

ENVIRONMENTAL IMPACT ASSESSMENT: ATTITUDES AND VALUES OF ENVIRONMENTAL ASSESSMENT PRACTITIONERS

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'A research report submitted to the School of Geography, Archaeology and Environmental Studies; in the Faculty of Science of the University of the Witwatersrand, Johannesburg, South Africa; in partial fulfilment of the requirements for the degree of Master of Science.'

Johannesburg, 2009

DECLARATION

I declare that this research report is my own, unaided work. It is being submitted for the Degree of Master of Science in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

(Signature of candidate)

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ABSTRACT

The link between the EIA process and decision-making has been legislated and applied in policy. A vital component of this link is the ability to combine an expert-driven and participative approach to decision-making. However the practical implementation thereof remains challenging with a dominance of one approach over another frequently occurring in the decision-making process. This research explored the expertise of environmental practitioners and the public participation process and links these to the outcome of the EIA practice. It specifically explored the level of expertise and the implementation of the public participation process, and how this was reflected in the decision-making. The qualitative approach utilised in this study employed multiple research methodologies through the utilization of the Gautrain Environmental Impact Assessment and Comparative Impact Assessment as a case study. This research report illustrates that while there is often a dominant approach between the expert-driven and participative, there is no indication that this choice is influenced by the practitioner's expertise. This research has also shown that the public participation process has a number of weaknesses however it has potential as a tool to aid in the implementation of communicative planning through its ability to bring together diverse stakeholders in an interactive decision-making process.

DEDICATION

TO MY LOVING AND SUPPORTIVE HUSBAND MONDE AND
MY BEAUTIFUL DAUGHTER ELIHLE.

ACKNOWLEDGMENTS

I would like to thank my supervisor, Dr. Zarina Patel for her continuous support, guidance and patience throughout this research. Thank you for not giving up on me even when I had given up on myself.

My appreciation and thanks to all the people that have contributed in this research, including the environmental assessment practitioners, stakeholders and government officials. A special thank you to Mr. Jeremy Boswell for all your help and guidance.

To my loving husband Monde, thank you for loving me enough to encourage me to pursue my dreams. To my mom for her unfailing love and support, I really do it all for you. To my dad for affording me the wonderful gift of education, thank you so much. I love you both.

To my beautiful daughter Elihle, you're a blessing and inspire me everyday to be a better person. I love you.

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LIST OF ACRONYMNS

BOHLWEKI	-	Bohlweki Environmental Consultants
CBEAPSA	-	Certification Board for Environmental Assessment Practitioners in South Africa
CONNEPP	-	Consultative National Environmental Policy Process
EAP	-	Environmental Assessment Practitioners
ECA		Environment Conservation Act (Act 73 of 1989)
EIA	-	Environmental Impact Assessment
FELEHETSA	-	Felehetsa Environmental Consultants
GAUTRANS	-	Gauteng Department of Transport
GDACE		Gauteng Department of Agriculture, Conservation, Environment and Land Affairs
I&APs	-	Interested and Affected Parties
NEMA	-	National Environmental Management Act (Act 39 of 1998)
ROD	-	Record of Decision
S	-	Stakeholder

CHAPTER 1

INTRODUCTION, RATIONALE AND AIM

1.1. Introduction

Environmental Impact Assessment (EIA) is prioritised as a tool in environmental management in South Africa, and it plays a significant role in environmental decision-making. According to Patel (2006), environmental decision-making is the responsibility of the state; however the state lacks the capacity to make these decisions. This lack of capacity means that the state relies on Environmental Assessment Practitioners (EAPs) to assist them in not only framing the problems, but also in making decisions. This reliance by government on EAPs places them in a position where they can influence the environmental decision-making process in South Africa.

Due to the nature of EIA as a scientific tool it is viewed as objective. This research aims to illustrate that this process is not value free. The EAPs that are involved in the process very often have different expertise and values which can influence the decision-making process. Expertise in this context refers to the educational background and/or qualifications of the EAPs and values refer to the choice between, and or combination of the expert-driven and participative approaches. For the purposes of this research, these are referred to as value systems that can be applied to the EIA process in South Africa. This research will argue that the different expertise and the choices in value systems influence the direction that an EIA process will take, and that this therefore renders EIA as a subjective tool. In addition there are underlying (political) factors that may influence the process.

Both local and international Environmental Assessment literature has failed to engage with the concept of values within EIA. Communicative planning theory has engaged with these issues in the field of planning, and this report will employ analytical concepts borrowed from this theory to understand how the presence of these values and other political factors in EIA can influence decision-making.

Communicative planning theory refers to the dominant procedural theory currently underpinning collaborative planning practice within planning literature (Murray, 2006). This research focuses on communicative planning theory in relation to EIA because according to Sager (2001) the organization of the EIA process is linked to the choice of planning style. In addition it represents a paradigm shift from traditional 'top-down' planning to collaborative planning, which is a trend that EIA has emulated.

The research will establish how the EAPs expertise and values hinder or encourage the participation of stakeholders in the formulating of decisions¹. This is in line with the rights-based approach instituted by the South African constitution. Environmental policy and decision-making has been overhauled giving South African citizens rights to access to the tools of decision-making. South African citizens have become aware of their right to be involved in the processes that will influence decision-making, such as EIA.

1.2. Research Context

The case study approach has been employed to explore the research questions through a practical approach. The Gautrain EIA was utilised as a case study for a number of reasons. The primary reason is the controversial nature of the project and the decision-making process. The EIA process occurred in two phases in the Sandton area, in processes that were termed as EIA and Comparative Environmental Assessment (CEA). These processes were conducted using the same legislative and policy context, and involved practitioners that had similar qualifications and expertise; however they yielded different conclusions. The EIA was carried out by Bohlweki Environmental Consultants, and the CEA by Felehetsa Environmental Consultants. The controversy of this case study lies in the question of how the two processes in the same area yielded different

¹ The term "stakeholder" in this research refers to individuals who registered as Interested and Affected Parties (I&APs) for the Gautrain EIA in Sandton.

outcomes. The study therefore investigates the role of the values and expertise of the practitioners in determining the outcomes.

It was also chosen as a case study because of the projects recent time-frame, the availability of information, the ability to interact directly with the EIA consultants and the different groups of stakeholders. Moreover it was chosen to illustrate if and how public participation can influence the decision-making process due to the changes in the routing of the alignment in the CEA. The EIA recommended that the routing of the Gautrain be placed below residential areas and there was pressure on the experts to change this routing to commercial areas. Interestingly this routing was subsequently changed in the CEA. It is essential to understand why these changes were implemented in the CEA and not in the EIA. It could also potentially show a dominance of approach in the two processes, which in all intents and purposes should have been identical.

1.3. Rationale

Planning theory has had a radical paradigm shift from an expert-driven planning approach to a communicative planning approach. EIA has mirrored this shift from an expert-driven approach to a participative approach, but has neglected key issues underpinning this evolution. These issues include that of expertise and values, and the influence they have in shaping the process of EIA. According to Sager (2001), EIA has a central position in the planning of large developments, and therefore this makes it relevant to comment on EIA from the planning perspective.

Advocates of communicative planning theory believe that planning structured around this theory encourages a more democratic form of decision-making. This form of decision-making in EIA can be impacted on by the expertise and values of the EAPs. The most significant gap in the literature is the absence of an analysis of how EAPs values and expertise can influence the outcome of an EIA.

In addition, there is limited information on the various underlying factors that could influence the direction of the public participation process, and the level of involvement of the stakeholders.

This research offers three main contributions. Firstly, this research develops an evaluative outline that questions the key forces that shape the decisions within EIA. Secondly, this research provides empirical evidence into whether the expertise of environmental assessment practitioners' will influence the decisions that they make in an EIA. Finally, this research examines how all these forces influence the experience of the public participation process from the perspective of the stakeholder.

1.3.1. Aims

The aim of this research is to investigate how the expertise and values held by environmental assessment practitioners' impact on environmental decision-making, and on public participation using the Gautrain Environmental Impact Assessment (EIA) within Sandton as a case study. The aim is to establish how these expertise and values influence environmental decision-making, and enable or constrain access to decision-making during the EIA process.

1.3.2. Objectives

The objectives of this research are as follows:

- To establish the expertise and values of the Environmental Assessment Practitioners (EAPs) who conducted the Gautrain Environmental Impact Assessment (EIA) in Sandton.
- To investigate how far the values and expertise of the Environmental Assessment Practitioners (EAPs) influenced environmental decision-making.

- To determine how the political nature of the EIA impacted on public participation for the stakeholders.

1.4. The Structure of the research

In order to meet these objectives, this study has been structured in the following way. The second chapter of this study reviews both the planning and environmental impact assessment literature. This chapter traces the shift towards communicative planning theory, and its relevance to environmental impact assessment. This chapter also compares the value systems that are applicable to the EIA process and traces the role of environmental assessment practitioners within environmental decision-making. The third chapter describes the research approach, and explores the strengths and weaknesses of the data collection and research technique. The fourth chapter critically analyses how the EAPs and public participation have shaped the outcome of the EIA and CEA. Conclusions are drawn on the factors that influenced these decisions based on analysis of information from the fourth chapter and from the interviews. The fifth chapter presents the main conclusions from the research, and recommendations.

CHAPTER 2

THEORETICAL

FRAMEWORK

2.1. Introduction

Environmental Impact Assessment (EIA) has become an integral element of planning and development in the international context as well as the local context. South Africa has unique challenges that are intensified by the need to implement public participation in a context that is diverse at best and divergent at worst. There remain numerous debates among professionals of the most suitable approach to EIA, and the inclusion of the public in these debates only intensifies the challenges that are an everyday existence for EIA professionals.

This chapter addresses the research aims and objectives through the development of a theoretical framework which will guide the structure of the research. The theoretical framework will first define communicative planning as it is the main theoretical framework that will shape this research. It then defines and describes Environmental Assessment Practitioners, their values and expertise in the local context in which the research is based. Thereafter the key benefits and challenges of communicative planning as a mechanism to implement EIA are discussed. Finally the value systems within EIA practice are discussed with a focus on the public participation component.

2.2. Theoretical Framework

This research report will develop an argument about the inherent presence of values in environmental assessment using some of the principles employed in communicative planning theory such as the promotion of democratic principles in decision-making and the accurate representation of the diverse nature of society. EIA is by nature a political tool for environmental decision-making due to the multiple and conflicting values that are involved. This research has its focus on two value systems which are but some of the choices that an Environmental Assessment Practitioner (EAP) needs to make also whilst conducting an EIA. These are the expert-driven (approach) value system or the participative

(approach) value system. Both local and international literature will be used to attempt to explain these conflicting, and sometimes complimentary values involved in EIA, and how far these influence the decisions that practitioners make.

2.2.1. Defining Communicative Planning Theory

Communicative planning is a relatively recent theoretical development in planning, and has grown out of the postmodern critiques of the scientific rationalism and a stress on relativism and intersubjective meaning (Campbell and Marshall, 1999). The development of this theory is based on the work of Habermas (1987) who rejected the superiority of rational and scientific knowledge as superior. Instead “morality, aesthetics and cultural experience are all assumed to be equally valid with the most appropriate course of action arrived at through a process of open discursive interaction” (Campbell and Marshall, 1999:472).

Communicative planning theory has its roots in Habermas’s theory of communicative rationality, and has gained acceptance as the dominant theory underpinning collaborative planning practice (Innes, 2004). In his theory, Habermas supports the use of a collaborative model of decision making as a tool to achieve the wider democratisation of wider society. A number of theorists such as Sager, 1994, Forester, 1985 have adapted the work of Habermas to come up with a democratic planning process.

Communicative planning theory is described as an approach to planning and management that involves “the pooling of ...resources by two or more stakeholders to solve a set of problems that neither can solve individually (Gray, 1985:912). According to Sager (2001), this approach has very often been conceived as an enlargement and empowerment of democratic processes. In

addition it has embraced the inclusion of values and norms which did not have any foundation in scientific rationality.

These definitions of communicative planning demonstrate the key principles that this research aims to demonstrate. Firstly it rejects the dominance of scientific rationality and embraces the democratization of the decision-making process. Secondly it emphasizes the need for the acknowledgement of values and norms of all those involved in the decision-making process. Public participation, values and norms are central themes in communicative planning, and this will form the focus of the research.

According to Murray (2006), communicative planning has been adopted for natural resource management which includes amongst other things environmental management. This therefore makes it applicable for application in EIA, particularly in the democratic South African context where “participation processes are mandatory in any state policy making process to include the diverse voices of civil society” (Scott and Barnett, 2007:5). According to Scott and Oelofse, (2005), within the South African context, democratisation of decision-making means that in principle all stakeholders in an environmental issue have the right to participate in the decision-making process. This is in line with the principles of communicative planning, and this research will establish if communicative planning principles were implemented in this process of the EIA.

2.2.2. Environmental Assessment Practitioners, Values and Expertise

The use of the term “environmental assessment practitioner” in this study will imply or refer to someone who “co-ordinates, manages and integrates the various components of environmental assessment throughout the planning process”. (The term “environmental assessment practitioner” therefore does not apply to specialists in particular fields who may be involved in, or asked to give input to, particular stages of an environmental assessment from the perspective

of his/her field of expertise) (CBEAPSA, 2007).

In addition, the use of the term within this document will be restricted to the EAPs that were involved in the Gautrain EIA in Sandton and the Sandton Comparative Environmental Assessment (CEA). The use of “EIA” will refer to the Gautrain environmental impact assessment in Sandton and “CEA” will refer to the Gautrain comparative environmental assessment in Sandton. The use of the term “values” in this study will imply or refer to the preference of approach employed by the EAP between the two value systems that are prescribed within South African environmental decision-making. These are namely; participative approach and expert-driven value systems.

The use of the term “expertise” in this study will imply or refer to the educational skills and academic background of the EAPs involved in the EIA. According to Campbell and Marshall (2000) values of practitioners are “inculcated through a variety of influences including family, religion, education, community, class and so on” (299). These are factors that influence the values of practitioners and consequently influence their decision-making process. For the purposes of this study, the focus will be on education as an influence on the values of practitioners. According to Campbell and Marshall (2000) the assumption is always that professions attract people of similar values, and these similarities are further strengthened by the education and training that the professionals receive and the experience of the job.

This is applicable to EAPs as well because by virtue of the individuals picking this profession, the assumption tends to be that they have shared values and their educational background and shared experiences within the profession should only serve to re-enforce these similarities. However despite these assumptions, there remains a level of subjectivity among individual EAPs and Campbell and Marshall (2000) point out that this subjectivity very often arises when there is “conflict between his or her concept of right or wrong and/or good or bad and

those of his senior officers, political masters or the organisational culture as a whole” (300). In essence, this would mean that despite uniform education, training, organisational culture etc, the individual EAP can make their own choices of what is good or bad.

Generally debates around EAPs and the EIA process revolve around the question of independence and influence in and over the decision-making process. The role of EAPs is one that has been defined in legislation as stipulated by the National Department of Environmental Affairs and Tourism (DEAT), however despite the outlining of the responsibilities that come with this profession, the values, skills and duties of EAPs remain ambiguous. According to Campbell and Marshall (1999), the reason for this ambiguity is the subtle interrelationships between democratic accountability, the market, community interests and professional values and duties. These are the factors that complicate the role of the EAP even within a legislative and institutional context.

EAPs do not operate in a vacuum because to be a “member of a profession exact responsibilities and obligations” (Campbell and Marshall, 2000:300). There are certain standards and behaviour that a professional EAP is required to meet, and some of these are prescribed by legislation while others are code of ethics to guide the professionals. Working within prescribed standards does not guarantee that values and individual judgement will not come into play. This is eloquently articulated by the following statement by Campbell and Marshall (2000), “acting upon principles depends upon an assessment of the circumstances of the particular situation and not simply applying a set of hard-and-fast prescriptive rules” EAPs in South Africa are expected to conform to principles as established by the National Department of Environmental Affairs (DEAT). In terms of the Environment Conservation Act (No.73 of 1989), an EIA process must be conducted by an independent practitioner. An EAP ceases to be independent if they have one or more of the following vested interest in the project:

- In the full time employ or service of the applicant;
- Involved in any design work of the same project;
- Earn more than 50% of his or her work from the same company;
- Payment depends on the successful authorisation of the project;
- He or she has a financial interest in the undertaking of the project, except for the purposes of complying with the regulations; and
- Working for any relevant authority in respect of the same application.

