “box-ticking” exercise. Public participation is widely adopted as a rigid one-size-fits-all process and the comments raised by interested and affected parties (I&APs) are not always reflected in the conditions of environmental authorisations.

Therefore, this study assessed the effectiveness of public participation for a filling station development within the Capricorn district of Limpopo Province for which an EIA process was undertaken. The perceived effectiveness was measured against the requirements stipulated by guidelines as well as against the characteristics of a comprehensive public participation process as described in literature.

1.4 RATIONALE

Several studies have been undertaken at an international and national level focusing on the effectiveness of public participation in EIA including studies by Aregbeshola (2009); Mnengwane (2014); Ngonge (2015); and Schoeman (2017). However, none looked specifically at the effectiveness of public participation for the proposed development of filling stations in the Capricorn district. According to the report by the Limpopo Department of Economic Development, Environment and Tourism (LEDET, 2018) the Capricorn district records the highest number of the development of filling stations compared to the other four districts of the Limpopo province. Filling stations are therefore one of the most common developments undergoing EIA processes in the Capricorn district.

The report from the Department of Energy indicates that from 2006 to 2016 there was an increase in the development of filling stations, particularly as a channel for expanding the retail services across South Africa. The report further highlighted that many more filling stations will be developed in the future (Ratshomo and Nembahe, 2017). According to the

EIA Regulations (GNR 327, of 2017, activity 14), the development of facilities such as filling stations with a combined storing capacity of 80 cubic meters requires an environmental authorisation before it is constructed.

EIA is internationally recognised as a crucial planning tool that is used to accomplish the three pillars of sustainable development. Public participation in EIA is therefore used to facilitate the sustainable development of projects (Madlome, 2016). Effective public participation for filling stations is, therefore, an important factor for facilitating development that is beneficial to the environment, society, and the economy.

Due to this unprecedented increase in the establishment of filling stations in the district, there is a need for a proper understanding of the effectiveness of PPPs being undertaken to ensure on-going sustainable development. It is important to study how different key stakeholders in PPP of EIA systems, i.e., competent authority, EAPs and the I&APs perceive the entire process of public participation in order to ensure that effective PPP is achieved. Furthermore, effective public participation processes will promote community approval and ownership. In many studies, the economic benefits are often exaggerated to gain support from the community, and it is therefore vital to assess the effectiveness of public participation in EIA projects within the Capricorn district of Limpopo Province to ensure that environment and society is equally represented in the EIA process. This study therefore investigated the perceived effectiveness of PPPs among various stakeholders for the Matseke filling station project.

1.5 AIM

This study aimed to assess the perceived effectiveness of public participation in EIA processes of the Matseke filling station project developed within the Capricorn District of Limpopo.

1.6 OBJECTIVES

To achieve the aim of the study the following objectives was formulated:

1. To determine the factors influencing the level of public participation in the EIA process.
2. To determine how different stakeholders understand the influence of the public participation process on final decision making in the EIA processes.
3. To determine the extent to which the public participation process has an influence on the final decision making of the project.

1.7 THE SIGNIFICANCE OF THE STUDY

The study will contribute to the body of scientific knowledge by determining the perceived effectiveness of public participation in the EIA process for the Matseke filling station in the Capricorn district of Limpopo province. The findings of the study are important in promoting knowledge sharing to enhance effective participation in the EIA process, which is a policy tool in promoting sustainable development. This is essential to ensure that all relevant views and comments from I&APs are incorporated in the final decision-making and to determine how effective public engagement can be promoted. The findings of this study may be used to promote awareness about the importance of the public to engage in activities that are directly and indirectly affecting their livelihoods. It will also assist in understanding of the role, scope and contribution of public involvement in decision-making processes.

1.8 THE LIMITATION OF THE STUDY

Limitations are the potential weakness of the characteristics of methodology that will impact the interpretation of the findings of a study. Due to the global pandemic Covid-19 and with its regulation of minimising physical contact amongst people, it was challenging and time-consuming for the researcher to gather data. The collection of data and access to EIA reports was mainly through online resources. This resulted in delays in accessing the documents and interaction between the researcher and participants. Some of the participants were not familiar with online research data collections tools and this impeded the process of data collection. The researcher did not pilot data collections due time and access of participants caused by the global pandemic Covid-19. However, the limitations were addressed, and the validity of the study ensured through the research design.

1.9 DEFINITIONS OF TERMS

1.9.1 Environmental Impact Assessment

Environmental Impact Assessment (EIA) is the systematic assessment of the possible impacts of development on the environment prior to decision making and commencement of the proposed projects (EADP, 2015). EIA is a tool that is used to assist in environmental decision making and to achieve sustainable development. It is a process that allows the involvement of the public to comment and raise their views regarding the proposed project. The process of EIA is an interdisciplinary and multi-step procedure that is used to identify the significant impacts and alternative measures to minimise the identified impacts (Chi, Xu, & Xue, 2014).

The International Association for Impact Assessment (IAIA) defines EIA as the “*process of identifying, predicting, evaluating and mitigating the biophysical, social and other relevant effects of development proposals prior to major decision being taken*” (IAIA, 1999). For the purpose of this research this definition was adopted.

1.9.2 Public participation

Public participation is “*the ongoing process of interaction between service providers or project implementers and the community with the aim of improving decision making during the planning, design, implementation and evaluation phases of the project*” (Mathabatha & Naidoo, 2004).

In relation to the application for an environmental authorisation for any development Public Participation is defined by the National Environmental Management Act, 1998 (ACT no 107 of 1998) (NEMA) as “*a process by which potential interested and affected parties are given an opportunity to comment on, or raise opportunity to comment on, or raise issues relevant to the application.*”

1.10 STRUCTURE OF DISSERTATION

Chapter one: Introduction

This chapter provides a background of the assessment of public participation in Environmental Management Assessment (EIA) that led to the formulation of the problem statement. The aim of the research and objectives were formulated in order to address the research problem. This chapter also provides the rationale for, significance of and limitations to this study.

Chapter two: Literature review

This chapter provides an overview of existing literature and government documents related to public participation processes in EIA. The chapter gives an overview of perceptions and understanding regarding the effectiveness of public participation processes in EIA. The chapter is structured to provide an overview of the public participation processes followed internationally and nationally, the effectiveness of public participation, the benefits of public participation, and the factors influencing public participation processes.

Chapter three: Methodology and analytical procedures

Chapter three describes the methodology and analytical procedures that were followed to address the research aim and objectives. It includes the research design, research setting, sampling technique, data collection, sampling strategy and data analysis.

Chapter four: Presentation and discussion of findings

Chapter four presents the findings and discussions of the case study of a filling station project in Matseke village in the Molemole Local municipality within Capricorn District, Limpopo province.

Chapter five: Summary, conclusion and recommendations

The summary of the research findings and the conclusion is presented in chapter five. It also presents the recommendation to enhance effective public participation.

1.11 CONCLUSION

This chapter provided a brief background of the assessment of public participation in EIA. The brief background provided in this chapter led to the formulation of the problem statement and the study rationale. The aim of the research and objectives were formulated in order to address the research problem. This chapter also provides the rationale for, significance of and limitations to this study.

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

This chapter provides an overview of existing literature and government documents related to public participation processes in Environmental Impact Assessments (EIA). The purpose of this chapter is to provide an overview of current perceptions and understanding regarding the effectiveness of public participation processes in EIA. The chapter is structured to provide an overview of EIA, the public participation process followed internationally and nationally, the effectiveness of public participation, the benefits of public participation, and the factors influencing public participation processes.

2.2 ENVIRONMENTAL IMPACT ASSESSMENT

Environmental Impact Assessment (EIA) is one of the most widely used tools globally to achieve sustainable development (Glasson, Therivel, & Chadwick, 2019). Although there is variation in the descriptions and definitions of EIA, the key aspects are similar. Swangjang (2018) describes the process of EIA as a necessary planning and managing tool of sustainable development designed to provide information on the likely expected environmental effects of the project to ensure final decisions that are fair and equitable. Madlome (2016) defines the EIA process as an effective tool that is used to envisage the environmental, social and economic impacts of a specific project before the competent authority approves or rejects its development. Several scholars agree that EIA is an essential tool in promoting sustainable development (Khawula, 2015; Madlome, 2016 and Roos *et al.*, 2020).

EIA was first formalised in 1969 in the United States of America (USA) and followed by the United Kingdom (UK) in 1985 (Glasson, Therivel, & Chadwick, 2019). The emergence of EIA in South Africa can be traced back to 1989 under the Environmental Conservation Act (73 of 1989). The act did not cover all aspects of the environment and largely focussed on conservation. There was therefore a need for new legislation to cover the entire range of environmental concerns (Madlome, 2016).

The supreme law, which is the Constitution of South Africa (Act 106 of 1996), contains the Bill of Rights. Section 24 of the Constitution stipulates that *“Everyone has the right to an environment that is not harmful to their health or well-being; and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development”*. Section 24 of the Bill of Rights gives effect to the environmental rights of South Africans and provides the foundation for the National Environmental Management Act (107 of 1998). The NEMA (107 of 1998) provides the guiding legislative principles related to the management of the environment to ensure environmental, social and economic justice. In September 1997, EIA regulations were first published in terms of Sections 21 and 26 of ECA (Act 73 of 1989). Subsequently, the EIA regulations were amended in terms of NEMA (Act 107 of 1998) in 2006, 2010, 2014 and the latest amendment was published in 2017 (Mubanga and Kwarteng, 2020).

NEMA: EIA regulations contain listed notices with identified activities that may have a significant impact on the environment. The listed identified activities require an environmental authorization by the responsible competent authority before its commencement. Public participation processes should be undertaken for all the listed activities as part of EIA processes before major decisions are taken and when all alternatives can still be developed and considered (De Oliveria & Partdario, 2020).

The South African NEMA: EIA regulations (1997; 2006; 2010; 2014 and 2017) are grouped into three listing notices. Listing 1 notice covers activities with lesser environmental impacts and a Basic Assessment Report (BAR) is submitted for such activities. Listing 2 cover activities that may present a significant harm to the environment and a full EIA report is a prerequisite. Listing notices 3 is for a sensitive and protected environments for all nine provinces of South Africa and requires the submission of a BAR to the competent authority.

2.3 PUBLIC PARTICIPATION IN ENVIRONMENTAL IMPACT ASSESSMENT

The process of EIA consists of sequential steps i.e.: *“screening, scoping, impact analysis, mitigation and impacts management, reporting, reviewing of an EIA report, decision-making,*

and monitoring". Public participation processes should typically be applied in all these steps of an EIA process. However, public participation activities are most intense and concentrated more during the scoping and review steps. The best EIA system practices the involvement of the public at various points throughout the process (Clarke & Vu, 2021). Figure 2.1 illustrates the various steps of the EIA process and how it links with other steps in the process. The figure adopted from UNEP, 2002 also illustrates where public participation should generally feed into the process.

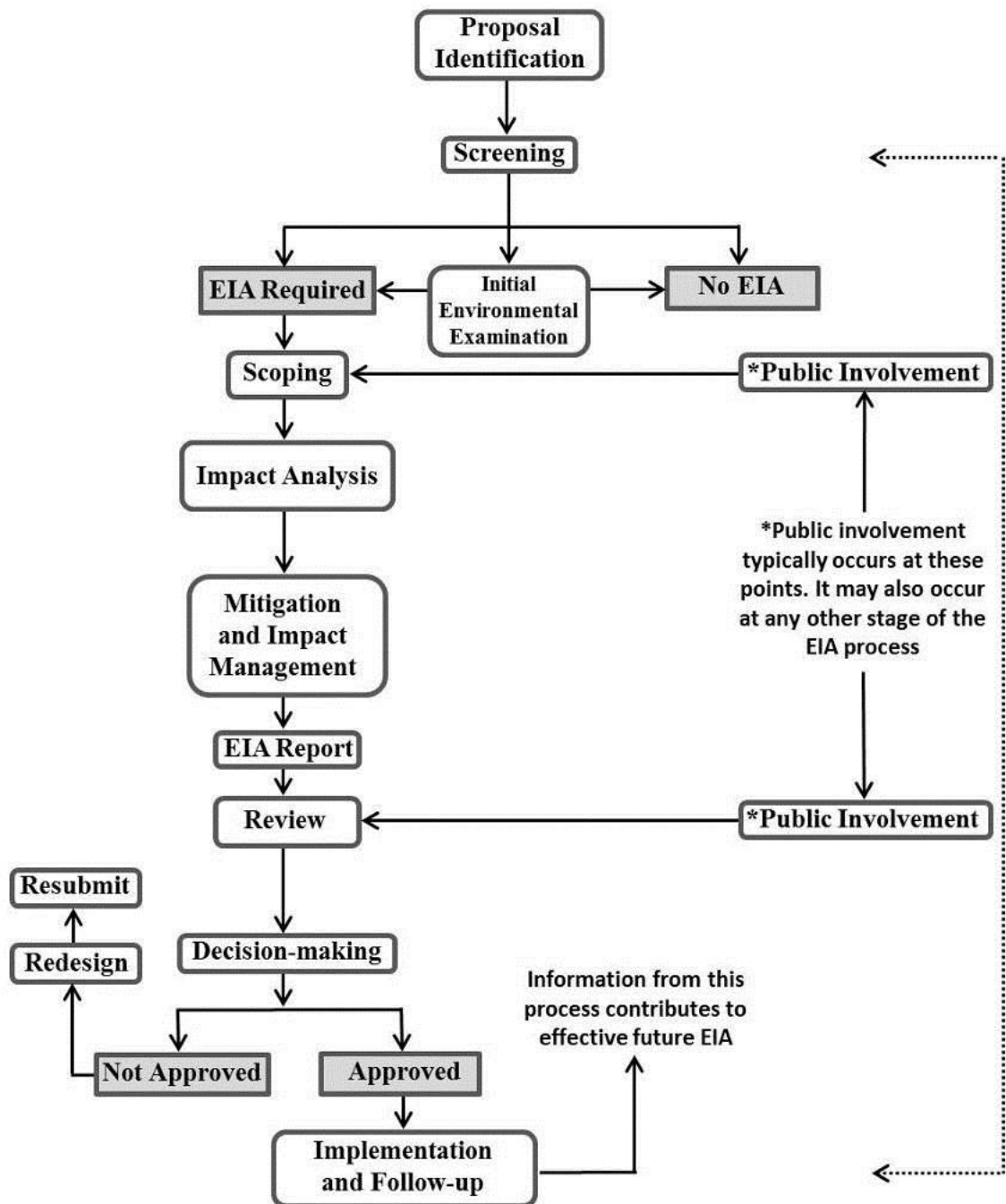


Figure 2.1: Generalised EIA Processes Flowchart (Adopted from UNEP, 2002)