Independence in this context refers to the EAP not having financial, personal or professional ties with the project proponent; however it could refer to a private consultant. A private consultant, as opposed to a public consultant, does not work for the state. Campbell and Marshall (1998) in their work on planning professionals highlight the debates around private consultants versus public consultants. The decision to either work for private or public is viewed as the primary point of departure among professionals. The public consultants question the integrity of private consultants by saying that they as public consultants “are on the side of angels” (Campbell and Marshall, 1998:125). The common practice of making the developer responsible for carrying out the EIA begs the question of whether the analysis is neutral (Hokkanen, Päiviö and Wallentinus, in Sager, 2001) This is also a factor within EIAs as the independence of EAPs is under scrutiny because they remain financially dependent on the client. There seems to be an argument about the integrity of the private consultants versus the public sector consultants, and this is reiterated by the following quote from a public sector consultant:

“Private consultants are like lawyers – they’ll defend anything if paid whereas we’re meant to have values and defend concepts like fair play” (Campbell and Marshall, 1998).

The statement above only serves to re-enforce the theory that professionals are open to influences from different sources. One criticism that has come from the

guiding principles as prescribed by environmental legislation is the lack of specific qualifications that an EAP is required to have. This has resulted in a saturation of the environmental assessment profession with individuals with varied expertise and educational background. This has made it difficult to pin down a precise and accurate definition of the profession. In an attempt to fix this problem the Certification Board of Environmental Assessment Practitioners of South Africa (CBEAPSA) was formed in 1998.

The CBEAPSA was initiated in May 1998 to address the lack of a professional body of EAPs in South Africa. This board which is referred to as the Interim Certification Board For Environmental Assessment Practitioners of South Africa (ICB) “comprises of certified environmental assessment practitioners who evaluate applicants for voluntary certification based on the applicant’s academic records, documented experience and reports from two already certified environmental assessment practitioners who are willing to sponsor the applicant” (CBEAPSA, 2007). According to the CBEAPSA, the board assesses an individual's capabilities and aims to recognise that the individual has met specified occupational standards. There are three considerations used to evaluate environmental practitioners, namely: their substantive knowledge, gained through formal training; skills and competence, gained with experience; and their values or ethics. Table 1 below describes the requirements for voluntary certification of environmental assessment practitioners.

Table 1: Requirements for voluntary certification of Environmental Assessment practitioners (adapted from CBEAPSA, 2007)

QUALIFICATIONS FROM A UNIVERISTY, TECHNIKON OR RECOGNISED EQUIVALENT	MINIMUM EXPERIENCE IN RESPONSIBLE CHARGE NEEDED
Degree in environmental practice	3 years subsequent professional experience
Degree and a postgraduate degree in environmental practice	3 years subsequent professional experience
Degree and a short course or diploma in environmental practice	5 years subsequent professional experience

DEAT has requested the ICB to coordinate and facilitate the creation of a formal structure for the regulation and registration of EAPs in the country. The outcome of this process will be the establishment of a statutory registration Authority for the industry in terms of section 24H of NEMA (Act no 8 of 2004). The regulation of the environmental assessment industry is to ensure that only suitably qualified, experienced and competent practitioners undertake environmental assessment work (ICB, 2006). According to the Minister of Environmental Affairs (Van Schalkwyk, 2008) the following progress has been made:

“We have now agreed on a general qualification with the assistance of the South African Qualification Authority (SAQA). I am also expecting an application for the establishment of the first registration authority for environmental professionals in this country before the end of the year. It is accordingly envisaged that a registration authority will be in place towards the middle of 2009. This will be followed by steps to enforce the compulsory use of registered practitioners”.

The statement above illustrates that the environmental assessment profession is on track to being standardized to ensure quality. This therefore means that registered EAPs will have similar if not uniform expertise, training and experience. However this will not address the question of other factors that could influence the decisions that EAPs make. As Campbell and Marshall have so

eloquently explained the uniformity of expertise, training and even experience do not always guarantee a consensus when it comes to decision-making. There are a number of influences that play a role, and although the focus of this study is on educational background, some of these will be addressed in this study using the Communicative Planning theory within EIA.

2.2.3. Communicative planning theory and EIA

EIA often has a vital role in the planning of large development projects. According to Sager (2001), the tasks of an EIA are so central to the planning process that the question of planning style is to a large extent the question of how to design the EIA process. EIAs organize the fundamental parts of the process, making it relevant to use planning theory to evaluate the tool of EIA. The purpose is to link the planning theory with the EIA process. Richardson (2005) argues that EIA has in recent times taken a turn towards communicative rationality which he feels resembles a similar shift in planning in the 1990s. Similarly, Murray (2006) also makes the link between environmental decision-making and planning and argues that environmental management has been encouraged by the history and experience that the planning field has in decision-making with multiple stakeholders, and therefore planning theory -particularly communicative planning theory- has been encouraged as a theory for environmental management.

The fields of EIA and planning are similar in that they both involve a diverse range of stakeholders, and very often involve complex problems. According to Murray (2006), the field of planning has traditionally promoted the use of coordinated approaches in decision-making; however this position has been criticized for being “unable to produce enduring integrated approaches to natural resource management” (Murray, 2006:25). Consequently collaborative planning has been favoured as an alternative, and this has made it necessary to develop a theory to implement this approach.

According to Sager (2001), the concept of communicative rationality was initially developed by Habermas (1990). “Communicative rationality is found in speech aiming at agreement and meeting the validity claims of comprehensibility, truth, rightness, and sincerity. Whilst all conversation is not communicatively rational, dialogue in the Habermasian sense is so by definition” (Sager, 2001:198). Communicative planning theory is described as the “dominant procedural theory underpinning collaborative planning practice within the planning literature” (Murray, 2006:4). Communicative planning has been applied to natural resource management contexts such as environmental management in attempts to improve its implementation. The communicative planning theory has a number of components as described by Allmendinger (1998) however for the purposes of this research, only those principles that are applicable to the EIA context under the umbrella of environmental management will be described:

1. Planning is an interactive and interpretative process;
2. Planning is undertaken among a diverse and fluid discourse community;
3. Focus is placed on processes where public discussion occurs and where problems, strategies, tactics and values are identified, discussed, elevated and where conflicts are mediated; and
4. Capacity is developed that enables participants to evaluate and re-evaluate.

For the purposes of this research these components will be used in the analysis of the EIA process to establish if it subscribed to the principles of communicative planning theory. However, it is important to remember that the focus of this research is on the expertise of the practitioners, and therefore these components as listed above will be cross-checked against the expertise of the EAPs to establish how the expertise and values of the EAPs hinder or promote a communicative approach to EIA. There are benefits to adopting communicative

planning theory to EIA application, and these will be discussed in the following section.

2.2.3.1. Potential Benefits of Communicative Planning Theory in EIA

According to Richardson (2005), the communicative turn within planning has ensured the early death of “scientific rationality”. Due to this turn, scientific rationality has ceased to exist within planning and has been described by Healey (1997) as modernist instrumental rationalism within which the planning tradition has been trapped for many years, and is only now starting to escape. Communicative and deliberative theories of planning (e.g., Forester, 1989; Innes, 1995; Healey, 1997; Forester, 2000) have become popular in response to the modernist “scientific rationality” approach to planning. “This post-modern theory advocated a more inclusive approach to decision-making that accepts diversity and provides a role for non-scientific variables” (Murray, 2006:37).

The impartial expert is the handmaiden of practices that prioritize ‘scientific’ over lay knowledge and in so doing create ‘discourses’ which, in treating everyone the same, prove indifferent to difference (Young, 1990). In this statement Young (1990) eloquently advocates for the recognition of multiple values in the statement above. This is the core of communicative planning theory – its ability to embrace multiple values in a collaborative effort to reach a decision. Scientific rationality ignores these values which are contained in lay knowledge and according to Young that is tantamount to saying that we are all the same. The South African environmental decision-making process embodies this principle as the public participation element is an integral part of the EIA process. This is a shift that occurred with the birth of democracy in the country, and has been reflected in all spheres of decision-making within the state. The question therefore is not whether these multiple views are gathered, but how far they influence the decision making.

According to Murray (2006), there are three main arguments for the shift from the modernist approach to the post-modern approach. The first argument is the recognition that communicative planning promotes democratic principles in decision-making and more accurately represents the diverse nature of society. The promotion of democratic principles within the process of EIA is accomplished by the mere act of conducting public participation exercises such as public meetings etc. Therefore the representation of the needs of the diverse society is central in the understanding of how efficient the process is in promoting democracy. This is also true for the EIA process whereby there are diverse stakeholders, particularly in the South African context. These stakeholders require a democratic process of decision-making that will give them a voice, and not a process that is simply a legal requirement. This is a change from the scientific rational approach in which the decisions are made “through a techno-scientific analysis and deductive knowledge through the prevailing voices which appeal to those forms of knowledge/reasoning (McGuirk, 2001:196). The principles of the promotion of democratic principles in decision-making and the accurate representation of diverse society are critical for this research. It is necessary to establish if these principles were upheld in this case study and to correlate these results with the EAPs expertise and values.

The second argument originates from the idea that “planners operates in a decision-making context where power and responsibility for action is fragmented between multiple stakeholders” (Murray, 2006:21). This is based on the fact that planners operate in a political and economic climate that requires them to negotiate and communicate the decisions to a variety of political, business and community groups, and additionally resolve conflicts between these groups. This is applicable in the EIA context as very often an EAP finds themselves in a similar position of having to negotiate the decision-making process with multiple stakeholders.

The third and final argument for the 'communicative turn' is that this theory is being applied as it "facilitates a downsizing and hollowing out of government" (Murray, 2006). This is in line with more participative governance as compared to more traditional top-down approaches. This is particularly true for the South African government which as it tries to redress the legacy of apartheid has re-branded itself as the "government for the people". This is intended to make government relevant to the people, and to instil a sense of ownership of the decisions and service delivery instituted by the government.

2.2.3.2. Criticism of Communicative planning theory

One of the main criticisms of this theory is that it is based on free speech as advocated by the Habermas theory of communicative rationality. The criticism is based on the ideals of free speech' which requires all participants to "understand the subject and information under discussion, engage in effective debate, act in a completely open and honest manner, and in the face of a 'better' argument move toward consensus" (Holmes and Scoones, 2000:31). The criticism lies in the fact that these are requirements that are hard to achieve. These are particularly difficult to achieve when there are varying levels of power within the participating groups.

This is particularly true for the EIA process because there are very often varying levels of participants from academics, politicians and the ordinary citizen ranging from the grassroots level to the upper class. These differences make it hard to reach a consensus on the way forward because very often the needs are different. For some participant groups the needs very often are tied in with their basic survival while for another group it is simply about convenience and an awareness of their rights to be involved in the decision-making process. These differences present a challenge in the attempts to make decisions that will be beneficial to all stakeholders during an EIA.

Murray (2006), has three main criticisms of the communicative planning theory which are based on a number of key works such as McGuirk (2001), Polanyi (2002), Buchy and Race (2001) and Michaels (1999) to name a few. These criticisms are described as follows:

- **The attitudes, perceptions and skills of participants**

This criticism is linked to the value-laden process of communicative theory in which collaborative decision-making allows participants to bring their values, attitudes and interests. The argument is that these divergent views by the myriad of stakeholders have the potential to exacerbate the conflict between the participant groups, and in turn defeat the purpose of collaborative decision-making. It is particularly difficult in a context as diverse as South Africa to have participants speaking in a uniform voice; however democratic decision-making is based on the principle of being given the platform to contribute to the decision-making process.

This is also true for the environmental decision-making process whereby there are very often conflicting groups involved in the decision-making process. It is for this reason that I believe that EIA can adopt lessons from communicative planning theory, even at the risk of “exacerbating conflict”. The benefits of involving stakeholders from a variety of groups and affiliations outweigh the negatives of the criticism as described by Murray (2006). I would imagine that stakeholders know that not all opinions can be implemented in the decision-making process; however they take comfort in the knowledge that their opinions have been considered. The aim of such a process is to find the best practice for everybody involved, and unfortunately perfection is not a possibility.

This particular criticism of the communicative approach will be addressed in depth in the discussion of public participation in section 2.2.5. The reason for this

being that these attitudes, perceptions and skills of participants is a factor during the public participation process.

- **The way power and interests are manifested within the decision-making process**

This criticism stems from the political nature of decision-making. According to Murray (2006), collaborative planning practices have been criticized for their inability to prevent powerful elites from influencing the decision-making process. “Planners know from a multitude of cases that thorough analysis does not guarantee that the results will play a crucial part in the final political decision. Neither would it be right in a democracy to use the result of formal analysis as the decisive answer in political problem solving” (Sager, 2001:214). This statement by Sager highlights the political nature of decision-making where even the EAPs sometimes lack the influence to inform the decisions taken despite their recommendations. According to Richardson (2005), power can condition an EIA, where momentum and political support already exists for a particular project.

Planning theory also debates the issue of power by arguing that knowledge is constructed through power relations (Richardson (2005). The argument here is that access to knowledge is dependent on power relations and to utilize the cliché ‘knowledge is power’. Knowledge in this research not only refers to the expertise that the environmental practitioners have, but also the host of data that is made available to stakeholders during an EIA. This makes EAPs powerful in the formation of knowledge about the EIA, because it is a ‘knowledge-value gathering’ process that ultimately influences decision-making by the politicians (Richardson, 2005).

Power and Interests seem to manifest themselves in the decision-making process in two ways. These are defined as manipulation and communication distortion. According to Sager (2001) manipulation includes secrecy and

deception. Manipulated individuals are caused to do something they would not otherwise have done, unaware that an act of power has been effected upon them. The manipulator is very subtle and will not directly influence the manipulated, but instead will send out specific messages that will influence the manipulated to do what they want them to do.

Communication distortion refers to the act of deceiving the stakeholders during the public participation process in a number of ways. This can be done by not taking the expressed opinions during the public participation process into consideration during the decision-making process. Another form of distortion could be pretending to include input whilst in reality leaving the analysis unchanged (Stenstadvold, 2001). The point being made here is that there is a fine line between facts and values in the process of EIA. This line can become blurred when those in power have agendas that they want prioritised over the facts and the opinions (Wilkins, 2003, cited in Richardson, 2005).

- **The influence of the institutional and structural context in which the decision-making takes place.**

This criticism stems from the fact that communicative planning theory, which is also applicable to EIA, operates in an institutional context such as legislation. The criticism lies in the fact that “institutional arrangements are outside the control of stakeholders engaged in collaborative planning practice, but have a significant influence over how issues are identified, framed and how decisions are made (Lachapelle et al, 2001; McGuirk’ 2001; Buchy and Race, 2001; Kellert et al, 2000, Leach, Mearns and Scoones, 1999.

The South African environmental decision-making process gives the state the ultimate responsibility in making the decisions. The collaborative process may occur throughout the project, but ultimately it is at the states’ discretion to make a decision which it deems the best practice. This decision is largely influenced by

the recommendations provided by the EAP who also acts within a legislative framework. This therefore leaves the process open to abuse in the sense that the collaborative decisions taken by the participant groups could be ignored or sidelined by the EAP and the state when it comes to the political decision-making.

2.2.4. Value Systems Underpinning Environmental Decision-Making

In South Africa, as in many other countries, the use of EIAs has strongly increased over the last two decades. It has also been institutionalized, as impact assessment is mandatory for projects of many categories over a given size. Environmental decision making in South Africa is guided by the National Environmental Management Act (RSA 1998). NEMA places emphasis on EIA as a tool for environmental decision-making. According to Jay et al (2007), the aim of EIA in regulation is to ensure that environmental considerations are taken into account at the decision-making level. According to Patel (2006) the definition of problems, and the determination of whom and what gets included and excluded in the processes of environmental assessment are shaped by the tool of EIA.

EIA debates are divided between two positions with regards to the question of values. According to Richardson (2005), the first position argues for a complete disregard of values in EIA (expert-driven) and the second position argues for an embrace of values in EIA (participatory). According to Sager (2001) the following are the type of questions that inform the design of the EIA process:

- How much weight to put on technocratic analysis?
- How to balance refinements of the single items of the EIA against the advantages of making the analysis accessible to people?
- How to make the EIA an important input into the democratic process of community preference formation?
- How to promote the use of EIA results in political decision-making?

These questions inform the shape that the EIA will adopt. Very often this is informed by policy and legislation. The South African EIA process employs both value systems; however there can be one that is more influential in the outcome due to the subjective nature of the EIA process. The value system that has more influence on the outcome of an EIA may give one an understanding of the expertise held by an environmental practitioner, or vice versa, and how these impact on their subsequent decision-making.

2.2.4.1. Expert-driven Approaches

The expert-driven approach to decision-making is also known as the technocratic approach, and it is generally top-down. The success of this relies on the objectivity of both the facts and the experts that collect them (Connelly and Richardson, 2004). Environmental Impact Assessment has been criticized for being a technocratic approach to decision-making; however there are sectors that believe that “Environmental Assessment needs to be reaffirmed as a scientific rational process which can be weakened through participation” (Connelly and Richardson, 2004:2). These same sectors believe “that the objectivity of the process will lead to appropriate outcomes” (Patel, 2006:687).

This approach is described as being objective because it places an emphasis on the use of science to solve environmental problems through an objective consideration of the problem through the examination of a number of alternatives, which are “assessed on the basis of the technical information available” before coming up with a solution that they feel will be in the best interests of society as a whole (Jay et al, 2007:293). The assumption is that by virtue of experts and the process being objective, the data collected will also be neutral and objective. Thus, a science based policy approach dominates where scientists and experts lead decision-making processes. Science is thus strategically employed by actors, business or the state, to frame environmental issues and impose particular claims of authority. Policy interventions therefore

have to be legitimated by scientific evidence (Hajer, 1995; Fischer, 2003). The rationale is that through the use of these scientific methods, the perfect solution will be found through science.

This technocratic view of environmental assessment has been criticized for the notion of a 'value-free process', which is described as the failure to "recognise the intrinsic presence of value differences and conflicts in environmental assessment" (Connelly and Richardson, 2004:2). According to Campbell (2002), the recognition of values is the acknowledgement that there are many voices involved in the process, and they all deserve to be heard. Jay et al (2007) put forward a number of critiques of environmental assessment as a technocratic tool: first being the assumption of environmental assessment as an objective and value-free tool is questioned, and second, they argue that decision-making never occurs in the detached way as described in the technocratic approach. They argue that decisions taken depend on a variety of factors such as the norms and values of the decision-makers who are also influenced by the political environment in which they are operating.

2.2.4.2. Participative Approaches

The shift towards participative approaches in environmental decision-making came about as a reaction to the criticism of the tools for decision-making which "resulted in outcomes that have not been supported by community groups" (Patel, 2006:687). This is particularly true in the South African historical context whereby the government imposed its politics and policies onto the citizens. These policies were not supported by the citizens, and the South African government has been redressing this since the democratic elections in 1994. According to Connelly and Richardson (2004), this shift was an attempt to deal with the weaknesses of a technocratic approach through an approach that is based on participation, deliberation and mediation.

This technocratic approach is one that states that the authority and the expertise of those in power is unquestionable and infallible. However there has been a growing concern by the general public on the authority and the expertise of these 'experts'. Fischer (2000:30) states that "polls have shown a steady decline in the public's confidence in, and respect for professions and their technologies". These experts have been accused of failing to generate solutions that will be relevant to the diverse needs of society, but also of using their position to appease the politicians and the influential members of society by protecting them from public challenges.

The global institutionalisation in the 1990s of public participation in sustainable development, planning and environmental legislation is testimony to this shift away from centralized state decision-making (Scott et al, 2001). Public participation is a response to the loss of confidence in the expert, and an increased desire, by the public, to be involved in decisions that affect their lives. This shift can be described as the recognition that "aspirations of comprehensiveness imply public involvement and openness to different views" (Connelly and Richardson, 2004:7).

2.2.5. Public Participation

The role and importance of public participation in environmental decision-making has been recognized as a fundamental right and principle and has been incorporated into a number of international agreements and policy initiatives (e.g. The Rio Declaration (1992), the Aarhus Convention (1998)) and plans of action (e.g. Agenda 21, The Johannesburg Implementation Plan). For the purposes of this research, the focus will be on the Aarhus Convention.

According to Doelle and Sinclair (2005), one of the key challenges of project based environmental impact assessments has been to deliver on the promise of a meaningful public participation that can lead to decisions that put affected

societies on the path to sustainability. Public participation has frequently been criticized for being inefficient by participants, costly, and time consuming by proponents, and inefficient by government. Wood (2002, 22) states that “EIA is not EIA without consultation and participation”.

According to Fiorino (1998, in UCT/UNITAR, 2006:8) public participation in environmental decision-making can be justified according to three rationales: normative, substantive and instrumental.

1. The *normative* rationale is based on the democratic fundamental that individuals and groups which may be affected by an administrative decision should be informed and consulted in advance. It also assumes that public participation in the administrative process increases democratic oversight and accountability. This is perhaps the most compelling rationale for involving the public in decision-making: people should have a right to be consulted and involved in decisions that affect their lives.
2. The *substantive* rationale is based on the premise that the public has significant expertise to contribute to the substantive quality of the decision. It also questions the technocratic perspective, that elites make more rational decisions. There is vast knowledge in the lay person that can prove beneficial to environmental decision-making, and to ignore this knowledge would render the decision as unrepresentative of how the public feels.
3. Finally, the *instrumental rationale* of public participation assumes that public participation will decrease conflict and build trust among stakeholders, thus raising the overall societal acceptability of decisions. This is achieved by identifying concerns and values of the public during the early stage of a process rather than when decisions

have been made. However there appears to be the assumption that the stakeholders share common goals and values. Public participation has the limitation of assuming that stakeholders come from communities with shared interest, which is not possible in the “fragmented, fluid, multicultural” context of South Africa (Campbell and Marshall, 1999:468).

Public participation is implemented through the use of participatory approaches in all spheres of governance with transparency and accountability as the driving principles. The principles of transparency and accountability are highlighted by the preamble of the Aarhus Convention of the United Nations Economic Commission for Europe which states:

“Effective participation in the taking of decisions enables the public to express, and the decision maker to take account of, opinions and concerns which may be relevant to those decisions thereby increasing the accountability and transparency of the decision making process and contributing to public awareness of environmental awareness and support for decisions taken” (EC, 2003b, para.3 cited in Wood and Hartley, 2005:320).

The role and importance of public participation in environmental decision-making has been emphasized by the Aarhus Convention on access to *Information, Public Participation and Access to Justice in Environmental Matters* (United Nations Economic Commission for Europe, 1998, cited in Wood and Hartley, 2005:320). This convention, although not intended in South Africa, is very useful in highlighting the value of public participation towards public participation. For the purposes of this study we shall focus on the *Public Participation* directive of this convention. The role of public participation in environmental decision-making is clearly outlined in the preamble.

Wood and Hartley (2005) have devised evaluation criteria to determine how far this Convention is being implemented in the UK using the principles of the

Aarhus Convention. The same criterion has been used in the methodology section of this report to assess the public participation process in this study. The evaluation criteria are as follows;

1. *Timing* of the Participation process should begin early enough to ensure that all participants have an input. This criterion poses the following question to the EAPs “at what stage in a particular decision-process should the public be involved”?
2. *Accessibility* for the all members of the public to all documentation relevant to the decision-making process;
3. *Information Provision* to all members of the public on where information relevant to the decision-making can be obtained;
4. *Interaction* through participation techniques that allow stakeholders to contribute effectively. This criterion poses the following question to the EAPs, “which participation techniques are most appropriate in a given situation in order to obtain public input, e.g. notice and comment, face-to-face discussions, workshops, etc.?” (UCT/UNITAR, 2006:9)
5. *Competence* through the empowerment of the public to enable them to challenge experts and have the necessary information to do this effectively;
6. *Influence on Decision-making* through the outcome of participation influencing the decision-making process;
7. *Compromise* through the processes used allowing a consensus to be reached among all the parties;
8. *Fairness* through the full range of potentially affected individuals being identified. This is linked to the question posed by the UCT/UNITAR (2006) study on the challenges of implementing public participation. This criterion poses the following questions to the EAPs, “who is the public for a given decision, which groups should be invited to participate in order to ensure representation, and how the interests of disadvantaged groups/communities can be elicited?” (9).

9. *Communication* through ensuring that material is presented in a non-technical format and is understandable to lay people.
10. *Trust* being facilitated by the process amongst all involved. The question linked to this criterion is “which skills and capacities would need to be developed to ensure that participation processes are professionally managed and implemented, thus enhancing the trust of the public?” (UCT/UNITAR, 2006)

This criterion will be used to assess how well the public participation process in this EIA was followed, and consequently if there was involvement of citizens in decision-making. These criteria cover the three main limitations of public participation in South Africa which are; communication, timing and transparency (Patel, 2006). To elaborate, communication is when the methods used to communicate to citizens exclude some I&APs from being involved.). Timing is an issue where the identification of key issues occurs late in the process, therefore limiting the contribution of the public. In addition, public participation has been accused of causing unnecessary delays in the process of EIA. According to Patel (2006) these delays have been a result of exploitation - people bringing non-environmental agendas to debate under the environmental umbrella. This resulted in a shift in focus from important issues, and time constraints in decision-making.

2.2.6. The Politics of EIA

The idea of Environmental Impact Assessment (EIA) as a scientific and rational tool has suffered a lot of criticism and consequently there has been an acceptance that EIA occupies the “fluid boundary between science and politics” (Pritchard, 1993:3). EIA is political by its very nature, and needs to engage more with questions of values (Richardson, 2005). Local and international literature has failed to debate the issue of values within the discourse of environmental assessment, resulting in a lack of understanding on how to navigate through the

maze of multiple, and often conflicting values such as influences stemming from self, family, friends, employer, client, colleagues, the profession, local community, nation-state, past generations and future generations (Bolan, 1983). Campbell and Marshall (2000) have reduced this list to three key influences which can influence the values of EAPs, and these are: childhood influences, influences from university and participation in social movements and influences from professional experience. The focus in this section will be on the influence of education, employer, client and local community on the values of the environmental assessment practitioners (EAPs) when using the tool of EIA.

From as early as the scoping phase; the process of EIA is affected by the EAPs' values in what Richardson (2005) describes as 'microlevel judgements that cannot help but deal with questions of value" (p.9). There are a number of lessons and insights that EIA theory can learn from communicative planning theory in dealing with these values, and these include acknowledging the inherent presence of values through participatory approaches and the recognition that power defines facts and decision-making. These lessons can aid EIA theory in gaining a better understanding of the decisions that practitioners make, and why they make these decisions.

EIA theory has adopted some lessons from planning theory but there are more lessons to be learnt because "obstacles and dramas already encountered and addressed in planning theory are still hampering EIA theory building and practice" (Lawrence, 2000:307). Traditional planning theory has, like environmental assessment, been criticized for being modernist, rational and technocratic in its approach. As a response to the criticism, "communicative and deliberative theories of planning have gained popularity" (Richardson, 2005:4). Similarly environmental assessment theories have also adopted a participative approach that is "grounded in free speech and rational judgement" (Richardson, 2005).

2.2.6.1. How can EAPs shape Environmental Decision-Making?

The EAP in South Africa is in a very powerful position when it comes to environmental decision-making due to the lack of capacity of government environmental departments. This power is evident from the beginning of the EIA process during the scoping process, where the impacts and issues to be addressed in the EIA are framed. Scoping is defined as “the process of determining the spatial and temporal boundaries (i.e. extent) and key issues to be addressed in an EIA. The main purpose is to focus the impact assessment on a manageable number of important questions on which decision-making is expected to focus and to ensure that only key issues and reasonable alternatives are considered” (CSIR, 2005). The EAP plays a major role in framing the knowledge, and in deciding the significant issues that are to be covered, and those to be sidelined. According to Woods et al (2006); it is this knowledge that plays a critical role in shaping the nature and extent of the environmental information that will be included in the final report.

This final report is submitted to the state to make a decision on the EIA, and this implies that the framing of the environmental information contained in this report will have a huge bearing on the decision-making. This is clearly articulated Woods et al (2006) in the following statement:

“The political dimension of scoping introduces elements of ‘power’, ‘influence’, and interest’ into the equation. Scoping is thus considered an activity in which there are underlying conflicting interests at stake, as well as varying perceptions of the significance of the environmental effects amongst a range of stakeholders potentially involved in the process. Scoping cannot therefore be conceived as a rational and objective ‘activity’ that can be replicated or verified because the outcome of a scoping exercise will vary according to how, and by whom it is undertaken”(Woods et al, 2006:222).

The statement above clearly articulates the significance of scoping during an EIA, and how influential it can be towards the decision-making process. There are a number of different stakeholders involved in scoping including the EAP. This implies that impacts that can be deemed insignificant by the EAP may be seen as being significant by the other stakeholders. However the stakeholders are not a homogenous group with shared interests, and will come to the process with different objectives. It is apparent from the statement above that the scoping exercise is not uniform and varies according to how and by whom is undertaking it. This then makes it necessary to have basic guidelines for scoping; which is catered for in the environmental legislation.

Public consultation is a legal requirement, but an EAP makes a conscious decision to be 'sensitive' to the needs of the stakeholders, and ensures that these needs are considered at the decision-making level. The ultimate decision-makers are generally disconnected from the stakeholders, and therefore it is the responsibility of the EAP to 'paint a relevant picture' about the needs of stakeholders. This 'painting of this picture' begins during the scoping process. This is when the significant impacts and issues pertaining to the project are identified. The EAP, with the stakeholders, frame the knowledge that will inform the EIA, and decide which issues are significant and which should be classified as minor.

Sager (2001) has highlighted some of the key responsibilities of the EAP during the process, and some of these include:

- The elimination of distortions,
- To foster open and authentic communication, and
- To make dialogue possible.

Sager (2001) describes these responsibilities of the practitioner as a 'blueprint' for communicative planning. This therefore means that for communicative

planning theory to be implemented during the EIA process, the practitioner has to fulfil the roles as defined by Sager.

Woods et al (2006: 230) have also identified a number of different approaches to impact identification during the scoping process that can be used by the EAPs. This implies that EAPs use different methods to identify significant impacts to be addressed during the EIA; however an EAP can employ more than one approach. These approaches illustrate that an EAP can use different methods in identifying impacts in a scoping exercise. For the purposes of this report; these approaches will be included and used later in the methodology section to analyse the choices and the reasons behind the approaches used by the EAPs during the Gautrain EIA.

The different approaches that a practitioner can have towards scoping are:

1. Consultation with own organisation;
2. Community consultation;
3. Followed guidance from EIA plans and policies;
4. Legal Regulations and thresholds;
5. Consulted other examples of similar projects;
6. Used professional judgement and expertise
7. Used checklist to identify possible impacts;
8. Used other formal technique;
9. Based decision on an appraisal of the likely controversy of the project.

These principles as designed by Woods et al (2006) are critical for this research in highlighting the processes as followed by the EAPs during the EIA. These principles are essential to establish the methods that EAPs utilize to make decisions, and to gain an understanding of why they choose specific methods. This will be useful in cross-checking the choice of method against the individual's expertise. It has been highlighted by Campbell and Marshall (2000) that despite

individuals operating within prescribed code of ethics and principles, personal influences such as education, local community etc have an influential role to play in the decision-making process.

According to Sager (2001), the EIA process is correctly placed as a deliberative tool that can facilitate dialogue. However, with important conflicts remaining, one might have to fall back on majoritarian decision-making. This has the disadvantage of the entire EIA exercise may being regarded as little more than a ritual, “a theatre with roles and script fixed in advance” This therefore implies that public involvement is not always successful and public comments not always incorporated. The EAPs and the political decision-makers may have to make decisions based on other criteria. These facts that they will come up with are defined by the power that the decision-makers have.

2.3. Conclusion

The review of the literature demonstrates the similarities of the collaborative planning approaches, which are described as communicative planning theory, and environmental impact assessment (EIA). EIA has mirrored the communicative turn in planning of the 1990s, and is in the process of abandoning modernist scientific rationality for a post-modern all-inclusive approach. It would appear that EIA has much to learn from planning theory.

The issues of values, power and ethics has also been reviewed, and demonstrate that environmental decision-making can be influenced by these factors. The two value systems within environmental decision-making have been reviewed, and it has been established that the design of the EIA process dictates the use of both these systems. The question is which of the two will dominate during the process, and this research aims to establish the reasons for one value system dominating over another. The need for this research is not to demonstrate that EIA is subjective because the literature has demonstrated that,

but it is to attempt to understand the factors that influence the decisions made during the process. Power in this context is knowledge, which determines who has access to decision-making. This factor is explored within communicative theory, and is also applicable to the EIA context, as being a disadvantage to the collaborative process of decision-making. This review is necessary to answer the research questions, particularly of whether the values and expertise of the EAPs influence their decision-making.

CHAPTER 3

METHODOLOGY

3.1.Introduction

This chapter discusses the methodological approach that was employed in this study. This approach was influenced by the literature review in chapter two. In addition, it took account of the research questions posed in chapter one, which determined the research methodology.