The screening process aims at determining on whether a full EIA or Basic Assessment process is required for a specific proposed project. As previously mentioned, a Basic Assessment is undertaken when a development is expected to have lesser significant and more predictable impacts and does not require a full scoping process. A full EIA is for activities that are expected to have more significant impacts and full scoping process is required as a basis. PPP is required for both full EIA and basic assessment processes and approached in a similar way in line with the NEMA: EIA Regulations (2017).

Scoping is usually undertaken once screening is completed. It is aimed at determining the key issues and alternatives to be addressed and investigated. It is regarded as a key step as it lays the foundation for an effective EIA process (Kanu, Tyonum & Uchegbu, 2018). This is also the step where public participation is largely focussed and concentrated. Scoping should be conducted in a transparent manner to ensure fair and equitable access to information by all stakeholders. It is compulsory to involve all necessary stakeholders in this phase in order to address all major environmental issues and concerns (Hassan, Nahduzzaman & Aldosary, 2018). This stage is also the stage where I&APs are identified through advertisements, written notices and poster notices are required by the NEMA: EIA Regulations (2017). Potential different stakeholders are provided the opportunity to register as I&APs to partake in later phases of the EIA process.

Impact assessment involves the assessment and investigation of issues addressed during the scoping phase. Impact assessment involves the use of specialist studies. Specialists investigate and assess the issues addressed during the scoping phase. During this step, the significant impacts are assessed and possible measures to minimise the negative impacts and enhance the positive impacts are recommended (Hassan, Nahduzzaman & Aldosary, 2018). This is a stage in the EIA processes where the PPP usually only involve those that are registered as I&APs during the scoping phase. At this stage it is not required to advertise the process again, but it is required that all registered I&APs are informed of the way in which they can make representations.

The impact assessment stage is followed by reporting. The EIA report should give a detailed account of the likely significant impacts of a proposed project. It should include a detailed discussion of the viable alternative measures to mitigate potential significant impacts (Madlome, 2016). PPPs are also recorded, in detail, in the comments and response report. According to Chapter 6 of NEMA: EIA Regulation 59, the comments and response report

should accompany the EIA report in question when submitted to the competent authority. EIA reports are submitted to the competent authority for review, consideration and decision making.

The review step determines the adequacy of an EIA report. It is the key quality control function within any EIA system. It assures the completeness and quality of an EIA report and ensures that comments from the PPP are taken into consideration (Western Cape Government Environmental Affairs and Development Planning, 2015). The final stage is decision-making. This is a stage where the competent authority decides whether to approve or reject the environmental authorisation application. NEMA: EIA regulation (2017) further gives specific timeframes after a decision is finalised. The EAP is given 14 days to inform the I&APs about the final decision taken and they are also given a timeframe of 20 days to appeal the decision.

2.3.1 Public participation in the international context

The US National Environmental Policy Act (NEPA) introduced public participation as part of EIA in 1969 (Glunker *et al.*, 2013 and de Oliveria & Partdario, 2020). Since the introduction of public participation by the NEPA, the importance of engaging with the public in decision making has gained momentum across the globe. One of the conferences that emphasized the importance and the need of public participation in decision making is the United Nations Conference on Environment and Development (UNCED) also known as the “Earth summit” held in Rio de Janeiro in 1992 (UNCED,1992). Principle 10 of the declaration from this conference states that “*Environmental issues are best handled with the participation of all concerned citizens at the relevant level.*” The Rio declaration was signed by over 172 countries which contributed to the adoption of public participation processes globally (UN, 1992).

In 1998 the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) was entered into by various international parties. This convention set out and describes the minimum requirements for public participation in various categories of environmental decision-making. It is the most ambitious venture that further elaborates the principle 10 of the Rio

Declaration in the environmental democracy (UN, 1992). The Aarhus convention promotes the right of access to information pertaining to the environment and encouraged public participation in decision making to ensure justice in environmental matters (Decadt, 2001).

The Aarhus convention gave the public the right to participate in environmental decision-making and access to environmental information in activities such as EIA processes. The Aarhus convention recognizes that sustainable development may be most efficiently achieved through the involvement of all stakeholders by adopting a new approach for public participation through the implementation of global agreements. The Aarhus convention addresses issues of government accountability, openness, and responsiveness in addition to the environmental decision-making and access to environmental information (Decadt, 2001 and Peters, 2018).

Despite the developments in the field and the widespread agreement that public participation is essential to achieving sustainable development there is little consensus on what effective public participation should entail. The process of public participation is largely guided by legislative, political, and administrative provisions of a country (Murombo, 2008). The Netherlands and Denmark are examples of countries with a history of well recorded and effective public participation processes mainly because of early public involvement (Glunker *et al.*, 2013).

Previous studies highlight the importance of early public involvement (Aregbeshola, 2009; Glunker *et al.*, 2013; Simpson & Basta, 2018). Early involvement of affected parties affords them the opportunity to raise their concerns regarding the location and type of development to be undertaken. This empowers the public to reflect their needs in the process and subsequently grants them an opportunity to influence and coproduce the environmental authorisation outcome (Chi, Xu & Xue, 2014 and Hassan, Nahduzzaman & Aldosary, 2018). Early public participation assists in building trust between developers and the public, while saving time and improving the screening, and scoping stages in an EIA process (Aregbeshola, 2009).

2.3.2 Public participation in South Africa

South Africa was governed within the framework of segregation, oppression and apartheid in pre-1994 wherein inequality and discrimination was the norm. The policies enhanced white domination over black people and engagement by members of the public on important planning matters were restricted to the ruling minority (Ngcamu, 2019). New legislation was adopted under the post-1994 ruling government on the 8th of May 1996, when the South African Republic Constitution Act 106 of 1996 was promulgated. The new legislation upheld that all citizens have a right to involvement in decision-making (Hoosen, 2010). This new legislation referred to as the Constitution of South Africa Act (106 of 1996) entrenches human rights of access to information and participation in activities that might affect them. This is entrenched in the Bill of Rights of the Constitution of South Africa (106 of 1996). Sections 24, 32, 59, 72, 118 and 152 of the Constitution (1996) upholds the right of communities and stakeholders to participate and be involved in decision making processes that could influence their livelihoods (Republic of South Africa, 1996 and Kalipa-Mini, 2018). Section 24 of the constitution led to the promulgation of NEMA Act 107 of 1998. The Act was put into place to protect the environment and improve public involvement in decision-making. Section 2 (4) (f) of NEMA Act 107 of 1998 encourages the participating of I&APs and it is as follows:

“The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation and participation by the vulnerable and disadvantage persons must be ensured”.

As per widely adopted practices in South Africa public participation can be in a form of informational meetings, public hearings, and opportunities to provide written comments using questionnaires or open-survey participation (Johnson, 2020).

Aregbeshola (2009) states that, South Africa has a better and much more effective public participation process compared to other African countries because of a well stabilized public-private partnerships in terms of the environmental sector. In South Africa the parameters and level of public participation are further shaped not only by the legal and institutional framework, but also by other variables like the social and economic characteristics of I&APs (Murombo, 2008). Employment status, education level, and gender

are some of the socio-economic characteristics that influence the level of public participation (Mohammed & Kurian, 2016). The socio-economic characteristics can impede the public to effectively participate in PPP (Atieno, 2018). A study on the effect of socio-economic status on public involvement in South Africa was conducted by Lindeque and Cloete in (2005). According to the study, people with better socio-economic status are more worried about the impact of the development of projects in their areas than people with lower socio-economic status.

Public participation is a concept that means different things to different people (Aregbeshola, 2009). Every person has their own understanding of what public participation is and what it entails affecting the effectiveness of public participation negatively (Murombo, 2008). Even the word "public" is a vague term and misleading because it includes every citizen regardless of their association and thus this cause non-decision authorities and private sectors to feel excluded from PPP. This prompted some institutions such as Department of Environmental Affairs and Tourism (DEAT) to simultaneously use it with the term "stakeholder involvement" (DEAT, 2002 and Aregbeshola, 2009). The process of public participation varies from region to region and even within a country, there are often discrepancies in the quality and extent of public involvement in the EIA process (O'Faircheallaigh, 2010). The level of involvement often depends on the varied understanding of the concept 'public participation' and the type of project being considered and the communities that may be affected (Kalipa-Mini, 2018).

The International Association for Impact Assessment (IAIA, 1999) defines public participation in the context of environmental assessment as "*the involvement of individuals and groups that are positively or negatively affected, or that are interested in, a proposed project, programme, plan or policy that is subject to a decision-making process*". NEMA (ACT no 107 of 1998) defines public participation as "*a process by which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to the application.*" Public participation can therefore be considered an engagement opportunity by means of different methods and techniques between the developers, consultants and the I&APs and must be undertaken throughout the EIA process. It allows I&APs to raise concerns and views for consideration in the decision-making process (Schoeman, 2017). Based on the varied understanding of public participation this research, therefore attempted to explore these differences in understanding of the effectiveness of public participation between key stakeholders.

2.4 OBJECTIVES AND CORNERSTONES OF EFFECTIVE PUBLIC PARTICIPATION IN EIA

Aregbeshola, (2009), Glunker *et al*, (2013) and Schoeman (2017) proposes three objectives that should be included in all public participation processes and Mnengwane, (2014) proposes four cornerstones on which effective public participation should be build. This section presents and illustrate how the objectives are supported by the cornerstones. This section of the literature review further illustrates how the objectives and cornerstones are reflected through legislation.

2.4.1 The objectives of effective public participation

Public participation in EIA has several objectives that can be categorized into three groups i.e., normative, substantive and instrumental. These three objective groups are the goals that are to be achieved when conducting public participation processes. They explain why public participation processes an essential and integral part of an EIA system. An effective process of public participation should ensure that all these three categories are integrated into the process of public involvement (Aregbeshola, 2009; O'Faircheallaigh, 2010; Glunker *et al.*, 2013; Mnengwane, 2014 and Simpson & Basta, 2018). The section below further elaborates on the three objective groups of public participation.

The normative objective involves the democratic perspective and promotes maximum public participation. It encourages and decrees rights to the public to influence environmental decision-making. According to Petts (2003), every member of the public has “*the right to be informed, to be consulted and to express his or her views on matters which affect them personally.*” The public participation process is an essential phase in the process of environmental decision-making, as it determines the quality of decision making to achieve sustainable development (Simpson & Basta, 2018 and Hassan, Nahduzzaman & Aldosary, 2018). In accordance with the normative objective, the public has the right to influence decision-making on all matters that is directly or indirectly affecting them.

According to Glunker *et al*, (2013) it is unethical and undemocratic not to provide the opportunity for the public to participate in EIA processes. The public however often considers public participation processes as a “*tick-box exercise*” where the decisions have already been made prior to the engagement. The true essence of public participation processes is that the public should participate in all stages of EIA and eventually influence the final decision (Kanu, Tyonum,& Uchegbu, 2018. Hassan, Nahduzzaman & Aldosary, 2018).