In research there are both primary and secondary sources of evidence. Primary data is raw data, and according to Hoggart et al (2002) secondary data is published data. This research employed both primary and secondary research sources. Primary data has been collected in the form of interviews. This data has been useful in complementing the secondary data in this research, and forms the basis for the analysis and interpretation presented in chapter five. Secondary data sources that have been used in this research including document analysis.

This chapter discusses the methodological approach that has been employed for this research. It then examines the different research methods that were used within the framework of this research. The strengths and weaknesses of each method are detailed thereafter including justifications for the use of these methods in this research.

3.2.Research Methodology

The nature of the research questions posed in this study demanded a qualitative approach to data collection and analysis. This is a method that is suitable for this research because it is concerned with the explanation of people's construction of reality. Robinson (1998:40) describes qualitative techniques as "people's representations and constructions of what is occurring in their world". Qualitative research usually addresses 'how' or 'what' questions, in contrast to quantitative research that asks 'why' and searches for a "comparison of groups... or a

relationship between variables, with the intent of establishing an association, relationship, or cause and effect” (Creswell, 1998:17).

The objective of this study was to establish the expertise of the EAPs conducting the two processes and to determine how far these influenced the decision-making process. It was therefore important to employ the appropriate method of research to highlight the key issues relating to expertise, public participation and decision-making. There are a number of underlying issues that come into play during the EIA process, and therefore the research methodology had to highlight the main issues that would assist the researcher to answer the research questions. It was of primary importance to employ a methodology that allows for subjectivity and value-laden opinions to come through because this research required this information to come through from the various sources such as the public, practitioners, and government officials.

The decision to use a qualitative method in this study was taken after it emerged that the EAPs had signed confidentiality agreements that did not permit them to discuss certain aspects of the Gautrain project. This approach was used through a multiple research approach that would enable the researcher to compare between the information received through interviews with information collected from the Gautrain EIA documents, newspaper articles etc.

3.2.1. A Qualitative Approach

Qualitative research is a method of inquiry in which the researcher is the key instrument of data collection by gathering data in the form of words or pictures, and building a complex, holistic picture (Creswell, 1998). There is recognition in this methodology that there is no single ‘correct’ or factual position but that different people interpret life in different ways according to their experiences of life, and their interaction with culture and lifestyle. This is important for this research due to the nature of the EIA process as subjective. EAPs working in the

same team could have a different experience and interpretation of the same project, and therefore it was these different stories that the researcher wanted to solicit. It is for this reason that this method was employed for this research to enable the different interpretations of the EIA experience from the practitioners and the stakeholders to come through. This approach was utilized through a variety of methods which will be explored in the following section.

This approach was vital for this study as it made possible to acquire the views of the stakeholders and the EAPs and their understanding of and contributions to the EIA and public participation processes respectively. This study was more focused on the description of the processes rather than testing which is characteristic of a quantitative approach.

A qualitative approach was able to bring forth different views from the different stakeholders and the EAPs. In addition, this approach has also enabled the use of a number of data sources to either support or contradict the information received. This has been very useful for a project that has a number of different groups of people involved with very often conflicting opinions and views. In addition, it was very useful to track the consistency or lack thereof in the opinions and views of the interested and affected groups from the project inception in 2002 to present day.

3.2.2. Case Study

Case studies are important because they can be used to test theories, to provide a detailed contextual analysis of events and contradict generalizations (Anderson, 2003). According to Kitchin and Tate (2000), case studies are useful for studying specific issues in depth. This research necessitated that specific issues be highlighted such as the expertise of the EAPs involved in the EIA. The case study approach was ideal to address these issues and to answer the research questions.

The key issues that needed to be highlighted in this study is the relationship between the EAPs' expertise and the environmental decision making process. The case study served as a magnifying glass through which these issues could be elevated within the EIA process. This case study served as the backbone for the formation of a literature framework because it influenced the direction that the research would take. In addition, this case study was suitable for answering the research questions because it had resulted in two processes in the same setting with different outcomes. This therefore raised numerous questions for the reasons behind these different outcomes (Table 2).

Table 2: Differences between the Sandton RoD Alignment and variant alignment.

ROD ALIGNMENT	VARIANT ALIGNMENT	IMPACTS
Alignment beneath Strathavon residential area	Alignment beneath Katherine Street	• Alignment beneath Katherine Street affects less population than that beneath Strathavon • Traffic impacts reduced as Rivonia road at the corner of Pretoria Road and 5th Avenue will not be closed for the 3 year construction period • Impacts to open space (park) limited to construction phase only, but park to be rehabilitated after construction
Sandton Station further deep below surface	Sandton station shallower than original	
No temporary construction shaft	Temporary construction shaft in Mushroom Farm Park, Sandton	

The chronological confines of this research include the period 2002 to 2005. The reason for defining this time period is based on the period when the EIA was started on the Gautrain project in 2002 to the period when the CEA was completed in 2005. The subsequent period of development of the project has not been included because it has no relevance for this project. For the purposes of this research it was essential to understand the key issues linked to the EIA and

CEA processes of the Gautrain project.

This case study had the benefits of a comparative analysis of these two processes that occurred in similar settings in trying to understand the reason for the different outcomes. However the limitations of this case study are also noted which include the difficulty in obtaining information from the EAPs due to legal implications of the confidentiality agreements that they had signed, and also due to the initial negative press and public reaction to the project. In addition, this research had time and financial resources.

3.2.3. Interviews

This research employed the in-depth semi-structured face-to-face interviews which can accommodate any type of question and questionnaire (Clifford and Valentine, 2003). Semi-structured interviews are appropriate for this research as compared to focus groups because “they reflect individual views, values and opinions”, while focus groups “enable researchers, and group members to explore together the embeddedness of environmental experience and values within different cultural contexts” (Hoggart et al, 2002:214). Semi-structured interviews have “some degree of predetermined order but still ensures flexibility in the way issues are addressed by the informant” (Clifford and Valentine, 2003:119).

A self-administered questionnaire with open-ended questions which included a variety of yes/no, multiple response (including likert scale-type questions) was used to guide the informal conversation with the respondents. This enabled them to be comfortable enough to express their opinions without being constrained by structured questions. Open-ended questions can be used to gain a deeper understanding of an individual's perceptions and experiences. Informal, semi-structured and unstructured interviews offer several advantages over more standardised interviews or survey questionnaires, such as the ability to elicit

more information from the respondents. Because of its qualitative nature, in semi-structured and unstructured interviews there is also a greater potential to interpret individuals' contributions in their appropriate social context. This was critical for this research because the EAPs were very conscious of saying "the right thing". This approach helped relax them and gave the researcher an opportunity to elicit extra information. The structure of the questions was also very flexible and allowed the researcher to ask leading questions, which means that questions were constantly being altered to keep up with new information gained from the interview process.

A flexible format allows the interviewer to pursue a different line of questioning (and use wording and phrasing) appropriate to a particular interviewee. Non-directive questioning allows the interviewee to focus on the issues to which they attach the most relevance, enabling the interviewer to understand their interpretation and perspective better (Morrison, 1987). This is an informal technique and it helps the "researcher to gain access to the experiences and insights of the human subjects" (Robinson, 1998:41). In addition to that there is evidence that respondents are more likely to be 'truthful' in such an environment, as compared to when they have to answer questions in a questionnaire survey, and can "express in their own words the fullest range of attitudes, preferences and emotions" (Clifford and Valentine, 2003:89) . This type of technique allows a high percentage of flexibility, and "can be tailored to suit the particular individual needs" (Robinson, 1998:41).

This type of research methodology was chosen for this project because of the sensitive and controversial nature of this project. The project has been subject to a number of lawsuits, and the EAPs were required to sign confidentiality agreements, that not only limit the amount, but, also the type of information that they could reveal. The open-ended questions enabled the respondents to feel relaxed, and not feel as if they were compelled to speak about specific subjects. At the same token, this feeling of security resulted in relaxed respondents who in

the process revealed more than they had intended to. A recorder was used with the respondents' permission to have an accurate record of the responses. In addition, the respondents requested that their names not be used in the report to avoid persecution for the opinions expressed. The structured nature of the questions proved useful when interviewing the stakeholders, particularly the taxi drivers, because the project was controversial and therefore had the potential to rouse a number of varied emotions. The structure of the open-ended questions maintained the theme of the interview, while also affording the respondents the opportunity to answer the questions in their own words.

The sample in research is “the subset of people to who the questionnaire will be administered” (Clifford and Valentine, 2003:95). Selection of interviewees followed a ‘purposeful sampling’ approach (Maxwell, 1996:70; Creswell, 1998). This is a technique in which the total sample population is chosen by the researcher “on a basis of their experience related to the research topic” (Cameron, 2000 cited in Clifford and Valentine, 2003:123). This means that the researcher chooses the sample population based on experience and knowledge that they are likely to produce the desired results. In contrast to quantitative methods, where the sample needs to be representative and objective, the sample in qualitative methods is not meant to be representative, but to understand how individual people experience and make sense of their own lives (Valentine, 1997:111 cited in Clifford and Valentine, 2003). Interviewees were chosen to represent a variety of positions, roles or perspectives, and also for their accessibility and willingness to be interviewed. Interviews were recorded and later transcribed.

In this research the sample population was picked from the EAPs in Felehetsa Environmental (Pty) Ltd and Bohlweki Environmental (Pty) Ltd. Felehetsa was appointed as independent environmental consultant to Bombela Consortium to undertake environmental investigations for the CEA, and Bohlweki was appointed by the Gauteng Department of Transport as independent

environmental consultant for the EIA. Stakeholders who had registered as Interested and Affected Parties (I&APs) in the Sandton area were also included in the sample, more specifically business owners, homeowners and taxi drivers/owners because they have been affected by this project.

For the purposes of this research, it was imperative that the sample included both the EAPs from the EIA and CEA processes. The EIA process was the initial process that was conducted in 2002 and a RoD was granted; however when the Bombela Consortium was awarded the project, they felt that there could be substantial improvements made to some aspects of the EIA and therefore appointed a second group of environmental consultants to conduct the CEA. For the purposes of this project, it is vital to establish the differences between the two processes that were inherently carried out for a single project, and to understand why there were different outcomes (as illustrated in Table 2).

The number of interviews that could be conducted was limited by the time and resources available for this research, and the willingness and accessibility of suitable interviewees. The limitation of having just 14 interviews is noted; however it is important to understand that this research was focused on the EAPs and it was this group that had limitations in terms of willingness to avail themselves for the interview process. The question of stakeholders and public participation was a minor issue in the research and did not necessitate a substantial sample. Consent from all the interviewees was sought and granted before the interview took place, particularly about the use of the tape recorder.

Interviewees included:

- Four EAPs from Bohlweki Environmental Consultants
- Three EAPs from Felehetsa Environmental Consultants
- Six stakeholders
- Two environmental officers (GDACE)

A total of thirty-seven practitioners were involved in the original EIA (Figure 2). The EAPs involved were the project director, project manager for EIA coordination, project manager for public participation process, nine EAPs of which three reported to the Project Manager for EIA coordination and six reported to the project Manager for Public participation. A total of twenty-six practitioners were also sub-contracted for a variety of specialist fields. For the purposes of this research, the specialists have not been included in the sample population which consists of the eleven EAPs. The structure and the portfolios of the EAPs involved from Bohlweki is illustrated in Figure 1. The interviewees included four out of eleven EAPs from Bohlweki.

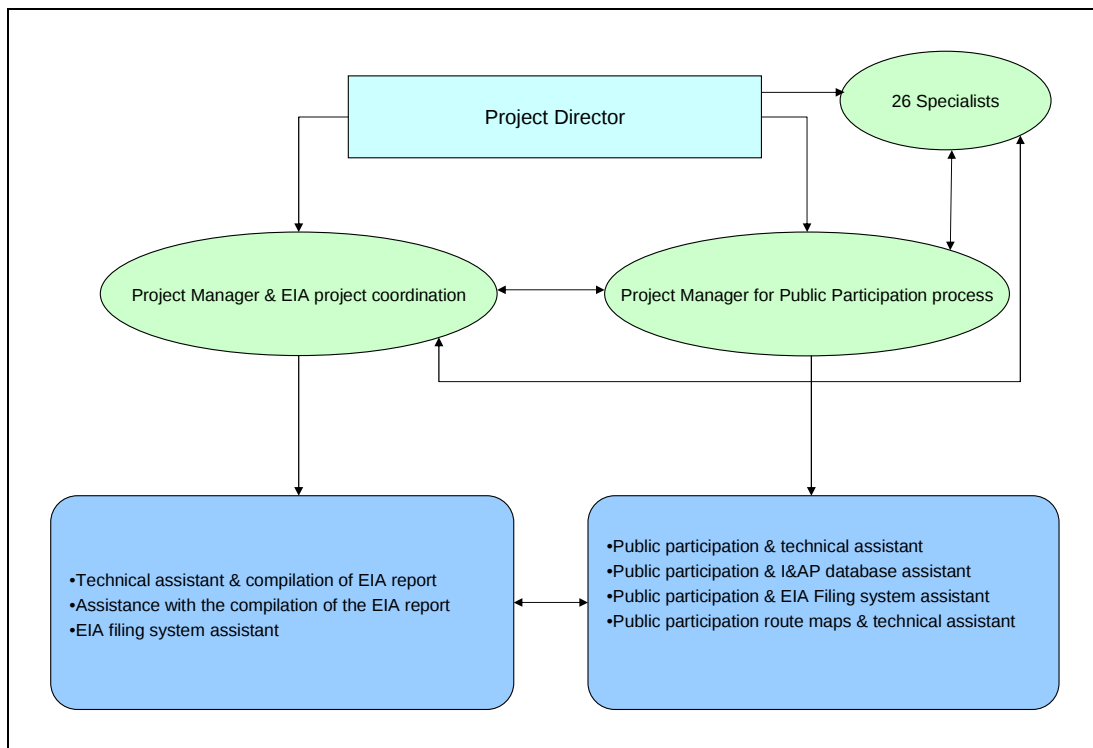


Figure 1: Bohlweki EAPS involved in EIA

The Felehetsa team for the CEA involved a total of twenty-five practitioners (Figure 2). The EAPs involved were the project leader, two EAPs in the project management, support, and EIA applications portfolio, one EAP in the strategic client communications portfolio, four EAPs in the public participation process

portfolio who reported to the strategic client communications manager. A total of twelve practitioners were also sub-contracted for a variety of specialist fields. There was also an environmental lawyer, a media specialist and a strategy specialist. For the purposes of this research, the sample population comprises the project leader, the two EAPs in the project management and support, one EAP in the strategic client communications portfolio and the four EAPs in the public participation process portfolio. Three out of eight EAPs were interviewed for the purposes of this research. The structure of all the EAPs involved in the comparative assessment is illustrated in Figure 2.

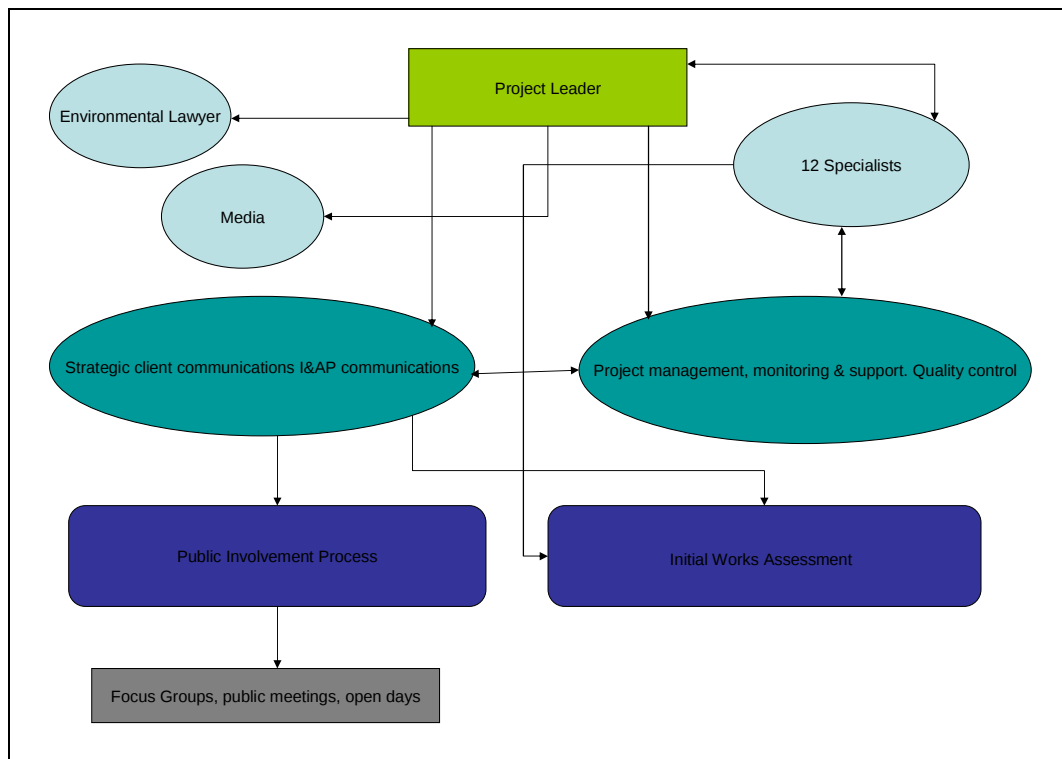


Figure 2: Felehetsa EAPS involved in CEA

Two environmental officers from GDACE were also interviewed. A total of two business owners in the Sandton area, two homeowners in Strathaven, and two taxi drivers whose rank has since been re-located for the development. The number of stakeholders was less than the EAPs because the focus of this study

is on the EAPs and their values and expertise; however the stakeholders had to be included in the sample population to answer the public participation question. These stakeholders were selected randomly from a list of registered I&APs. The businesses and homes in this area are serviced by domestic workers and gardeners who do not reside in the area. These are the people that require public transport to take them to and from work. Taxis therefore play a pivotal role in the efficient functioning of the homes and businesses within Sandton. It is for this reason that taxi owners were included in this study, and because the taxi rank in Sandton was relocated to make way for the development. This sample population was selected because their experiences with this EIA are useful in answering the main research questions that are posed by this study.

3.2.3.1. Strengths of the semi-structured interviews (open-ended questions)

- The privacy clause in this project made this method suitable for this research because the open-ended questions did not prescribe to the respondents. In addition, the respondents felt comfortable due to open nature of the questions, and ended up giving extra information.
- The informal nature of this method resulted in both parties being comfortable. This proved useful during the interviews for the respondents such as the taxi drivers who could not relate to a young, educated woman. The informal nature of the interview and the ability of the researcher to communicate in their language evened out the power relations, and eased the problem of intimidation.
- This method proved to be cost-effective because there was a specific sample population that the researcher had selected, which minimised the amount of interviews to be conducted. This minimised the costs involved in the research process which include telephone costs,

transport costs and stationary costs.

3.2.3.2. Weaknesses of Semi-structured Interviews (Open-ended Questions)

- The fact that this method is open to interpretation may introduce a bias, whereby the researcher may interpret the information provided to suit what they intend to get out of the research. They may also nudge specific responses from the interviewee or the interviewee could dominate the proceedings and in the process throw the researcher off-track.
- This method is not a scientific procedure and therefore results that were collected cannot be generalised. The results of this research are only relevant for this particular case study, and cannot be applied to another area. This can lead to the validity of the data being brought under scrutiny. Moreover the study depended on views as expressed by the respondents, and people can be inconsistent. The very ideas on which the results of this study are based may very well change before this study has been completed.
- This method has resulted in excessive and ineffectual data being collected. Due to the questionnaire being semi-structured, the respondents would go off on a tangent and discuss irrelevant agendas. This proved to be very problematic in this particular study because of the public nature of the proposed project. Some of the respondents were eager to show how much knowledge, however irrelevant, they had on the project. This required extra time to sieve out the useless information from the transcribed data.
- Finally, this method is time-consuming. As already mentioned above,

the researcher needs to sieve through irrelevant and unnecessary information that is provided by the respondents.

3.2.4. Document Analysis

According to Hoggart et al (2002) published data is secondary data. Secondary data sources that have been used in this research are literature in the form of EIA reports, books, journals, newspaper articles and attendance registers during public participation exercises. Secondary data was very important for this research in providing an insight into the process of EIA and CEA due to the unwillingness of the EAPs to be interviewed. This data was compared and correlated with the primary data that was received from the interviews that the researcher managed to secure.

These have formed the bulk of the data. In this research, secondary data provided insight into the EIA process and the sentiments of the public about the project. It also enabled a tracking of the key issues raised during the public participation exercise, and how these were reflected in the decisions taken. One of the critical documents for this research was the EIA and CEA reports, particularly the issues reports. These reports detailed the issues raised during the public participation exercise, and the follow through on these issues. In addition, it also detailed the process followed and the priority that specific issues were given.

The document analysis was used to identify specific themes that would be useful in answering the research questions. In analysing the Issues documents it was imperative to recognise a follow-through of the issues raised in the EIA, and to see if those had been addressed during the CEA. In addition, it was important to identify similarities and differences in the process followed for the EIA as compared to the CEA in an effort to understand why the processes had different outcomes. One of the key themes that was analysed from these documents was

that of public participation for both these processes. The EIA process was the primary process which received a lot of media attention and coverage. The CEA process was undertaken a few years later by the appointed consortium to amend the original RoD. It therefore is fundamental for the purposes of answering the research questions to establish why the changes to the alignment, which had been suggested in the EIA, were only approved years later for the CEA.

This was useful for this research because it gave an indication of which value-system had dominance. In addition, the newspaper articles were crucial for giving a historical view of the project, and for illustrating how there is no single truth when it comes to people's construction of reality. Newspaper articles from as early as 2002 had a different mood as compared to the information that was collected from the interviews. It would appear that there had been a substantial shift in the way people perceive the project from its inception to present day. This allowed for a comparative analysis for the researcher.

3.2.5. Conclusion

This chapter has explored the methods that have been used to answer the research questions as posed in this study. The research process has been flexible by allowing for a number of different groups to express their opinions and views. In addition, this flexibility was expressed in the use of a number of different approaches within the qualitative approach. These include the use of primary data sources such as interviews and secondary sources such as document analysis through the use of a case study. These approaches highlighted the specific issues that were necessary to answer the research questions.

CHAPTER 4

DATA ANALYSIS AND DISCUSSION

4.1. Introduction

In the previous chapter the research methodology that was used to carry out this study was discussed. This chapter focuses on discussing and analysing the data that was collected from the research. This will tie in with the main themes as discussed in the literature review in understanding the role that the expertise and values of the EAPs played in the two different outcomes of the EIA and CEA. In addition, the role of public participation in influencing these outcomes is also analysed.

In unpacking the two processes in the case of the Gautrain, the analysis will focus specifically on the role of the two groups of EAPs. This role is defined by their expertise and values, their involvement in formulating decisions, and the methods used in making these decisions. It also addresses the extent to which the public is involved through an understanding of the institutionalised issues and instruments used to engage with the public. Fundamental to these issues is the implementation of the concept of communicative planning which is underpinned by the principle of shared decision-making.

Table 3: List of interviewees

INTERVIEWEE	REFERENCE	DATE
Environmental Practitioner 1	(EAP 1, 2007)	September 2007
Environmental Practitioner 2	(EAP 1, 2007)	September 2007
Environmental Practitioner 3	(EAP 1, 2007)	May 2008
Environmental Practitioner 4	(EAP 1, 2007)	May 2008
Environmental Practitioner 5	(EAP 1, 2007)	September 2007
Environmental Practitioner 6	(EAP 1, 2007)	September 2007
Environmental Practitioner 7	(EAP 1, 2007)	May 2008
Environmental Officer 1	(GDACE 1, 2007)	May 2008
Environmental Officer 2	(GDACE 2, 2007)	May 2008
Stakeholder 1	(S1, 2007)	October 2007
Stakeholder 2	(S2, 2007)	October 2007
Stakeholder 3	(S3, 2007)	October 2007
Stakeholder 4	(S4, 2007)	October 2007
Stakeholder 5	(S5, 2007)	October 2007
Stakeholder 6	(S6, 2007)	October 2007

4.2. Analysing the EAPs Expertise and Values

This research has focused on understanding how the values and expertise of EAPs can aid or hinder the implementation of EIA processes through the key element of public participation. This was explored through an understanding of the EAPs values that could influence the process and outcomes.

The most important way to understand the values and the expertise of the EAPs was by establishing the factors that influence these values. According to Bolan (1983), there are a number of influential factors ranging from self, family, friends, employer, client, colleagues, the profession, local community, nation-state, past generations and future generations academic background. This research focused on the influence of education and local community on the values and consequently the decision-making of the environmental assessment practitioners

(EAPs) when using the tool of EIA.

The South African environmental field is very broad with EAPs who hold qualifications ranging from the Sciences, Humanities and Animal Sciences. These fields are diverse and are built on different principles which form the basis of the studies from the first year of study. A scientific scholar will be taught that there is a single objective truth which can be determined through the use of scientific processes that follow a specific order and format. A humanities scholar on the other hand is taught that there are multiple truths and that those truths are dependent on who is telling the story at that particular juncture. This therefore implies that the truth is subjective. This has implications on the approaches and methods that a humanities and scientific scholar will use in trying to get answers and ultimately in making decisions as they both come from different schools of thinking. It therefore became necessary to establish the different schools of thought that were key in the decisions that were made for the EIA and CEA, and attempt understand the influence of these thereof.

4.2.1. The influence of education and expertise

In order to establish the expertise of the EAPs involved in the EIA and CEA, it was necessary to establish their educational background and qualifications. This would then aid in understanding the influence or lack thereof of education on the outcomes of these processes.

4.2.1.1. Bohlweki Practitioners Expertise

The educational background of the interviewed EAPs from the EIA process ranged from a basic teaching diploma to Engineering degrees. Four EAPs were interviewed from the EIA process (Table 4); two had an engineering qualification, one had an Environmental Management qualification and one had a teaching diploma.

Table 4: Expertise of respondents from Bohlweki

BOHLWEKI ENVIRONMENTAL ASSESSMENT PRACTITONERS EXPERTISE	
EAP 1	Engineering
EAP 2	Engineering
EAP 3	Environmental Management
EAP 4	Other (Teaching)

The differences in expertise and qualification are a result of the lack of standardization of the environmental assessment profession. The sentiments of the EAPs varied on the question of how they felt this lack of professional standards in EIA impacted on the quality of the process. One EAP noted that his expertise as a teacher positively influenced the work he did in the EIA because his focus was on public participation, which very often cast him in the role of facilitator (EAP 4, 2008).

“My teaching diploma is very influential and useful when it comes to my role as facilitator of public participation. I find that I rely on the skills that I acquired in college very often” (EAP 4, 2008).

This point of view was the opposite of one by another EAP who emphasised the need for the profession to be “purified” because the individuals who had the appropriate qualifications were struggling to find employment (EAP 3, 2008). These two conflicting statements from members of the same team highlight the debates that exist within EIA theory. On the one hand there is the debate that EIA is a science, and therefore finding the appropriate solutions should be left to the experts, while on the other hand is the school of thought that embraces ‘multiple values and voices’. Another EAP noted that an EIA, particularly a big one such as this case study required specialist input from experts from a wide range of fields

such as heritage, social etc, and therefore could not be viewed as a “science”.

“EIA is one of the most inclusive environmental management tools in the country. It incorporates input from a wide variety of specialists such as social and heritage specialists, and therefore in that way already incorporates multiple voices. I therefore am puzzled when some people refer to EIA as a pure science” (EAP 2, 2007).

This comment raises questions about the potential benefits of diverse expertise in an EIA. As much as the specialists only have an advisory function on the specific issues of their concern, some of these specialist studies can be very influential in terms of decision-making therefore making the specialist an important part of the team. For the purposes of this research, the term “environmental assessment practitioner” did not apply to specialists in particular fields who may be involved in, or asked to give input to, particular stages of an environmental assessment from the perspective however it is worth mentioning in the debates around a pure science versus a multiple values approach.

In addition, the CBEAPSA in its requirements for voluntary accreditation does make provision for practicing EAPs who do not necessarily have the environmental degree by stipulating that they should have at least three years experience and a post-graduate degree in environmental studies. This could be because of the realisation that most practicing EAPs do not have the necessary qualifications or it could be the acceptance of the multiple values approach. An interviewed EAP had a different understanding of the politics behind the accreditation process, and felt that it was about controlling the profession and power, and the realisation that excluding EAPs without environmental qualifications would basically mean most of the practicing practitioners who had the experience and could get the job done. In addition, this practitioner felt that his expertise as an engineer also added value to the process (EAP 5, 2007).

“To be honest, running an environmental assessment project does not require a specialised skill, and Engineers bring a lot to the process. At the end of the day, it is all science, and engineers are scientists” (EAP 5, 2007).

The other side of the debate argues for the standardization of the profession, and one practitioner expressed his frustration at the saturation of the market with “unsuitably qualified people” (EAP 7, 2008).

“...anyone can conduct an EIA because the profession is not legally standardised. I have an environmental qualification, and could never get a job as an engineer, so why should an engineer do EIAs? It has become so bad that we cannot get jobs because the market is saturated with the unsuitably qualified people!” (EAP 7, 2008).

It is evident from both these statements that both EAPs feel that they have the required expertise and skills to conduct an EIA. The question driving this research is how this expertise influences the outcome of the process. A comparative analysis of the expertise within the two teams is necessary to understand why the processes yielded different outcomes.

4.2.1.2. Felehetsa Practitioners Expertise

Three EAPs were interviewed from the CEA (Table 5). Two had environmental management qualifications, and one had an Engineering qualification.

Table 5: Expertise of respondents from Felehetsa

FELEHETSA ASSESSMENT PRACTITIONERS EXPERTISE	
EAP 5	Engineering
EAP 6	Environmental Management
EAP 7	Environmental Management

According to Campbell and Marshall (2000), the assumption is that by virtue of practitioners being in the same profession that they will have shared values however this is not always the case because there are a range of factors that can influence practitioners. Table 4 and 5 illustrate that both teams were composed of EAPs with similar expertise; however these teams had different outcomes for the EIA and CEA. This confirms the statement by Campbell and Marshall (2000) that sharing a similar educational background does not necessarily guarantee that the individuals will have shared ideals and values. This confirmation indicates that expertise alone may not necessarily influence the outcome of the EIA process, however to further understand this it is necessary to also analyse the approaches and methods as employed by the EAPs in the two teams.

The most important way of understanding the process as adopted by the two teams was by understanding how the EAPs rank the different methods and approaches of impact identification. This was done to give clarity on the values of the EAP, specifically the key influential factors that drive their decision-making process. This ties in to the list of influences as supplied by Campbell and Marshall (2000). The weight given to the methods and approaches would then be linked to the individual expertise of the EAP in an attempt to find a relationship. The EAPs were asked to rate the different approaches to impact identification on a scale rating from 0 to 10, with 0 being not important and 10 being very important. As can be noted from Table 6, in general there is a considerable similarity in the ranking of the important approaches, with all EAPs showing a strong ranking for following policy and regulatory thresholds.

Table 6: Ranking of impact identification methods by Bohlweki

BOHLWEKI ENVIRONMENTAL ASSESSMENT PRACTITIONER'S RANKING OF IMPACT IDENTIFICATION METHODS				
APPROACH	EAP 1	EAP 2	EAP 3	EAP 4
Consultation with own organisation	10	10	10	10
Community consultation	10	10	10	10
Following guidance from EIA plans and policies	10	10	10	10
Legal Regulations and thresholds	10	10	10	10
Consulting other examples of similar projects	2	0	5	0
Using professional judgement and experience	10	10	10	10
Using checklist to identify possible impacts	10	10	5	2
Using other formal technique	8	10	5	0
Basing decision on an appraisal of the likely controversy of the project	10	10	10	10

In addition, consultation with own organisation, professional judgement and likely controversy of the project were all ranked as very important. These findings are perhaps not surprising given that EAPs do operate in a legal and policy framework to which they need to abide. In addition, EAPs work as a team and

generally rely on other members of the team so the high ranking of the consultation with own organisation method is also not a surprise. All the EAPs rated the likely controversy of the project as very important in determining the identification of impacts. One EAP commented that the project had immense public attention, and therefore had the potential to be controversial from its inception because of the re-settlement that was involved (EAP 6, 2007). This approach is an interesting one because it raises questions about the true nature of impact identification and inadvertently about public participation. Does this mean that if a project is deemed to be controversial that more effort will be put into identifying impacts and involving the public?

“The truth of the matter is there are small EIA projects that are really of no consequence, and that do not attract as much public attention, so there is no pressing need for attention to detail. However projects that are likely to be controversial require an in-depth study because the public has their focus on it” (EAP 2, 2007).

This statement raises questions about the influence that the public can have in determining the outcome of the process. This statement articulates that the more involved the public are in environmental projects, the harder the EAPs will work in identifying the impacts. This statement appears to confirm the influence of the public in the outcomes of EIA projects. This can only be confirmed through an in-depth analysis of the public participation process which is done in section 4.3 of this research.