Substantive participation allows the non-experts to identify problems and issues and provide solutions where experts or specialist might have overlooked the issues. It is ultimately aimed at collecting as much information as possible from all stakeholders with the goal to enhance the quality on decisions making. It eliminates the issue of power and bias; hence all information from all stakeholders is valued and considered necessary (Schoeman, 2017). In most cases the biggest challenge arises from the assumption by developers or consultants that the public are the recipients of information from project managers and decision makers and not participators (Kanu, Tyonum & Uchegbu, 2018)

The substantive objective maintains that stakeholders provide a diversity of valuable information such as historical, experimental and value-based knowledge. Value-based knowledge is grounded and built on individual common sense, experience, social interest and perception of a social value. The quality of decision-making in EIA is enhanced when the decision-makers retrieve this diverse information from different stakeholders (Glunker, *et al.*, 2013). For the benefit of protecting the environment, it is essential that scientific findings and predictions are supported with information regarding value-based knowledge and scrutinised by various stakeholders (Johnson, 2020). The process of public participation is very useful in assisting the decision-makers to generate information from different stakeholders about social, environmental and economic concerns of the proposed project (Johnson, 2020). The substantive objective is flexible, in that if ever new information become available, it adapts and reassesses the basic details of the initial problem and adjusts based on the new information received (Aregbeshola, 2009). This study incorporated an assessment of whether the substantive objective was adhered to during the public participation process of the case study of the Matseke filling station.

The instrumental perspective is focussed on generating legitimacy, confidence, trust, and credibility within and of the project. Generating legitimacy is the most important objective of public participation in EIA. The instrumental objective is aimed at reducing conflicts or finding

resolutions where conflicts are encountered among the developers, government and the stakeholders and it grants the opportunity to justify decisions implemented (Mnengwane, 2014). Public participation in EIA provides the mechanisms for the identifying conflicts and finding resolution of conflicts before a final decision is considered (Munch-Peterson, 2017).

2.4.2 The cornerstones of effective public participation

The key information regarding effective public participation is found within the four cornerstones, namely purpose cornerstone; people cornerstone; method and document cornerstone; and evaluation participation cornerstone. These cornerstones echo the basic requirements that ensure that effective public participation is achieved (Schoeman, 2017).

The *purpose cornerstone* determines the rationale and objectives behind commencing the process of public participation, the motive for inviting specific stakeholders, their role in the process, and how the set objectives will affect the public (Miskowiak, 2004:7). Transparency in communicating the objectives promotes awareness and education making the process easier to undertake (Miskowiak, 2004, Nadeem & Fischer 2012). According to Scott and Ngoran, (2003), identifying goals and objectives of undertaking the process of public participation; identifying relevant stakeholders and public; recording and considering the public efforts and inputs; and identifying convenient communication techniques are crucial criteria that developers should consider in achieving effective public participation. These prerequisites help to determine and evaluate the success of public participation. Effective public participation is characterized by the different stakeholders that are willing to participate with full information, given access to decision-making and implementing its key objectives (Khawula, 2015).

The people cornerstone involves identifying and selecting the appropriate stakeholders to participate. The stakeholders may include the I&APs, adjacent landowners, and local and regional government officials from various departments. The stakeholders must be informed at an early stage to ensure that they engage when the planning phase commences (Kamijo, 2022). The people cornerstone is deeply entrenched in the NEMA Act 107 of 1998 Section 24J where the Act has made a list of relevant of stakeholders

The method cornerstone is focussed on selecting the correct and effective methods to be used for the public participation process. Selecting the correct technique of communication between the developers and the public is vital to achieve effective engagement between the EAPs and the stakeholders. It is essential to select a technique that is convenient and accessible for the targeted stakeholders and that will encourage dialogue between the facilitator and stakeholders (Khawula, 2015).

There is no consensus of what effective public participation in EIA entails (Murombo, 2009 and Mnengwane, 2014). It is guided and shaped by national policies and legislation and involves many aspects. Public participation processes differ in terms of its objectives and socio-political contexts (Kanu, Tyonum & Uchegbu, 2018). Effective public participation is described through specific criteria stipulated in the legislative requirements of different countries (Kalipa-Mini, 2018). In South Africa, public participation in EIAs is governed and regulated by NEMA, Act 107 of 1998.

In 2017, DEA published guidelines and characteristics of a comprehensive PPP. The guidelines highlighted some key aspects of effective and comprehensive public participation processes including early public involvement, public influence on decision-making, public access to adequate information, inclusion of all stakeholders, and opportunity for the role-players to voice their support, concerns and questions regarding the application, decision or the life cycle of a project (DEA, 2017). This entrenches the people and method cornerstones of effective public participation.

According to Nadeem and Fischer (2012) that found that for public participation to be effective it should consider the following aspects: meeting the legal requirements of the country, the use of efficient methods for informing and inviting stakeholders, access and transparency of information, accessibility of venues, adequacy of time given for written comments and raising concerns and considering public concerns and comments in final decision making. Furthermore, the use of easily accessible and convenient methods of notification and proper communication skills between the developers and I&APs are essential (kamijo, 2022). Accordingly, the NEMA: EIA regulations (2017) require the placement of an advert in a local, provincial or national newspaper depending on the type and scale of the project, distributing written notices and fixing a notice board of not less 46cm x 60cm to the boundaries of a site as methods of notification.

The document and evaluate cornerstone provide meaningful and purposeful reasoning to the public, outlines the context of procedures for evaluation and documents the process' activities and outcomes. The public can witness how their contribution has influenced the final decision-making process through documentation and records. It is much easier to track and evaluate the progress when the information provided by the stakeholders is documented and it becomes simpler to identify problematic areas which must be addressed (Khawula, 2015). The EIA regulations recommends that the EAP should have a copy of complaints or comments submitted by the I&APs. These comments are submitted together with the EIA reports for final decision making. The environmental authorisation granted by the competent authority has specific conditions that must be adhered throughout the life cycle of a project. These conditions also incorporate comments made by the I&APs. This study determined to what level various stakeholders considered these objectives to have been observed within the public participation process of the case study.

2.5 THE BENEFITS AND CONSTRAINTS OF PUBLIC PARTICIPATION IN EIA

2.5.1 The benefits of public participation in EIA

There are numerous benefits associated with public participation processes that are shared by both developers and the public as public participation is a two-way process where there is a mutual benefit between the public and developers. Both developers and the public learn and exchange ideas. Public participation is generally known for strengthening democracy (Kock, 2017) and the participatory process gives the public a platform to exercise their democratic rights and authority to influence decision-making (Kanu, Tyonum & Uchegbu, 2018)

Moreover, public participation is an essential tool for increasing accountability and good governance within a system. It allows government to take accountability for the final decisions made and actions taken (Sandham *et al.* 2019). The public assists in ensuring that the decision made by government is taken in a responsible manner and that the decision-makers are held accountable for their actions (Clarke & Vu, 2021). It allows interaction between the citizen and decision makers in such a way that the public is afforded an opportunity to have decision-makers justify and account for their actions (Kock, 2017).

The process of public participation is also useful in managing the conflicts and reaching resolutions. Different stakeholders can assess the environmental, economic and social impacts in order to identify the most suitable solution that promotes sustainable development while promoting fair representation of all stakeholders (Kanu, Tyonum & Uchegbu, 2018). Effective public participation is essential in improving the quality of decision-making (Bastidas, 2004).

Effective public participation is also beneficial to achieving the objectives of empowerment and political stability. Public participation is useful because the public is empowered with skills, knowledge and values. Government can increase its popularity through the process of public participation which in turn may advance social and political stability (Bastidas, 2004 and Aregbeshola, 2009).

2.5.2 The factors hindering public participation process in EIA

The benefit of public participation is clear from the previous section however public participation processes are still subjected to factors that can hinder the successful and effective implementation thereof. Government authorities desire efficient, streamlined processes; developers want short, cost-effective processes; the consultants' desire smooth, effective processes; and the public want a process where their inputs receive meaningful attention (McDaid & Kruger, 2004).

One of the major factors hindering a successful public participation process is the lack of access to information. Limited access to information becomes problematic particularly to developing geographical locations that are remote and marginalised (Atieno, 2019). Within these geographical locations the methods of and access to communication becomes challenging. Most global EIA regulations have recommended the use of newspapers as a way of conveying information to I&APs whereas remote areas have limited access to internet connectivity and access to newspapers (Glunker *et al.*, 2013, Kanu, Tyonum & Uchegbu, 2018 and Kamijo, 2022). Similarly, NEMA Act 107 of 1998 Section 24J stipulates the use of these methods as per extract below:

Section 24J of NEMA is as follows:

- (i) The owner or person in control of that land if the applicant is not the owner or person in control of the land;*
- (ii) The occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;*
- (iii) Owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;*
- (iv) The municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;*
- (v) The municipality which has jurisdiction in the area;*
- (vi) Any organ of state having jurisdiction in respect of any aspect of the activity; and*
- (vii) Any other party as required by the department*

Despite these provisions the method of communication can determine the reach of the information and, depending on the selected methods, it can potentially hinder effective public participation processes, for instance an EAP decides to use a method of communication that is not familiar to the community area. The method won't reach larger I&APs and thus PPP will be limited (Clarke & Vu, 2021).

Nadeem and Fischer (2012) in their study found that the public could not efficiently access information and therefore they had limited influence on the final decision-making. This was largely due to geographical and physical barriers making it difficult for I&APs to access the required information. The EIA reports of these projects were placed in libraries and could only be seen during working hours. Mohammed and Kurian, (2016) further found that the lack of access to information and low literacy levels negatively affects the level of public participation in the EIA processes in South Africa. A study conducted by Hoosen (2010) found that I&APs were not satisfied with the way in which EIA processes and the public participation process in four case studies in south Durban were advertised. The I&APs outlined that the newspapers in which these adverts were placed, were not suitable, and language used was not relevant. They found that the information did not reach the majority of the potential I&APs that were likely to be affected by the proposed projects.

The socio-economic factors impeding public participation include low level of education, low-income status and remote geographical location (Ngonge, 2015 and Kanu, Tyonum & Uchegbu, 2018). The level of education is generally associated with the ability to read and write or the application of acquired skills into the real world. The ability to read and write is

crucial in EIA systems. Participation is usually limited for persons with no or limited education. Several studies also found that when the affected community members have a high level of literacy, they tend to show more willingness to engage in community activities (Joshi & Houtzager, 2012, Brombal, Moriggi & Marcomini, 2017 and Atieno, 2019). People with higher income or people with stable employment have more opportunities to participate, dominate discussion in public meetings and their inputs are more likely to be considered as priority when compared to those with low income and unemployed people. Unemployment and lower income level therefore affects public participation negatively (Ngonge, 2015).

Other demographics characteristics such as sex, ethnic group, religion and location also affect public participation (Ferragina, Tomlinson, & Walk, 2013 and Atieno, 2019). To address this, the Rio declaration includes principles 20 and 21 that encourage participation of women and youth in environmental management and development (Rio Declaration, 1992). In some areas women are however still restricted from participating and raising concerns in community activities (Nzewi & Sikhosana, 2020).

Transparency is an issue that affect public participation negatively and lack of transparency nurtures mistrust, misunderstanding and conflict between developers and stakeholders negatively influencing the attainment of objectives (Atieno, 2019). According to Gera, (2016) the strength of public participation processes is often reduced by the limitations in legislation on providing access to information. Ngonge, (2015) states that the availability of information to the public is restricted as the majority of the population have no or limited understanding of what EIA processes entail. The majority of the people are therefore not aware of the important role they are required to play in EIA processes as illustrated in the study by Khawula, (2015) that found that 60% of the participants did not understand what is meant by public participation. An effective participatory process should also ensure that there is a two-way flow of information between the affected public and the consultants (Clarke & Vu, 2021). However, a study by Mohammed and Kurian (2016) found that respondents felt like the facilitator did not provide enough information about the project and potential impacts was not fully explained. Hoosen (2010) in their study found that respondents expressed concerns that not all relevant stakeholders attend public meetings and respondents questioned the transparency of the process as a result of this.

Delayed public consultation has been a concern for several decades. Kakonge (1996) found that the public participation process was delayed on the Kiambere Dam Project in Kenya

and the conflicts that arose were threatening the funding of the project (Kakonge, 1996). Similarly, as study by Ngonge (2015) found that the public participation was undertaken in a later stage of the project cycle hence it could not influence the design of the southern bypass road project in Nairobi.

The major challenges identified through the literature include limited access to information, transparency, late public involvement, literacy level, gender inequality and employment status. These limitations threaten the objectives and cornerstones of effective public participation and ultimately the attainment of effective public participation. The study identified similar challenges as expressed by the stakeholders which is discussed in detail in Chapter 4.