“This project was not only the first of its kind in South Africa, which required extensive research on international examples, but it was also controversial which required one to carefully consider all options before making a decision because a lawsuit was the distinction between a right or wrong decision”(EAP1, 2007)

As can be noted from Table 7, all the interviewed practitioners from both teams ranked the methods of impact identification in a similar fashion, and this statement confirms that EIAs are by their nature political, because the facts do

not seem to speak for themselves but instead the facts are defined by political and financial power. This then raises questions on the influence of expertise and values on the decision-making process. This research has established that both teams had similar expertise and similar rankings of methods and approaches to impact identification but still managed to have different outcomes. A practitioner noted that “an EIA is bigger than education and expertise. It is driven by financial and political motives more than the science” (EAP 2, 2007). This statement confirms that EIAs are by their nature political, because the facts do not seem to speak for themselves but instead the facts are defined by political and financial power.

The ranking of impact identification by the EAPs when assessed for correlations with the educational backgrounds assists in the development of trends. The EAPs with engineering backgrounds were the only EAPs to give high rankings for checklists and formal techniques. This was a common thread between both the groups of practitioners. This correlation of education and the ranking of the impact identification method may be suggestive of the influence of educational background on the decision-making process of the EAP during an EIA. EAPs with a scientific or engineering background final assessment may be influenced by checklists and formal techniques, while an EAP with a human geography background may not be.

Table 7: Ranking of impact identification methods by Felehetsetsa

FELEHETSA ENVIRONMENTAL ASSESSMENT PRACTITIONER'S RANKING OF IMPACT IDENTIFICATION METHODS			
APPROACH	EAP 5	EAP 6	EAP 7
Consultation with own organisation	10	10	10
Community consultation	10	10	10
Followed guidance from EIA plans and policies	10	10	10
Legal Regulations and thresholds	10	10	10
Consulted other examples of similar projects	4	2	8
Used professional judgement and experience	8	10	10
Used checklist to identify possible impacts	8	4	0
Used other formal technique	10	1	5
Based decision on an appraisal of the likely controversy of the project	10	10	10

One government practitioner commented that the South African government had found itself in a peculiar position of being a developed country in a developing country (GDACE 1, 2007). This practitioner proceeded to explain this statement by saying that South Africa needed development as it was a growing economy; however it had also adopted environmental policies from the developed world which at most times complicated the development drive (GDACE 1, 2007). This statement is also a confirmation of the political nature of EIA, and raises the question 'at what point do EAPs ignore implications of an EIA that has the political and financial support? The Gautrain is a project that falls under this classification, as the proponent was government and it had the financial support of government. How far could this have influenced the outcome of the process?

I don't think anybody has ever said EIAs are accurate, but it's doing something, and I think that is definitely better than not doing anything. Every system has a loop hole, and perfection is hard to come by, but EIAs have done a lot for the environment in South Africa. Even if projects always get the go-ahead, there are checks in place for mitigation and monitoring" (GDACE 2, 2008).

This comment by the government practitioner substantiates the claim that there are a number of factors that influence how EAPs make their decisions. In this particular EIA, the EAPs expertise did not influence the outcomes of the process. This has been demonstrated by the similarity in the expertise of the EAPs from the two teams however they still yielded different outcomes. It becomes necessary to understand the reasons that there was a second EIA process after the Record of Decision (RoD) had been issued. According to the Gautrain spokesman Dr. Barbara Jenson, the proposed changes in the variant alignment would have potential positive environmental benefits, including a reduction in traffic, heritage, land-use and construction-related impacts. This statement implies that the RoD was flawed and therefore required revision to maximise the environmental benefits, and raises questions on the decision –making process because the EIA report had declared the project as “acceptable from an environmental perspective” (Seria, 2002).

Most of the interested and affected parties that were interviewed expressed that they felt this project was financially driven and that the environmental studies were conducted with the intentions of maximising profit. An interviewed resident of Sandton had the following to say when questioned on why they thought there was a need for the original RoD to be amended.

“I do not for one second believe that the second study was done to improve on the original study. It is all about maximising profits for the developers, and if they could find a way to undertake the project at the lowest cost they would; even if it required further study” (S3, 2007).

A practitioner who was involved in the project had a different understanding of

the reasons for the amendment of the original RoD, and these were expressed in the following statement:

“The CEA had the intention of improving the results from the EIA. This did not imply that the EIA was wrong, but it was within Bombela's right to make any improvement they deemed necessary to some of the decisions taken in the original RoD” (EAP 7, 2008).

This statement validates the subjectivity of the EIA process due to the fact that the one team of practitioners felt that they had followed best practice within the confines of the law, and government approved the decision which was subsequently amended to make improvements. This illustrates that there are multiple truths and depending on the individual making the decision, there can be a number of varied interpretations of the same EIA. One of the reasons given in the Comparative Environmental Assessment report (2005) for the need for the variant environmental investigations was the reduction of overall project costs. These changes were proposed by the preferred bidder for the Gautrain project and approved by GDACE. GDACE had already approved the RoD for the original variant however they still approved the proposal to have a CEA of the same project. A practitioner from GDACE who was not involved in this specific project made the following comment:

“I was not involved in the decision-making for the Gautrain, but as a government officer, I know that these decisions are based on the facts that are presented to the authority. The main focus is to ensure that all the steps and procedures according to law have been adhered to. Once this has been established, then we can review the information that is presented and make recommendations based on the information received” (GDACE 1, 2008).

This statement illustrates the loopholes in the environmental decision-making in the country. The government departments rely on the information that is provided to them by the project proponents through their EAPs to make their decisions. This places an emphasis on the information that the EAPs relay to the state. Are

these recommendations an accurate representation of the facts, and who can decide what these facts are? Based on the information collected in this research, education did not influence the decision-making process for the EAPs in this study. However it must be noted that this was a limited study, and further research is required.

4.3. Analysing the Public participation process

While there are numerous ways of analysing EIAs, this research has focused on understanding how the expertise of the EAPs and public participation can aid or hinder the implementation of communicative planning principles in the decision-making process. This was explored through an understanding of the principles of communicative planning theory, the EIA process and the expertise of the EAPs. The public participation process is legally embedded in the EIA process; however it was necessary to establish how far it influences the decision making, and if this in any way correlates with the expertise of the relevant EAPs.

4.3.1. Engaging the public

Public involvement in the EIA process is legislated in the South African context, and for the purposes of this research the Aarhus Convention has been used as a filter through which this process can be analysed. Public participation is a complex process, and will be addressed through a discussion of the methods used to engage with the public. Specific issues that were addressed in meetings will be discussed in an attempt to trace the influence of public participation on the decision making process. This section is then concluded by discussions on the different stakeholders that exist in the study area. This discussion is based on the information received from the research respondents, and also on archive information. This discussion aims to highlight the ability of the stakeholders to influence the public participation.

4.3.1.1. The public participation process

To gain an understanding of the influence of the public participation process on the outcome of the process, it was important to understand the process itself (see Figure 3). This section shows exactly how and when public participation took place during the EIA. As can be noted, public participation was extensive and took place for an extended period. According to the draft EIA document (Bohlweki, 2003), the public participation process for this EIA commenced in January 2002, and was carried out in terms of the Environment and Conservation Act of 1989. Public participation becomes difficult to define when you consider that the project was initially announced in 2000 but the public was consulted in 2002. This has implications for the evaluation of the public participation process in terms of timing because the public was only brought into the process two years after the inception of the project. That implies that the public has no bearing on the decision of whether the project will take place or not. A practitioner noted that there was consultation before the public participation process began however it was limited to major role players such as government (EAP 1, 2007).

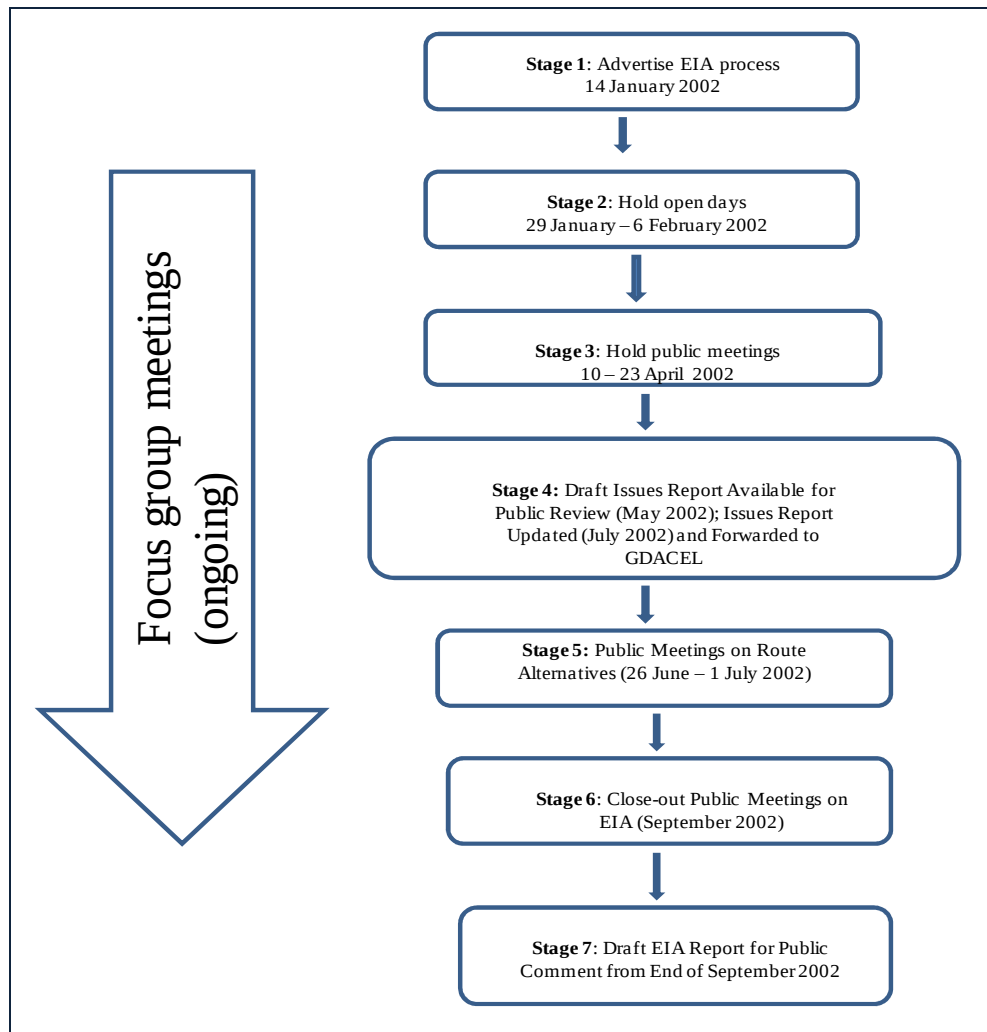


Figure 3: The EIA Public Participation Process (revised) (Bohlweki, 2002a:2)

The repercussions for the implementation of communicative planning theory is that it creates the impression in the public that this is a non-inclusive process and therefore exacerbates feelings of anger and fear that may already exist. It was reported that a number of residents and business owners were “angry, others were fatalistic, and many more residents did not know that the much vaunted Gautrain rapid rail link could just go through their homes and businesses” (Cox et al, 2002). The early involvement of the stakeholders in the process could dispel misunderstanding and miscommunication. Even at the time of the interviews, there still existed feelings of mistrust towards the public participation process.

This is illustrated by the following statement from a stakeholder:

“This project was clearly going ahead with or without the support of the public. The public participation exercise was to foster the buy in of the public and to make us believe that our opinions matter” (S3, 2007).

This statement highlights the need for the public to feel involved in a project from its inception to ensure commitment and a sense of ownership and pride. The principles of communicative planning promote a deliberative approach where all the parties have an opportunity to be heard and where compromise can be achieved. Failure to achieve these principles limits the ability of a public participation process to aid in the implementation of communicative planning.

4.3.1.2. Public Communication

Public participation occurred through various forms of communication (see Figure 4). Communication is a key element of public participation and has often been highlighted as an area of weakness in the South African context due to the level of technical jargon in the documents intended for the public. The public communication used in the EIA was extensive and diverse. Most of the interviewed stakeholders noted that the project was well advertised and that updates were communicated effectively and efficiently. A practitioner also noted that stakeholders were also able to submit their concerns by e-mail, telephone, fax and through the post (EAP 4, 2008). However there were also stakeholders who felt that the information contained in the communication was scientific and confusing for them to understand (S2, 2007). This aspect of the process will be addressed in detail in the evaluation of public participation criteria.

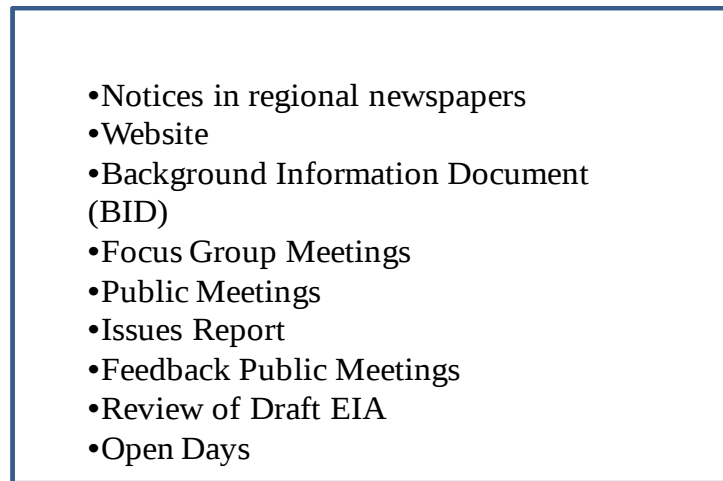
- 
- Notices in regional newspapers
 - Website
 - Background Information Document (BID)
 - Focus Group Meetings
 - Public Meetings
 - Issues Report
 - Feedback Public Meetings
 - Review of Draft EIA
 - Open Days

Figure 4: Methods for Public Communication in the EIA (EIA Draft Report, 2003)

A series of Open Days were held between 29 January and 6 February 2002 at various venues in close proximity to the proposed rail route. The purpose of these Open Days was to introduce the project to the public. A background information document was distributed to Interested and Affected Parties (I&APs), which contained information regarding the proposed project, the proposed route alignment and the EIA and public participation process (Bohlweki, 2003).

4.3.1.3. Focus groups

A series of focus group meetings were held in the Sandton area to address particular concerns in specific areas (see Table 8). According to the draft EIA document focus group meetings are smaller meetings with specific groups or organisations who have similar interests in or concerns about the project.

Table 8: Focus Group Meetings adapted from Draft EIA Report (Bohlweki, 2003).

FOCUS GROUP	NUMBER OF MEETINGS
Alexandra Taxi Association	1
Atholl Residents Association	1
Region 3 of Johannesburg Metro, Mushroom Farm Park and Innisfree Park	1
Sandton South Residents and Ratepayers Association	2
Strathavon / Sandown Residents	3
Sandton focus group	3
Sandton East and Parks Focus group	2

4.3.1.4. Public Meetings

A series of public meetings in Sandton occurred throughout the public participation process. These meetings were held in the Sandown High School hall and the Parkmore Scout headquarters hall. The location of the meetings made it viable for most stakeholders in Sandton to attend as it was in a public area which is accessible to all. However the time (mostly in the evenings) of the public meetings did not make it conducive for people to attend.

Observations from the public meeting minutes revealed that the format of the meetings (see Box 1) was a combination of the expert-driven and participative approach. The agenda shifted from a scientific and economic view of the project to a discussion item where the members of the public were awarded and opportunity to express their opinions and raise any questions (see Box 2).

Box 1: Public Meeting Agenda (adapted from minutes of a meeting, Bohlweki 2002b).

**EXAMPLE OF THE FORMAT OF A PUBLIC MEETING
AGENDA**

- 1. Welcome and Introduction**
- 2. Proposed Gautrain Rapid Rail Link**
- 3. Environmental Impact Assessment and Public participation process**
- 4. Discussions**
- 5. Way forward and closure**

Box 2: Extract of Discussion session during Sandton Public Meeting (Bohlweki, 2002b).

Question:

Mr. Dieter Kreissel enquired about the feasibility of the project as not one resident in Sandton is for the Gautrain project traversing through Sandton. He stated that Sandton residents do not want the train in this area and suggested that it be constructed somewhere else.