2.6 CONCLUSION

This chapter furnished a comprehensive discussion and a background of the public participation process, its objectives, cornerstones, benefits, factors hindering public participation and an analysis of the effectiveness of current public participation processes. A review of important international and national documents is discussed in the literature review. It is clear from this review that there are several factors that influence public participation. Despite the various efforts to improve public participation processes there are still several challenges to achieving effective engagement. There is therefore a need to understand the perceived effectiveness of these processes to contribute to the debate to improve these processes in future.

CHAPTER THREE: METHODOLOGY AND ANALYTICAL PROCEDURE

3.1 INTRODUCTION

This chapter describes the research design that was used to collect and analyse data. The research design is a plan that describes the methods of where, when and how to collect and interpret data (Marshall & Rossman, 2003). Therefore, this chapter will describe the different structures of plans that were employed for this study. The structures are research setting, sampling technique, data collection, sampling strategy and data analysis.

3.2 RESEARCH SETTING

The research was undertaken at Matseke village (also known Botlokwa) within Capricorn district of Limpopo province. The study uses the development of a filling station as a case study. The filling station is located on the farm Klipbok 767 LS at Matseke village within Molemole Local Municipality of Capricorn District, Limpopo Province, South Africa. Figure 3.1 shows the study area. The geographic coordinate of the filling station project is S 23° 30' 11.02" and E 29° 43' 11.2". According StatsSA (2011) the village consist of 93% of the population using Sepedi as their home language with a total number of households of 1645.

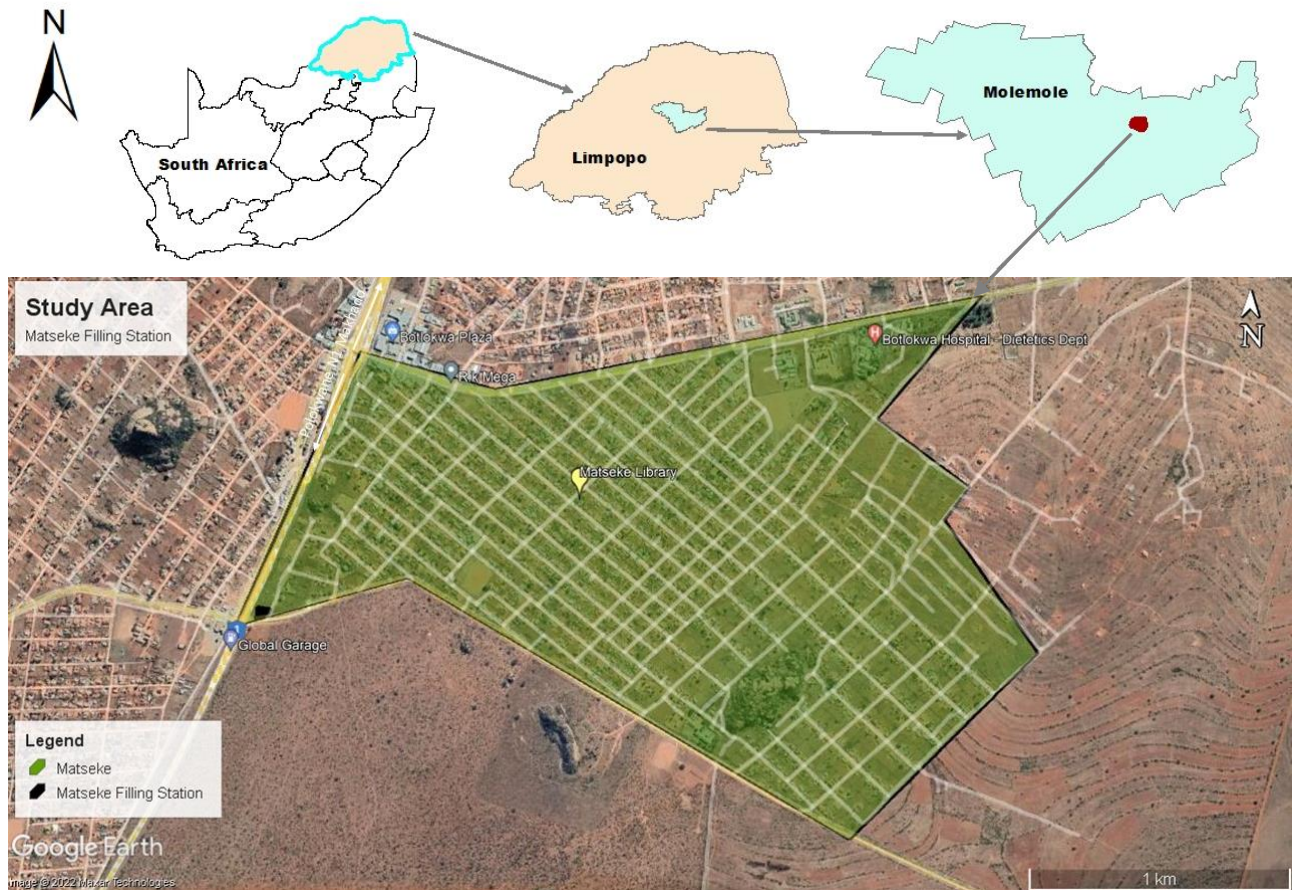


Figure 3.1: Study area

3.3 RESEARCH DESIGN

The study was descriptive and exploratory in nature. Therefore, a qualitative research approach was pragmatic for this study. A qualitative research design was selected because the study was based on an in-depth investigation and understanding of the effectiveness of public participation in EIA based on the perceptions of key stakeholders of the process. A case study approach was used to gain an in-depth understanding of the effectiveness of public participation in EIA projects in the Capricorn district.

3.4 SAMPLING TECHNIQUE

The study assessed the perceived effectiveness of the public participation in EIA for a development of an activity listed in terms of NEMA: EIA Regulations (GNR 327, of 2017, activity 14). The project identified for this study was a filling station project located in a rural area with limited resources and poor access to services delivery. The Matseke filling station development triggered a listed activity in terms of the NEMA: EIA regulations (2017) and the Basic Assessment Report (BAR) was submitted to the competent authority, the Limpopo Department of Economic Development, Environment and Tourism (LEDET). The project was selected as it was already in operation, had obtained the relevant environmental authorization and had undergone the relevant EIA process in January 2018.

Three key stakeholders were identified for the purpose of this study. Two key informants were identified and included the official from LEDET representing the competent authority and a representative of the EAP responsible for the project. The involvement of the three different role players can be summarised as follows:

- Competent Authorities (government officials): Responsible for granting or rejecting Environmental Authorisation.
- Consultants (EAPs): Coordinators of the EIA public participation process. EAPs advocate for the environment however they are appointed by the applicant or developers of the project.
- I&APs: It includes any person or group of people or organisations that are interested in or affected by the project development. For instance, it can be the local municipality where the proposed project is undertaken, or public located in proximity of the proposed project.

The sample size for I&APs was calculated using Slovin's (1960) formula below, where N is the total number of registered interested and affected parties for the project as contained in the EIA report, and e is the accepted level of error of 0.05. The respondents were selected randomly. The EIA report document and environmental authorization was sourced from LEDET. A total of 90 I&APs initially registered for the public participation process and based on the formula 16 were identified to participate in the study.

$$\begin{aligned}
S &= \frac{N}{1 + N(e)} \\
&= \frac{90}{1+90(0.05)} \\
&= 16
\end{aligned}$$

3.5 DATA COLLECTION

The proposed study used a self-administered questionnaire consisting of closed and open-ended in-depth questions and interviews where more information was required to gain in-depth understanding of the perspective of the different stakeholders regarding the public participation of the project. Therefore, two types of questionnaires (See Appendix A and B) were developed to gain insight from key stakeholders i.e., the consultant (Environmental Assessment Practitioner – EAP); the competent authority (government official) and the interested and affected parties (I&APs).

The researcher developed the questions for the self-administered questionnaires guided by the study objectives. Due to Covid-19 restrictions, face-to-face engagement was limited. The research therefore made use of a questionnaire to gain an in-depth understanding of the perceptions of the two key informants. The questionnaires were circulated via email to the two key informants. The circulation of questionnaires to I&APs through e-mail did not get the desired response rate and the researcher obtained permission to engage with them through physical data collection. This also assisted in gaining an in-depth understanding of their perceptions. The researcher conducted a once-off information session of about five minutes beforehand, where the researcher explained the research topic and provided assurance of anonymity. Participants were also afforded the opportunity to sign an informed consent form. Due Covid-19 restrictions the researcher was not able to pilot the data collections.

3.6 DATA ANALYSIS

Objective 1: To determine the factors influencing the level of public participation in the EIA process.

Thematic analysis was used to analyse the above objective. For familiarization, the researcher viewed over the information collected through the Google forms surveys and interviews multiple times. The researcher highlighted and coded the responses into different themes. For instance, participants provided challenges that they faced during the PPP of Matseke filling station project. Different views and opinions were stated and coded to create themes such as language as a factor hindering effective PPP, comments from I&APs, methods of informing I&APs and stage of public participation. The themes were further reviewed and defined. The researcher then presented the findings of factors that influenced PPP in the case study. The six steps of thematic analysis were repeated to identify other major themes.

Objective 2: To determine how different stakeholders understand the influence of public participation process on final decision making in the EIA processes.

Thematic analysis was also used to analyse the above objective. The researcher followed the six-step process of thematic analysis, i.e., familiarization, coding, generating themes, reviewing themes, defining themes and writing up or producing the report. Different themes were generated from the information collected from the participants. The themes include roles and responsibilities played by different stakeholders, communications of different stakeholders, opportunities provided to different stakeholders. Thematic analysis is a good approach to finding people's views and opinions about certain aspects (Braun and Clarke, 2006). Therefore, thematic analysis was considered appropriate to analyse the data on how stakeholders perceive and understand public participation processes.

Objective 3: To determine the extent to which the public participation process has an influence on the final decision making of the project

Marshal and Rossman (2003) define data analysis as the process of conveying order, summarising, and interpreting the data collected. To achieve this objective Likert-scale and open-ended questions were used and therefore, two methods of analysis were used. For open-ended questions, the researcher used the document analysis to give voice and

meaning to the data provided. The Basic Assessment Report (BAR) and environmental authorisation was used as documents that aided in analysing the data to corroborate what respondents had indicated in their answers. Likert-scale questions were analysed using descriptive statistics. Bar charts and tables were used to present the findings. The software called Statistical Package for Social Science (SPSS) version 24.0 was used to analyse the data.

3.7 ETHICAL CONSIDERATIONS

This study involved engagement with human subjects and the researcher applied for ethical clearance from the University of Limpopo's Turfloop Research and Ethics Committee (TREC). The nature and purpose of the study as well as the ethical considerations was explained in full to all participants. The respondents were required to sign an informed consent before taking part in the study that indicating that they understand the nature and process of the study. It was explained that the participation was voluntary and there was no remuneration offered for participating in the study. The anonymity and confidentiality were also assured to the respondents, and they were assured that the information they provide was used for academic purposes only.

3.8 CONCLUSION

This chapter describes the procedures or techniques that were used to identify, select, process and analyse the data collected for the assessment of the effectiveness of public participation in EIA for the selected case study of Matseke filling station development. In chapter 4 the study discusses the analysis and findings from the research.

CHAPTER 4: RESULTS AND DISCUSSION OF FINDINGS

4.1 INTRODUCTION

This chapter presents the findings from the case study of Matseke filling station development in the Limpopo province, Capricorn District. A detailed description of the selected case study is contained in Chapter 3.

The study targeted two key informants from the project i.e., the Environmental Assessment Practitioner (EAP), and the government official from LEDET representing the competent authority. Interested and affected parties (I&APs) were identified as participants to provide a perspective on their understanding of the public participation process in the selected case study.

The aim of this study was to assess the effectiveness of public participation in EIA processes of the selected filling station project.

The following objectives were set in order to achieve this aim:

1. To determine the factors influencing the level of public participation in the EIA process.
2. To determine how different stakeholders understand the influence of the public participation process on final decision making in the EIA processes.
3. To determine the extent to which the public participation process has an influence on the final decision making of the project.

In the following sections, the objectives are each addressed through the methods adopted for the analysis of the data collected for the study.

4.2 FACTORS THAT INFLUENCE THE LEVEL OF PUBLIC PARTICIPATION PROCESS IN EIA

During the thematic analysis of the data, the researcher identified five main themes regarding the perceived factors that influence public participation. The themes identified were effects of demographic characteristics on public participation, methods used for notification, methods of notification and language, methods of participation and stages of participation. These themes are discussed under separate headings below.

4.2.1 Effects of demographic characteristics on public participation

Based on the research design, 16 registered I&APs were randomly selected to participate in the study. This section provides an overview of the demographic characteristics of the respondents and links the findings to the literature.

Table 4.1 below shows three variables of demographic elements i.e., gender, age groups and education level of this study. Most of the respondents (6) had obtained a national higher certificate, meaning that they have completed grade 12. A quarter (25%) of the respondents had only attended a primary school of which three (3) were female. Respondents with no formal school at all represented 12.5% (2) of the sample and respondent with a tertiary education 12.5%. Only one respondent reported having obtained a post-graduate qualification.