Response:

Mr. Jack van der Merwe replied that various feasibility studies had been conducted regarding patronage and ridership. Traffic modelling and stated preference surveys were carried out in terms of international norms. The results showed that 20% of the people in the Tshwane-Johannesburg corridor would shift modes and use the train. Origin and destination surveys also indicated where travellers come from and where they were travelling to. This information was used in determining

In an interview with a stakeholder who had attended the public meetings during the public participation process, the interviewee noted that, “the meetings were very well organized but my personal feeling was that the experts would shoot down comments that were not in line with what they wanted. Their explanations were often too technical and confusing” (S2, 2007). Another interviewee stated that, “my feeling was that most of the people who attended the meetings were educated people who knew about the issues, because some of the concerns they raised seemed too complicated for a normal person” (S5, 2007).

4.4. Evaluation of public participation

The public participation process has been analysed using the Aarhus Convention criterion (Wood and Hartley, 2005). This analysis was based on information generated from the document analysis and the interviews.

- *Timing*

Public involvement can take place in various phases of the EIA process, and the practice differs across the Nordic cases. It is usually recommended that involvement begins “....early in the process to be effective (Sager, 2001)”. Most of the interviewees felt that this criterion had been partially fulfilled. The reasons for this were based on the fact that the project inception occurred two years before the public participation process began. According to Sager (2001), it makes sense to let the various interests have their say before the developer’s ideas about the project become set in stone. An interviewee noted, “.....it is clear that this project was going ahead, and that the public would not be able to stop it” (S4, 2007). At the same token another interviewee stated that, “....the process began as soon as we heard about the project, and we were given sufficient time to comment, and.....” (S1, 2007).

- *Accessibility*

Information was readily available in the Sandton public library, and the consultants offices; however most of the stakeholders felt that this criterion had not been fulfilled in a satisfactory manner. The ability to access the information was considered problematic because the information was viewed as being targeted for specific people. As noted by an interviewee, “I did not read any of the information because I felt that it was not intended for me because I am not educated and do not go to the library, so why would they put the information there if they wanted me to see it?” (S6, 2007). Another interviewee stated that,

“I must say that I felt that the information was not placed strategically. I relied on newspapers for information, because going to the library just seemed like way too much effort for me. In future, they might want to consider having a copy or pamphlets of the key information in local supermarkets. That could be more useful” (S1, 2007).

- *Information Provision*

Most of the interviewees considered this criterion to be fulfilled. The reasons for this were similar to the reasons given for the communication criterion. These ranged from the information being available in the media (both print and broadcast), and the website being updated on a regular basis. An interviewee who considered this criterion to be unfulfilled stated that, “I am a simple taxi driver, and cannot read English. I heard that this information was in English newspapers and very scientific, so I relied on what I heard on the radio and from other people” (S5, 2007).

The ability to engage with the provided information was considered problematic by most of the interviewees and this was a recurring theme throughout most of the criterion.

- *Interaction*

Interviewees felt that there had been sufficient interaction between the public and the experts during public meetings. An interviewee who had attended the meetings stated that, “there was a discussions section during the public meetings during which we were given the opportunity to raise our concerns in a question and answer format” (S3, 2007). Some interviewees felt their lack of technical knowledge was an impediment to effective interaction. An interviewee also noted, “It was difficult to gauge how much the experts listened to our opinions because they were so ready to defend themselves” (S2, 2007).

- *Competence*

The interviewees generally regarded this criterion as being unfulfilled. Most of the interviewees argued that they did not consider themselves competent to challenge and question the experts without any technical expertise. An interviewee noted, “The information was available; however one had to take the initiative to get advice from other experts if they wanted to challenge the project. It all depends on how passionate one is about opposing the development, because then you will go the extra mile just to make sure you are informed” (S2, 2007). Another interviewee stated, “I did not bother because I am a simple taxi driver and do not know anything about science and stuff” (S6, 2007).

- *Influence on Decision-making*

Most of the interviewees felt that this criterion was not fulfilled. An interviewee stated that, “a lot of feelings have changed about the project, but when it started most people were angry and against it but that did not change anything” (S3, 2007). There was also the general sentiment that the influence of the public in the decision-making was limited as noted by an interviewee, “I do not waste my

time with such things because we all know that government does what they want to do and does not care what we say” (S5, 2007).

However some interviewees felt that this criterion had been completely fulfilled. These were interviewees who had participated in the process; however it is unclear whether the performance of the EIA procedure influenced decision-making. One interviewee who is a resident of Strathaven noted that; “We were clear from the beginning that we never wanted this disruption in our lovely neighbourhood, but it became obvious that it wasn’t an option. I’m just grateful that they have heard our pleas about the alignment not going below our area” (S2, 2007).

From observations made in the Issues Report (Bohlweki, 2002a), the section of the route between Sandton and Marlboro received numerous comments from stakeholders. According to the draft EIA report (Bohlweki, 2003), specific issues that were raised in this area included:

- Impacts associated with tunnelling between the Johannesburg CBD and Sandton such as noise, blasting, construction and vibration impacts.
- An alternative route alignment between Rosebank and Sandton beneath main roads and commercial areas rather than under residential areas.
- Impacts on property and the crossing of Mushroom Farm and Innesfree Parks in terms of the proposed above ground alignment through eastern Sandton.
- Route past edge of Marlboro Gardens, Buccleuch and Linbro Park rather than the proposed baseline alignment; and the relocation of Marlboro station.
- An alternative route alignment across the Modderontein property.

The variant alignment in the CEA addressed most of these issues as raised on the RoD alignment during the EIA however during the EIA most of these

concerns had not been addressed because the alternatives had “engineering, design and cost implications” (EAP 1, 2007). In contrast one of the reasons given for the CEA was cost reduction, and therefore it seems like a contradiction for the EIA to have not used the same alternatives that were used in the CEA because of cost implications. This confirms that EIAs are indeed subjective, and the same facts can be interpreted in a number of different ways.

An interviewee stated that, “It is an open secret that EIAs are subjective, which is why we work in groups to avoid the project representing a single person’s values. No two EIAs are alike, even if they are the same EIA! However the CEA was really about improving on the RoD to ensure that impacts were minimal at best” (EAP 5, 2007).

- *Compromise*

Most of the interviewees felt that this criterion was fulfilled. One interviewee expressed that he was happy with the compromise reached on the relocation of the Sandton taxi rank and noted that, “the taxi rank that we were using before was small and we had to park on the street, but now we have a big taxi rank” (S6, 2007).

I think it is a positive move because it is undeniable that the previous taxi rank in front of the Sandton library was a complete mess” (Jeanine Fincher in Business Day, 13/04/2007).

Another interviewee stated that, “I am happy that eventually they changed the route from going below my residential area because I was very concerned about that (S2, 2007).

- *Fairness*

Most of the interviewees felt that this criterion was not fulfilled because they did not feel that they were part of the process. An interviewee noted that, “I never

registered because I did not feel that I was the part of the group of people that they wanted at the meetings” (S6, 2007).

- *Communication*

Most of the interviewees noted that the communication criterion was fulfilled. A stakeholder noted that “there was a lot of hype surrounding this project so it received extensive media coverage” (S4, 2007). One respondent argued that “the communication was there, but if you consider that most of the time I did not understand the technical jargon in the documents then the purpose was defeated” (S2, 2007).

Ms Valerie Thompson expressed her concern that too much emphasis has been placed on the fact that project information is available on the website. She requested that information be made available to the public at large through newspapers and the distribution of leaflets (Bohlweki, 2002b).

- *Trust*

Most of the interviewees said that they felt that this criterion was partially fulfilled. One interviewee said that they did not think it was necessary to trust the experts, but it was important to see your opinions being taken seriously (S4, 2007). Another respondent felt that it was difficult to trust the experts because it was so easy for them to deceive the public with all their technical jargon (S2, 2007). One interviewee noted that, “it is very hard to trust them (experts) because it appears as if they are pushing their own agendas and have no regard for ours” (S3, 2007).

4.4.1. Environmental Decision making for Communicative Planning

In South Africa, the responsibility of environmental decision making is the responsibility of the state; however this is a decision that is based on the

recommendations of the EAPs. The role of the EAP in delivering effective public participation will be discussed before the EIA process is analysed as communicative planning.

Sager (2001) highlighted the key responsibilities of EAPs in a communicative planning process:

- **The elimination of distortions**

The EAPs in this process did not fulfil this responsibility as most of the interviewees did not understand the contents of the documents, and this resulted in miscommunication because people had to rely on other sources of information. According to Sager (2001), the weak link between EIA results and the reasons given for the recommendation can also distort communicative rationality. This was the case in this project whereby the reasons given for the variant alignment contradicted the reasons that had been given for the RoD alignment.

- **To foster open and authentic communication**

The EAPs in this process fulfilled this responsibility because the meetings were conducive to attendees expressing their opinions and views during the discussion sessions. There was a weakness in the fulfilment of this responsibility as the interviewees complained about the technical nature of the discussions and the documents. This was not done to deceive the public, but ultimately it had the effect of not fostering open and authentic communication due to the lack of understanding from the public. In addition, updated information was available through a number of mediums.

- **To make dialogue possible**

This responsibility was also fulfilled by the EAPs through the series of public

meetings and focus groups that were held in the area. These meetings made it possible for all stakeholders to be able to come together and debate the relevant issues.

Allmendinger (1998:1976, in Murray 2006) listed the following principles that defined a communicative planning process.

4.4.1.1. Planning is an interactive and interpretative process

The EIA was interactive which is evident from the evaluation of the interaction criteria by the interviewees. In addition, the information from the public meeting minutes illustrate that the process was interactive and interpretative.

4.4.1.2. Planning is undertaken among a diverse and fluid discourse community

The EIA was undertaken in a diverse community of residents, business owners, domestic workers, taxi drivers, teachers etc. The diversity extended to race and education. This is a community of the rich (who live in the area) and the poor (who are employed in the area). The South African landscape is diverse; however Sandton is an area where the differences that exist between people are highlighted.

4.4.1.3. Focus is placed on processes where public discussion occurs and where problems, strategies, tactics and values are identified, discussed, elevated and where conflicts are mediated

The EIA has confirmed this principle through the public participation process that involved debate and discussions and eventually a solution. This was also illustrated in the evaluation of the interaction and compromise criterion by the interviewees.

4.4.1.4. Capacity is developed that enables participants to evaluate and re-evaluate

The EIA did not succeed in employing this principle. This is evident from most of the interviewees not feeling capacitated to understand the scientific jargon. In addition, the criterion of competence was evaluated by the respondents as being unfulfilled. Despite the above complaints, one should not underestimate the positive role of the EIA in giving the public access to the decision-making process (Sager, 2001).

4.5. Summary

While much has been done to make the public participation process meaningful and effective through the involvement of the public in problem identification, their involvement in decision making remains minimal. Regarding decisions concerning the design and implementation of the project, there is little evidence that the public participation process had a significant role. Despite this, there is a sense of interaction and involvement from some members of the public who see the value of public participation. The public participation met the legal requirements required for such a process; however there are varying views on the sufficiency of the process. It is important to note that with a project of this size and nature, there will always be stakeholders who feel short-changed as ultimately the “best practice” is subjective and will differ from individual to individual. This is EIA which by its very nature is subjective.

There is evidence to show that the expertise of the EAPs influenced the outcome of the process. The evidence suggests that the EAPs with a scientific background are likely to be influenced by an expert-driven approach that advocates for the use of ‘science’; however the EIA is a political process that is

not only driven by the science. There are varying aspects that are involved, and these contribute to the process being subjective. It is important to note that all EAPs operate within a prescribed legal framework which advocates a combination of an expert-driven and participative approach, and that the dominance of one approach over the other is influenced by the educational background which was the focus of this study.

This dominance of one over the other for the individual EAP is evidence that the process of EIA is subjective. In this particular research, there is evidence of a participative approach through the CEA which addressed a number of the issue raised by the residents of Strathavon which had not been addressed in the EIA. Based on the data collected in this research, the EAPs based their recommendations on a combination of legal requirement and the combination of expert driven and participative approach. However it is difficult to determine the extent that the individual educational background of each EAP influenced the outcome of the processes.

While the process is communicative, and has allowed for public consultation more needs to be done to aid the implementation of the communicative planning. In addressing this, it is imperative that the EAPs and the state find a way to indicate to the public how they influence the outcomes. Moreover there appears to be distortions of reality or fact because of contradictions between the reasons for specific decisions which ultimately cultivates a lack of trust in the process.

CHAPTER 5

CONCLUSIONS

5.1. Introduction

Environmental Impact Assessment as a tool for environmental decision-making remains contested with the debate centred on the expert-driven approach and the participative approach. This study began by arguing for the inclusion of values in the practice of EIA, and with attempts to establish how the outcome of the process can be influenced by the environmental assessment practitioners. The research sought to unearth answers to the questions as posed by the research. The discussion that follows addresses the key questions that have emerged from the following objectives:

- **To establish the expertise and values of the Environmental Assessment Practitioners (EAPs) who conducted the Gautrain Environmental Impact Assessment (EIA) in Sandton.**
- **To investigate how far the values and expertise of the Environmental Assessment Practitioners (EAPs) influenced environmental decision-making.**
- **To determine how the political nature of the EIA impacted on public participation for the stakeholders.**

The research has not produced an answer to the influence of the expertise of the EAPs on the outcome of the process and therefore does not have definitive recommendations in this regard. Instead through the research findings this chapter will echo on the role of an efficient public participation process within EIA in achieving communicative planning. It further highlights the benefits of this theory in EIA.

The key findings of this research are presented in the section below. This is followed by a discussion on the strengths and limitations of the research. Finally some conclusions and recommendations will be discussed.

5.2. Key Research Findings

The case study of the Gautrain EIA proved to be relevant to the needs of this research through it being a process that resulted in two different outcomes within the same legal and policy context. In addition, it was a project that implemented public participation through an engagement with a variety of stakeholders. The research project has been concerned with establishing how the expertise of the EAPs and the public participation process influenced the EIA and the implications thereof for the decision-making process. It was also concerned with an interactive and deliberative participation toward a communicative rationality.

In terms of addressing the question of the EAPs expertise the research has shown that the EAPs that were interviewed had a variety of qualifications even within the same teams. This is a reflection of the lack of a standard accreditation for EAPs in South Africa. Despite the expertise of the EAPs not being uniform there is little evidence that the expertise influenced the methods used by the EAPs. The EIA process is a legislated process which has a specific methodology, and this research has shown that the EAPs stick within the confines of legislation, but still manage to influence the EIA through one set of values being dominant over another.

This research further demonstrated how malleable the EIA process is, taking on different forms depending on the subjective view of the professionals driving it. This is certainly the case in the EIA and the CEA, as these processes in Sandton produced different outcomes. In addition there were differing views with regard to the reasons why the CEA was necessary when the EIA had already been granted a positive record of decision.

In terms of addressing the question of the impact of the public participation on the stakeholders, the EIA had an extensive public participation process that

involved a variety of stakeholders. Issues of competence and trust seem to have been a major issue in this case study. Competence was an issue for the stakeholders because of the scientific nature of the available information, and a lack of trust arose because some of the stakeholders felt that the experts had not taken the initiative to foster relationships through the process.

This case illustrates that decision-making is complex. The commitment to public participation is evident through the extensive process and initiatives for public communication. However despite these efforts, the stakeholders still displayed a lack of understanding of how they influenced the decision-making process. It is essential that the influence of the stakeholders be emphasized to help them understand their role in the process.

The public participation process allowed for debate and discussion. The discussion sessions gave the stakeholders a platform; however due to the lack of competence among the stakeholders there were differing views with regards to the performance of the process as effective public participation. Stakeholders who have been part of the process utilized the communication instruments to engage the experts, and felt that the discussion was interactive and deliberative.

In terms of communicative planning, the EIA process was communicative and interactive with regard to the way the public participation processes were implemented. The EIA focused its attention on reaching a diverse range of stakeholders, and the promotion of democratic principles through the interactive process.

Finally, while the research cannot irrefutably determine if the expertise of the EAPs, and the public participation influenced the outcome of the EIA, there is evidence to suggest that the subjectivity of the EAPs is influential. Public participation can be improved upon to implement a communicative approach. To provide some understanding on the implementation of communicative planning,

this research has suggested that the public participation process does not foster a sense of ownership of the decisions among the stakeholders. Stakeholder consultation could occur much earlier in the process, combined with a more transparent approach in terms of the decision-making aspect.

5.3. Strengths and limitations of this research

This research examined the EIA process from the perspective of the EAPs and of the stakeholders within the public participation process. The information that has been collated can be used to fill the gaps in literature on the influence of the expertise of EAPs on the EIA process, and the benefits of implementing a communicative rationality within EIA.

There are a number of limitations of this research. These include the use of the point of view of a specific set of knowledge to understand EIA. This point of view provided a specific perspective on an issue that is complex at best and divergent at worst. This did not provide a comprehensive understanding of all the factors that influence the decision-making process of the EAPs. This research had the limitation of the possibility of important issues not being revealed due to direction of the research.