The two respondents with no formal education indicated that they are unable to read and write whereas a quarter of the respondents that attended primary school can read and write but they need an assistance in comprehending the information. One respondent mention that *“I have never attended any formal school in my entire life, during our era school was not regarded as important, most especial as a woman, as you were expected to do household duties and wait for your husband to provide.”* This research further found that, based on the participants, the majority (10) of those who participated as I&APs have completed their high school education and out of these ten, only four respondents had a tertiary qualification.

Poppe, Weigelhofer, and Winkler (2018) and Mohammed and Kurian (2016) found that education level influences PPP. Community members with high literacy rates are likely to express a greater interest in engaging in activities that are affecting them (Joshi & Houtzager, 2012, Atieno, 2019 and Yao, He & Bao, 2020). However, in this study, both literate and illiterate people expressed an interest in participating in the PPP of Matseke filling station development. Although no conclusion could be drawn based on the limited number of responses collected, it is evident that even those with lower qualifications are inclined to participate.

Table 4.1: Demographic data

	Male		Female		Males and Females (Total)	
	Number of participants	Percentage (%)	Number of participants	Percentage (%)	Number of participants	Percentage (%)
Age						
18-24	1	6.3	1	6.3	2	12.5
25-35	2	12.5	1	6.3	3	18.8
36-45	4	25	1	6.3	5	31.2
46-55	1	6.3	2	12.5	3	6.3
56-65	1	6.3	0	6.3	1	6.3
>65	1	6.3	1	6.3	2	12.5
Totals	10	62.5	6	37.5	16	100
Education level						
No formal Education	1	6.3	1	6.3	2	12.5
Primary school	1	6.3	3	18.8	4	25
National Higher Certificate	3	18.75	3	18.75	6	37.5
Tertiary level	1	6.3	2	12.5	3	18.8
Post-Graduate degree	1	6.3	0	6.3	1	6.3
Totals	7	43.75	9	56.5	16	100

Table 4.2 below shows employment status for each age groups. The age group 35-46 had the highest number of participants (3) that were employed on full time or contract basis. The

age groups 18-24 and over 65, had no employed respondents. For the over 65 group this was expected as they are both participants mentioned that they are pensioners. The total number of unemployed respondents constituted a total of six (37.5%). According to a study by Atieno (2019), employed community members with higher socio-economic status tend to dominate public discussions and their inputs often receive more attention. However, from the selected participants results shows that both unemployed and employed respondents participated in the PPP.

Table 4.2: Employment status and Age group

Employment status	Age groups						Totals
	18-24	25-35	36-45	46-55	56-65	>65	
Employed full time	0	1	3	1	0	0	5
Part-time employed	0	0	0	1	0	0	1
Contract employed	0	1	1	1	0	0	4
Full-time employed	2	1	1	0	1	2	6
Totals	2	3	5	3	1	2	16
Totals (%)	12.5	18.75	31.25	18.75	6.25	12.25	100

4.2.2 Methods used for notification

According to Moyo, Dirsuweit, and Cameron, (2017) Limpopo province is characterised by rural communities in which people often engage and interact with one another. The activities in rural areas such as collecting firewood, hunting, collecting water and public meetings hosted and led by the tribal authorities results in high levels of human interaction and communication (Gebre & Gebremendhin, 2019). In most of the developing countries these

responsibilities are highly gender-specific resulting in most domestic activities undertaken by women, whereas men tend to attend meetings (Ngonge, 2015; Mohammed & Kurian 2016 and Moyo, Dirsuweit, & Cameron, 2017).

In some areas, women are still limited to participate and raise concerns in community activities (Nzewi & Sikhosana, 2020) and often side-lined when it comes to notification of activities that might affect them directly. Figure 4.1 illustrated the methods of communication that reached the male and female respondents from this study. It was found that the majority of women (31.25%) heard about the intended development through word of mouth. None of the women who participated in this study were notified by written notice or through advertisement. The results of this study are similar to a study by Glunker (2012) which found that no female respondents had been notified of the intended development or PPP through newspaper advertisements.

According to Hassan, Nahduzzaman and Aldosary, (2018) it is important that all necessary key stakeholders are engaged in PPP to address all the identified environmental concerns and issues. The EAP indicated that he was guided by Section 24J of the NEMA Act 107 of 1998 in identifying the stakeholders and potential I&APs to be notified of the development. Accordingly, the EAP indicated that they had informed the Department of Water and Sanitation (DWS), Capricorn District Municipality (CDM), Limpopo Department of Economic Development, Environment and Tourism (LEDET), Territorial Council/Tribal Authorities, Molemole Local Municipality and I&APs in line with Section 24J of NEMA Act 107 of 1998.

The government official stated that the EAP had fulfilled all legal requirements to meet the minimum requirements as stipulated by the NEMA: EIA Regulations (2017). The EAPs view corroborates that of the government official and who indicated that all key stakeholders were notified, and all legally prescribed commenting periods were observed. EAPs often find that PPP can be time consuming and often associated with conflicts (Atieno, 2019, and Chi, Xu & Xue, 2014). It is noted in a study by Leonald (2017) that the consultants did not effectively consult with I&APs since they preferred not to address concerns and issues raised by the stakeholders to get developments approved more easily. In this study, the EAP followed all basic minimum requirements as stipulated by legislation and took additional measures to ensure effective public participation through a public meeting as required by Section 41 of

the NEMA: EIA Regulations (2017). The result in this study, shows that there are significant disparities in how stakeholders perceive the process of commenting.

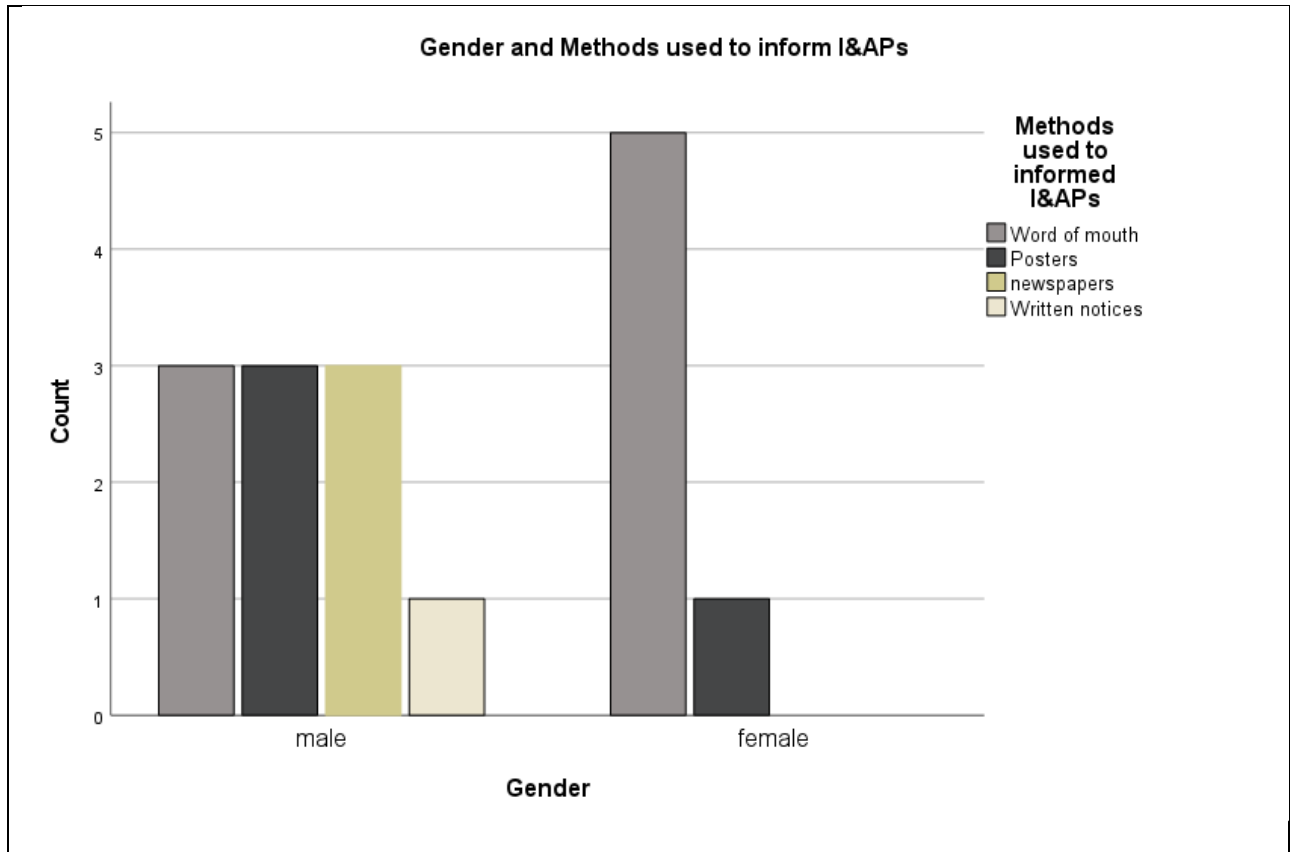


Figure 4.1 Method used to inform I&APs and Gender

4.2.3 Methods of notification and language

Figure 4.2 below shows the different methods of communication that were used to inform the public regarding the development of a filling station. From the results, it is evident that word of mouth and posters were most effective in reaching a larger audience as the majority (75%) of participants received notification through these methods. Figure 4.2 shows that unemployed participants 37.5% were informed through the posters and word of mouth. The EAP indicated that he made use of a poster, newspaper advertisement, written notices and a public meeting to notify and engage with I&APs. The BAR contains evidence of a newspaper advert and posters placed in prominent locations around and close to the site proposed for development. The EAP intentionally placed posters at locations frequented by

people in an attempt to reach a wider audience. Only 37.5% of the participants reported reading the poster. It could be that as the posters were only written in English, it excluded some of the potential I&APs. One respondent mentioned that *“I saw the posters near the spaza shop where we get our daily necessities but I didn’t bother reading because I thought it is the local people advertising their products until I overheard my neighbour talking about a development of a filling in our hood. It is then I knew of the filling station development.”* According to Gunker (2012), in his study report that posters reach out large participants compares to other notification methods. The BAR of Matseke filling station contains evidence of the use of written notices distributed to community members as required by the NEMA: EIA Regulations (2017) Section 41(b). Despite, this only one participant from the entire sample reported being informed through a written notice.

The study shows that only three (18.3%) of participants read the newspaper advert and all participants reporting newspapers as the method of notification were employed on full time or contractual employment. The advert was placed in a newspaper that is based and familiar to communities in and around Polokwane, approximately 60km from the Matseke village, which could have resulted in the low number of participant reporting this as a method of notification. Ngonge (2015) and Schoeman (2017) in their studies found, in general, written notices and newspapers were more effective in communicating with the public to inform them about the project development. In contrast this study found that word of mouth and posters were more effective in reaching a larger audience.

The advertisement was only published in English in the newspaper and not in Sepedi, the dominating language in the study area. Furthermore, the majority (37.5%) of participants reported not buying the newspaper due to affordability or the fact that they are unable to read fluently in English. One of the participants that saw the newspaper indicated that the advert was published on one of the last pages of the newspaper, printed in small font and it was placed in the classified advertisements section. Reportedly, this made it difficult for people to find or read. According to Maphanga *et al.* (2022), illiterate participants are usually side-lined from the EIA process using posters, newspapers and written notices as a tool for communication. Assisting these participants in participating in the EIA process can therefore often be perceived as time consuming by the EAP (Maphanga *et al.*, 2022). This is what of the respondent stated *“I left school at standard four, what is called grade six nowadays. I*

usual asks the younger ones to assist me with reading and writing in English. Therefore, I could not understand the advert posted'

The majority (81%) of the respondents did not raise any concerns or make any comment regarding the filling station project. The respondents indicated that they could have potentially been limited from raising their concerns due to all communications being conducted in English. They indicated that a combination of Sepedi and English would have addressed the issue. The government official mentioned that the issues of language potentially brought a challenge as the public did not understand what they are affected or interested by the development of a filling station and what are they supposed to do in the entire process. The EIA report, however, recorded evidence that the public meeting was undertaken in Sepedi, however as per the report, the posters were only in English. The EAP further confirmed during the interview that they did make use of Sepedi as a language of communication during the public meetings and that the public were allowed to raise issues and comments in their preferred language. The EAP mentioned that three official South African languages were spoken in exchanging information with the public during the EIA process and include English, Sepedi and Tshivenda.

The EAP and competent authority expressed similar sentiments and indicated that the use of the languages that are not familiar to the community members can lead to poor technical understanding and thus impede effective participation of the public in EIA processes. According to Kanu, Tyonum and Uchegbu (2018), the use of languages that are not dominating in the areas where most of the I&APs are located is one of the factors that hinders effective public participation. There is a clear disparity between the I&APs perception and that of the EAP regarding the language of communication. The BAR also reports that appropriate language was used during the public meetings, however the I&APs did report this. Of the 16 participants 75% had attended the public meeting despite reporting that the language used for notification was not suitable.

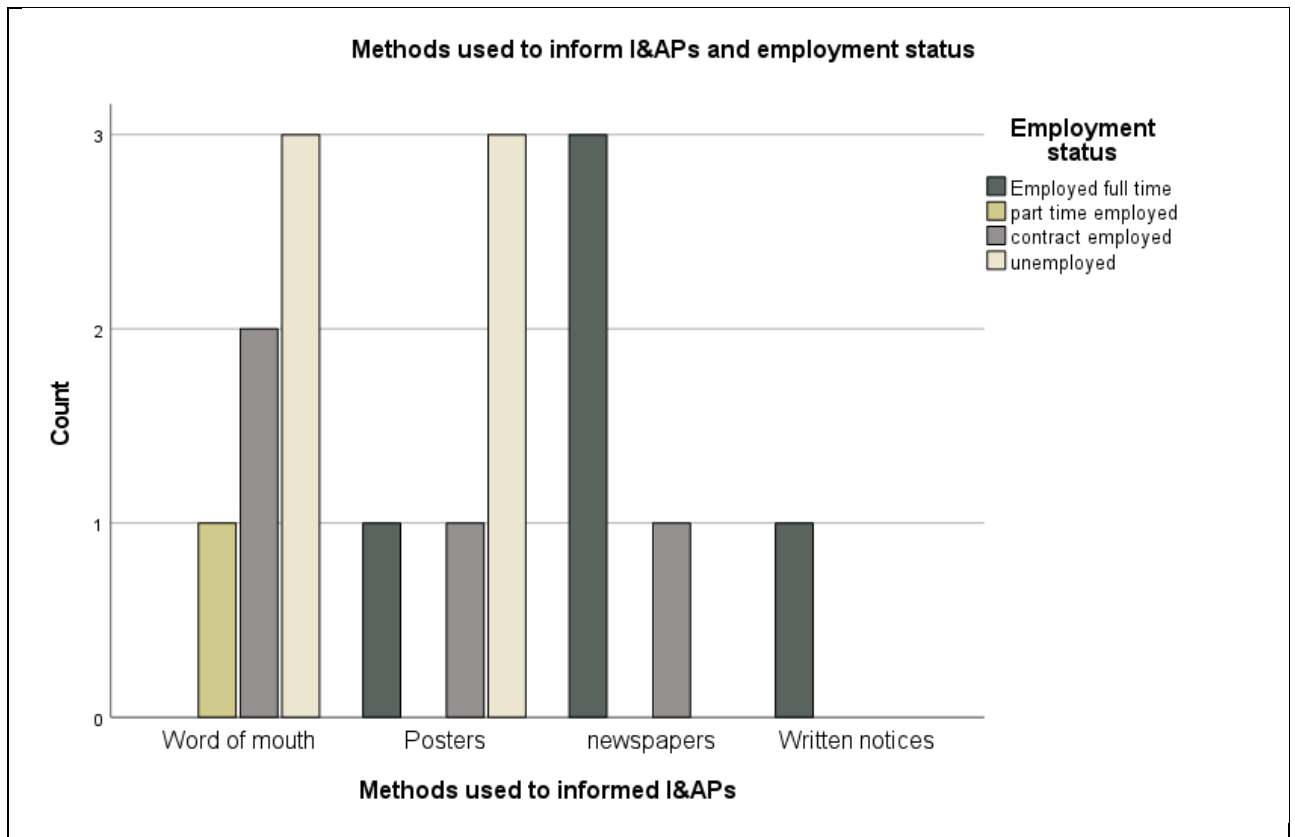


Figure 4.2: Methods of notification of the I&APs and employment status

4.2.4. Methods of participation

Of the 16 participants from this study only one, male participant made use of the information desk to engage in the public participation process. Figure 4.3 shows that 75% of the participants indicated a preference for public participation gatherings as a method of participation and had all attended the public meeting. Only two participants participated in the open survey option and one participant indicated that they had participated in an alternative manner. The preference for public meetings by I&APs is supported in studies by Decadt (2001), Wetang'ula (2010), Glunker *et al.* (2013), and Ngonge (2015), that all found that I&APs prefer public participation gatherings and meetings over other methods of participation. Maphanga *et al.* (2022) reports that I&APs generally prefer this method as it is more inclusive of a wider audience and allows participation by those that cannot read or write. It is also generally regarded as being quicker and more efficient in addressing issues. The EIA report supplied had no evidence of a public meeting held, however, the EAP

indicated that the meeting was held on the 7th of October 2017 as agreed to between the local community representative and the government official. This was confirmed by the participants that had attended the meeting.

Despite the clear benefits of public meetings, it is not explicitly required in terms of the NEMA: EIA regulations. The NEMA: EIA regulations (2017) provide that relevant information must be made available to potential IAPs and that such parties be given a reasonable opportunity to comment and raise their issues regarding the application. This particular provision leaves room for interpretation and adhering to the basic minimum requirements often results in EAPs not undertaking public meetings. The government official confirmed that public meetings are not an explicit legal requirement of the EIA process according to the EIA regulations and therefore some EAPs do not undertake such processes. However, according to Section 41(2)(e) of the NEMA: EIA Regulations (2017) the competent authority can also advise on alternative measures, including that of a public meeting, should it be deemed necessary. If the EAP does not make use of a meeting it could result in I&APs missing important information and reduce the effectiveness of public engagement (Moyo, Dirsuweit, & Cameron, 2017).

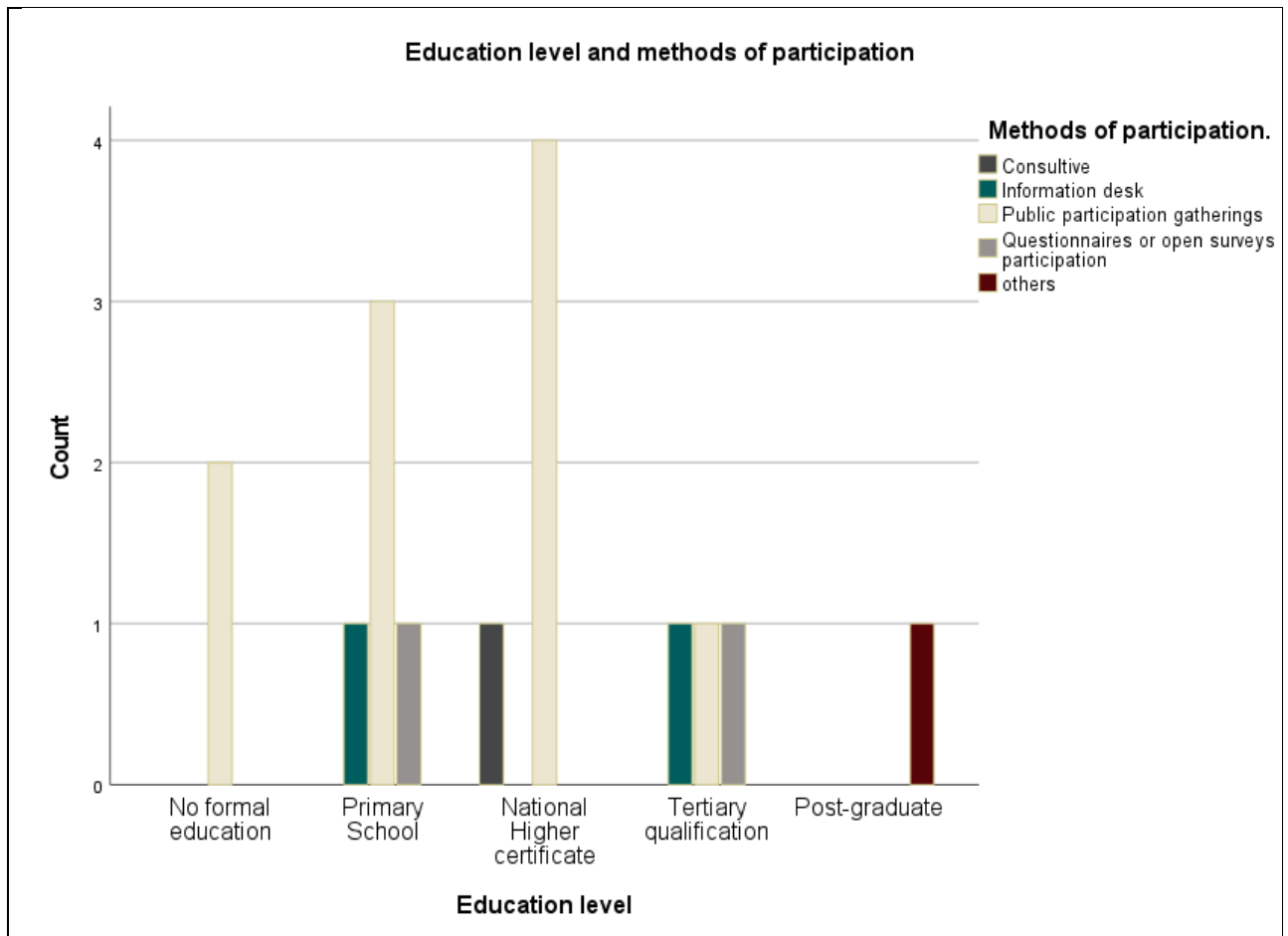


Figure 4.3: Education level and methods of participation

4.2.5 Stages of participation

Of the 16 respondents, 87.5% said that they only participated after the BAR report was finalised 93.8% disagreed that the public was consulted at an early stage of planning and design. Despite 75% of respondent having reported that they had participated in the public meeting, respondents expressed that they felt they were only involved at a later stage when project planning, implementation and design had already taken place. In this case study, the participants said that they could not influence the planning and design of the project. Despite widespread research reporting the advantages of early involvement, delayed consultation of the public in EIA processes remains a challenge internationally and results in the public losing interest in participating because they feel like decisions have been already finalised (Murombo, 2008, Glunker *et al.*, 2013, Omenge *et al.*, 2019, Atieno, 2019 and de Oliveira & Partidário, 2020). Another respondent stated that “*I attended the meeting*

scheduled on the 07th of October 2017, but it was not a participatory meeting but rather an informing meeting because developers already had a plan designated for the development of the filling without consulting the interests of the public.”

Schoeman (2017) found that EAPs often only involve EAPs at a later stage of the project cycle where major design and planning decisions have already been made. Very often, the EAP is then in the unfortunate position of only involving the public after the design and planning phase. This negatively influences the perceived transparency, fairness and effectiveness of public participation processes among I&APs (Schoeman, 2017 and Maphanga *et al.*, 2022). Similarly, this research shows that current practices of public involvement and accepted stages of involvement often result in dissatisfaction among I&APs and a perceived ineffective process. I&APs also often feel that they are unable to influence the final decision made due to late involvement in the project phases. Similarly, 93.75% of the participants from this study did not make comments and they feel like they could not influence the final decision making. The study by Moyo, Dirsuweit, and Cameron, (2017) found similar disparities between the perceived involvement of I&APs by participants and the EAPs in their study. From the research, it is evident that the delay in involvement of potential I&APs and the lack of wider use of recognised local languages negatively impact the level of public participation.

Table 4.3 Level of agreement on early consultations of the public

Level of agreement	Frequency	Per cent (%)
Strongly agree	0	0
Agree	1	6.3
Neutral	0	0
Disagree	5	31.3
Strongly disagree	10	62.5
Totals	16	100

Table 4.4: Stages of participation

Stage of participation	Frequency	Per cent (%)
Screening	1	6.3
Scoping	1	6.3
Impact and evaluation studies	0	0
After EIA report was finalised	14	87.5
Others	0	0
Totals	16	100

4.3 PERCEIVED EFFECTIVENESS OF PUBLIC PARTICIPATION PROCESSES AMONG KEY STAKEHOLDERS

In this section, the major findings regarding the perceived effectiveness of public participation processes are discussed. The major themes identified during the analysis of the data in this regard are perceived roles and responsibilities of key stakeholders and perceptions of public participation processes in EIA.

4.3.1 Perceived roles and responsibilities of key stakeholders

The EAP and a government official were respectively requested to describe the roles of each of the three key stakeholders (EAPs, government officials and I&APs) of public participation processes in EIAs. From the responses by both parties, it was evident that they understand the roles of different role players in the public participation process. They conveyed similar information when describing each of the three roles for the three parties. It can be concluded that both the competent authority and the EAP are aware of the duties that they should perform during the EIA process. According to Mnengwane (2014), the role of competent authority is to make decisions regarding the application of EIA, the EAP must facilitate the application process and the public and stakeholders should be afforded

opportunity to provide input. The term 'stakeholders' refers to all people and different institutions that are interested in the design, implementation, and sustainability of the project (Lee & Abbot, 2003).