In addition, time and financial resources were limited, and therefore it was difficult to find other voices to provide thoughts and understanding of the EIA process. Also there were legal implications for the EAPs due to the confidentiality agreements that they had entered into with the project proponent. This therefore limited their contributions towards understanding the influential forces in the decision-making process.

5.4. Conclusions and Recommendations

Considering the questions posed by the research, this research has shown that

expertise and education influence the decision-making process; however EAPs do operate within a legal framework that has prescribed requirements. For the purposes of this research, the focus was on expertise and therefore conclusions could not be drawn on any other possible factors that could influence decision making. It is therefore a recommendation of this research that more research is required to determine the impacts of a combination of factors including expertise. It is critical that EAPs move beyond legal compliance and a project based approach to a process that embraces multiple values and collective and deliberative decision-making.

The public participation process was extensive and this research has shown that it was interactive albeit with some short-comings. The public participation process fulfilled legal requirements; however as is always the case with a diverse public, there were misgivings about this process. One of the key findings of this research has been the lack of trust in the process from the perspective of the stakeholders, and a lack of competence for interaction by the stakeholders. Ultimately there is a need for the EIA process to be transparent in terms of how the stakeholders influence the decisions, and in addition there is a need to address the content of the public participation documents.

EIA has made strides in implementing communicative rationality; however there is a need for a greater commitment to up-holding the principles of communicative planning in order to deliver a process that the stakeholders can take ownership of. This study aimed to highlight the benefits of implementing communicative planning principles in EIA, particularly with regard to the decision-making process. Moreover it explored how the EAPs influence the outcome of the EIA, and their roles in improving or deterring the experience for the stakeholders.

It is the hope of the researcher that this study will assist in filling the gaps in environmental impact assessment literature, particularly on the benefits of implementing a communicative planning theory to EIA. It is also hoped that this

study will influence further and comprehensive research on the factors that influence the decision-making process of EAPs. Finally, it is hoped that this study will aid in understanding the need for improving on public participation to foster good relations between the experts and the stakeholders through a more interactive, capacity-building and deliberative process.

REFERENCES

Anderson, J.E. (2003), *The Study of Public Policymaking*, Boston: Houghton Mifflin Company.

Bohlweki Environmental. (2003) *Draft Environmental Impact Assessment Report for the Proposed Gautrain Rapid rail link between Johannesburg, Pretoria and the Johannesburg International Airport*, Midrand: Bohlweki.

Bohlweki Environmental. (2002a) *Final Issues Report*, Midrand: Bohlweki.

Bohlweki Environmental. (2002b) *Minutes of a Meeting*, Midrand: Bohlweki.

Bolan, R. (1983), The Structure of ethical choice in planning practice, *Journal of Planning, education and Research*, vol 3, pp.23-34.

Buchy, M. and Race, D. (2001), The Twists and Turns of Community Participation in Natural Resource Management in Australia: What is Missing? *Journal of Environmental Planning and Management*, 44(3), pp.293-308.

Campbell, H. (2002), Planning: an idea of value, *Town Planning Review*, vol. 73, no. 2, pp 271 – 288.

Campbell, H. and Marshall, R. (1998), Acting on principle: dilemmas in planning practice, *Planning Practice and Research*, vol.13, no. 2, pp. 117– 28.

Campbell, H. and Marshall, R. (1999), Ethical Frameworks and Planning Theory, *International Journal of urban and Regional Research*, vol. 23, no3, pp. 464 – 478.

Campbell, H. and Marshall, R. (2000), Moral Obligations, planning and the public interest: a commentary on current British practice, *Environment and Planning B*:

Planning and Design, vol. 27, pp. 297 – 312.

Certification Board for Environmental Assessment Practitioners of South Africa. (2007): *Draft Constitution of the Interim Certification Board*, <http://www.eapsa.co.za/downloads.html#info> (16 July 2007).

Clifford, N.J. and Valentine, G. (2003), *Key Methods in Geography*, London: Sage Publications.

Connelly, S. and Richardson, T. (2004), Value Driven SEA: time for an environmental justice perspective?, *Environmental Impact Assessment Review*, vol. 25, no. 4, pp. 391-409.

Cox et al. (2002), *Proposed Path of the 'Shilowa Express': a look at who is affected and how*, The Star.

Creswell, J.W. (1998), *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*, London: Sage Publications.

Centre for Scientific and Industrial Research. (2005), *Guideline for developing the scope of specialist involvement in EIA processes*, Stellenbosch: CSIR Environmentek.

Earth Summit. (1992), *Declaration on Environment and Development*, United Nations Conference on Environment and Development, Rio de Janeiro.

Felehetsa Environmental. (2005), *Final Draft Comparative Environmental Assessments: Sandton Variant Alignment for the Proposed Gautrain Rapid Rail Link between Johannesburg, Pretoria and the Johannesburg International Airport*, Fairland: Felehetsa.

Fischer, F. (2000), *Citizens, Experts, and the Environment: The Politics of Local Knowledge*, London: University Press.

Fischer, F. (2003), Beyond empiricism: policy analysis as deliberative practice. In: Hajer, M., Wagenaar, H., (Eds.), *Deliberative Policy Analysis: Understanding Governance in the Network Society*. Cambridge University Press, Cambridge, pp.209-227.

Forester, J. (1985), Practical Rationality on planmaking. In M.Brecheny and A. Hooper (eds), *Rationality in planning: Critical Essays On the Role of Rationality in Urban and Regional Planning*, London: Pion Limited.

Forester, J. (1989), *Planning in the Face of Power*, Berkeley: University of California Press.

Forester J. (2000), *The deliberative practitioner: encouraging participatory planning processes.*, Cambridge7: M.I.T. Press.

Gray, B. (1985), Conditions Facilitating Interorganisational Collaboration, *Human Relations*, vol. 38, pp911-936.

Habermas, J. (1987), *The Philosophical Discourse of Modernity*, Cambridge: Polity Press.

Habermas, J. (1990), *Moral Consciousness and Communicative Action*, Cambridge: Polity Press.

Hajer, M., 1995, *The Politics of Environmental Discourse*. Oxford, Clarendon Press.

Healey, P. (1997), *Collaborative Planning: Shaping Places in Fragmented*

Societies, Macmillan Press.

Hoggart, K., Lees, L. And Davies, A. (2002), *Researching Human Geography*, Edward Island.

Hokkanen, P. (2001), EIA and Decision-making in search of each other, *Hilding-Rydevik TEIA, large development projects and decision-making in Nordic countries*, vol. R2001:6.

Holmes, T. and Scoones, I. (2000), Participatory Environmental Policy process: experiences from North and South. *IDS Working Paper 113*, Institute of Development Studies, University of Sussex, Brighton.

Interim Certification Board for Environmental Assessment Practitioners. (2006), *Towards the establishment of a registration authority for environmental assessment practitioners in South Africa*, Pretoria.

Innes, J. (1995), Planning theory's paradigm, *Journal of Planning, Education and Research*, vol. 14, no. 3, pp. 128 – 135.

Innes, J. (2004), Consensus Building: Clarifications for the critics, *Planning theory*, vol. 3, no. 1, pp. 5 – 20.

Jay, S., Jones, C., Slinn, P. and Wood, C. (2007), Environmental Impact Assessment: Retrospect and prospect, *Environmental Impact Assessment Review*, vol. 27, pp. 287 – 300.

Kellert, S., Mehta, J., Ebbin, S., and Lichtenfeld, L. (2000). Community Natural resource Management: Promise, rhetoric and reality, *Society and Natural Resources*, vol 13, pp. 705 – 715.

Kitchin, R. and Tate, N.J. (2000), *Conducting Research in Human Geography Theory, Methodology and Practice*, England: Prentice Hall.

Lachapelle, P, McCool, S, and Patterson, M. (2003), Barriers to Effective Natural Resource Planning in a 'Messy' world, *Society and Natural Resources*, vol 16, pp.473 – 490.

Lawrence, D.P. (2000), Planning Theories and Environmental Impact Assessment, *Environmental Impact Assessment Review*, vol 20, pp. 607 – 625.

Leach, M, Meanes, R. and Scoones, I. (1999), Environmental Entitlements: Dynamics and Institutions in Community-Based Natural Resource Management, *World Development*, vol 27 (2), pp225 – 247.

Maxwell, J.A. (1996), *Qualitative research design: An interactive approach*, London: Sage Publications.

McCool, S.F. and Guthrie, K. (2001), Mapping the dimensions of successful public participation in messy natural resource management situations. *Society and Natural Resources*, vol 14, pp.309 – 323.

McGuirk, P. (2001), Situating Communicative Planning Theory: Context, Powers, and Knowledge, *Environment and Planning A*, vol 33, pp.195 – 217.

Michaels, S. (1999), Configuring who does what in Watershed Management: The Massachusetts Watershed Initiative, *Policy Studies Journal*, vol 27 (3), pp. 565 – 578.

Morrison, M. (1987), *Methods in Sociology (Sociology in Focus Series)*, London: Longman.

Murray, D (2006), *A critical analysis of the communicative planning theory as a theoretical underpinning for integrated resource and environmental management*, Unpublished PhD thesis, School of Environmental Planning, Griffith University.

Paivo, J. and Wallentinus, H.G. (2001), The Hallandsas Railway Tunnel Project, *Hilding-Rydevik TEIA, large development projects and decision-making in Nordic countries*, vol. R2001:6.

Patel, Z. (2006), Of questionable value: The role of practitioners in building sustainable cities, *GeoForum*, vol 37 (2006), pp. 682-694.

Polanyi, M. (2002). Communicative Action in Practice: Future Search and The Pursuit of an Open, Critical and Non-Coercive Large-group Process, *Systems Research and Behavioral Science*, vol 19 (4), pp. 357 – 367.

Pritchard, D. (1993), Towards sustainability in the planning process: the role of EIA., *ECOS (Br Assoc Nat Conserv)* vol 14(3,4):10–5.

Robinson, G.M (1998), *Methods and Techniques in Human Geography*, London: John Wiley and Sons.

Republic of South Africa. (1998), *The National Environmental Management Act No 107 of 1998*, Government Gazette, Cape Town.

Richardson, T. (2005), Environmental assessment and planning theory: four short stories about power, multiple rationality, and ethics, *Environmental Impact Assessment Review*, vol. 25, no. 4, pp. 341-365.

Sager, T. (1994), *Communicative Planning Theory*, Aldershot, Avebury.

Sager, T. (2001), A Planning theory perspective on the EIA, *Hilding-Rydevik*

TEIA, large development projects and decision-making in Nordic countries, vol. R2001:6, pp.197 – 222.

Scott, D and Barnett, C. (2007), Spaces of opposition: activism and deliberation in post-apartheid environmental politics, *Environmental Planning*, vol.39, pp. 2612 – 2631.

Scott, D., Oelofse, C. and Weaver, A. (2001), The institutionalisation of social assessment in South Africa: The post-apartheid window of opportunity, *Integrating Social Assessment in Resource Management Institutions*, CSIRO Publishing, Australia.

Scott, D., and Oelofse C., (2005), Social and environmental justice in South African cities: Including 'invisible stakeholders' in environmental assessment procedures, *Journal of Environmental Planning and Management*, 48 (3), 445-467.

Seria, N (2002), *Study gives Gautrain plan the green light*, Business Day.

Stenstadvold, M. (2001), The case of the Gardermoen Project, *Hilding-Rydevik TEIA, large development projects and decision-making in Nordic countries, vol. R2001:6.*

The United Nations Economic Commission for Europe (UNECE). (1998), *Convention on Access to Information, Public Participation in Environmental Decision-making and Access to Justice in Environmental Matters*, Aarhus, Germany.

UCT Environmental Evaluation Unit, the UCT School of Public Health and Primary Health Care and the United Nations Institute for Training and Research (UNITA). (2006), *Public participation in Environmental Decision-Making*. Cape

Town.

Van Schalkwyk, M. (pers.comm., 2008), Department of Tourism and Environmental Affairs. Somerset West: South Africa.

Wilkins, H. (2003), The need for subjectivity in EIA: discourse as a tool for sustainable tool, *Environmental Impact Assessment Review Rev 2003*, vol. 2, pp. 401 – 414.

Wood, G. and Hartley, N. (2005), Public Participation in Environmental Impact Assessment – implementing the Aarhus Convention, *Environmental Impact Assessment Review*, vol. 25, pp. 319 – 340.

Wood, G., Glasson, J., and Becker, J. (2006), EIA Scoping in England and Wales: Practitioner Approaches, perspectives and constraints, *Environmental Impact Assessment Review*, vol. 26, pp. 221-241.

Young, I.M. (1990), *Justice and the Politics of Difference*, Princeton, NJ: Princeton University Press.

ANNEXURES

ANNEXURE A: SEMI- STRUCTURED INTERVIEW – STAKEHOLDERS

Semi-structured Interview - Stakeholders

1. How do you feel about the construction of the Gautrain?
2. Did you register as an I&AP during the EIA?
3. If so, were you consulted about the proceedings during the Gautrain EIA?
4. Did you attend public meetings? If so, did you find them informative and interactive?
5. If you didn't register, can you give the reason why?
6. Do you feel you received adequate information about the process?
7. What methods of communication were used to relay this information?
8. Do you feel you were given a platform to express your opinions about this development?
9. If yes, do you feel you were given adequate time to express these opinions?
10. Has the construction of the Gautrain impacted on you, your property, and your business?
11. If yes, how?
12. Would you say that a fair compromise has been reached for all parties?
13. Would you say you contributed towards decision-making in this process?

ANNEXURE B: SEMI- STRUCTURED INTERVIEW – ENVIRONMENTAL ASSESSMENT PRACTITIONERS

Semi-structured Interview - Environmental Assessment Practitioners

1. What would you say is the role of environmental consultants in South Africa?
2. What is your opinion of the lack of a professional body of registration for environmental consultants in South Africa?
3. Do you think that affects the quality of the work? If so, how?
4. How long have you been in this field?
5. What is your educational background?
6. To what extent do you think this background influences the work that you do?
7. What skills do you think are required to conduct environmental impact assessments?
8. To your own understanding, what is the purpose of conducting an EIA?
9. Which plans and policies did you refer to or adhere to during the EIA for the Gautrain?
10. To your own understanding, what is the purpose of the public participation process within EIAs?
11. In your experience, does the public show interest in being involved in public participation processes?
12. Do you think the public understands what the EIA process entails?
13. In your opinion, which is more important, Qualitative analysis (impacts based on ideas, opinions) or Technical analysis (Measurable impacts such as groundwater conditions)?
14. There were differences between the ROD alignment and the variant alignment in the Gautrain EIA. In your opinion, was this because of differences in methodology and level of detail from the consultants involved?
15. What is your opinion on subjectivity within the process of EIA? How do you think this impacts on the outcome of the process?

16.How much influence (on decision-making) do you think EIA outcomes have?

17.Methods used by practitioner to identify impacts (Scoping) in this project?

Approach	Yes or No
Consultation with own organization	
Community consultation	
Followed Guidance from Environmental Impact Assessment (EIA) plans and policies	
Legal Regulations and thresholds	
Consulted other examples of similar projects	
Used professional judgement and experience	
Used checklist to identify possible impacts	
Used other formal technique (Name)	
Based decision on an appraisal of the likely controversy of the project	

ANNEXURE C: LIST OF INTERVIEWEES

List of Interviews conducted

Environmental Assessment Practitioners Interviews		
Environmental Assessment Practitioner 1	(EAP 1, 2007)	September 2007
Environmental Assessment Practitioner 2	(EAP 2, 2007)	September 2007
Environmental Assessment Practitioner 3	(EAP 3, 2008)	May 2008
Environmental Assessment Practitioner 4	(EAP 4, 2007)	May 2008
Environmental Assessment Practitioner 5	(EAP 5, 2007)	September 2007
Environmental Assessment Practitioner 6	(EAP 6, 2007)	September 2007
Environmental Assessment Practitioner 7	(EAP 7, 2007)	May 2008
Gauteng Department of Agriculture, Conservation, Environment and Land Affairs Interviews		
Environmental Officer 1	(GDACE 1, 2007)	May 2008
Environmental Officer 1	(GDACE 1, 2007)	May 2008
Interviews with Stakeholders		
Stakeholder 1	(S1, 2007)	October 2007
Stakeholder 2	(S2, 2007)	October 2007
Stakeholder 3	(S3, 2007)	October 2007
Stakeholder 4	(S4, 2007)	October 2007

Stakeholder 5	(S5, 2007)	October 2007
Stakeholder 6	(S6, 2007)	October 2007