The government official mentioned that the public is responsible to *“raise their issues and concerns with regards to the proposed development. The public has the right to either be opposed or be in favour of the proposed development for various reasons. These reasons are usually based on how the proposed development will impact and affect their lives.”* The EAP similarly described the public's role as one of *“making comments, raise views and concerns regarding the proposed development. The public should be involved and allowed in decision making of the project.”*

The role of the EAP was described by the government official as a person appointed *“to ensure that all interested and affected parties, including relevant official stakeholders, are aware of the proposed development, its potential impacts on the environment and those affected.”* The role of the EAP as described by the EAP of Matseke filling station is *“the EAP is responsible for facilitating, managing and coordinating the whole process of EIA. The EAP is appointed by the applicant, and they are required to arrange all the required activities of public participation process.”*

The government official said that the *“competent authority is one of the key official stakeholders and therefore must be made aware of any proposed development. The competent authority must ensure that all the legal requirements of an application process are fulfilled, and that the EIA process is conducted according to the legislative requirements. The competent authority further has the role of informing the public through comments of all the issues that may arise from the proposed development.”* The EAP of this study details the role of the competent authority as *“is responsible for making decisions as per the NEMA regulations regarding the environmental authorization, the competent authorities may grant, reject, withdraw, amend, or suspend the environmental authorization but all decision should be guided by the regulations.”*

4.3.2 Perceptions of public participation process in EIA

According to Moyo, Dirisuweit, and Cameron, (2017), the need and desirability of the project should always be clearly stated to ensure the public effectively engage during the public participation process. This assists different stakeholders to raise valid enquiries and give applicable feedback related to the development (Hassan, Nahduzzaman & Aldosary, 2018). Table 4.5 below shows that most of the participants (6) disagree and strongly disagree (4) that the need and desirability of the project was clearly stated at the commencement of the EIA process whereas only 2 participants agreed. The findings of this study are supported by a study of Schoeman (2017) that found that majority of the I&APs were not satisfied with the information presented at public meetings – the results of a study by Schoeman, (2017) depicts dissatisfaction with the need and desirability and impacts of the project to be clearly stated (63%).

Table 4.5: The need and the desirability of the project detailed when the EIA process commenced.

Level of agreement	Frequency	Per cent (%)
Strongly agree	0	0
Agree	2	12.5
Neutral	4	18.8
Disagree	6	37.5
Strongly disagree	4	31.3
Totals	16	100

In contrast to the views expressed by the participants and government official, the EAP stated that the need and desirability of the development of a filling station in Matseke village was stated clearly to ensure that I&APs can understand it. A study by Sandham, Chabalala, and Spaling, (2019) found that even when the need and desirability of a project is adequately explained, the public is not always given a fair chance to participate, often play a passive role, or have a limited understanding of the processes. It is evident that the different stakeholders have divergent perspectives of the same process which creates challenges in achieving effectiveness.

Table 4.6 illustrate level of agreement on whether the sufficient and satisfactory information was provided on negative and positive environmental, social and economic impacts of the project. Of 16 respondents, only three respondents (18.75%) agreed that sufficient and satisfactory information was provided on negative and positive environmental, social and economic impacts of the project, whereas 75% of respondents disagreed that the information provided was not sufficient. The result in a study by Ngonge (2015) shows that many respondents disagreed that sufficient information was provided on the positive and negative impacts of the project. According to respondents in a study by Sandham, Chabalala and Spaling, (2019) the EAPs are not transparent and do not often share full information with the I&APs.

Table 4.6: Sufficient and satisfactory information provided on the social, economic and environmental impacts

Level of agreement	Frequency	Per cent (%)
Strongly agree	1	6.3
Agree	2	12.5
Neutral	1	6.3
Disagree	8	50
Strongly disagree	4	25
Totals	16	100

Figure 4.4 below shows the level of agreement of the data and maps that were provided to I&APs compared to education level. This study depicts an interesting observation that 56.25% agreed that the maps provided were adequate for participants to comprehend and visualise the information. Among the participants that agreed that the maps and data provided were sufficient to be visualised and comprehended, four of them had completed a national higher certificate and three of them attended primary school. *“One participant with a higher national certificate stated that I found the maps and data easy to understand, they were clearly reflected one could understand the absolute location that the development was undertaken”*. According to the findings of a study Ngonge, (2015), 40.0% of respondents

agreed that the data and maps provided were sufficient to make it possible to understand and visualize the project because they could write and read.

According to a study by Denh (2020) children learn to read and write at their first class in primary schools, but the comprehension is still very limited. It is possible, that due to the participant's educational levels, the interpretation of visual data and maps was more successful and therefore more than half of the participants found the maps and data provided to be adequate for them to understand and visualise the project.

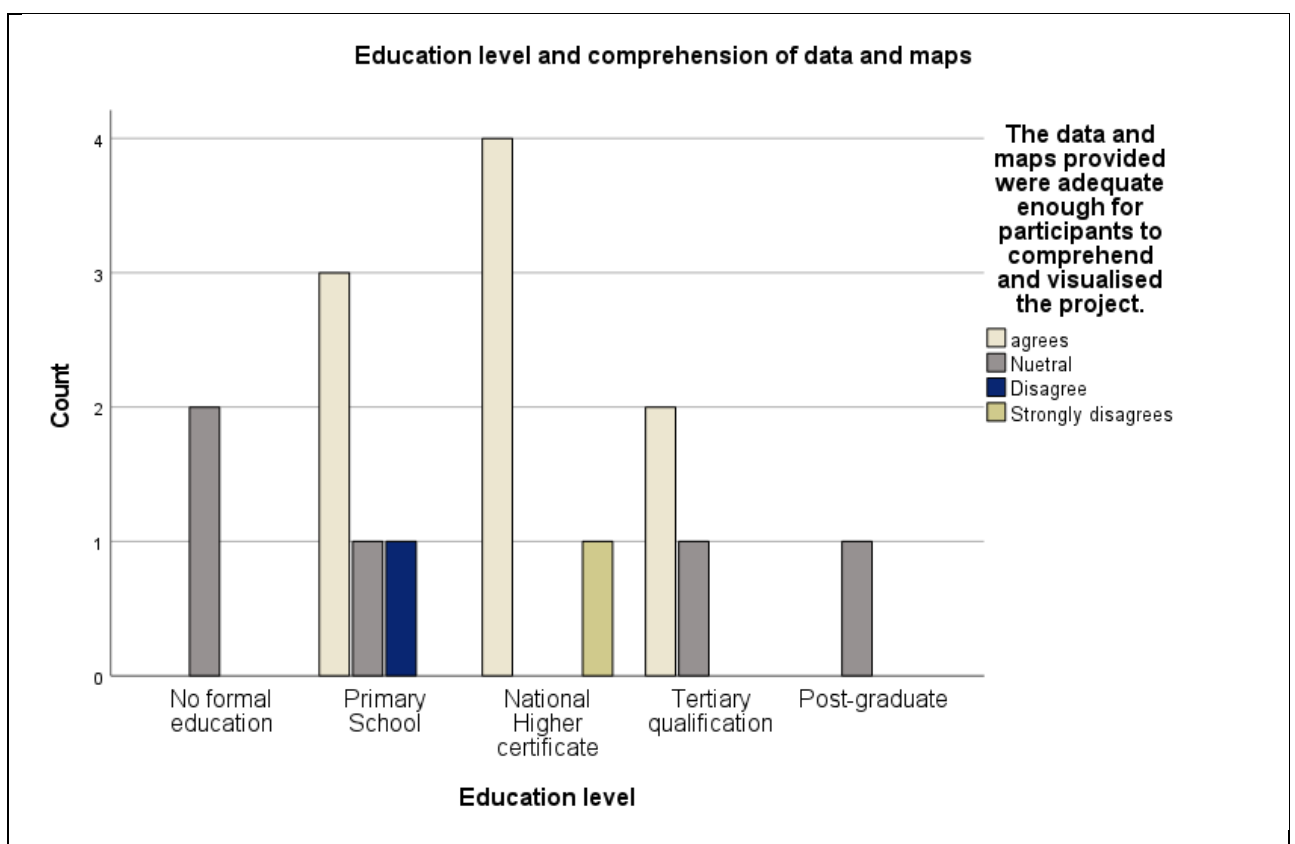


Figure 4.4: The data and maps provided and Education level

4.4 THE EXTENT TO WHICH PUBLIC PARTICIPATION PROCESS INFLUENCES FINAL DECISION-MAKING

Participants were asked specific questions to determine their perceptions around the extent to which the PPP influences final decision making. The major themes that were identified during the analysis of the data include the opportunities provided to different stakeholders in public participation process; public gatherings meeting and communications from I&APs.

4.4.1 The opportunities provided to different stakeholders in public participation process

Table 4.7 illustrates the level of agreement on the equal opportunity granted to everybody to participate in the PPP of Matseke filling station development. The total percentage of the respondents that strongly disagreed that everybody was provided with an equal opportunity to participate in the EIA process of the Matseke filling station project was 25% whereas 31.25% disagreed. This makes a total of 9 (56.25%) respondents that disagree and disagree that everyone had an equal and fair opportunity to participate in the EIA process of the filling station. Of the 9 respondents, 31.25% were females and 25.0% were males. Only 18.75% stated that they agree that everybody has an equal opportunity to participate and 12.5% are neutral in this regard. One female respondent mentioned that *“during the meeting there were lesser female attendees than males. Many women who are working couldn’t attend the meeting since it was held in a weekend and during that time, it is when they get an opportunity to do their households duties”*

Table 4.7: Gender and equal opportunity provided to everybody to participate

Gender	Level of agreement						totals	Per cent (%)
	Strongly agree	Agree	Neutral	Disagree	Disagree	Strongly Disagree		
Male	0	1	2	2	2	2	9	56.25
Female	0	2	0	0	3	2	7	43.75
Totals	0	3	2	2	5	4	16	100

Gender inequality plays a role in public participation of the community activities (Lovenduski & Hills, 2018 and Patnaik, 2021). Women are limited to participation and involvement in the activities of the community, which is influenced by aspects such as religion and cultural contexts, educational level, land tenure, gender division labour, women's health and family planning (Patnaik, 2021). A study by Willan *et al*, (2020), found that black women would participate more effectively in decision-making process if they had greater access to sufficient information used in making informed decisions. However, in this study, women with higher educational levels participated in the EIA process. Out of three respondents with tertiary qualifications two were females.

According to Moyo, Dirisuweit, and Cameron, (2017) EAPs often choose to engage with traditional leaders/ authorities to ensure that public participation processes are done without major resistance. The challenges resulting from this approach and the corruption often associated with this have been well documented in studies by Moyo, Dirisuweit, and Cameron, (2017) and Glucker *et al*, (2013). As Leonard (2019:292) stated "*Participation without redistribution of power is an empty and frustrating process for the powerless*". In this study the expression of being powerless is supported by comments such as this one by a respondent: "*we were not granted an opportunity to participate equally. The process was not fair and just because the Moshate- community leaders all they do is to sell the land and make profit without questioning the buyers what they are going to do with land. Developers can do anything they want with the land sold to them regardless of its harm on the community*"

It is evident that the participants express similar sentiments in this research, despite the NEMA: EIA Regulations (2017), clearly upholding equal opportunity for participation for all stakeholders regardless of their position and power. The government official expressed a comprehensive understanding of who the stakeholders are in terms of the regulations and stated that the description of stakeholders is clear enough that it should afford all potential stakeholders an opportunity to engage. The government official did however state that the EAP had initially not attempted to involve all key potential I&APs and the Department had scheduled a meeting with the EAP to provide guidance and clarity. They further indicated that another key stakeholder i.e., the local municipality failed to participate as required despite receiving notification of the project.

4.4.2 Public gathering meetings

Table 4.8 below, shows the level of agreement on the selected venue for the public gathering meeting and the time that was chosen whether it was easily accessible and convenient for public access. The study shows that 43.8% agreed that the time schedule and the venue selected for the meeting was accessible. The meeting was held at the tribal authority's office where other meetings of the village are normally held. The results show that only 31.8% strongly disagreed and disagreed that the time and venue selected was not convenient. One respondent mentioned "*that there are few community halls and lodges around the village where the EAP could have selected rather than the tribal authority's area because we might assume that there is bias. Already the tribal authority knows something.*"

Table 4.8: Level of agreement on convenience and accessibility of time schedule and the venue selected for the meetings

Level of agreement	Frequency	Per cent (%)
Strongly agree	1	6.3
Agree	7	43.8
Neutral	3	18.8
Disagree	4	25.0
Strongly disagree	1	6.3
Totals	16	100

The findings of this study contradict the findings of Leonard (2017) that found that the venue selected was 20 kilometres from the proposed development and negatively influenced attendance of the meeting. The results of this study are similar to a study by Ngonge (2015) that confirmed that more than half of the respondents (58.0%) agreed that the venues of the meetings were accessible and convenient. It is evident that the selection of a venue for a public meeting play an important role in engagement by communities. It is important to study the area where the proposed development would be undertaken to identify the most accessible venues and time before the scheduling of meetings. This will help to determine

the level of attendance, the most effective method to be used to mobilise people, and the likely challenges to be faced during public participation (Hassan, Nahduzzaman & Aldosary, 2018).

4.4.3 Communication from I&APS

Of the 16 participants, only one respondent submitted a comment that she fully supports the development of the filling station project because it will generate employment opportunities in the village. The EAP indicated that the comments received were general comments to support the development of the filling station, and that there was nothing that needed to be attended to or specifically addressed. The final BAR contains evidence, in the form of a delivery note, which a copy of the applications forms and a draft BAR for comment was delivered to Department of Water and Sanitation, Molemole Local Municipality and one I&APs. The comments and response report included as an appendix to the final BAR recorded the comment from the I&AP. The majority (93.75%) of the participants did not make comments and they felt like they could not influence the final decision making. It is evident from the existing literature that most developments consider some major decisions like design, planning and site selection prior to public involvement (Aregbeshola, 2009, Glunker, *et al.*, 2013 and Ngonge, 2015). As no additional comments were made by I&APs it was difficult to determine whether comments would have influenced the environmental authorisation of the project. The conditions of the environmental authorization of this project did not reflect the comments from the I&APs since there no comments made. Despite the general perception among the I&APs that the public participation process was not effective, the government official distinctly remembers that the general public expressed gratitude for the proposed development.

A study by Moyo, Dirsuweit, and Cameron, (2017) and Sandham, Chabalala, and Spaling, (2019) however found that the majority of the respondents indicated that they they were not being heard and that comments were not addressed. In studies by Maphanga *et al.* (2022) and Leonald (2017) it is noted that public participation was mainly conducted to inform the public rather than a two-way process where there is a mutual benefit between the public and developers and all parties shares the information.

4.5 CONCLUSION

This chapter presented an analysis and discussion of the findings of the perceived effectiveness of the public participation process among key stakeholders in the EIA process. The research was based on a case study of the Matseke Filling Station Development. It consisted of the results from a questionnaire administered to I&APs and two key stakeholders, the EAP and a government official. Further interviews were conducted with the EAP and government official where clarification on their responses were required. All the results were analysed, and results compared with findings from other studies to identify similarities or disparities. Major themes identified from the analysis of the data include effects of demographic characteristics on public participation, methods used for notification; methods of participation, stages of participation, perceived roles and responsibilities of key stakeholder, perceptions of public participation in EIA, opportunities provided to different stakeholders in the public participation process, public gathering meetings and communications from I&APs.

The study shows that the I&APs perceive public participation processes to be ineffective, in all the themes identified, as they report only being involved at a later stage, the language used prohibits them from participating and the logistics of public participation processes can prevent them from participating fully. From the findings discussed in this chapter it is evident that there are disparities in the perceptions of the effectiveness of public participation as well as its requirements between EAPs, government officials and I&APs. Although the EAP had done the entire public participation process in line with the NEMA: EIA Regulations (2017) the I&APs (respondents) still expressed dissatisfaction with logistics of the process. It is, therefore, evident that there is still a challenge in getting all stakeholders to have a similar understanding and vision of the PPP in EIAs.

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents the summary, conclusions and recommendations arising from the findings of the study. It demonstrates that the aim and objectives of this study are achieved and answered. The chapter includes the overall conclusions and recommendations together with a description of the findings regarding each of the research objectives.

5.2 SUMMARY OF THE STUDY FINDINGS

The study assessed the perceived effectiveness of public participation in the EIA process of Matseke filling station project developed within the Capricorn District of Limpopo. The findings of the study are important in promoting knowledge sharing to enhance effective participation in the EIA process, which is a policy tool in promoting sustainable development. This is essential to ensure that all relevant views and comments from I&APs are incorporated in the final decision-making.

The study illustrated that there are still major differences in the understanding of effective public participation among the key stakeholders particularly on perceived roles and responsibilities of key stakeholders and perceptions of public participation in EIA process. Due to this the effectiveness of these processes are generally regarded to be limited by I&APs. The literature review in Chapter 2 highlights the important characteristics of public participation which includes early public involvement; public influence on decision-making; public access to adequate information; inclusion of all stakeholders; and opportunity for the role-players to voice their support, concerns and questions regarding the application, decision or the life cycle of a project. Despite the EAP confirming that involvement of the public was done at a widely accepted stage after some planning decisions had already been made, the respondents indicated that they were only involved at a later stage and could not influence decision making at all. The EAP had however initially not notified some key stakeholders of the intended project and the government official as representative of the

competent authority had to schedule a formal meeting with the EAP to assist them in identifying the correct stakeholders. The government official also raised a concern regarding the lack of interest of some stakeholders like the municipality in this case study.

The public could not influence the final decision making because they did not make any comments. The findings of this study reveal that the public had numerous questions and comments that they wanted to submit however, when the opportunity was available, they did not raise any of these comments. In fact, both the EAP and government official reported that the I&APs had expressed their support for the development during the public meeting. Similar to the study by Atieno (2019) it was found that this was because of gender, class, language and education barriers that made it difficult for participants to understand and to effectively engage in the process. It was however interesting that those respondents that had obtained higher levels of education and those with lower levels of education equally showed interest in engaging in the public participation process. The differences between these groups were evident in their understanding of the process and their preferred method of notification. The respondents, despite this, had largely supported the proposed development and did not appeal the environmental authorisation.

The study's findings show that the varying perceptions among the key role-players still negatively affects the effectiveness and satisfaction with the process. There is a need to investigate ways in which these opposing perceptions can be addressed to establish more effective engagement by I&APs during the process.

5.3 CONCLUSION

The aim of this study was to assess the perceived effectiveness of public participation in EIA processes of a selected filling station project developed within the Capricorn District of Limpopo. The public participation process of the development of a filling station in Matseke village, within Molemole local municipality of Capricorn Municipality, Limpopo province was not perceived to be effective by I&APs. There is therefore a need to establish a better understanding of the provisions of the legislation among I&APs in order to encourage more effective engagement during the public participation processes.

5.4 RECOMMENDATIONS

The study recommends that public participation meetings should be legally formalised since there are several studies emphasizing the importance of public participation gatherings to address the challenges encountered during PPP in EIA and to achieve sustainable development. The legal formalisation of public participation meetings in the EIA process will enhance the effectiveness of the practice of public participation processes. The developers and proponents of the project will have to follow legal routine when conducting public participation in EIA.

The public is not adequately aware of their role in the public participation processes in EIAs. Therefore, the study further recommends that awareness campaigns and education of EIA and public participation should be widely shared through various media. The study further recommends that the public participation meetings are always preceded by a short information session on the provisions of the NEMA: EIA Regulations (2017) to assist I&APs in familiarising themselves with their roles, responsibilities and rights. These recommendations will be shared with the government official and environmental assessment practitioner that participated as key informants in this study.

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APPENDIX A

Interested and Affected Parties Questionnaire

My name is Shenen Rikhotso, a student in the University of Limpopo. I am currently studying Master of Science in Geography. I would like to request you to participate in this research by answering a few questions. This research is for academic purpose only. As a part of the research project, it is necessary to carry out a questionnaire.

You are assured and guaranteed that the information provided by you will be treated professionally and with utmost confidentiality.

I greatly appreciate your anticipated cooperation.

A. Personal Details

Gender	Female			Male			
Age group	<16	16-24	25-35	36-45	46-55	56-65	>65
Level of Education	No formal Education	National Higher Certificate	Tertiary level	Post-Graduate degree			
Employment Status	Employed Full-time/ Employed Part-time (<27 hours per week)/ Contract Employment/ Unemployed						
Housing type							
Location	Rural		Peri-urban		Urban		

B. Public Participation Process

1. Are you affected by or interested in the development of the filling station? Yes/ No

2. Explain how you were/are affected by and/or why were you interested in the development of the filling station?

3. How were you informed about the project?

Radio	Newspaper	Television	Word of mouth	Posters	Others (Specify)
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4. How were you participating in the public participation process of the development of a filling station?						
Consultative	Information desk	Public participation gatherings	Questionnaires or open-surveys participation	Others (specify)		
5. At what stage of the EIA process of the filling station's project did you participate?						
Screening	Scoping	Baseline study	Impact Assessment	Evaluation	After EIA report was finalised	Others (specify)
6. Did you raise any issues or concerns regarding the filling stations?						
Yes			No			
7. If you answered "yes" to question 6 please describe the issues or concerns that you raised regarding the filling station development?						
8. What are the challenges that you faced regarding public participation process of the filling station?						
9. EIA documentation review						
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
a) All my issues and concerns were satisfactorily addressed in the EIA report.						
b) My issues and concerns were covered as conditions of Environmental Authorization.						
10. How do you feel about the integration of comments and issues into the final decision-making in EIA?						
11. Do you think that all comments and issues from all I&APs were integrated or adequately addressed in the final EIA report? Please justify your answer.						

12. Please select your level of agreement of the following statements concerning entire EIA and public participation process of the filling station.					
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
a) The public were consulted early during the project planning and design phase.					
b) The necessity and purpose of the project was well detailed when the EIA process commenced.					
c) Sufficient and satisfactory information was provided on negative and positive environmental, economic and social impacts of the project.					
d) The public were involved in project planning and all other stages of EIA process.					
e) The data and maps provided were adequate for participants to comprehend and visualize the project.					
f) The public was allowed to comment regarding their views, raise issues and express their feelings towards the projects.					
g) The language used during the meetings was well understood by the participants and participants were allowed to respond in their preferred language.					

h) Every person was provided equal opportunity to participate.					
i) Time schedule was convenient, and the venue selected for the meeting was accessible.					

APPENDIX B

Environmental Assessment Practitioner and Competent Authority questionnaire						
<p>My name is Shenen Rikhotso, a student in the University of Limpopo. I am currently studying Master of Science in Geography. I would like to request you to participate in this research by answering a few questions. This research is for academic purpose only. As a part of the research project, it is necessary to carry out a questionnaire.</p> <p>You are assured and guaranteed that the information provided by you will be treated professionally and with utmost confidentiality.</p> <p>I greatly appreciate your anticipated cooperation.</p>						
<p>1. What is the role of the following bodies in an EIA public participation</p> <ul style="list-style-type: none"> I. Public II. EAPs III. Government officials 						
<p>2. What was your role in this project regarding public participation?</p>						
<p>3. Do you think that the other two bodies performed their roles effectively regarding an EIA public participation process of this project? Please justify your answer.</p>						
<p>4. What are the necessary stakeholders that should be included for the EIA public participation process to be effective?</p>						
<p>5. Do you think that this project incorporated all the necessary stakeholders of an EIA public participation project? Please justify your answer.</p>						
<p>6. At which stage of an EIA did the I&APs participate?</p>						
The initial stage of planning	Screening	Scoping	Preparation of the Environmental	Stage of reviewing of reports	Stage of making final decision	All stages of EIA processes

and design			I Impact Report			
7. Please give reasons why the public participated in the stage/s that you have selected above.						
8. Do you think that all the issues and comments that were raised during the process of public participation of this project were adequately addressed in the EIA report? Please justify your answer.						
9. Please mention some of the issues and comments that were raised by the public.						
10. Please select your level of agreement of the following statements regarding entire EIA and public participation process of the filling station?						
			Strongly agree	Agree	Neutral	Disagree
						Strongly disagreed
a) The public was consulted early during the project planning and design.						
b) The necessity and purpose of the project was well detailed when the EIA process commenced.						
c) Sufficient and satisfactory information was provided on negative and positive environmental, economic and social impacts of the project.						
d) The public were involved in project planning and all other stages of EIA process.						
e) The data and maps provided were adequate for participants to						

comprehend and visualize the project.					
f) The public was allowed to comment regarding their views, raise issues and express their feelings towards the projects.					
g) The language used during the meetings was well understood by the participants and participants were allowed to respond in their preferred language.					
h) Every person was provided equal opportunity to participate.					
i) The time schedule was convenient, and the venue selected for the meeting was accessible.					
j) All concerns and issues from the public were sufficiently addressed in the EIA report.					
k) Relevant environmental, economic and social concerns and issues from public members were reflected in the Environmental Authorization's condition.					
11. Please indicate your level of agreement on how the following statements that could have hindered or affected the process of public participation of this project.					
	Strong agree	Agree	Neutral	Disagree	Strongly disagree
Public participation process was costly and time consuming					
I&APs were not willing to participate in the public participation process					

Lack of trust and misunderstanding between the developers and the I&APs were notable					
Public participation venues were inaccessible					
The community had limited resources and poor infrastructure discouraging effective public participation.					
The language used to communicate with participants was appropriate					
The lack of technical skills or understanding hindered public participation					
12. Please mention any other factors that could have affected the public participation process of this project.					